

## Weekly Epidemiologic Summary

# COVID-19 in Ontario: Focus on March 7, 2021 to March 13, 2021

This report includes the most current information available from CCM as of March 16, 2021.

Please visit the interactive Ontario COVID-19 Data Tool 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

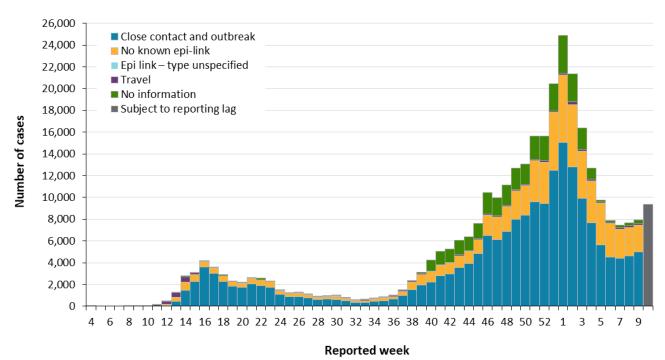
- There are a total of 318,953 confirmed cases of COVID-19 in Ontario with a public health unit reported date up to March 13, 2021.
- For the period with a public health unit reported date between March 7 to 13, 2021 (week 10):
  - A total of 9,376 cases were reported to public health compared to 7,916 cases the previous week (February 28 to March 6, 2021).
  - The total number of cases reported in week 10 is the highest since week 4 (January 31 to February 6, 2021) where 9,751 cases were reported. The 9,376 cases reported in week 10 represent a 21.7% increase compared to 7,706, the mean number of weekly cases reported between weeks 5 and 9 (February 7 to March 13, 2021).
  - The number of cases associated with outbreaks in congregate living settings (e.g. correctional facilities, shelters, group home/supportive housing and short-term accommodations) decreased by 37.0% in week 10 compared to week 9.

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.

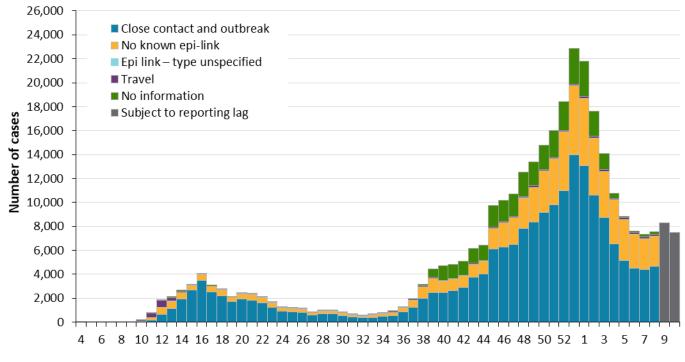
### **Cases Over Time**

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 10 (March 7 and 13, 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



#### Episode week

**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 10 (March 7 and 13, 2021). See <u>Table 1A</u> in Appendix A for a list of the weeks and corresponding start and end dates.

## **Case Characteristics**

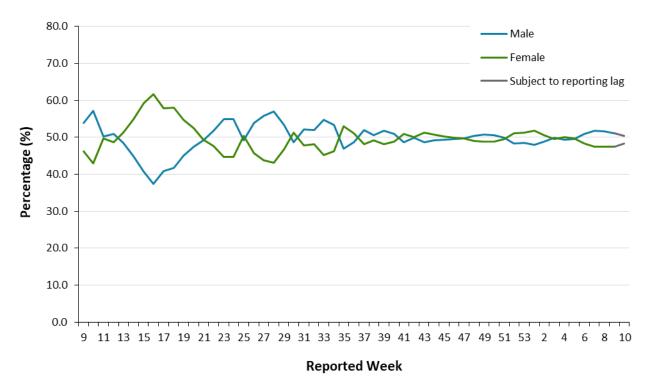
Table 1. Summary of confirmed cases of COVID-19 by public health unit reported date: Ontario

