

## Weekly Epidemiologic Summary

# COVID-19 in Ontario: Focus on January 24, 2021 to January 30, 2021

This report includes the most current information available from CCM as of February 2, 2021.

Please visit the interactive <u>Ontario COVID-19 Data Tool</u> to explore recent COVID-19 data by public health unit, age group, sex, and trends over time.

A <u>daily summary</u> is available and provides an epidemiologic summary of recent COVID-19 activity in Ontario. This weekly report provides an epidemiologic summary of COVID-19 activity in Ontario over time.

## **Highlights**

- There are a total of 268,933\* confirmed cases of COVID-19 in Ontario with a public health unit reported date up to January 30, 2021.
- For the period with a public health unit reported date between January 24 to 30, 2021 (week 4):
  - A total of 12,769 cases were reported to public health compared to 16,412 cases the previous week (January 17 to 23, 2021).
  - Approximately three-quarters of public health units reported a lower rate of disease this
    week compared to the previous week. However, while there is an overall decreasing trend
    in the number of cases reported in recent weeks, the number of deaths continue to
    increase with 384 deaths reported last week.
  - There continues to be an increase in the number of cases reported with a variant of concern. As of January 30th, 106 cases reported the COVID-19 variant of concern Lineage B.1.1.7 (across 11 public health units) and 1 case reported the Lineage B.1.351 variant in Peel Region.

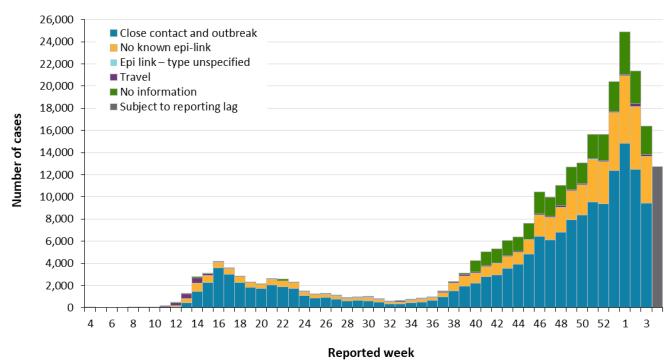
\*On February 1, Toronto Public Health (TPH) migrated their COVID-19 data to CCM from their local CORES system. This migration had an impact on this week's data. Fluctuations in data are expected the week of February 1st as TPH completes data quality checks and remediation including duplicates resolution and data corrections for some fields (e.g., long-term care home residents and health care workers, outbreak numbers within case records).

The term public health unit reported date in this document refers to the date local public health units were first notified of the case.

Data corrections or updates can result in case records being removed and or updated from past reports. Thus comparisons of case counts by public health unit reported date may not align with daily change in cases publicly reported by the province for the same time period, which reflects the difference in cumulative counts between one day and the next.

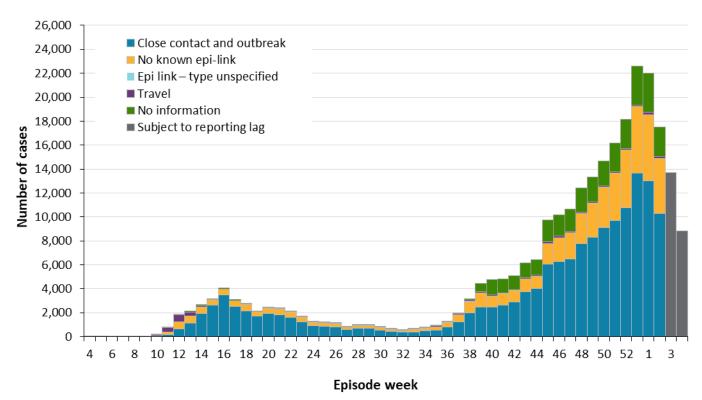
### **Cases Over Time**

Figure 1. Confirmed cases of COVID-19 by likely source of acquisition and public health unit reported week: Ontario



**Note:** Include cases with reported dates ranging from week 4 (January 19 and 25, 2020) to week 4 (January 24 and 30, 2021). See <u>Table 1A</u> in Appendix A for a list of the weeks and corresponding start and end dates.

Figure 2. Confirmed cases of COVID-19 by likely source of acquisition and approximation of symptom onset week: Ontario



**Note:** Not all cases have an episode date. Cases without an episode date are not included in the figure. The definition for how episode date is defined is available in the technical notes. Include cases with episode dates ranging from week 4 (January 19 and 25, 2020) to week 4 (January 24 and 30, 2021). See <u>Table 1A</u> in Appendix A for a list of the weeks and corresponding start and end dates.

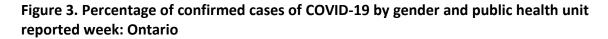
## **Case Characteristics**

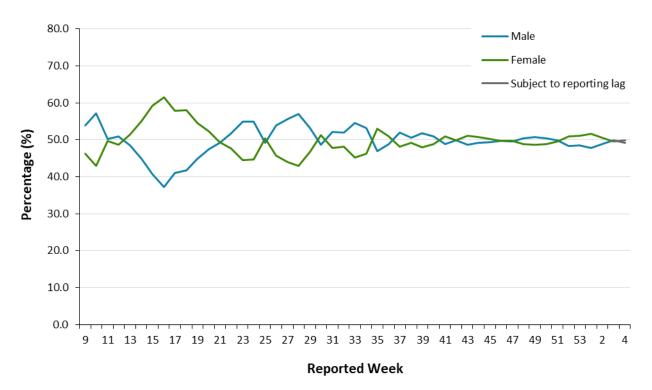
Table 1. Summary of confirmed cases of COVID-19 by public health unit reported date: Ontario

	Reported week 3 (January 17 to 23)	Reported week 4 (January 24 to 30)	Cumulative case count up to January 30	Cumulative rate per 100,000 population
Total number of cases	16,412	12,769	268,933	1,809.2
Gender: Male	8,172	6,269	131,618	1,798.2
Gender: Female	8,121	6,377	135,777	1,799.5
Ages: 19 and under	2,089	1,687	35,194	1,122.1
Ages: 20-39	6,009	4,540	98,301	2,365.1
Ages: 40-59	4,801	3,818	77,652	1,972.1
Ages: 60-79	2,451	1,874	38,819	1,313.7
Ages: 80 and over	1,055	845	18,918	2,785.1
Number resolved	N/A	N/A	248,865	N/A

Note: Not all cases have an age or gender reported.

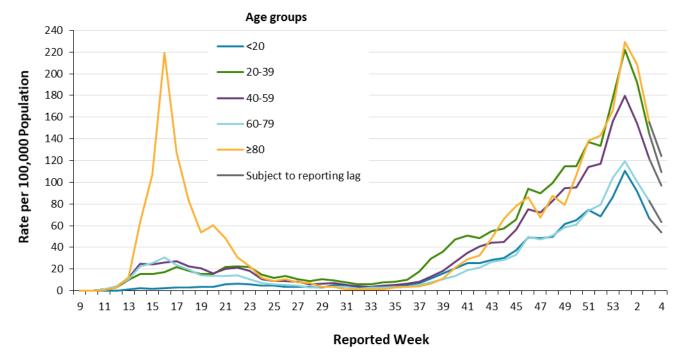
Interpret information for the most recent week with caution due to reporting lags.





