Public Health Ontario | Santé publique Ontario

WEEKLY EPIDEMIOLOGICAL SUMMARY

# COVID-19 in Ontario: Focus on September 26, 2021 to October 2, 2021

This report includes the most current information available from CCM as of **October 5, 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 daily summary 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.

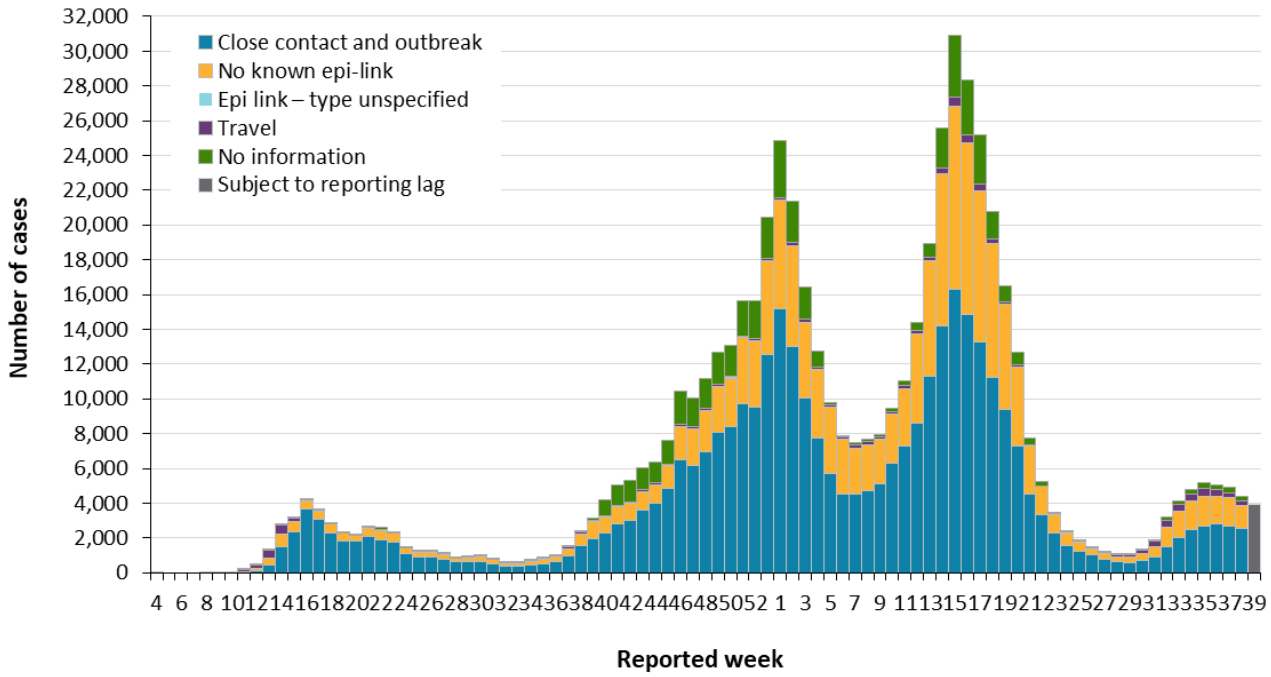
## Highlights

- There are a total of 588,316 confirmed cases of COVID-19 in Ontario with a public health unit reported date up to October 2, 2021.
- For the period with a public health unit (PHU) reported date between September 26 to October 2, 2021 (week 39):
    - A total of 3,948 cases were reported to public health compared to 4,396 cases the previous week (September 19 to 25, 2021).
    - While the rate of cases in most regions has either plateaued or trended downward, the rate in Southwestern region trended upward from 14.0 cases per 100,000 population in week 38 to 17.8 in week 39. Health units in this region, such as Chatham-Kent (101.3), Lambton (60.9) and Windsor-Essex County (58.5) reported some of the highest rates in the province this week.
    - Since week 35 (August 29 to September 4), the rate of cases has declined across most quintiles of neighbourhood diversity with the rate in the most ethnically diverse neighbourhoods reporting a 28.5% decrease (38.6 to 27.6) from week 35 to 39. While the least diverse neighbourhoods continue to report the lowest rate, it is the only quintile that has not reported a downward trend over the past 5 weeks.

> 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.

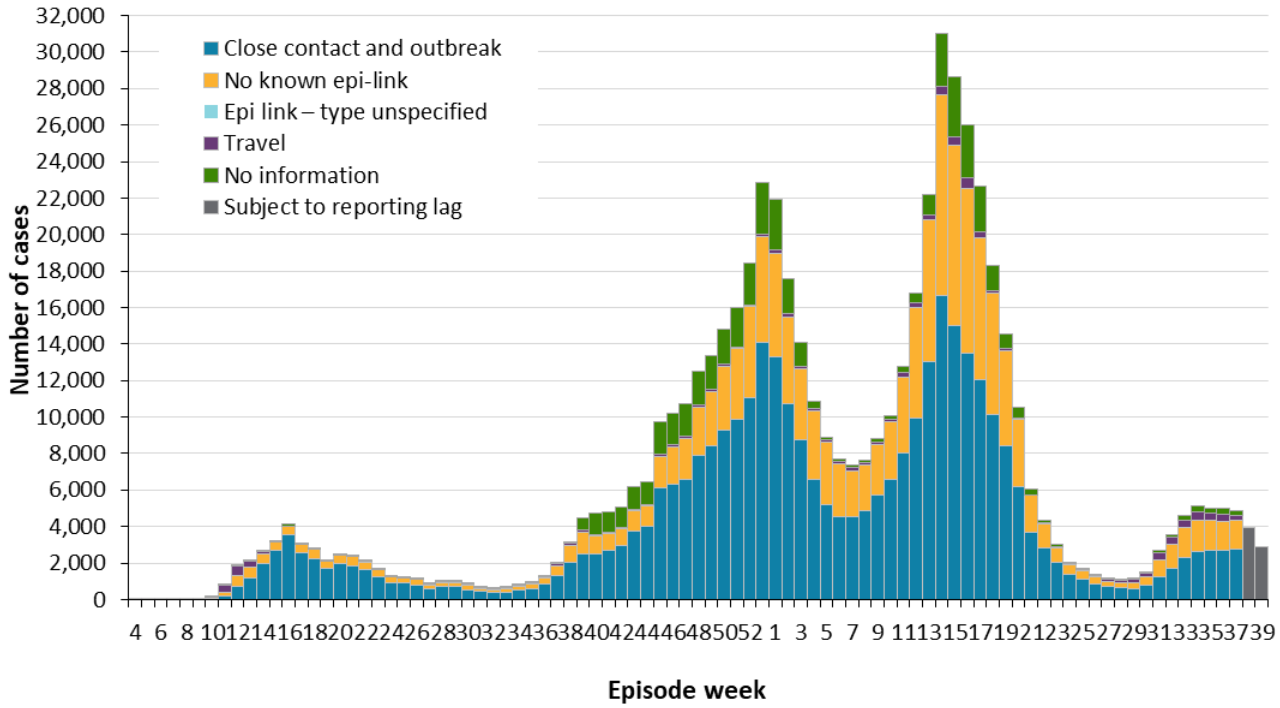
# Cases Over Time

**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 39 (September 26 and October 2, 2021). See Table 1A in Appendix A for a list of the weeks and corresponding start and end dates.
**Data Source:** CCM

**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 39 (September 26 and October 2, 2021). See Table 1A in Appendix A for a list of the weeks and corresponding start and end dates.
**Data Source**: CCM