	Reported week 9 (February 28 to March 6)	Reported week 10 (March 7 to 13)	Cumulative case count up to March 13	Cumulative rate per 100,000 population
Total number of cases	7,916	9,376	318,953	2,145.7
Gender: Male	4,049	4,729	157,161	2,147.2
Gender: Female	3,750	4,538	160,046	2,121.2
Ages: 19 and under	1,511	1,888	43,758	1,395.1
Ages: 20-39	3,007	3,449	116,961	2,814.1
Ages: 40-59	2,180	2,580	91,887	2,333.6
Ages: 60-79	997	1,209	45,592	1,542.9
Ages: 80 and over	212	245	20,683	3,044.9
Number resolved	N/A	N/A	302,208	N/A

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

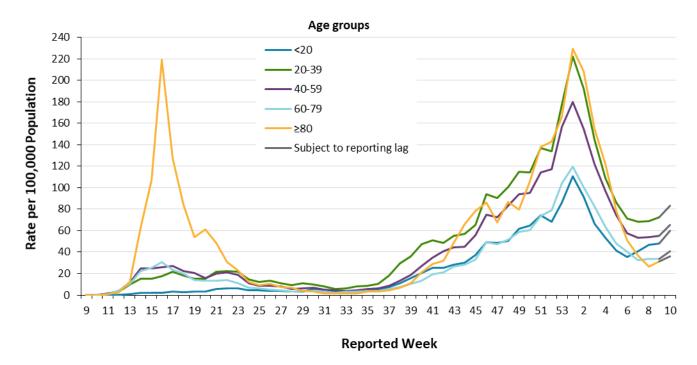
Interpret information for the most recent week with caution due to reporting lags.





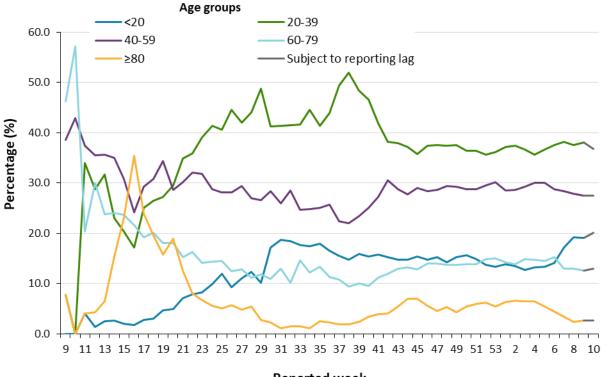
**Note:** Not all cases have a gender reported. The denominator for calculating weekly percentages includes all cases. Only weeks with more than 10 cases by public health unit reporting date are included (starting in week 9). Include cases with reported dates ranging from week 9 (February 23 and 29, 2020) to week 10 (March 7 and 13, 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 10 (March 7 and 13, 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

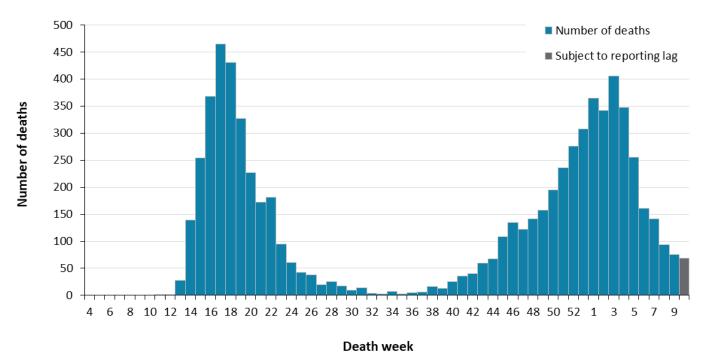


#### Reported week

**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 10 (March 7 and 13, 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 10 (March 7 and 13, 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 9 (February 28 to March 6)	Reported week 10 (March 7 to 13)	Cumulative case count up to March 13	Cumulative rate per 100,000 population
Number of deaths	40	17	7,185	48.3
Gender: Male	18	6	3,483	47.6
Gender: Female	22	11	3,659	48.5
Ages: 19 and under	0	0	2	0.1
Ages: 20-39	1	1	31	0.7
Ages: 40-59	1	2	295	7.5
Ages: 60-79	14	4	1,998	67.6
Ages: 80 and over	24	10	4,858	715.2