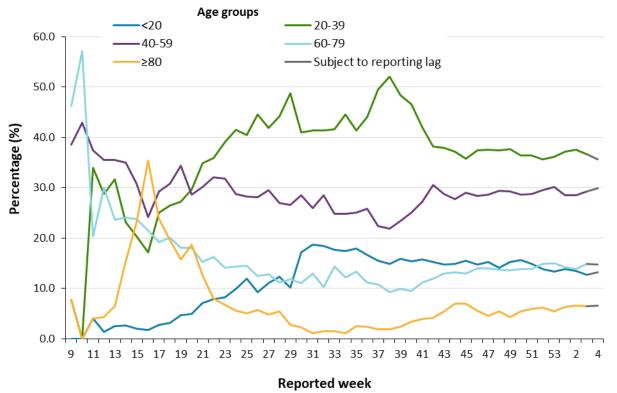
**Note:** Not all cases have a gender reported. The denominator for calculating weekly percentages includes all cases. Only weeks with more than 10 cases by public health unit reporting date are included (starting in week 9). Include cases with reported dates ranging from Week 9 (February 23 and 29, 2020) to week 4 (January 24 and 30, 2021). See <u>Table 1A</u> in Appendix A for a list of the weeks and corresponding start and end dates.

Figure 4a. Rate of confirmed cases of COVID-19 per 100,000 population by age group and public health unit reported week: Ontario



**Note**: Not all cases have an age reported. Only weeks with more than 10 cases by public health unit reporting date are included (starting in week 9). Include cases with reported dates ranging from week 9 (February 23 and 29, 2020) to week 4 (January 24 and 30, 2021). See <u>Table 1A</u> in Appendix A for a list of the weeks and corresponding start and end dates.

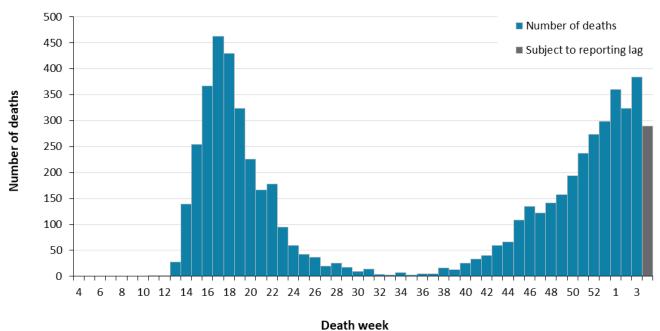
Figure 4b. Percentage of confirmed cases of COVID-19 by age group and public health unit reported week: Ontario



**Note**: Only weeks with more than 10 cases by public health unit reporting date are included (starting in week 9). Include cases with reported dates ranging from week 9 (February 23 and 29, 2020) to week 4 (January 24 and 30, 2021). See <u>Table 1A</u> in Appendix A for a list of the weeks and corresponding start and end dates.

## **Deaths**

Figure 5. Deaths among confirmed cases of COVID-19 by week of death: Ontario



**Note**: Cases without a death date are not included in the figure. Include cases with date of death ranging

from week 4 (January 19 and 25, 2020) to week 4 (January 24 and 30, 2021). See <u>Table 1A</u> in Appendix A for a list of the weeks and corresponding start and end dates.

Table 2. Summary of deaths among confirmed cases of COVID-19 by public health unit reported week: Ontario

Deaths	Reported week 3 (January 17 to 23)	Reported week 4 (January 24 to 30)	Cumulative case count up to January 30	Cumulative rate per 100,000 population
Number of deaths	205	67	6,301	42.4
Gender: Male	84	32	3,001	41.0
Gender: Female	121	35	3,258	43.2
Ages: 19 and under	0	0	2	0.1
Ages: 20-39	2	1	24	0.6
Ages: 40-59	7	7	238	6.0
Ages: 60-79	57	19	1,702	57.6
Ages: 80 and over	139	40	4,334	638.0

**Note:** Age and gender may not be reported for all cases. Reported week is the week the case was reported to the public health unit. This is different than the "week of death" presented in Figure 5 which reflects the week the case was reported to have a 'Fatal' outcome.

Interpret information for the most recent week with caution due to reporting lags.

## **Exposure**

Table 3. Confirmed cases of COVID-19 by likely source of acquisition and public health unit reported week: Ontario

	Reported week 3 (January 17 to 23)	Percentage	Reported week 4 (January 24 to 30)	Percentage	Cumulative case count up to January 30	Cumulative percentage
Travel	175	1.1%	126	1.0%	4,784	1.8%
Outbreak-associated or close contact of a confirmed case	9,457	57.6%	6,954	54.5%	166,312	61.8%
Epidemiological link  – type unspecified	0	0.0%	2	0.0%	195	0.1%
No known epidemiological link	4,206	25.6%	3,420	26.8%	60,629	22.5%
Information missing or unknown	2,574	15.7%	2,267	17.8%	37,013	13.8%
Total	16,412		12,769		268,933	

**Note:** Information for how cases are grouped within each category is available in the technical notes. Interpret information for the most recent week with caution due to reporting lags.

## Sub-populations of interest

Table 4. Summary of cases of COVID-19 among health care workers: Ontario

Health care workers	Reported week 3 (January 17 to 23)	Reported week 4 (January 24 to 30)	Cumulative case count up to January 30
Number of cases	810	654	17,998
Ever hospitalized	7	4	354
Ever in ICU	2	1	78

**Note:** Interpret information for the most recent week with caution due to reporting lags.

Data Source: CCM

Table 5. Summary of cases of COVID-19 associated with long-term care home outbreaks: Ontario

Long-term care home associated cases	Reported week 3 (January 17 to 23)	Reported week 4 (January 24 to 30)	Cumulative case count up to January 30
Residents	614	454	14,543
Deaths among residents	102	15	3,643
Health care workers	267	230	6,225
Deaths among health care workers	0	0	10

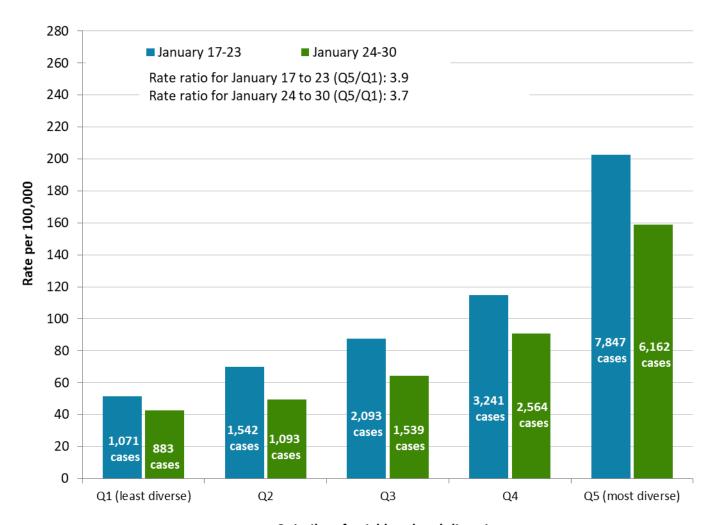
**Note:** Information on how long-term care home residents and health care workers are identified is available in the technical notes. Interpret information for the most recent week with caution due to reporting lags.