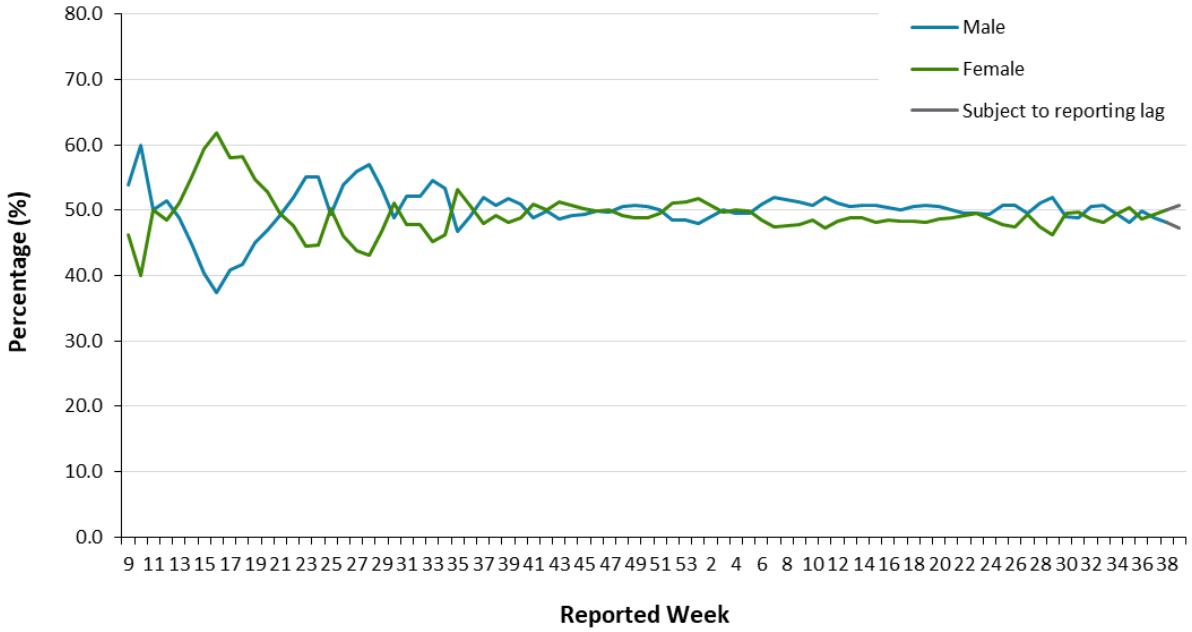
# Case Characteristics

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

| | Reported week 38 (September 19 to 25) | Reported week 39 (September 26 to October 2) | Cumulative case count up to October 2 | Cumulative rate per 100,000 population |
|---|---|---|---|---|
| Total number of cases | 4,396 | 3,948 | 588,316 | 3,992.9 |
| Gender: Male | 2,116 | 1,864 | 293,022 | 4,025.3 |
| Gender: Female | 2,202 | 2,000 | 291,178 | 3,906.0 |
| Ages: 0-4 | 288 | 208 | 16,577 | 2,292.8 |
| Ages: 5-11 | 656 | 597 | 30,047 | 2,785.9 |
| Ages: 12-19 | 413 | 350 | 52,518 | 3,950.3 |
| Ages: 20-39 | 1,587 | 1,363 | 221,959 | 5,346.0 |
| Ages: 40-59 | 941 | 963 | 165,096 | 4,238.1 |
| Ages: 60-79 | 415 | 390 | 76,152 | 2,626.1 |
| Ages: 80 and over | 96 | 76 | 25,861 | 3,943.2 |
| Number resolved | N/A | N/A | 575,125 | N/A |

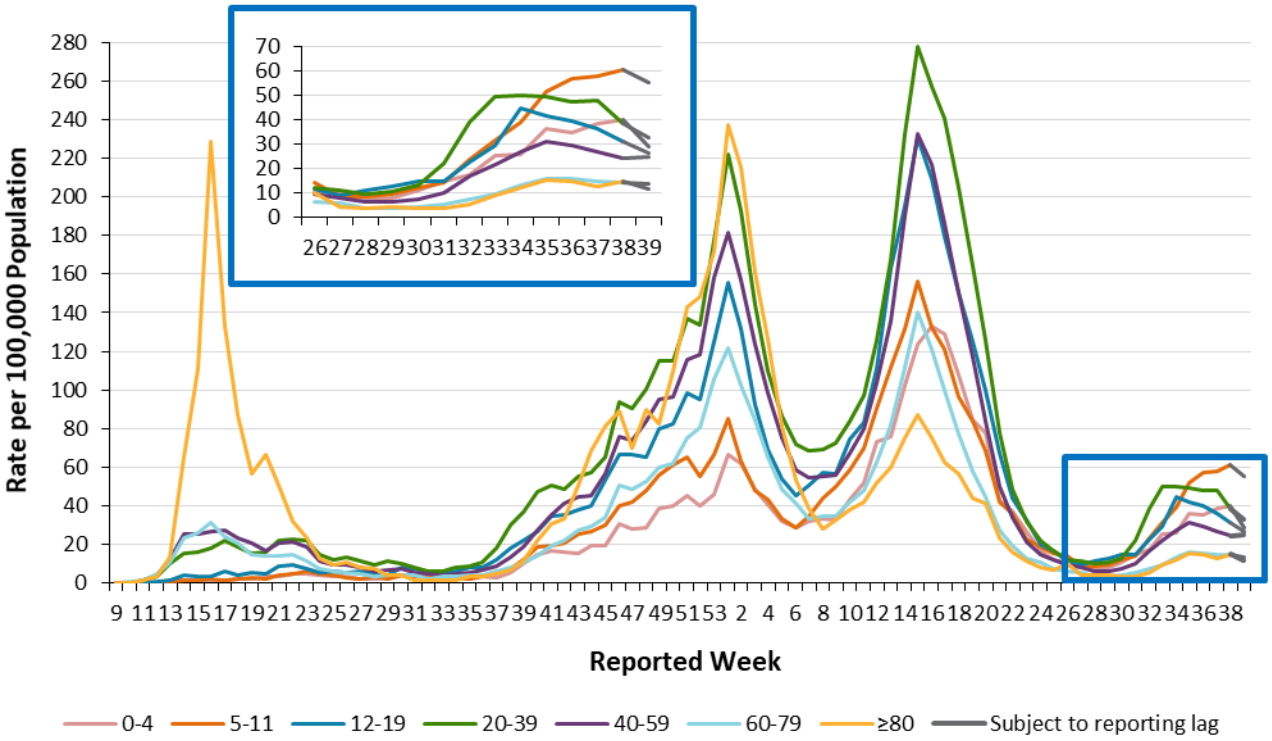
**Note:** Not all cases have an age or gender reported.
Interpret information for the most recent week with caution due to reporting lags.
**Data Source**: CCM

**Figure 3. Percentage of confirmed cases of COVID-19 by gender and public health unit reported week: Ontario**



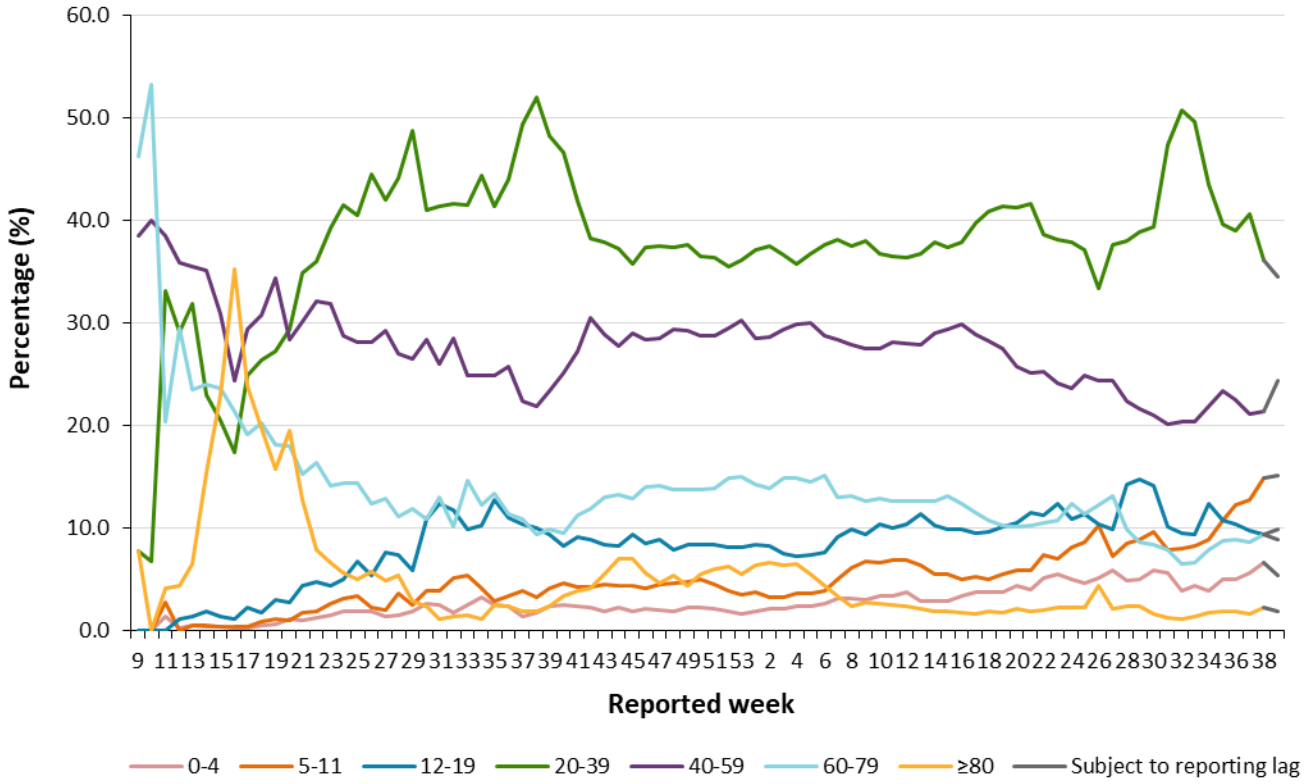

**Note:** Not all cases have a gender reported. The denominator for calculating weekly percentages includes all cases. Only weeks with more than 10 cases by public health unit reporting date are included (starting in week-9). Include cases with reported dates ranging from week-9 (February 23 and 29, 2020) to week 39 (September 26 and October 2, 2021). See Table 1A in Appendix A for a list of the weeks and corresponding start and end dates.
**Data Source**: CCM

**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 39 (September 26 and October 2, 2021). See Table 1A in Appendix A for a list of the weeks and corresponding start and end dates.
**Data Source**: CCM