**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 9 (February 28 to March 6)	Percentage	Reported week 10 (March 7 to 13)	Percentage	Cumulative case count up to March 13	Cumulative percentage
Travel	147	1.9%	129	1.4%	5,745	1.8%
Outbreak-associated or close contact of a confirmed case	4,986	63.0%	5,405	57.6%	198,003	62.1%
Epidemiological link – type unspecified	0	0.0%	0	0.0%	170	0.1%
No known epidemiological link	2,468	31.2%	2,741	29.2%	79,159	24.8%
Information missing or unknown	315	4.0%	1,101	11.7%	35,876	11.2%
Total	7,916		9,376		318,953	

**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 9 (February 28 to March 6)	Reported week 10 (March 7 to 13)	Cumulative case count up to March 13
Number of cases	216	191	19,941
Ever hospitalized	1	5	381
Ever in ICU	0	0	82

**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 9 (February 28 to March 6)	Reported week 10 (March 7 to 13)	Cumulative case count up to March 13
Residents	11	8	14,985
Deaths among residents	2	3	3,887
Health care workers	20	15	6,756
Deaths among health care workers	0	0	10

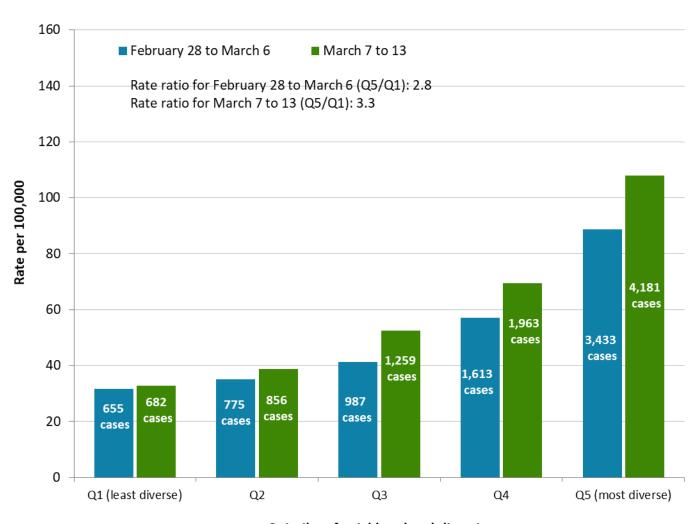
**Note:** Information on how long-term care home residents and health care workers are identified is available in the technical notes. Interpret information for the most recent week with caution due to reporting lags.

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

	Reported week 9 (February 28 to March 6)	Reported week 10 (March 7 to 13)	Cumulative case count from August 30 up to March 13	
Ages: 4-8	358	408	7,512	
Ages: 9-13	424	519	10,020	
Ages: 14-17	325	428	10,293	

**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 9 (February 28 to March 6, 2021) and week 10 (March 7 to 13, 2021).

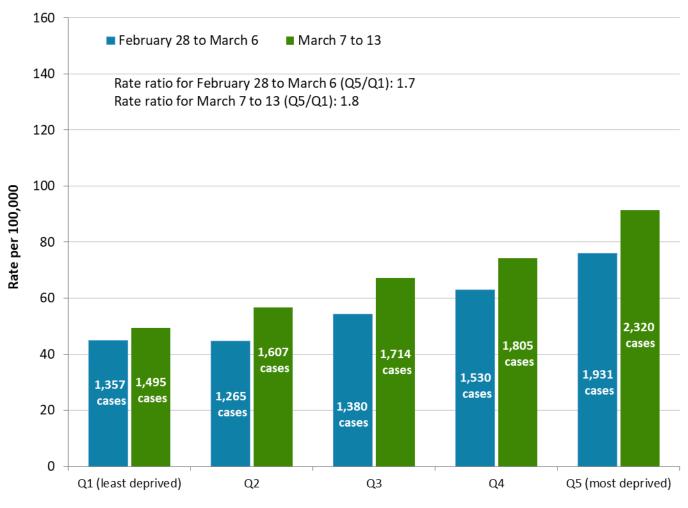


Quintiles of neighbourhood diversity

**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 9 (February 28 to March 6, 2021) and week 10 (March 7 to 13, 2021).