Table 6: Summary of cases of COVID-19 among school aged children by age group: Ontario

	Reported week 3 (January 17 to 23)	Reported week 4 (January 24 to 30)	Cumulative case count from August 30 up to January 30
Ages: 4-8	337	331	5,699
Ages: 9-13	450	348	7,859
Ages: 14-17	513	427	8,284

**Note:** Interpret information for the most recent week with caution due to reporting lags. Includes all confirmed cases of COVID-19 for specified ages, regardless of school attendance. Cumulative counts include cases of COVID-19 reported starting week 36 (August 30 to September 5, 2020).

Figure 6. Rate and number of confirmed cases of COVID-19 for each quintile of neighbourhood diversity: Ontario, week 3 (January 17 to 23, 2021) and week 4 (January 24 to 30, 2021).

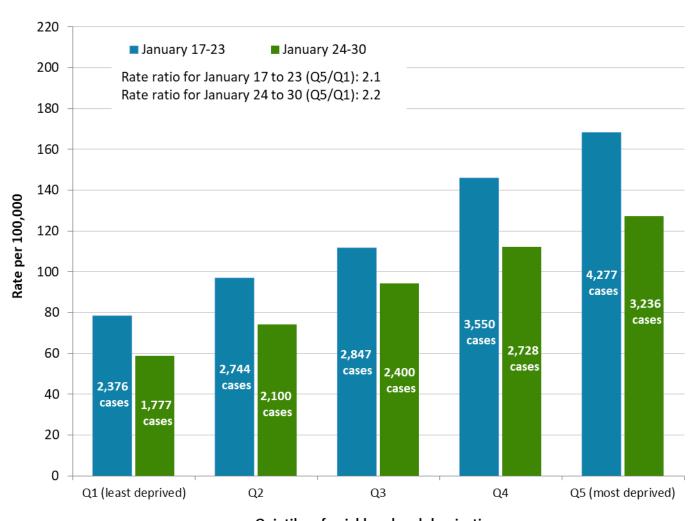


#### Quintiles of neighbourhood diversity

**Note:** Neighbourhood diversity is measured using the ethnic concentration dimension of the Ontario Marginalization Index. The ethnic concentration dimension is based on the proportion of non-white and non-Indigenous residents and/or the proportion of immigrants that arrived in Canada within the past five years.

Data Source: CCM, Ontario Marginalization Index

Figure 7. Rate and number of confirmed cases of COVID-19 for each quintile of neighbourhood deprivation: Ontario, week 3 (January 17 to 23, 2021) and week 4 (January 24 to 30, 2021).



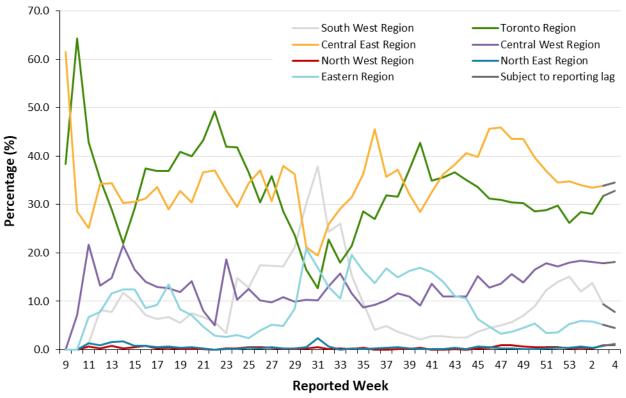
Quintiles of neighbourhood deprivation

**Note:** Neighbourhood deprivation is measured using the material deprivation dimension of the Ontario Marginalization Index. The material deprivation dimension uses Canadian census data on income, quality of housing, educational attainment and family structure characteristics to assess the ability of individuals and communities to access and attain basic material needs.

**Data Source:** CCM, Ontario Marginalization Index

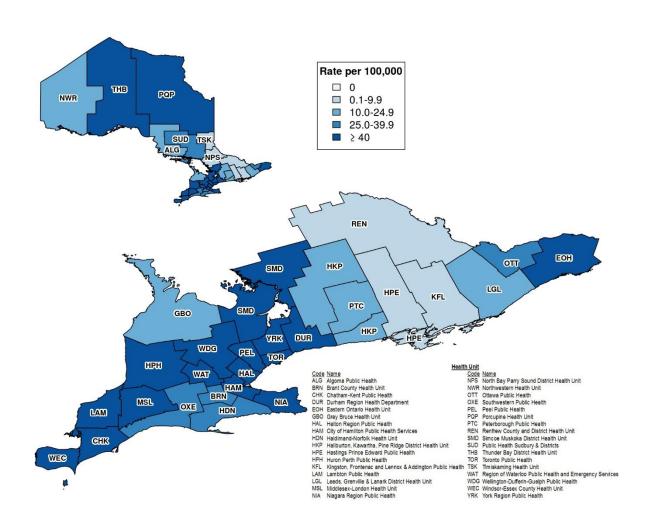
## Geography

Figure 8. Percentage of COVID-19 cases by geographic region and public health unit reported week: Ontario



**Note:** Only weeks with more than 10 cases by public health unit reporting date are included (starting in week 9). Include cases with reported dates ranging from week 9 (February 23 and 29, 2020) to week 4 (January 24 and 30, 2021). Table 2A in <u>Appendix A</u> has a listing of public health units by region.