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

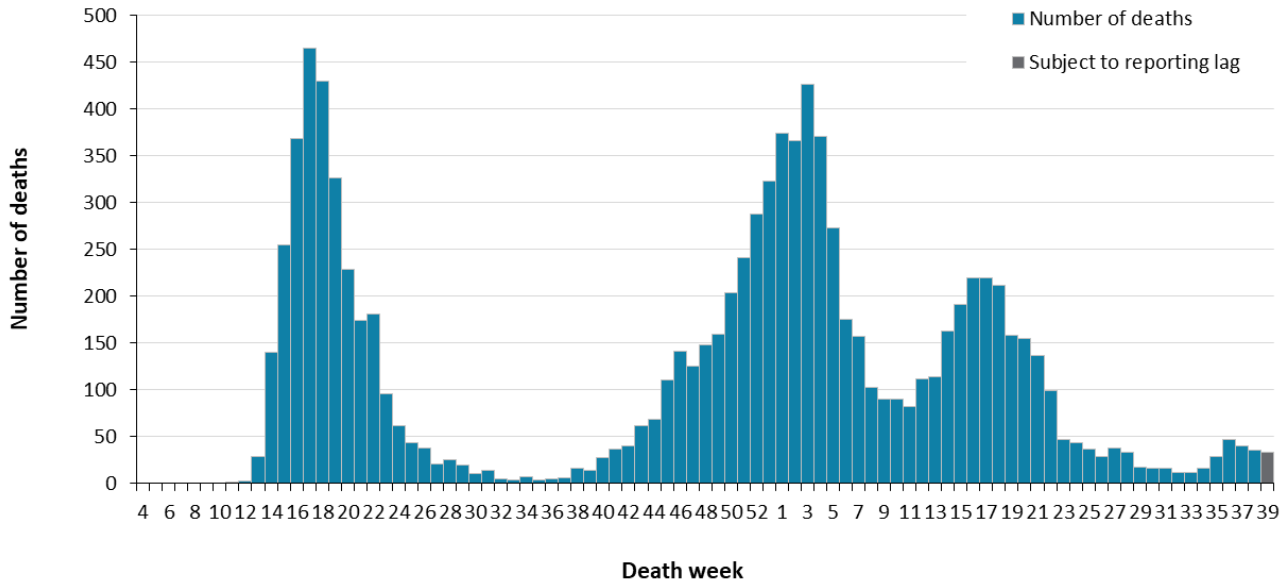



**Note:** Only weeks with more than 10 cases by public health unit reporting date are included (starting in week-9). Include cases with reported dates ranging from week-9 (February 23 and 29, 2020) to week 39 (September 26 and October 2, 2021). See Table 1A in Appendix A for a list of the weeks and corresponding start and end dates.

**Data Source**: CCM

# 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 39 (September 26 and October 2, 2021). See Table 1A in Appendix A for a list of the weeks and corresponding start and end dates.
**Data Source**: CCM

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

| Deaths | Reported week 38 (September 19 to 25) | Reported week 39 (September 26 to October 2) | Cumulative case count up to October 2 | Cumulative rate per 100,000 population |
|---|---|---|---|---|
| Number of deaths | 11 | 7 | 9,769 | 66.3 |
| Gender: Male | 6 | 3 | 4,992 | 68.6 |
| Gender: Female | 5 | 3 | 4,712 | 63.2 |
| Ages: 19 and under | 0 | 0 | 6 | 0.2 |
| Ages: 20-39 | 1 | 0 | 98 | 2.4 |
| Ages: 40-59 | 2 | 0 | 670 | 17.2 |
| Ages: 60-79 | 4 | 1 | 3,180 | 109.7 |
| Ages: 80 and over | 4 | 6 | 5,814 | 886.5 |

**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.
**Data Source**: CCM

# Exposure

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

| | Reported week 38 (September 19 to 25) | Percentage | Reported week 39 (September 26 to October 2) | Percentage | Cumulative case count up to October 2 | Cumulative percentage |
|---|---|---|---|---|---|---|
| Travel | 234 | 5.3% | 211 | 5.3% | 12,655 | 2.2% |
| Outbreak-associated or close contact of a confirmed case | 2,549 | 58.0% | 2,275 | 57.6% | 351,141 | 59.7% |
| Epidemiological link – type unspecified | 0 | 0.0% | 0 | 0.0% | 46 | <0.1% |
| No known epidemiological link | 1,321 | 30.1% | 1,158 | 29.3% | 171,670 | 29.2% |
| Information missing or unknown | 292 | 6.6% | 304 | 7.7% | 52,804 | 9.0% |
| **Total** | **4,396** | | **3,948** | | **588,316** | |

**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.
**Data Source**: CCM

# Sub-populations of interest

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

| Health care workers | Reported week 38 (September 19 to 25) | Reported week 39 (September 26 to October 2) | Cumulative case count up to October 2 |
|---|---|---|---|
| Number of cases | 78 | 91 | 24,490 |
| Ever hospitalized | 1 | 1 | 481 |
| Ever in ICU | 0 | 0 | 99 |

**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 38 (September 19 to 25) | Reported week 39 (September 26 to October 2) | Cumulative case count up to October 2 |
|---|---|---|---|
| Residents | 28 | 21 | 15,608 |
| Deaths among residents | 0 | 1 | 4,014 |
| Health care workers | 9 | 10 | 7,361 |
| Deaths among health care workers | 0 | 0 | 10 |

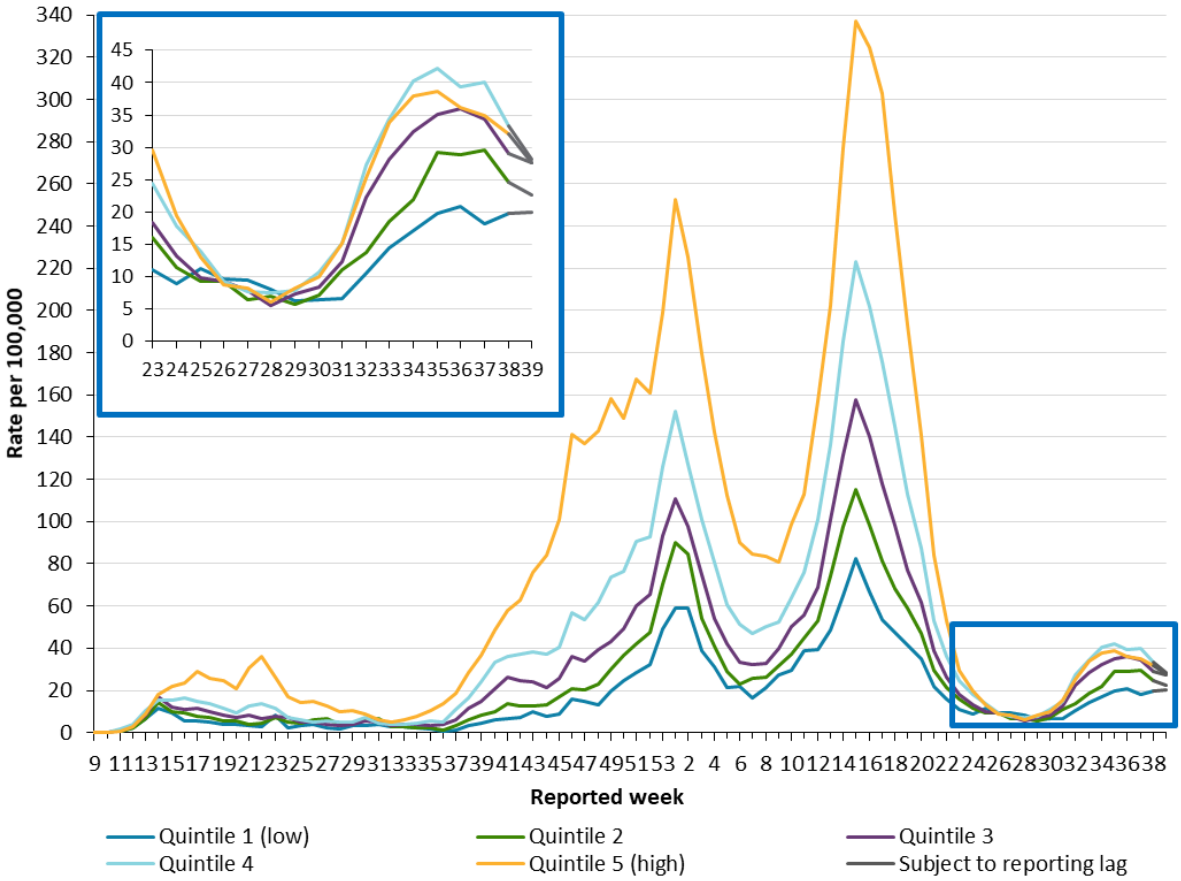
**Note:** Information on how long-term care home residents and health care workers are identified is available in the technical notes. Interpret information for the most recent week with caution due to reporting lags.
**Data Source:** CCM