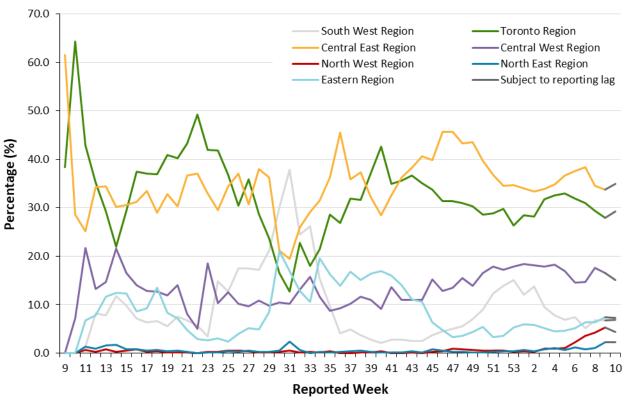
Quintiles of neighbourhood deprivation

**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

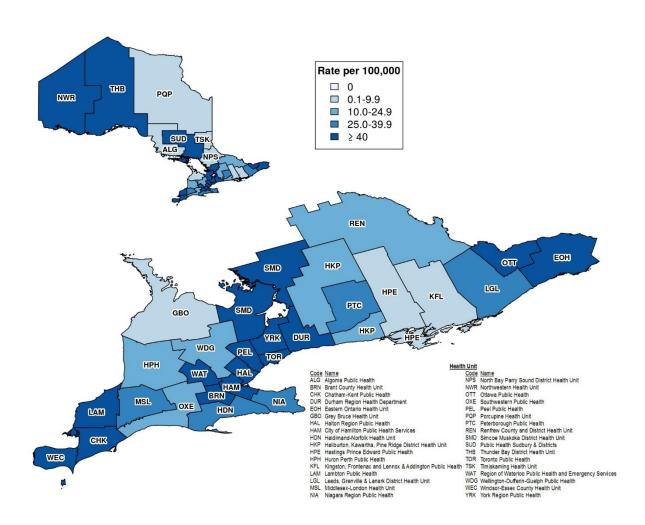
## Geography

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 10 (March 7 and 13, 2021). Table 2A in Appendix A has a listing of public health units by region.

Figure 9. Rate of confirmed cases of COVID-19 in public health reported week 10 (March 7 to 13, 2021) by public health unit: Ontario



**Note:** The provincial rate of confirmed cases of COVID-19 reported in week 10 was 63.1 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 10 (March 7 to 13)	Number of ongoing outbreaks	Cumulative number of outbreaks reported to March 13
Congregate Care	55	144	2,554
Long-term care homes	25	69	1,329
Retirement homes	16	46	790
Hospitals	14	29	435
Congregate Living	22	88	864
Correctional facility	1	9	37
Shelter	8	31	169
Group Home/supportive housing	7	35	527
Short-term accommodations	2	3	21
Congregate other	4	10	110
Education	65	134	1,234
Child care	21	41	446
School – Elementary*	39	76	573
School – Elementary/secondary*	0	1	34
School – Secondary*	4	14	158
School – Post-secondary*	1	2	23
Other settings	84	190	2,324
Bar/restaurant/nightclub	5	10	180
Medical/health services	2	4	103
Personal service settings	1	3	17

Setting Type	Reported week 10 (March 7 to 13)	Number of ongoing outbreaks	Cumulative number of outbreaks reported to March 13
Recreational fitness	0	4	62
Retail	9	22	244
Other recreation/community	0	14	114
Workplace – Farm	4	17	116
Workplace - Food processing	1	5	167
Other types of workplaces	52	98	1,297
Other	5	5	7
Unknown	5	8	17
Total number of outbreaks	226	556	6,976

**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/community 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.
\*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 9 (February 28 to March 6)	Reported week 10 (March 7 to 13)	Cumulative number of cases
Congregate Care	178	233	36,896
Long-term care homes	45	51	24,958
Retirement homes	43	69	6,800
Hospitals	90	113	5,138
Congregate Living	285	208	6,476
Correctional facility	43	25	1,157
Shelter	111	52	1,771
Group Home/supportive housing	75	63	2,632
Short-term accommodations	4	8	75
Congregate other	52	60	841
Education	321	290	4,938
Child care	71	67	1,267
School – Elementary*	174	162	2,455
School – Elementary/secondary*	3	0	218
School – Secondary*	35	41	753
School – Post-secondary*	38	20	245
Other settings	649	461	17,794
Bar/restaurant/nightclub	20	24	722
Medical/health services	9	2	438
Personal service settings	11	4	60
Recreational fitness	36	14	507
Retail	30	30	1,122