Figure 9. Rate of confirmed cases of COVID-19 in public health reported week 4 (January 24 to 30, 2021) by public health unit: Ontario



**Note:** The provincial rate of confirmed cases of COVID-19 reported in week 4 was 85.9 cases per 100,000 population.

# **Outbreaks**

Table 7. Number of public health unit declared COVID-19 outbreaks by setting type: Ontario

Setting Type	Reported week 4 (January 24 to 30)	Number of ongoing outbreaks	Cumulative number of outbreaks reported to January 30
Congregate Care	58	440	2,229
Long-term care homes	26	229	1,185
Retirement homes	17	129	679
Hospitals	15	82	365
Congregate Living	34	127	708
Correctional facility	4	12	25
Shelter	6	22	124
Group Home/supportive housing	16	64	452
Short-term accommodations	3	5	12
Congregate other	5	24	95
Education	28	88	946
Child care	16	55	342
School – Elementary*	5	15	429
School – Elementary/secondary*	1	3	28
School – Secondary*	4	12	129
School – Post-secondary*	2	3	18
Other settings	96	249	1,825
Bar/restaurant/nightclub	4	12	147
Medical/health services	3	8	82

Setting Type	Reported week 4 (January 24 to 30)	Number of ongoing outbreaks	Cumulative number of outbreaks reported to January 30
Personal service settings	0	0	13
Recreational fitness	0	2	54
Retail	8	28	200
Other recreation	2	12	91
Workplace - Farm	9	23	83
Workplace - Food processing	6	16	150
Other types of workplaces	61	139	983
Other	2	2	4
Unknown	1	7	18
Total number of outbreaks	216	904	5,708

**Note:** Reported week is based on the outbreak reported date, and if unavailable, the date the public health unit created the outbreak. Ongoing outbreaks includes all outbreaks that are 'Open' in CCM without a 'Declared Over Date' recorded or where the outbreak start date (determined by the onset date of first case, or if missing the reported date, or if missing the created date) is more than 5 months from the current date, even for outbreaks where the outbreak status value selected in CCM is 'OPEN'. Interpret information for the most recent week with caution due to reporting lags. Outbreak categories are mutually exclusive. Retail includes settings such as grocery stores, pharmacies, malls, etc. Other types of workplaces include settings such as offices as well as warehousing, shipping and distribution, construction, etc. Other recreation includes settings such as entertainment and event venues, gatherings (e.g., weddings), religious facilities, etc. Medical/health services refer to settings such as doctor's office or clinic, wellness clinics, etc., and excludes categories listed in the congregate care setting group.

<sup>\*</sup>Cumulative counts include COVID-19 school outbreaks reported starting week 36 (August 30 to September 5, 2020). Ongoing re-classification of settings for reported outbreaks can result in outbreak counts that may differ from previously reported counts.

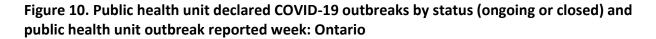
Table 8. Confirmed cases of COVID-19 associated with COVID-19 outbreaks by setting type and public health unit reported week: Ontario

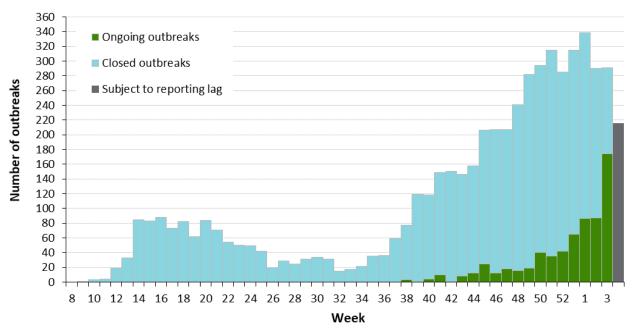
Cases associated with the outbreak setting type	Reported week 3 (January 17 to 23)	Reported week 4 (January 24 to 30)	Cumulative number of cases
Congregate Care	1,772	1,423	33,632
Long-term care homes	1,033	857	23,468
Retirement homes	397	296	5,994
Hospitals	342	270	4,170
Congregate Living	568	396	4,431
Correctional facility	222	145	693
Shelter	111	83	1,004
Group Home/supportive housing	117	103	2,036
Short-term accommodations	7	13	43
Congregate other	111	52	655
Education	100	92	3,566
Child care	86	55	837
School – Elementary*	3	18	1,852
School – Elementary/secondary*	2	1	194
School – Secondary*	8	9	618
School – Post-secondary*	1	9	65
Other settings	862	489	13,502
Bar/restaurant/nightclub	11	5	584
Medical/health services	27	7	345
Personal service settings	0	0	42
Recreational fitness	0	1	451

Cases associated with the outbreak setting type	Reported week 3 (January 17 to 23)	Reported week 4 (January 24 to 30)	Cumulative number of cases
Retail	64	18	879
Other recreation	6	8	821
Workplace - Farm	123	55	2,294
Workplace - Food processing	70	91	1,809
Other types of workplaces	516	289	6,114
Other	3	5	12
Unknown	42	10	151
Total number of cases	3,302	2,400	55,131

**Note:** Interpret case counts for the most recent week with caution due to reporting lags. Outbreak categories are mutually exclusive. Retail includes settings such as grocery stores, pharmacies, malls, etc. Other types of workplaces include settings such as offices as well as warehousing, shipping and distribution, construction, etc. Other recreation includes settings such as entertainment and event venues, gatherings (e.g., weddings), religious facilities, etc. Medical/health services refer to settings such as doctor's office or clinic, wellness clinics, etc., and excludes categories listed in the congregate care setting group.

<sup>\*</sup>Cumulative counts include cases of COVID-19 associated with school outbreaks reported starting week 36 (August 30 to September 5, 2020). Ongoing re-classification of settings for reported outbreaks can result in case counts that may differ from previously reported counts.





**Note:** If public health unit outbreak reported date is unavailable, the date the public health unit created the outbreak is used. Ongoing outbreaks includes all outbreaks that are 'Open' in CCM without a 'Declared Over Date' recorded. Closed outbreaks are 'Closed' or have a 'Declared Over Date' recorded in CCM or where the outbreak start date (determined by the onset date of first case, or if missing the reported date, or if missing the created date) is more than 5 months from the current date, even for outbreaks where the outbreak status value selected in CCM is 'OPEN'. Week 8 refers to February 16 and 22, 2020 and week 4 refers to January 24 and 30, 2021.

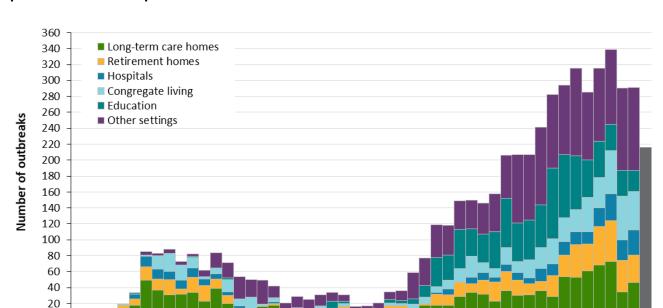


Figure 11. Public health unit declared COVID-19 outbreaks by outbreak setting type and public health unit reported week: Ontario

**Note:** If public health unit outbreak reported date is unavailable, the date the public health unit created the outbreak is used. Week 8 refers to February 16 and 22, 2020 and week 4 refers to January 24 and 30, 2021. Congregate living include group homes, shelters, correctional facilities, etc. Other settings include outbreaks within workplaces, childcare, schools, restaurants, recreation etc.