**Table 6: Summary of reinfection cases of COVID-19 by age group and public health unit reported week: Ontario**

| Age Group | Reported Week 38 (September 19 to 25) | Reported Week 39 (September 26 to October 2) | Cumulative count from November 1 up to October 2 | Percent of reinfection cases |
|---|---|---|---|---|
| Ages: 0-4 | 2 | 0 | 15 | 4.4% |
| Ages: 5-11 | 0 | 2 | 4 | 1.2% |
| Ages: 12-19 | 1 | 0 | 36 | 10.6% |
| Ages: 20-39 | 3 | 2 | 160 | 47.2% |
| Ages: 40-59 | 2 | 1 | 87 | 25.7% |
| Ages: 60-79 | 1 | 1 | 27 | 8.0% |
| Ages: 80 and over | 0 | 0 | 10 | 2.9% |
| **Total reinfection cases** | **9** | **6** | **339** | |

**Note:** Cases identified as reinfections meeting the provincial definition as indicated by public health units selecting the reinfection checkbox. Cumulative counts include cases of COVID-19 reinfection reported starting week-45 (November 1 to 7, 2020). Not all cases have a reported age or gender. 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 Source:** CCM

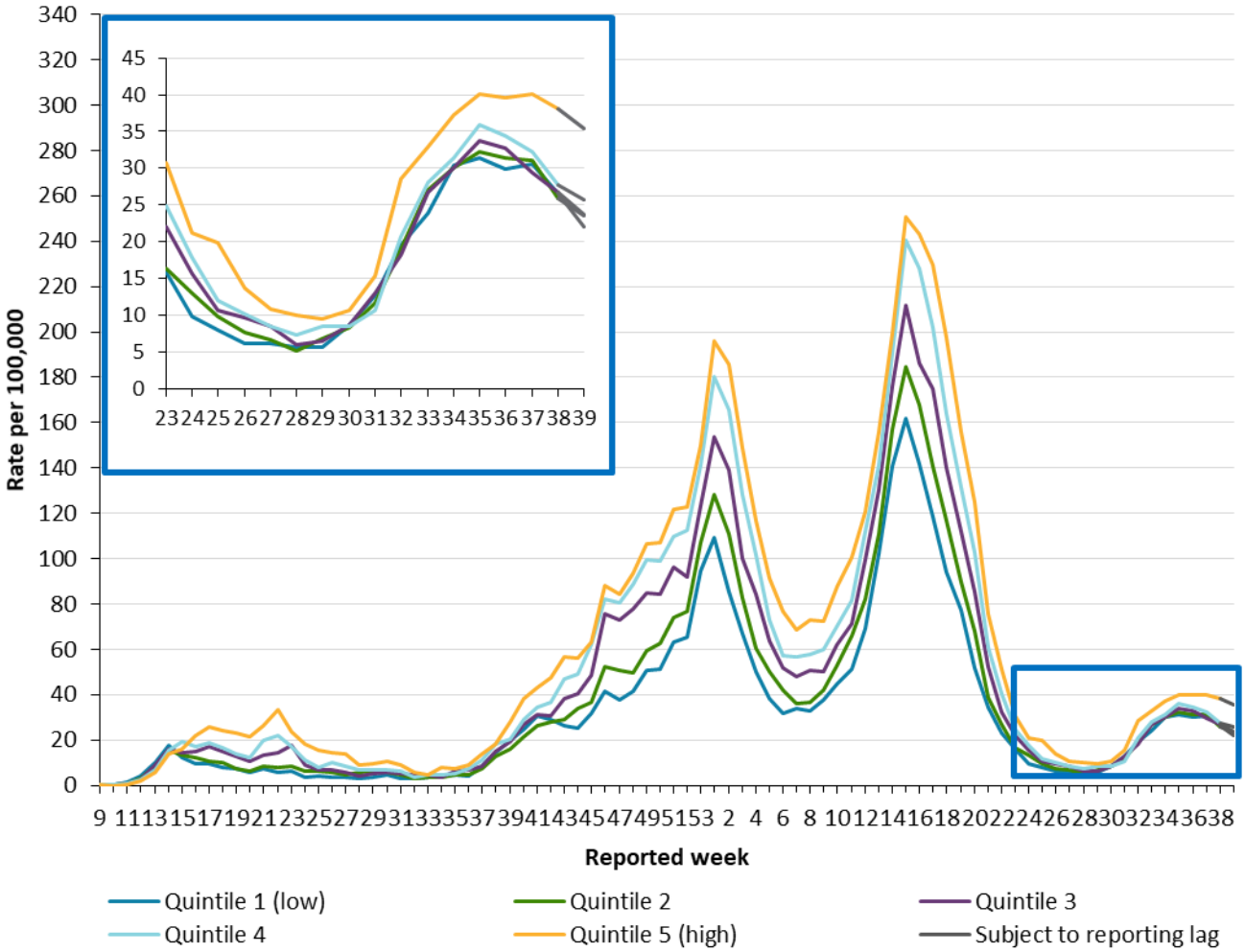
**Figure 6. Rate of confirmed cases of COVID-19 per 100,000 population by quintile of neighbourhood diversity and public health unit reported week: Ontario**




**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. 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 weeks 9 (February 23 to 29, 2020) to week 39 (September 26 to October 2, 2021). As of June 8, all rate denominators were changed to the 2021 OHIP RPDB population, and as a result, rates shown here may differ from previous reports. See Table 1A in Appendix A for a list of the weeks and corresponding start and end dates.

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

**Figure 7. Rate of confirmed cases of COVID-19 per 100,000 population by quintile of neighbourhood material deprivation and public health unit reported week: Ontario**




**Note:** Neighbourhood material 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. 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 weeks 9 (February 23 to 29, 2020) to week 39 (September 26 to October 2, 2021). As of June 8, all rate denominators were changed to the 2021 OHIP RPDB population, and as a result, rates shown here may differ from previous reports. See Table 1A in Appendix A for a list of the weeks and corresponding start and end dates.
**Data Source:** CCM, Ontario Marginalization Index

**Table 7: Summary of cases of COVID-19 by quintile of neighbourhood diversity and public health unit reported week: Ontario**

| | Cases Reported Week 38(September 19 to 25) | Cases Reported Week 39 (September 26 to October 2) | Cumulative case count up to October 2 | Cumulative rate per 100,000 population up to October 2 |
|---|---|---|---|---|
| Quintile 1 (least diverse) | 440 | 445 | 32,415 | 1,459.3 |
| Quintile 2 | 584 | 535 | 48,133 | 2,032.5 |
| Quintile 3 | 755 | 716 | 71,180 | 2,746.0 |
| Quintile 4 | 1,044 | 883 | 120,221 | 3,843.8 |
| Quintile 5 (most diverse) | 1,383 | 1,195 | 274,193 | 6,343.7 |

**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. Cumulative counts and rates include cases of COVID-19 reported starting week 9 (February 23 to 29, 2020).
**Data Source:** CCM, Ontario Marginalization Index

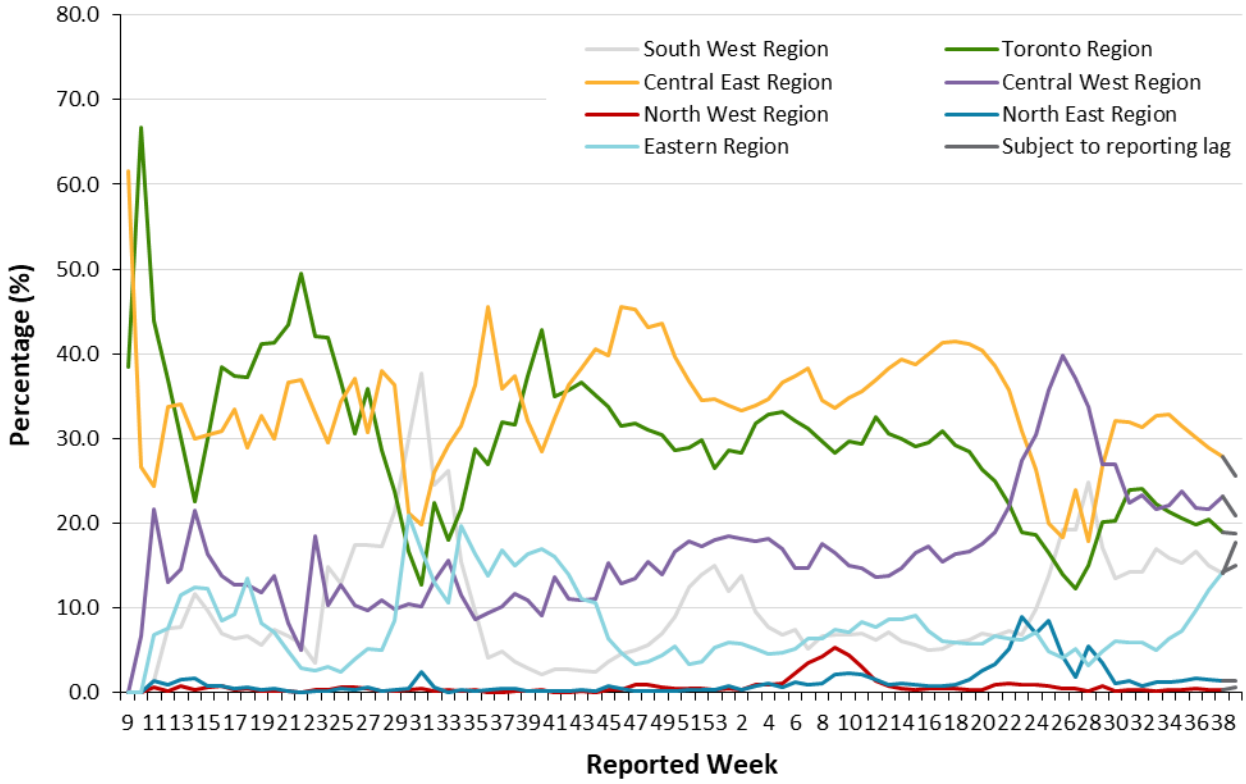
**Table 8: Summary of cases of COVID-19 by quintile of neighbourhood material deprivation and public health unit reported week: Ontario**

| | Cases Reported Week 38(September 19 to 25) | Cases Reported Week 39 (September 26 to October 2) | Cumulative case count up to October 2 | Cumulative rate per 100,000 population up to October 2 |
|---|---|---|---|---|
| Quintile 1 (least material deprivation) | 913 | 762 | 93,025 | 2,699.4 |
| Quintile 2 | 803 | 733 | 96,819 | 3,118.5 |
| Quintile 3 | 741 | 655 | 105,344 | 3,799.0 |
| Quintile 4 | 727 | 674 | 115,151 | 4,382.4 |
| Quintile 5 (most material deprivation) | 1,022 | 950 | 135,803 | 5,067.3 |