Cases associated with the outbreak setting type	Reported week 9 (February 28 to March 6)	Reported week 10 (March 7 to 13)	Cumulative number of cases
Other recreation/community	102	40	1,498
Workplace - Farm	26	14	2,514
Workplace - Food processing	37	9	2,155
Other types of workplaces	344	276	8,631
Other	10	32	59
Unknown	24	16	88
Total number of cases	1,433	1,192	66,104

**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/community 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.

Ongoing re-classification of settings for reported outbreaks can result in case counts that may differ from previously reported counts.

<sup>\*</sup>Cumulative counts include cases of COVID-19 associated with school outbreaks reported starting week 36 (August 30 to September 5, 2020).

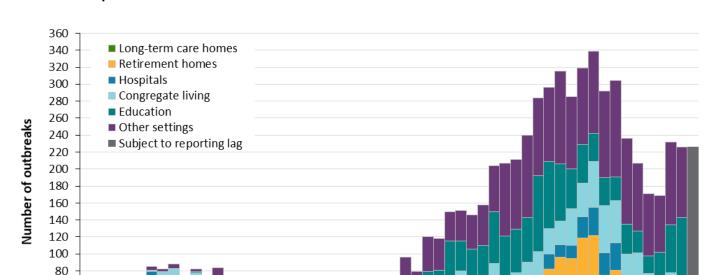


Figure 10. Public health unit declared COVID-19 outbreaks by outbreak setting type and public health unit reported week: Ontario

**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 10 refers to March 7 and 13, 2021. Congregate living include group homes, shelters, correctional facilities, etc. Other settings include outbreaks within workplaces, childcare, schools, restaurants, recreation etc.

8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 1

Week

Data Source: CCM

60 -40 -20 -

#### Variant COVID-19 Cases

Table 9. Summary of confirmed COVID-19 cases with a mutation or VOC detected by age group and gender: Ontario

	Lineage B.1.1.7	Lineage B.1.351	Lineage P.1	Mutation detected (lineage not determined)	Cumulative case count as of March 13, 2021
Gender: Male	551	24	21	4,767	5,363
Gender: Female	580	22	13	4,379	4,994
Ages: 19 and under	154	3	4	1,703	1,864
Ages: 20-39	424	18	15	3,504	3,961
Ages: 40-59	324	14	11	2,684	3,033
Ages: 60-79	165	9	4	1,159	1,337
Ages: 80 and over	66	2	0	201	269

**Note:** Not all cases have a reported age or gender reported. Data corrections or updates can result in case records being removed and or updated from past reports and may result in subset totals (i.e., age group, gender) differing from past publicly reported case counts. Data for cases with a B.1.1.7, B.1.351, and P.1 lineage detected are determined using the Investigation Subtype field only. Mutation detected (lineage not determined) includes all confirmed COVID-19 cases with a lineage or mutation detected reported in the Investigation Subtype field excluding B.1.1.7, B.1.351, and P.1 lineages.

Table 10. Summary of confirmed COVID-19 cases with a mutation or VOC detected by likely source of acquisition: Ontario

	Lineage B.1.1.7	%	Lineage B.1.351	%	Lineage P.1	%	Mutation detected (lineage not determined)	%	Cumulative case count up to March 13, 2021	Cumulative percentage
Travel	56	4.9%	8	17.4%	1	2.9%	256	2.8%	321	3.1%
Outbreak- associated or close contact of a confirmed case	832	73.4%	35	76.1%	22	64.7%	6,111	66.0%	7,000	66.9%
Epidemiological link  – type unspecified	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
No known epidemiological link	237	20.9%	3	6.5%	11	32.4%	2,291	24.8%	2,542	24.3%
Information missing or unknown	8	0.7%	0	0.0%	0	0.0%	595	6.4%	603	5.8%
Total	1,133		46		34		9,253		10,466	

**Note:** Information for how cases are grouped within each category is available in the technical notes. Data for cases with a B.1.1.7, B.1.351, and P.1 lineage detected are determined using the Investigation Subtype field only. Mutation detected (lineage not determined) includes all confirmed COVID-19 cases with a lineage or mutation detected reported in the Investigation Subtype field excluding B.1.1.7, B.1.351, and P.1 lineages.