10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52

Week

Data Source: CCM

0

## Variant COVID-19 Cases

Table 9a. Summary of cases by variant of concern (VOC): Ontario

Variant	Cumulative case count up to January 30
Lineage B.1.1.7 (UK variant)	106
Lineage B.1.351 (South African variant)	1

**Note:** Further details on screening for variants of concern can be found in the <u>technical notes</u>. Caution should be taken when interpreting these data due to potential sampling biases and delay between sample collection and sequencing in recent weeks.

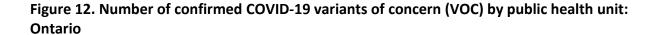
Data Source: CCM

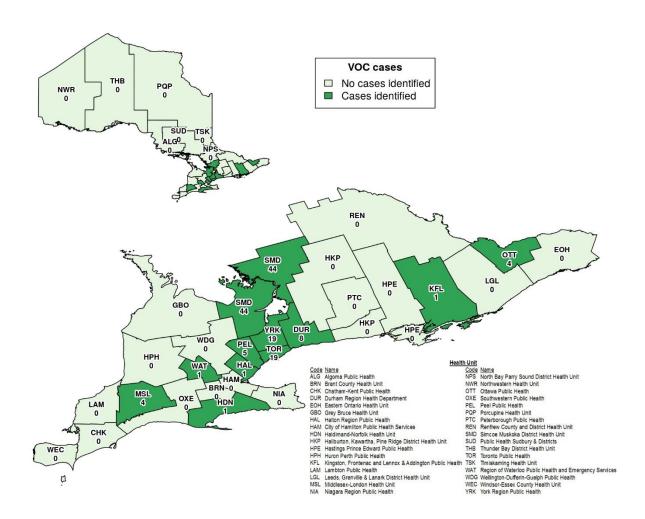
Table 9b. Ontario SARS-Co-V-2 Variant of Concern (VOC) screening data

	Cumulative count up to January 30
Specimens screened	6,309

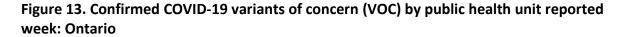
**Note:** Individuals may have more than one specimen screened for VOCs. Cumulative counts include VOC screening data starting December 1, 2020. Ongoing sequencing can result in count that may differ from previously reported counts.

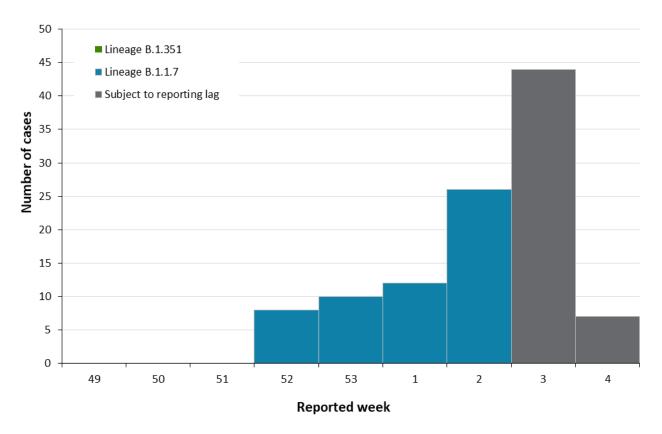
Data Source: PHO Laboratory and other Ontario sequencing laboratories





**Note:** Further details on testing for variants of concern can be found in the <u>Technical Notes</u>. The cumulative number of cases with a variant of concern by public health unit and region are available in <u>Appendix A: Table 3A</u>. Caution should be taken when interpreting these data due to potential sampling biases and delay between sample collection and sequencing in recent weeks.





**Note:** Reported week is based on the date the case was reported, not the date that the VOC was identified. Include cases with reported dates ranging from week 49 (November 29 and December 5, 2020) to week 4 (January 24 and 30, 2021). Additional testing was conducted in week 3 which led to an increase in the number of cases with variants of concern identified. Further details on screening for variants of concern can be found in the <u>technical notes</u>. Caution should be taken when interpreting these data due to potential sampling biases and delay between sample collection and sequencing in recent weeks. See <u>Table 1A</u> in Appendix A for a list of the weeks and corresponding start and end dates.

#### **Technical Notes**

#### **Data Sources**

- The data for this report were based on:
  - Information successfully extracted from the Public Health Case and Contact Management Solution (CCM) for all PHUS by PHO as of **February 2, 2021 at 1 p.m.**
  - SARS-CoV-2 Variant of Concern screening performed at PHO Laboratory and other sequencing laboratories performing VOC screening in Ontario, as of **February 2, 2021**.
- CCM is a dynamic disease reporting systems, which allow ongoing updates to data previously
  entered. As a result, data extracted from CCM represent a snapshot at the time of extraction
  and may differ from previous or subsequent reports.
- Ontario population projection data for 2020 were sourced from Ministry, IntelliHEALTH Ontario.
   Data were extracted on November 26, 2019.
- Statistics Canada Postal Code Conversion File (PCCF), reference date of May 2020.
- The health equity (neighbourhood-level diversity and deprivation) analyses use data from the 2016 Ontario Marginalization Index and population counts from the 2016 Canada Census:
  - Matheson FI; van Ingen T. 2016 Ontario marginalization index. Toronto, ON: Providence St. Joseph's and St. Michael's Healthcare; 2018. Joint publication with Public Health Ontario.
  - Statistics Canada. Census of Population, 2016: Profile for Canada, Provinces, Territories,
    Census Divisions, Census Subdivisions and Dissemination Areas. Retrieved from:
    <a href="https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/download-telecharger/comp/GetFile.cfm?Lang=E&FILETYPE=CSV&GEONO=044">https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/download-telecharger/comp/GetFile.cfm?Lang=E&FILETYPE=CSV&GEONO=044</a> ONTARIO.

#### **Data Caveats and Methods: Case Data**

- The data only represent cases reported to public health units and recorded in CCM. As a result, all counts are subject to varying degrees of underreporting due to a variety of factors, such as disease awareness and medical care seeking behaviours, which may depend on severity of illness, clinical practice, changes in laboratory testing, and reporting behaviours.
- Observed trends over time should be interpreted with caution for the most recent period due to reporting and/or data entry lags.
- All cases meeting the confirmed case classification as listed in the MOH <u>COVID-19 case definition</u> are included except where noted (e.g., analyses that describe the relationship between COVID-19 and marginalization). This includes persons with a positive detection of serum/plasma immunoglobulin G (IgG) antibodies to SARS-CoV-2, which was added to the confirmed case definition on **August 6, 2020**.