**Note:** Neighbourhood material 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. Cumulative counts and rates include cases of COVID-19 reported starting week 9 (February 23 to 29, 2020).
**Data Source:** CCM, Ontario Marginalization Index

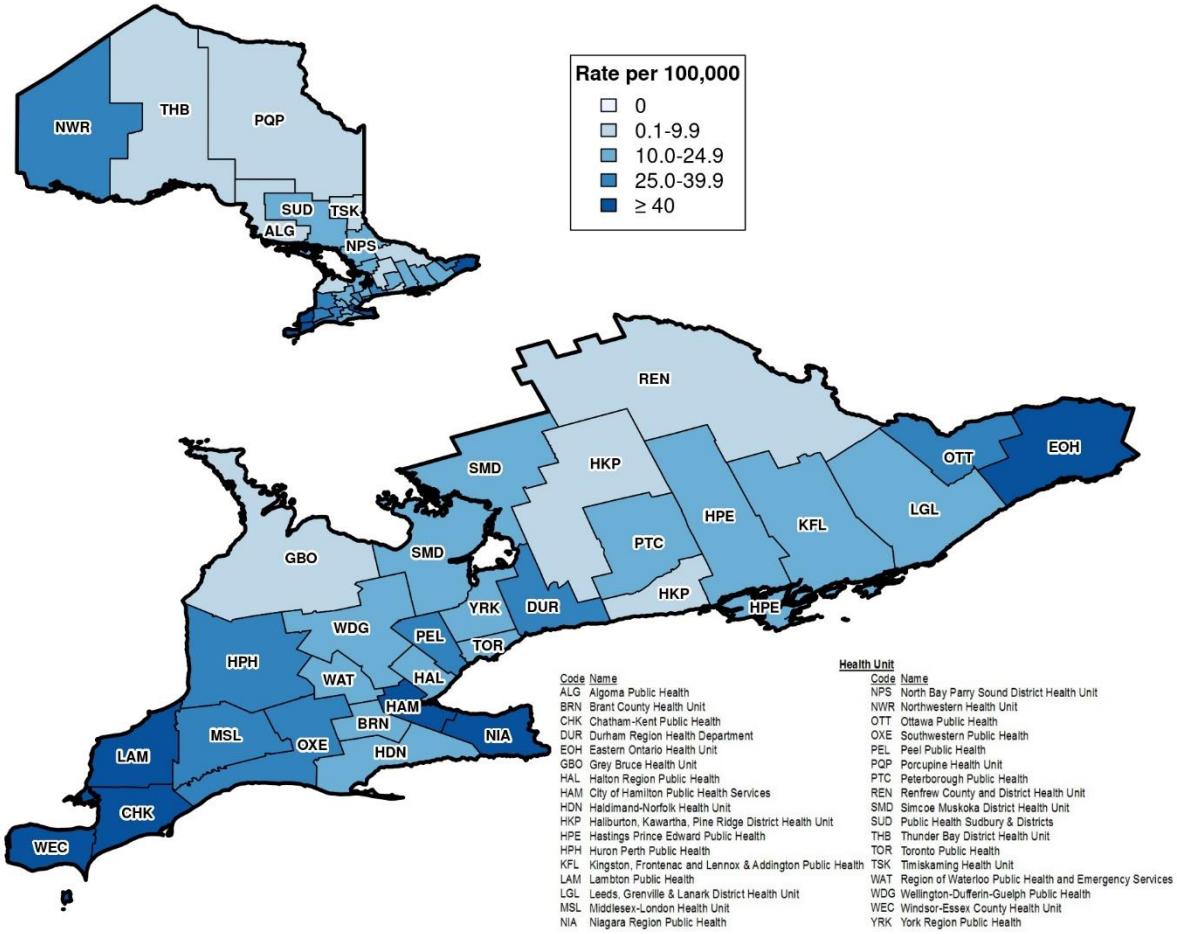
# Geography

**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 39 (September 26 and October 2, 2021). Table 2A in Appendix A has a listing of public health units by region.
**Data Source**: CCM

**Figure 9. Rate of confirmed cases of COVID-19 in public health reported week 39 (September 26 to October 2, 2021) by public health unit: Ontario**




**Note**: The provincial rate of confirmed cases of COVID-19 reported in week 39 was 26.8 cases per 100,000 population.
**Data Source**: CCM

# Outbreaks

**Table 9. Number of public health unit declared COVID-19 outbreaks by setting type: Ontario**

| Setting Type | Reported week 39 (September 26 to October 2) | Number of ongoing outbreaks | Cumulative number of outbreaks reported to October 2 |
|---|---|---|---|
| **Congregate Care** | **6** | **23** | **3,012** |
| Long-term care homes | 3 | 14 | 1,525 |
| Retirement homes | 2 | 7 | 894 |
| Hospitals | 1 | 2 | 593 |
| **Congregate Living** | **9** | **25** | **1,385** |
| Correctional facility | 2 | 3 | 66 |
| Shelter | 2 | 5 | 286 |
| Group Home/supportive housing | 4 | 13 | 808 |
| Short-term accommodations | 1 | 1 | 47 |
| Congregate other | 0 | 3 | 178 |
| **Education and Childcare** | **81** | **141** | **2,814** |
| Child care | 14 | 25 | 1,128 |
| Camp – Day* | 0 | 0 | 21 |
| Camp – Overnight* | 0 | 0 | 1 |
| Camp – Unspecified* | 0 | 0 | 1 |
| School – Elementary** | 59 | 95 | 1,252 |
| School – Elementary/secondary** | 1 | 3 | 68 |
| School – Secondary** | 6 | 14 | 288 |
| School – Post-secondary** | 1 | 4 | 55 |
| **Other settings** | **34** | **63** | **4,607** |

| Setting Type | Reported week 39 (September 26 to October 2) | Number of ongoing outbreaks | Cumulative number of outbreaks reported to October 2 |
|---|---|---|---|
| Bar/restaurant/nightclub | 1 | 4 | 398 |
| Medical/health services | 0 | 0 | 164 |
| Personal service settings | 0 | 0 | 37 |
| Recreational fitness | 0 | 0 | 113 |
| Retail | 1 | 3 | 498 |
| Other recreation/community | 4 | 4 | 284 |
| Workplace – Farm | 1 | 4 | 247 |
| Workplace - Food processing | 0 | 2 | 284 |
| Other types of workplaces | 18 | 35 | 2,544 |
| Other | 6 | 7 | 11 |
| Unknown | 3 | 4 | 27 |
| **Total number of outbreaks** | **130** | **252** | **11,818** |

**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, manufacturing facilities, mines and construction sites, 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 camp outbreaks reported starting week-27 of 2021 (July 4 to 10, 2021).
**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. Outbreaks in settings outside of Ontario are excluded from all outbreak counts.
**Data Source:** CCM