#### **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 **March 16, 2021 at 1 p.m.**
- CCM is a dynamic disease reporting system, 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.
- Only cases meeting the confirmed case classification as listed in the <u>MOH Case Definition</u> <u>Coronavirus Disease (COVID-19) document</u> are included in the report counts from CCM. This includes persons with:
  - laboratory confirmation by a validated NAAT assay
  - a validated point-of-care (POC) assay deemed acceptable to provide a final result
  - a validated laboratory-based serological assay SARS-CoV-2

- Cases of confirmed reinfection, as defined in the provincial case definitions, are counted as unique investigations.
- Case classification information may be updated for individuals with a positive result issued from a point-of-care assays.
- 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 may include some duplicate records, if these records were not identified and resolved.
- 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="mailto: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).
- PANGO lineage B.1.1.7: 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.
- PANGO lineage P.1 (also known as 501Y.V3): This lineage was first detected January, 2021 in Brazil
  and has several mutations of concern, including spike (S) gene N501Y, K417T, and E484K. Early
  evidence suggests that these mutations may increase SARS-CoV-2 transmissibility and decrease
  vaccine efficacy. The PANGO lineage P.1 is assigned to genome sequences with more than 10 of the
  17 defining P.1 SNPs.
- Public Health Ontario conducts testing and genomic analyses for SARS-CoV-2 positive specimens
  using 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>
- The laboratory detection of a variant of concern is a multi-step process. Samples that test positive for SARS-CoV-2 and have a cycle threshold (Ct) value ≤ 35 can be tested for mutations common to variants of concern. If positive for the mutation of interest these samples may then undergo genomic analyses to identify the VOC. VOC lineages may still be confirmed using genomic analysis despite specific S gene mutation(s) being documented as 'unable to complete' due to poor sequence quality at the genome position.

• If a VOC is identified through genomic analysis cases initially classified as a mutation may be updated and moved to the appropriate lineage (B.1.1.7, B.1.351 and P.1)

#### 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 PHO's ON-Marg website.
- 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	0	0
4	January 19, 2020	January 25, 2020	3	3
5	January 26, 2020	February 1, 2020	0	3
6	February 2, 2020	February 8, 2020	0	3
7	February 9, 2020	February 15, 2020	0	3
8	February 16, 2020	February 22, 2020	1	4
9	February 23, 2020	February 29, 2020	13	17
10	March 1, 2020	March 7, 2020	14	31
11	March 8, 2020	March 14, 2020	147	178
12	March 15, 2020	March 21, 2020	437	615
13	March 22, 2020	March 28, 2020	1,308	1,923
14	March 29, 2020	April 4, 2020	2,780	4,703
15	April 5, 2020	April 11, 2020	3,134	7,837
16	April 12, 2020	April 18, 2020	4,208	12,045
17	April 19, 2020	April 25, 2020	3,629	15,674
18	April 26, 2020	May 2, 2020	2,889	18,563
19	May 3, 2020	May 9, 2020	2,344	20,907
20	May 10, 2020	May 16, 2020	2,192	23,099
21	May 17, 2020	May 23, 2020	2,616	25,715
22	May 24, 2020	May 30, 2020	2,602	28,317

Reported Week	Start date	End date	Number of cases	Cumulative count
23	May 31, 2020	June 6, 2020	2,303	30,620
24	June 7, 2020	June 13, 2020	1,472	32,092
25	June 14, 2020	June 20, 2020	1,231	33,323
26	June 21, 2020	June 27, 2020	1,252	34,575
27	June 28, 2020	July 4, 2020	1,083	35,658
28	July 5, 2020	July 11, 2020	868	36,526
29	July 12, 2020	July 18, 2020	930	37,456
30	July 19, 2020	July 25, 2020	989	38,445
31	July 26, 2020	August 1, 2020	804	39,249
32	August 2, 2020	August 8, 2020	593	39,842
33	August 9, 2020	August 15, 2020	611	40,453
34	August 16, 2020	August 22, 2020	730	41,183
35	August 23, 2020	August 29, 2020	853	42,036
36	August 30, 2020	September 5, 2020	979	43,015
37	September 6, 2020	September 12, 2020	1,503	44,518
38	September 13, 2020	September 19, 2020	2,372	46,890
39	September 20, 2020	September 26, 2020	3,124	50,014
40	September 27, 2020	October 3, 2020	4,225	54,239
41	October 4, 2020	October 10, 2020	5,037	59,276
42	October 11, 2020	October 17, 2020	5,281	64,557
43	October 18, 2020	October 24, 2020	6,042	70,599
44	October 25, 2020	October 31, 2020	6,384	76,983
45	November 1, 2020	November 7, 2020	7,611	84,594