- Cases of confirmed reinfection, i.e. where genome sequencing indicates the two episodes are caused by different viral lineages, added to the confirmed case definition on November 20, 2020, are counted as unique investigations.
- COVID-19 cases from CCM for which the Classification and/or Disposition was reported as
  ENTERED IN ERROR, DOES NOT MEET DEFINITION, IGNORE, DUPLICATE, or any variation on
  these values have been excluded. The provincial case count for COVID-19 includes cases that are
  counted once across all systems from which the case data are obtained. Duplicate records may
  exist if these records were not identified and resolved prior to data upload to the Ministry.
- Reported date is the date the case was reported to the public health unit. This is different than
  the daily change in cases released by the Province for the same time period, which reflects the
  difference in cumulative counts reported to the Province between one day and the next.
- Reported weeks were created to align with the Public Health Agency of Canada (PHAC) influenza surveillance weeks.
- Case episode date is based on an estimate of the best date of disease onset. This date is calculated based on either the date of symptom onset, specimen collection/test date, or the date reported to the public health unit.
- Cases with unknown or missing ages were excluded from age-specific analyses.
- Health care worker includes cases that reported 'Yes' to any of the following occupations: health care worker, doctor, nurse, dentist, dental hygienist, midwife, other medical technicians, personal support worker, respiratory therapist, first responder.
- Resolved cases are determined only for COVID-19 cases that have not died. Cases that have died are considered fatal and not resolved. The following cases are considered resolved:
  - Cases that are reported as 'recovered' in CCM based on local public health unit assessment
  - Cases that are not hospitalized and are 14 days past their symptom onset date or specimen collection date (where symptom onset date is not known)
  - Cases that are currently hospitalized (no hospitalization end date entered) and have a case status of 'closed' indicating that public health follow up is complete and are 14 days past their symptom onset date or specimen collection date
- Data on hospital admissions, ICU admissions and deaths are likely under-reported as these events may occur after the completion of public health follow up of cases. Cases that were admitted to hospital or died after follow-up was completed may not be captured in CCM.
- Deaths are determined by using the outcome field in CCM. Any case marked 'Fatal' is included in the deaths data. The CCM field Type of Death is not used to further categorize the data.
  - The date of death is determined using the outcome date field for cases marked as 'Fatal' in the outcome field.

- Hospitalization includes all cases for which a hospital admission date was reported at the time of
  data extraction. It includes cases that have been discharged from hospital as well as cases that
  are currently hospitalized. Emergency room visits are not included in the number of reported
  hospitalizations.
- ICU admission includes all cases for which an ICU admission date was reported at the time of
  data extraction. It is a subset of the count of hospitalized cases. It includes cases that have been
  treated or that are currently being treated in an ICU.
- Likely source of acquisition is determined by examining the epidemiologic link and epidemiologic link status fields in CCM and local systems. If no epidemiologic link is identified in those fields the risk factor fields are examined to determine whether a case travelled, was associated with a confirmed outbreak, was a contact of a case, had an Epidemiological link with type unspecified, had no known epidemiological link (sporadic community transmission) or was reported to have an unknown source/no information was reported. Some cases may have no information reported if the case is untraceable, was lost to follow-up or referred to FNIHB. Cases with multiple risk factors were assigned to a single likely acquisition source group which was determined hierarchically in the following order:
  - For cases with an episode date on or after April 1, 2020: Outbreak-associated > close contact of a confirmed case > travel > no known epidemiological link > information missing or unknown
  - For cases with an episode date before April 1, 2020: Travel > outbreak-associated > close contact of a confirmed case > no known epidemiological link > information missing or unknown
- 'Long-term care home residents' includes cases that reported 'Yes' to the risk factor 'Resident of a long-term care home'; or 'Yes' to the risk factor 'Resident of nursing home or other chronic care facility' and reported to be part of an outbreak assigned as a long-term care home (via the Outbreak number or case comments field); or were reported to be part of an outbreak assigned as a long-term care home (via the outbreak number or case comments field) with an age over 70 years and did not report 'No' to the risk factors 'Resident of long-term care home' or 'Resident of nursing home or other chronic care facility'. 'Long-term care home residents' excludes cases that reported 'Yes' to any of the health care worker occupational risk factors.
- 'Health care workers associated with long-term care outbreaks' includes 'health care workers'
  reported to be part of an outbreak assigned as a long-term care home (via the outbreak number
  or case comments field). Excludes cases that reported 'Yes' to risk factors 'Resident of long-term
  care home' or 'Resident of nursing home or other chronic care facility' and 'Yes' to the
  calculated 'health care workers' variable.
- 'Cases associated with school outbreaks' includes cases that are linked to an outbreak, by school classification type (Elementary, Elementary/Secondary, Secondary, Post-Secondary), that met the definition of a <a href="school outbreak">school outbreak</a>.
- School classification types are defined by the Ministry of Education.

- Elementary/Secondary schools include public or private schools educating children in a combination of elementary and secondary grades (e.g., Kindergarten to Grade 8, Grades 9 to 12, and Kindergarten to Grade 12).
- Orientation of case counts by geography is based on the diagnosing health unit (DHU). DHU
  refers to the case's public health unit of residence at the time of illness onset and not
  necessarily the location of exposure. Cases for which the DHU was reported as MOH (to signify a
  case that is not a resident of Ontario) have been excluded from the analyses.
  - GTA health units include: Durham Region Health Department, Peel Public Health, Toronto Public Health and York Region Public Health
- Ongoing outbreaks are those that are reported in CCM as 'Open' and without a 'Declared Over Date' recorded. Closed outbreaks are 'Closed' or have a 'Declared Over Date' recorded in CCM or where the outbreak start date (determined by the onset date of first case, or if missing the reported date, or if missing the created date) is more than 5 months from the current date, even for outbreaks where the outbreak status value selected in CCM is 'OPEN'.
- Outbreaks are declared by the local medical officer of health or their designate in accordance to the Health Protection and Promotion Act and criteria outlined in Ministry guidance documents.
- School outbreaks include outbreaks declared on or after week 36 (August 30 to September 5, 2020).
- A confirmed VOC case is defined as a COVID-19 case in whom a designated VOC was detected by genome sequencing in their clinical SARS-CoV-2 positive specimen. Caution should be taken when interpreting these data due to potential sampling biases and delay between sample collection and sequencing in recent weeks.
- PANGO lineage B.1.1.7 (also known as VOC-202012/01 or 501Y.V1)
  - This lineage was first detected in England in September, 2020. Early evidence suggests that the N501Y mutation may increase SARS-CoV-2 transmissibility. The PANGO lineage B.1.1.7 is assigned to genome sequences with at least 5 of the 17 defining B.1.1.7 SNPs.
- PANGO lineage B.1.351 (also known as 501Y.V2)
  - This lineage was first detected October, 2020 in South Africa and has several mutations of concern, including spike (S) gene: N501Y, K417N, and E484K. Early evidence suggests that these mutations may increase SARS-CoV-2 transmissibility and decrease vaccine efficacy. The PANGO lineage B.1.351 will be assigned to genome sequences at least 5 of the 9 defining B.1.351 SNPs.
- Public Health Ontario conducts variants of concern (VOC) surveillance on a subset of SARS-CoV-2 positive specimens. Additional SARS-CoV-2 specimens are referred to PHO Laboratory for screening provided they meet the criteria outlined here:
   <a href="https://www.publichealthontario.ca/en/laboratory-services/test-information-index/covid-19-voc">https://www.publichealthontario.ca/en/laboratory-services/test-information-index/covid-19-voc</a>

- Other Ontario laboratories conducting sequencing include: The Hospital for Sick Children (SickKids), Sunnybrook Health Sciences, and McMaster University.
- VOC surveillance data should be interpreted with caution due to the lag between initial laboratory detection of SARS-CoV-2 and subsequent variant screening. Laboratory confirmation of VOCs by genome sequencing occurs at variable intervals after initial detection, depending when the request is made to have the screening conducted.