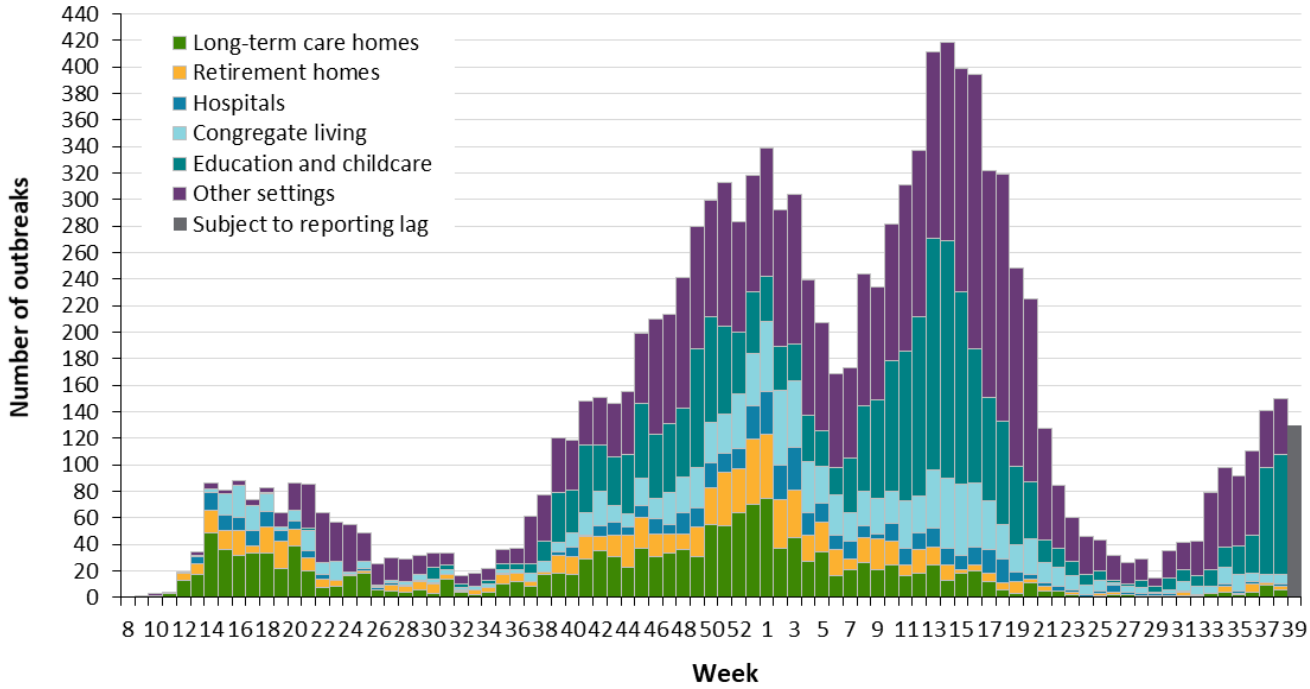
**Table 10. Confirmed cases of COVID-19 associated with COVID-19 outbreaks by setting type and public health unit reported week: Ontario**

| Cases associated with the outbreak setting type | Reported week 38 (September 19 to 25) | Reported week 39 (September 26 to October 2) | Cumulative number of cases |
|---|---|---|---|
| **Congregate Care** | **77** | **55** | **40,561** |
| Long-term care homes | 52 | 38 | 26,810 |
| Retirement homes | 17 | 10 | 7,307 |
| Hospitals | 8 | 7 | 6,444 |
| **Congregate Living** | **31** | **38** | **10,255** |
| Correctional facility | 17 | 22 | 1,825 |
| Shelter | 2 | 0 | 2,824 |
| Group Home/supportive housing | 12 | 14 | 3,706 |
| Short-term accommodations | 0 | 1 | 250 |
| Congregate other | 0 | 1 | 1,650 |
| **Education and Childcare** | **336** | **279** | **11,853** |
| Child care | 50 | 33 | 4,615 |
| Camp – Day* | 0 | 0 | 109 |
| Camp – Overnight* | 0 | 0 | 14 |
| Camp – Unspecified* | 0 | 0 | 2 |
| School – Elementary** | 260 | 222 | 5,127 |
| School – Elementary/secondary** | 1 | 3 | 354 |
| School – Secondary** | 23 | 12 | 1,186 |
| School – Post-secondary** | 2 | 9 | 446 |
| **Other settings** | **147** | **114** | **36,589** |
| Bar/restaurant/nightclub | 18 | 6 | 1,928 |
| Medical/health services | 1 | 0 | 741 |

| Cases associated with the outbreak setting type | Reported week 38 (September 19 to 25) | Reported week 39 (September 26 to October 2) | Cumulative number of cases |
|---|---|---|---|
| Personal service settings | 1 | 0 | 131 |
| Recreational fitness | 1 | 0 | 812 |
| Retail | 9 | 5 | 2,658 |
| Other recreation/community | 35 | 7 | 3,565 |
| Workplace - Farm | 22 | 9 | 3,229 |
| Workplace - Food processing | 2 | 2 | 3,785 |
| Other types of workplaces | 39 | 53 | 19,546 |
| Other | 5 | 18 | 50 |
| Unknown | 14 | 14 | 144 |
| **Total number of cases** | **591** | **486** | **99,258** |

**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, manufacturing facilities, mines, and construction sites, 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 cases of COVID-19 camp outbreaks reported starting week-27 of 2021 (July 4 to 10, 2021).
**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. Cases associated with outbreaks outside of Ontario are excluded from case counts in this table.
**Data Source**: CCM

**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 39 refers to September 26 and October 2, 2021. Congregate living include group homes, shelters, correctional facilities, etc. Other settings include outbreaks within workplaces, childcare, schools, restaurants, recreation etc.
**Data Source:** CCM

# Variant COVID-19 Cases

**Table 11. Summary of confirmed COVID-19 cases with a mutation or VOC detected by age group and gender: Ontario**

| | Lineage B.1.1.7 (Alpha)* | Lineage B.1.351 (Beta)** | Lineage P.1 (Gamma)*** | Lineage B.1.617.2 (Delta)† | Mutations‡ | Mutation not detected§ | Cumulative case count as of October 2, 2021 |
|---|---|---|---|---|---|---|---|
| Gender: Male | 73,978 | 736 | 2,710 | 9,527 | 11,899 | 14,800 | 113,650 |
| Gender: Female | 71,581 | 762 | 2,486 | 9,222 | 10,953 | 14,695 | 109,699 |
| Ages: 19 and under | 27,811 | 250 | 905 | 4,359 | 4,672 | 6,726 | 44,723 |
| Ages: 20-39 | 55,592 | 485 | 1,945 | 8,234 | 9,002 | 11,717 | 86,975 |
| Ages: 40-59 | 42,835 | 491 | 1,572 | 4,298 | 6,302 | 7,524 | 63,022 |
| Ages: 60-79 | 17,436 | 236 | 670 | 1,667 | 2,708 | 3,201 | 25,918 |
| Ages: 80 and over | 2,796 | 41 | 137 | 382 | 452 | 652 | 4,460 |

**Note:** Not all cases have an 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 (Alpha), B.1.351 (Beta), P.1 (Gamma) and B.1.617.2 (Delta) lineage detected or a mutation are determined using the Investigation Subtype field only. Changes to the VOC testing algorithm may impact counts and trends. Further details can be found in the data caveats section.

*Includes all confirmed COVID-19 cases where lineage B.1.1.7 (Alpha) was identified by genomic analysis and those presumed to be B.1.1.7 based on a positive N501Y and negative E484K mutation in the Investigation Subtype field.

**Includes B.1.351 (Beta) cases identified by genomic analysis and those presumed to be B.1.351 based on 'Mutation K417N+ and N501Y+ and E484K+' in the Investigation Subtype field.

***Includes P.1 (Gamma) cases identified by genomic analysis and those presumed to be P.1 based on 'Mutation K417T+ and N501Y+ and E484K+' in the Investigation Subtype field.

†Includes B.1.617.2 (Delta) and AY.3 cases identified by genomic analysis. Mutations common to B.1.617.2 are not included in the current VOC mutation test.

‡Mutations includes all confirmed COVID-19 cases with the following mutations detected, reported from the Investigation Subtype field: N501Y and E484K, N501Y (E484K unknown), E484K (N501Y negative), E484K (N501Y unknown).

§Includes cases identified as ‘Mutation not detected’ or ‘Mutation N501Y- and E484K-‘in the Investigation Subtype field only.
**Data Source**: CCM

**Table 12. Summary of confirmed COVID-19 cases with a mutation or VOC detected by likely source of acquisition: Ontario**

| | Lineage B.1.1.7 (Alpha)* | % | Lineage B.1.351 (Beta)** | % | Lineage P.1 (Gamma)*** | % | Lineage B.1.617.2 (Delta)† | % | Mutations ‡ | % | Cumulative case count up to October 2, 2021 | Cumulative percentage |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Travel | 842 | 0.6% | 38 | 2.5% | 70 | 1.3% | 1,479 | 7.8% | 324 | 1.4% | 2,753 | 1.4% |
| Outbreak-associated or close contact of a confirmed case | 81,693 | 55.8% | 961 | 63.9% | 3,319 | 63.5% | 10,522 | 55.6% | 15,006 | 64.9% | 111,501 | 57.1% |
| Epidemiological link – type unspecified | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| No known epidemiological link | 52,249 | 35.7% | 405 | 26.9% | 1,609 | 30.8% | 6,090 | 32.2% | 6,710 | 29.0% | 67,063 | 34.3% |
| Information missing or unknown | 11,695 | 8.0% | 99 | 6.6% | 231 | 4.4% | 849 | 4.5% | 1,097 | 4.7% | 13,971 | 7.2% |
| **Total** | **146,479** | | **1,503** | | **5,229** | | **18,940** | | **23,137** | | **195,288** | |

**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 (Alpha), B.1.351 (Beta), and P.1 (Gamma) lineage detected are determined using the Investigation Subtype field only.

*Includes all confirmed COVID-19 cases where lineage B.1.1.7 (Alpha) was identified by genomic analysis and those presumed to be B.1.1.7 based on a positive N501Y and negative E484K mutation in the Investigation Subtype field.

**Includes B.1.351 (Beta) cases identified by genomic analysis and those presumed to be B.1.351 based on 'Mutation K417N+ and N501Y+ and E484K+' in the Investigation Subtype field.