Reported Week	Start date	End date	Number of cases	Cumulative count
46	November 8, 2020	November 14, 2020	10,435	95,029
47	November 15, 2020	November 21, 2020	9,986	105,015
48	November 22, 2020	November 28, 2020	11,125	116,140
49	November 29, 2020	December 5, 2020	12,687	128,827
50	December 6, 2020	December 12, 2020	13,050	141,877
51	December 13, 2020	December 19, 2020	15,646	157,523
52	December 20, 2020	December 26, 2020	15,632	173,155
53	December 27, 2020	January 2, 2021	20,445	193,600
1	January 3, 2021	January 9, 2021	24,876	218,476
2	January 10, 2021	January 16, 2021	21,357	239,833
3	January 17, 2021	January 23, 2021	16,388	256,221
4	January 24, 2021	January 30, 2021	12,722	268,943
5	January 31, 2021	February 6, 2021	9,763	278,706
6	February 7, 2021	February 13, 2021	7,868	286,574
7	February 14, 2021	February 20, 2021	7,439	294,013
8	February 21, 2021	February 27, 2021	7,648	301,661
9	February 28, 2021	March 6, 2021	7,916	309,577
10	March 7, 2021	March 13, 2021	9,376	318,953

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

Public Health Unit Name	Cases reported week 9	Rate per 100,000 population Reported week 9	Cases reported week 10	Rate per 100,000 population Reported week 10
Northwestern Health Unit	45	51.3	59	67.3
Thunder Bay District Health Unit	371	247.4	352	234.7
TOTAL NORTH WEST	416	175.1	411	173.0
Algoma Public Health	1	0.9	3	2.6
North Bay Parry Sound District Health Unit	5	3.9	4	3.1
Porcupine Health Unit	4	4.8	2	2.4
Public Health Sudbury & Districts	154	77.4	198	99.5
Timiskaming Health Unit	11	33.7	2	6.1
TOTAL NORTH EAST	175	31.3	209	37.4
Ottawa Public Health	390	37.0	470	44.6
Eastern Ontario Health Unit	79	37.9	86	41.2
Hastings Prince Edward Public Health	16	9.5	13	7.7
Kingston, Frontenac and Lennox & Addington Public Health	21	9.9	21	9.9
Leeds, Grenville & Lanark District Health Unit	58	33.5	69	39.8
Renfrew County and District Health Unit	24	22.1	20	18.4
TOTAL EASTERN	588	30.5	679	35.2
Durham Region Health Department	275	38.6	318	44.6

Public Health Unit Name	Cases reported week 9	Rate per 100,000 population Reported week 9	Cases reported week 10	Rate per 100,000 population Reported week 10
Haliburton, Kawartha, Pine Ridge District Health Unit	26	13.8	29	15.3
Peel Public Health	1,389	86.5	1,688	105.1
Peterborough Public Health	78	52.7	50	33.8
Simcoe Muskoka District Health Unit	208	34.7	296	49.4
York Region Public Health	702	57.3	902	73.6
TOTAL CENTRAL EAST	2,678	59.8	3,283	73.3
Toronto Public Health	2,211	70.9	2,739	87.8
TOTAL TORONTO	2,211	70.9	2,739	87.8
Chatham-Kent Public Health	18	16.9	63	59.3
Grey Bruce Health Unit	8	4.7	8	4.7
Huron Perth Public Health	30	21.5	24	17.2
Lambton Public Health	133	101.6	155	118.4
Middlesex-London Health Unit	120	23.6	139	27.4
Southwestern Public Health	45	21.3	47	22.2
Windsor-Essex County Health Unit	185	43.5	205	48.3
TOTAL SOUTH WEST	539	31.9	641	37.9
Brant County Health Unit	86	55.4	99	63.8
City of Hamilton Public Health Services	337	56.9	457	77.2
Haldimand-Norfolk Health Unit	38	33.3	39	34.2
Halton Region Public Health	258	41.7	285	46.0
Niagara Region Public Health	161	34.1	185	39.2