#### **Data Caveats and Methods: ON-Marg**

- ON-Marg is a data tool that combines a wide range of demographic indicators into multiple
  distinct dimensions of marginalization. It is an area-based index which assigns a measure of
  marginalization based on neighbourhood versus individual characteristics. As such, the broader
  demographic trends of an area may not reflect all residents of a neighbourhood owing to the
  inherent heterogeneity of demographic characteristics which can vary substantially especially
  across large rural geographies. For more information, please visit <a href="PHO's ON-Marg website">PHO's ON-Marg website</a>.
- Neighbourhood diversity is defined using the ethnic concentration dimension of ON-Marg,
  which measures populations who may experience marginalization related to racism and
  discrimination. It is based on the proportion of non-white and non-Indigenous residents (visible
  minority) and/or the proportion of immigrants that arrived in Canada within the past five years.
  'Visible minority' is a term used by Statistics Canada that, although is considered to be outdated,
  is used here to be consistent with the Canadian census.
- Neighbourhood deprivation is defined using the material deprivation dimension of ON-Marg, which is closely connected to poverty. It refers to the inability of individuals and communities to access and attain basic material needs. The indicators included in this dimension measure income, quality of housing, educational attainment and family structure characteristics.
- "Neighbourhoods" are considered to be Statistic Canada dissemination areas (DA). The Single Link Indicator Postal Code Conversion File (PCCF) was used to match individuals to a DA based on their postal code, which were subsequently assigned to a quintile of marginalization that contained 20% of Ontario neighbourhoods. The quintiles for the ethnic concentration and the material deprivation dimensions are ordered from quintiles 1 to 5, with quintile 1 having the lowest level of marginalization (i.e., least diverse or least deprived) and quintile 5 having the highest level of marginalization (i.e., most diverse or most deprived).
- The following were not included in analyses that summarize the impact of COVID-19 among Ontarians who may experience marginalization:
  - People who have tested positive for COVID-19 that reside in institutional and congregate settings are not included in the census data from which the marginalization indicators (ethnic concentration and material deprivation) are derived. Although these cases represent a large number of cases overall and deaths, their exclusion ensures appropriate comparisons since institutional and congregate setting residents are excluded from ON-Marg.

- People who have tested positive for COVID-19 that reside in census dissemination areas
  where data has been suppressed, and cases that have missing or invalid postal codes could
  not be assigned to a quintile of marginalization.
- Due to data suppression for some census indicators on Indian Reserves in Ontario, residents of Indian Reserves could not be included in ON-Marg and therefore people who have tested positive for COVID-19 and are living on Indian Reserves could not be assigned to a quintile of marginalization. While Indigenous individuals living off reserves are included in this analysis, Indigeneity data is not currently collected or captured in dimensions of ON-Marg.

# Appendix A

Table 1A. Confirmed cases of COVID-19 by public health unit reported week: Ontario

Reported Week	Start date	End date	Number of cases	Cumulative count
2	January 5, 2020	January 11, 2020	0	0
3	January 12, 2020	January 18, 2020	1	1
4	January 19, 2020	January 25, 2020	3	4
5	January 26, 2020	February 1, 2020	0	4
6	February 2, 2020	February 8, 2020	0	4
7	February 9, 2020	February 15, 2020	0	4
8	February 16, 2020	February 22, 2020	1	5
9	February 23, 2020	February 29, 2020	13	18
10	March 1, 2020	March 7, 2020	14	32
11	March 8, 2020	March 14, 2020	147	179
12	March 15, 2020	March 21, 2020	437	616
13	March 22, 2020	March 28, 2020	1,306	1,922
14	March 29, 2020	April 4, 2020	2,780	4,702
15	April 5, 2020	April 11, 2020	3,135	7,837
16	April 12, 2020	April 18, 2020	4,206	12,043
17	April 19, 2020	April 25, 2020	3,628	15,671
18	April 26, 2020	May 2, 2020	2,882	18,553
19	May 3, 2020	May 9, 2020	2,343	20,896
20	May 10, 2020	May 16, 2020	2,185	23,081
21	May 17, 2020	May 23, 2020	2,616	25,697
22	May 24, 2020	May 30, 2020	2,602	28,299

Reported Week	Start date	End date	Number of cases	Cumulative count
23	May 31, 2020	June 6, 2020	2,304	30,603
24	June 7, 2020	June 13, 2020	1,471	32,074
25	June 14, 2020	June 20, 2020	1,231	33,305
26	June 21, 2020	June 27, 2020	1,252	34,557
27	June 28, 2020	July 4, 2020	1,083	35,640
28	July 5, 2020	July 11, 2020	867	36,507
29	July 12, 2020	July 18, 2020	931	37,438
30	July 19, 2020	July 25, 2020	992	38,430
31	July 26, 2020	August 1, 2020	804	39,234
32	August 2, 2020	August 8, 2020	594	39,828
33	August 9, 2020	August 15, 2020	610	40,438
34	August 16, 2020	August 22, 2020	730	41,168
35	August 23, 2020	August 29, 2020	853	42,021
36	August 30, 2020	September 5, 2020	978	42,999
37	September 6, 2020	September 12, 2020	1,506	44,505
38	September 13, 2020	September 19, 2020	2,377	46,882
39	September 20, 2020	September 26, 2020	3,126	50,008
40	September 27, 2020	October 3, 2020	4,229	54,237
41	October 4, 2020	October 10, 2020	5,046	59,283
42	October 11, 2020	October 17, 2020	5,290	64,573
43	October 18, 2020	October 24, 2020	6,051	70,624
44	October 25, 2020	October 31, 2020	6,396	77,020
45	November 1, 2020	November 7, 2020	7,617	84,637

Reported Week	Start date	End date	Number of cases	Cumulative count
46	November 8, 2020	November 14, 2020	10,435	95,072
47	November 15, 2020	November 21, 2020	9,954	105,026
48	November 22, 2020	November 28, 2020	11,058	116,084
49	November 29, 2020	December 5, 2020	12,699	128,783
50	December 6, 2020	December 12, 2020	13,053	141,836
51	December 13, 2020	December 19, 2020	15,653	157,489
52	December 20, 2020	December 26, 2020	15,633	173,122
53	December 27, 2020	January 2, 2021	20,410	193,532
1	January 3, 2021	January 9, 2021	24,881	218,413
2	January 10, 2021	January 16, 2021	21,339	239,752
3	January 17, 2021	January 23, 2021	16,412	256,164
4	January 24, 2021	January 30, 2021	12,769	268,933