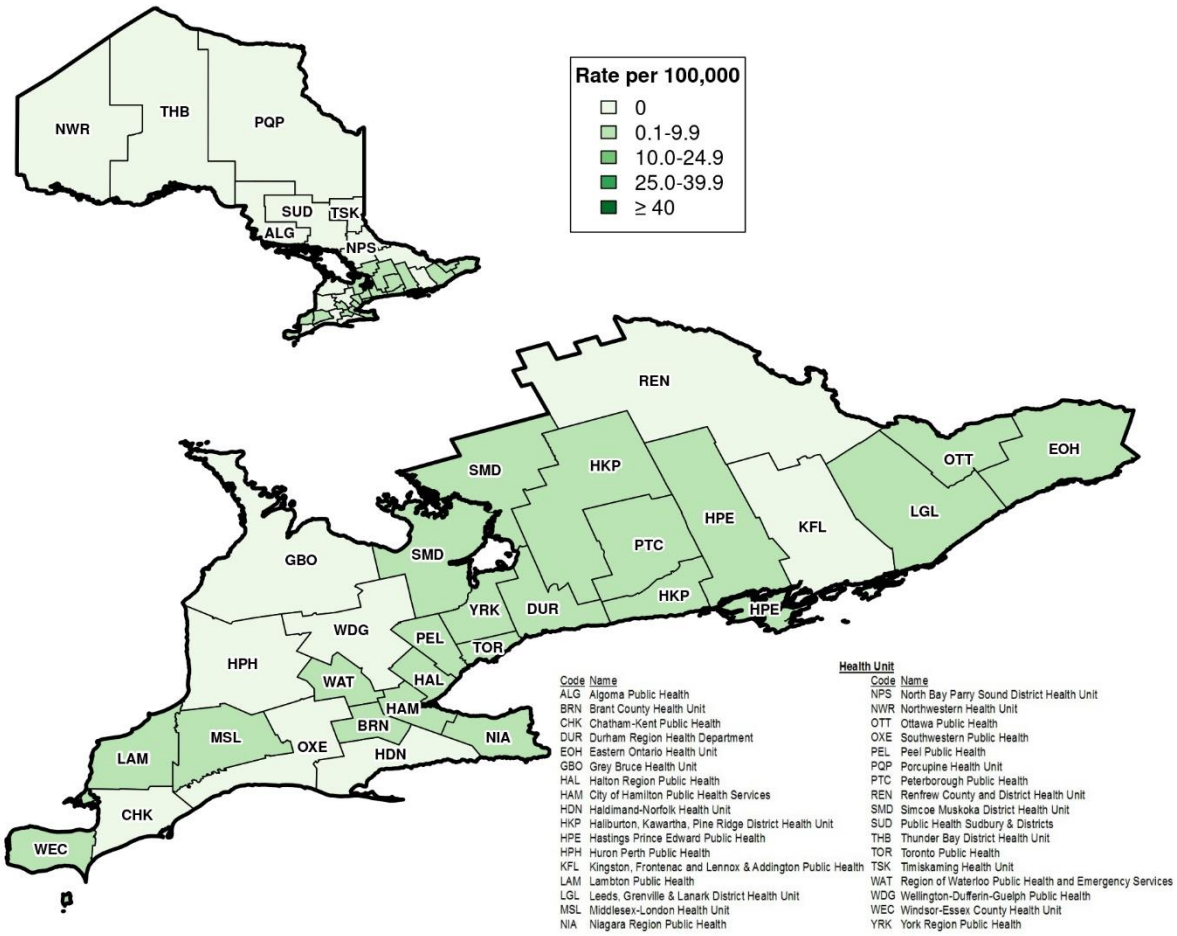
***Includes P.1 (Gamma) cases identified by genomic analysis and those presumed to be P.1 based on 'Mutation K417T+ and N501Y+ and E484K+' in the Investigation Subtype field.

†Includes B.1.617.2 (Delta) and AY.3 cases identified by genomic analysis. Mutations common to B.1.617.2 are not included in the current VOC mutation test.

‡Mutations includes all confirmed COVID-19 cases with the following mutations detected, reported from the Investigation Subtype field: N501Y and E484K, N501Y (E484K unknown), E484K (N501Y negative), E484K (N501Y unknown)

**Data Source:** CCM

**Figure 11. Rates of confirmed cases of COVID-19 with lineage B.1.617.2 (Delta)* detected in public health reported week 39 (September 26 to October 2, 2021) by public health unit: Ontario**




**Note**: The provincial rate of confirmed cases of COVID-19 with lineage B.1.617.2 (Delta)* reported in week 39 was 0.7 cases per 100,000 population. Data for cases with a B.1.617.2* lineage are determined using the Investigation Subtype field only. Changes to the VOC testing algorithm may impact counts and trends. Further details can be found in the data caveats section.

*Includes B.1.617.2 (Delta) and AY.3 cases identified by genomic analysis. Mutations common to B.1.617.2 are not included in the current VOC mutation test.

**Data Source**: CCM

# 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 **October 5, 2021 at 1 p.m.** for cases reported from February 1, 2021 onwards and as of **October 4, 2021 at 9 a.m.** for cases reported up January 31, 2021.

- VOC testing data for this report were based on information successfully extracted from CCM within the laboratory object for select Logical Observation Identifiers Names and Codes (LOINC) for cases reported between February 07, 2021 and August 17, 2021, for all PHUs by PHO as of **September 29, 2021 at 1 p.m.** VOC testing data for cases reported between February 07, 2021 and August 17, 2021 are supplemented with information from the Investigation lineage and Investigation mutation field. For cases reported as of August 18, 2021, VOC test value is assigned based on information solely from the Investigation lineage and Investigation mutation fields for all PHUs.

- Ontario population estimate data were sourced from Statistics Canada. Population estimates 2001-2020: Table 1 annual population estimates by age and sex for July 1, 2001 to 2020, health regions, Ontario [unpublished data table]. Ottawa, ON: Government of Canada; 2021 [received April 22, 2021].

- Statistics Canada Postal Code Conversion File Plus (PCCF+), version 7B.

- The health equity (neighbourhood-level diversity and material deprivation) analyses use data from the 2016 Ontario Marginalization Index (ON-Marg), and population counts from the Ontario Health Insurance Plan (OHIP) Registered Person Database (RPDB) as of May 1, 2021 (provided by the Institute for Clinical Evaluative Sciences [ICES]):

    - 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.

    - Chung H, Fung K, Ishiguro L, Paterson M, et al. Characteristics of COVID-19 diagnostic test recipients, Applied Health Research Questions (AHRQ) # 2021 0950 080 000. Toronto: Institute for Clinical Evaluative Sciences; 2020.

## Data Caveats and Methods: Case Data

- The data represent case information 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 MOH Case Definition – Coronavirus Disease (COVID-19) document 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. Reinfection cases include cases for persons (CCM clients) with two or more confirmed case investigations where the case investigations after the first one have the reinfection checkbox marked as 'Yes'.
- 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 represents an estimate of disease onset. This date is calculated based on the earliest 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 or hospitalization/ICU was reported as 'Yes' 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 school outbreak.

- 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 permanent health unit. This is equivalent to the diagnosing health unit (DHU) in iPHIS. 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).
- Public Health Ontario conducts testing and genomic analyses for SARS-CoV-2 positive specimens using the criteria outlined here: https://www.publichealthontario.ca/en/laboratory-services/test-information-index/covid-19-voc
- Lineage nomenclature is dynamic. PANGO lineage naming and assignment may change as more samples are sequenced and analyzed.
- Variant status may be updated based on scientific evidence. Variants designated as a VOC in Canada is available on the Public Health Agency of Canada's SARS-CoV-2 Variants webpage.
- Changes to the VOC testing algorithm may occur over time and trends should be interpreted with caution. Since February 3, 2021 all PCR positive SARS-Co-V-2 specimens with CT values ≤ 35 are tested for a N501Y mutation. As of March 22, 2021, positive specimens with a Ct ≤ 35 are tested for both the N501Y and E484K mutation, with all E484K positive specimens with a Ct ≤ 30 forwarded for further genomic analysis. If found to be positive for the N501Y mutation only, no further genomic analysis are performed as these are presumed to be B.1.1.7 (alpha). As of May 26, 2021, cases where an E484K mutation is detected will no longer be reflexed for sequencing as VOC testing labs switched to a representative sampling method where only a proportion of all positives with a Ct ≤ 30 are forwarded for further genomic analysis. 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 (Alpha), B.1.351 (Beta), P.1 (Gamma) and B.1.617.2 (Delta)].

## 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 material 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). Cases were probabilistically matched to a DA based on their postal code using Statistics Canada's PCCF+ version 7B file, and 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.