Public Health Unit Name	Cases reported week 9	Rate per 100,000 population Reported week 9	Cases reported week 10	Rate per 100,000 population Reported week 10
Region of Waterloo Public Health and Emergency Services	304	52.0	278	47.6
Wellington-Dufferin-Guelph Public Health	125	40.1	71	22.8
TOTAL CENTRAL WEST	1,309	45.9	1,414	49.6
TOTAL ONTARIO	7,916	53.3	9,376	63.1

**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 March 13 for Lineage B.1.1.7	Cumulative case count up to March 13 for Lineage B.1.351	Cumulative case count up to March 13 for Lineage P.1	Cumulative count up to March 13 for mutation detected (lineage not determined)
Northwestern Health Unit	1	0	0	3
Thunder Bay District Health Unit	0	0	0	1
TOTAL NORTH WEST	1	0	0	4
Algoma Public Health	0	0	0	0
North Bay Parry Sound District Health Unit	2	21	0	13
Porcupine Health Unit	0	2	0	1
Public Health Sudbury & Districts	3	0	0	185
Timiskaming Health Unit	0	1	0	0
TOTAL NORTH EAST	5	24	0	199
Ottawa Public Health	14	2	0	188
Eastern Ontario Health Unit	0	0	0	40
Hastings Prince Edward Public Health	0	0	0	10
Kingston, Frontenac and Lennox & Addington Public Health	1	0	0	17
Leeds, Grenville & Lanark District Health Unit	0	0	0	5
Renfrew County and District Health Unit	0	0	0	0
TOTAL EASTERN	15	2	0	260
Durham Region Health Department	63	0	2	406

Public Health Unit Name	Cumulative case count up to March 13 for Lineage B.1.1.7	Cumulative case count up to March 13 for Lineage B.1.351	Cumulative case count up to March 13 for Lineage P.1	Cumulative count up to March 13 for mutation detected (lineage not determined)
Haliburton, Kawartha, Pine Ridge District Health Unit	2	0	0	29
Peel Public Health	215	10	2	1,799
Peterborough Public Health	1	0	0	119
Simcoe Muskoka District Health Unit	250	1	7	581
York Region Public Health	244	1	5	1,078
TOTAL CENTRAL EAST	775	12	16	4,012
Toronto Public Health	272	5	18	3,682
TOTAL TORONTO	272	5	18	3,682
Chatham-Kent Public Health	1	0	0	0
Grey Bruce Health Unit	0	0	0	2
Huron Perth Public Health	0	0	0	4
Lambton Public Health	0	0	0	32
Middlesex-London Health Unit	4	0	0	35
Southwestern Public Health	2	0	0	18
Windsor-Essex County Health Unit	3	0	0	39
TOTAL SOUTH WEST	10	0	0	130
Brant County Health Unit	0	0	0	27
City of Hamilton Public Health Services	6	0	0	270
Haldimand-Norfolk Health Unit	3	3	0	10

Public Health Unit Name	Cumulative case count up to March 13 for Lineage B.1.1.7	Cumulative case count up to March 13 for Lineage B.1.351	Cumulative case count up to March 13 for Lineage P.1	Cumulative count up to March 13 for mutation detected (lineage not determined)
Halton Region Public Health	21	0	0	231
Niagara Region Public Health	4	0	0	122
Region of Waterloo Public Health and Emergency Services	17	0	0	210
Wellington-Dufferin-Guelph Public Health	4	0	0	96
TOTAL CENTRAL WEST	55	3	0	966
TOTAL ONTARIO	1,133	46	34	9,253

**Note:** Interpret the VOC trends with caution due to the varying time required to complete VOC testing and/or genomic analysis following the initial positive test for SARS-CoV-2.

#### 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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