Table 2A. Confirmed cases of COVID-19 by public health unit and region: Ontario

Public Health Unit Name	Cases reported week 3	Rate per 100,000 population Reported week 3	Cases reported week 4	Rate per 100,000 population Reported week 4
Northwestern Health Unit	15	17.1	14	16.0
Thunder Bay District Health Unit	143	95.4	111	74.0
TOTAL NORTH WEST	158	66.5	125	52.6
Algoma Public Health	9	7.9	16	14.0
North Bay Parry Sound District Health Unit	4	3.1	5	3.9
Porcupine Health Unit	50	59.9	54	64.7
Public Health Sudbury & Districts	59	29.6	69	34.7
Timiskaming Health Unit	3	9.2	1	3.1
TOTAL NORTH EAST	125	22.3	145	25.9
Ottawa Public Health	649	61.5	403	38.2
Eastern Ontario Health Unit	158	75.7	136	65.2
Hastings Prince Edward Public Health	13	7.7	1	0.6
Kingston, Frontenac and Lennox & Addington Public Health	23	10.8	7	3.3
Leeds, Grenville & Lanark District Health Unit	14	8.1	26	15.0
Renfrew County and District Health Unit	2	1.8	4	3.7
TOTAL EASTERN	859	44.6	577	30.0
Durham Region Health Department	533	74.8	473	66.4

Public Health Unit Name	Cases reported week 3	Rate per 100,000 population Reported week 3	Cases reported week 4	Rate per 100,000 population Reported week 4
Haliburton, Kawartha, Pine Ridge District Health Unit	92	48.7	45	23.8
Peel Public Health	2,927	182.3	2,349	146.3
Peterborough Public Health	40	27.0	32	21.6
Simcoe Muskoka District Health Unit	454	75.7	310	51.7
York Region Public Health	1,526	124.5	1,201	98.0
TOTAL CENTRAL EAST	5,572	124.4	4,410	98.4
Toronto Public Health	5,213	167.1	4,200	134.6
TOTAL TORONTO	5,213	167.1	4,200	134.6
Chatham-Kent Public Health	91	85.6	114	107.2
Grey Bruce Health Unit	17	10.0	28	16.5
Huron Perth Public Health	122	87.3	70	50.1
Lambton Public Health	133	101.6	65	49.6
Middlesex-London Health Unit	396	78.0	243	47.9
Southwestern Public Health	152	71.9	84	39.7
Windsor-Essex County Health Unit	640	150.6	385	90.6
TOTAL SOUTH WEST	1,551	91.7	989	58.5
Brant County Health Unit	62	39.9	56	36.1
City of Hamilton Public Health Services	584	98.6	489	82.6
Haldimand-Norfolk Health Unit	73	64.0	35	30.7

Public Health Unit Name	Cases reported week 3	Rate per 100,000 population Reported week 3	Cases reported week 4	Rate per 100,000 population Reported week 4
Halton Region Public Health	500	80.8	355	57.3
Niagara Region Public Health	699	147.9	618	130.8
Region of Waterloo Public Health and Emergency Services	631	108.0	486	83.2
Wellington-Dufferin-Guelph Public Health	385	123.4	284	91.1
TOTAL CENTRAL WEST	2,934	103.0	2,323	81.5
TOTAL ONTARIO	16,412	110.4	12,769	85.9

**Note:** Interpret information for the most recent week with caution due to reporting lags.

Table 3A. Confirmed COVID-19 variants of concern by public health unit and region: Ontario

Public Health Unit Name	Cumulative case count up to January 30 for Lineage B.1.1.7	Cumulative case count up to January 30 for Lineage B.1.351
Northwestern Health Unit	0	0
Thunder Bay District Health Unit	0	0
TOTAL NORTH WEST	0	0
Algoma Public Health	0	0
North Bay Parry Sound District Health Unit	0	0
Porcupine Health Unit	0	0
Public Health Sudbury & Districts	0	0
Timiskaming Health Unit	0	0
TOTAL NORTH EAST	0	0
Ottawa Public Health	4	0
Eastern Ontario Health Unit	0	0
Hastings Prince Edward Public Health	0	0
Kingston, Frontenac and Lennox & Addington Public Health	1	0
Leeds, Grenville & Lanark District Health Unit	0	0
Renfrew County and District Health Unit	0	0
TOTAL EASTERN	5	0
Durham Region Health Department	8	0
Haliburton, Kawartha, Pine Ridge District Health Unit	0	0
Peel Public Health	4	1
Peterborough Public Health	0	0
Simcoe Muskoka District Health Unit	44	0

Public Health Unit Name	Cumulative case count up to January 30 for Lineage B.1.1.7	Cumulative case count up to January 30 for Lineage B.1.351
York Region Public Health	19	0
TOTAL CENTRAL EAST	75	1
Toronto Public Health	19	0
TOTAL TORONTO	19	0
Chatham-Kent Public Health	0	0
Grey Bruce Health Unit	0	0
Huron Perth Public Health	0	0
Lambton Public Health	0	0
Middlesex-London Health Unit	4	0
Southwestern Public Health	0	0
Windsor-Essex County Health Unit	0	0
TOTAL SOUTH WEST	4	0
Brant County Health Unit	0	0
City of Hamilton Public Health Services	0	0
Haldimand-Norfolk Health Unit	1	0
Halton Region Public Health	1	0
Niagara Region Public Health	0	0
Region of Waterloo Public Health and Emergency Services	1	0
Wellington-Dufferin-Guelph Public Health	0	0
TOTAL CENTRAL WEST	3	0
TOTAL ONTARIO	106	1

**Note:** Caution should be taken when interpreting these data due to potential sampling biases and delay between sample collection and sequencing in recent weeks.

Table 4A: Ontario SARS-CoV-2 Variant of Concern (VOC) screening data

Date	PHO Laboratory: # specimens screened	Other Ontario sequencing laboratories: # specimens screened	Ontario Total: # specimens screened
December 1, 2020 to January 2, 2021	1,880	N/A	1,880
January 3 to 9, 2021	333	N/A	333
January 10 to 16, 2021	542	79	621
January 17 to 23, 2021	969	217	1,186
January 24 to 30, 2021	2,193	96	2,289

**Note:** Date refers to the date the VOC testing was completed. Individuals may have more than one specimen screened for VOCs. Other Ontario sequencing laboratories include McMaster University, Sunnybrook Health Sciences, and The Hospital for Sick Children (SickKids). Caution should be taken when interpreting these data due to potential sampling biases and delay between sample collection and sequencing in recent weeks.

Data Source: PHO Laboratory and other Ontario sequencing laboratories

### Disclaimer

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## For Further Information

For more information, email <a href="mailto:cd@oahpp.ca">cd@oahpp.ca</a>.

## **Public Health Ontario**

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