- Population counts used in rate denominators were provided by ICES. Individuals alive and eligible for the Ontario Health Insurance Plan (OHIP) as of January 1st, 2021 using the OHIP RPDB were included.
    - Individuals residing in long-term care (LTC) homes were excluded. Recent health care transaction records (e.g., OHIP physician billings, Ontario Drug Benefit [ODB] Plan claims) and Resident Assessment Instrument (RAI) assessments from the Continuing Care Reporting System (CCRS) were used to identify individuals residing in a LTC home near the period prior to the index date.
    - Postal codes were assigned to individuals according to the most recent residential address available in the OHIP RPDB.
- This work is supported by the Applied Health Research Questions (AHRQ) Portfolio at ICES, which is funded by the Ontario Ministry of Health, and Ontario Health Data Platform (OHDP), a Province of Ontario initiative to support Ontario's ongoing response to COVID-19 and its related impacts. Parts of this material are based on data and information compiled and provided by the Ontario Ministry of Health. The analyses, conclusions, opinions and statements expressed herein are solely those of the authors and do not reflect those of ICES, the OHDP or the funding or data sources; no endorsement is intended or should be inferred. For more information on AHRQ and how to submit a request, please visit www.ices.on.ca/DAS/AHRQ.

# 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 | 15 | 32 |
| 11 | March 8, 2020 | March 14, 2020 | 148 | 180 |
| 12 | March 15, 2020 | March 21, 2020 | 447 | 627 |
| 13 | March 22, 2020 | March 28, 2020 | 1,325 | 1,952 |
| 14 | March 29, 2020 | April 4, 2020 | 2,797 | 4,749 |
| 15 | April 5, 2020 | April 11, 2020 | 3,167 | 7,916 |
| 16 | April 12, 2020 | April 18, 2020 | 4,262 | 12,178 |
| 17 | April 19, 2020 | April 25, 2020 | 3,651 | 15,829 |
| 18 | April 26, 2020 | May 2, 2020 | 2,902 | 18,731 |
| 19 | May 3, 2020 | May 9, 2020 | 2,353 | 21,084 |
| 20 | May 10, 2020 | May 16, 2020 | 2,223 | 23,307 |
| 21 | May 17, 2020 | May 23, 2020 | 2,617 | 25,924 |
| 22 | May 24, 2020 | May 30, 2020 | 2,611 | 28,535 |
| 23 | May 31, 2020 | June 6, 2020 | 2,302 | 30,837 |

| Reported Week | Start date | End date | Number of cases | Cumulative count |
|---|---|---|---|---|
| 24 | June 7, 2020 | June 13, 2020 | 1,472 | 32,309 |
| 25 | June 14, 2020 | June 20, 2020 | 1,226 | 33,535 |
| 26 | June 21, 2020 | June 27, 2020 | 1,250 | 34,785 |
| 27 | June 28, 2020 | July 4, 2020 | 1,085 | 35,870 |
| 28 | July 5, 2020 | July 11, 2020 | 866 | 36,736 |
| 29 | July 12, 2020 | July 18, 2020 | 931 | 37,667 |
| 30 | July 19, 2020 | July 25, 2020 | 993 | 38,660 |
| 31 | July 26, 2020 | August 1, 2020 | 808 | 39,468 |
| 32 | August 2, 2020 | August 8, 2020 | 592 | 40,060 |
| 33 | August 9, 2020 | August 15, 2020 | 610 | 40,670 |
| 34 | August 16, 2020 | August 22, 2020 | 728 | 41,398 |
| 35 | August 23, 2020 | August 29, 2020 | 852 | 42,250 |
| 36 | August 30, 2020 | September 5, 2020 | 976 | 43,226 |
| 37 | September 6, 2020 | September 12, 2020 | 1,505 | 44,731 |
| 38 | September 13, 2020 | September 19, 2020 | 2,373 | 47,104 |
| 39 | September 20, 2020 | September 26, 2020 | 3,124 | 50,228 |
| 40 | September 27, 2020 | October 3, 2020 | 4,222 | 54,450 |
| 41 | October 4, 2020 | October 10, 2020 | 5,035 | 59,485 |
| 42 | October 11, 2020 | October 17, 2020 | 5,277 | 64,762 |
| 43 | October 18, 2020 | October 24, 2020 | 6,039 | 70,801 |
| 44 | October 25, 2020 | October 31, 2020 | 6,388 | 77,189 |
| 45 | November 1, 2020 | November 7, 2020 | 7,603 | 84,792 |
| 46 | November 8, 2020 | November 14, 2020 | 10,440 | 95,232 |
| 47 | November 15, 2020 | November 21, 2020 | 10,038 | 105,270 |
| 48 | November 22, 2020 | November 28, 2020 | 11,135 | 116,405 |

| Reported Week | Start date | End date | Number of cases | Cumulative count |
|---|---|---|---|---|
| 49 | November 29, 2020 | December 5, 2020 | 12,681 | 129,086 |
| 50 | December 6, 2020 | December 12, 2020 | 13,060 | 142,146 |
| 51 | December 13, 2020 | December 19, 2020 | 15,656 | 157,802 |
| 52 | December 20, 2020 | December 26, 2020 | 15,630 | 173,432 |
| 53 | December 27, 2020 | January 2, 2021 | 20,446 | 193,878 |
| 1 | January 3, 2021 | January 9, 2021 | 24,876 | 218,754 |
| 2 | January 10, 2021 | January 16, 2021 | 21,381 | 240,135 |
| 3 | January 17, 2021 | January 23, 2021 | 16,400 | 256,535 |
| 4 | January 24, 2021 | January 30, 2021 | 12,769 | 269,304 |
| 5 | January 31, 2021 | February 6, 2021 | 9,782 | 279,086 |
| 6 | February 7, 2021 | February 13, 2021 | 7,898 | 286,984 |
| 7 | February 14, 2021 | February 20, 2021 | 7,457 | 294,441 |
| 8 | February 21, 2021 | February 27, 2021 | 7,685 | 302,126 |
| 9 | February 28, 2021 | March 6, 2021 | 7,934 | 310,060 |
| 10 | March 7, 2021 | March 13, 2021 | 9,480 | 319,540 |
| 11 | March 14, 2021 | March 20, 2021 | 11,021 | 330,561 |
| 12 | March 21, 2021 | March 27, 2021 | 14,386 | 344,947 |
| 13 | March 28, 2021 | April 3, 2021 | 18,945 | 363,892 |
| 14 | April 4, 2021 | April 10, 2021 | 25,576 | 389,468 |
| 15 | April 11, 2021 | April 17, 2021 | 30,893 | 420,361 |
| 16 | April 18, 2021 | April 24, 2021 | 28,343 | 448,704 |
| 17 | April 25, 2021 | May 1, 2021 | 25,212 | 473,916 |
| 18 | May 2, 2021 | May 8, 2021 | 20,756 | 494,672 |
| 19 | May 9, 2021 | May 15, 2021 | 16,525 | 511,197 |
| 20 | May 16, 2021 | May 22, 2021 | 12,656 | 523,853 |

| Reported Week | Start date | End date | Number of cases | Cumulative count |
|---|---|---|---|---|
| 21 | May 23, 2021 | May 29, 2021 | 7,759 | 531,612 |
| 22 | May 30, 2021 | June 5, 2021 | 5,216 | 536,828 |
| 23 | June 6, 2021 | June 12, 2021 | 3,481 | 540,309 |
| 24 | June 13, 2021 | June 19, 2021 | 2,418 | 542,727 |
| 25 | June 20, 2021 | June 26, 2021 | 1,881 | 544,608 |
| 26 | June 27, 2021 | July 3, 2021 | 1,473 | 546,081 |
| 27 | July 4, 2021 | July 10, 2021 | 1,225 | 547,306 |
| 28 | July 11, 2021 | July 17, 2021 | 1,045 | 548,351 |
| 29 | July 18, 2021 | July 24, 2021 | 1,110 | 549,461 |
| 30 | July 25, 2021 | July 31, 2021 | 1,350 | 550,811 |
| 31 | August 1, 2021 | August 7, 2021 | 1,908 | 552,719 |
| 32 | August 8, 2021 | August 14, 2021 | 3,171 | 555,890 |
| 33 | August 15, 2021 | August 21, 2021 | 4,144 | 560,034 |
| 34 | August 22, 2021 | August 28, 2021 | 4,776 | 564,810 |
| 35 | August 29, 2021 | September 4, 2021 | 5,184 | 569,994 |
| 36 | September 5, 2021 | September 11, 2021 | 5,056 | 575,050 |
| 37 | September 12, 2021 | September 18, 2021 | 4,922 | 579,972 |
| 38 | September 19, 2021 | September 25, 2021 | 4,396 | 584,368 |
| 39 | September 26, 2021 | October 2, 2021 | 3,948 | 588,316 |

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

| Public Health Unit Name | Cases reported week 38 | Rate per 100,000 population<br><br>Reported week 38 | Cases reported week 39 | Rate per 100,000 population<br><br>Reported week 39 |
|---|---|---|---|---|
| Northwestern Health Unit | 12 | 14.8 | 21 | 25.9 |
| Thunder Bay District Health Unit | 3 | 1.9 | 5 | 3.2 |
| **TOTAL NORTH WEST** | **15** | **6.3** | **26** | **10.9** |
| Algoma Public Health | 6 | 5.1 | 6 | 5.1 |
| North Bay Parry Sound District Health Unit | 8 | 6.2 | 17 | 13.1 |
| Porcupine Health Unit | 13 | 15.3 | 3 | 3.5 |
| Public Health Sudbury & Districts | 28 | 13.6 | 29 | 14.1 |
| Timiskaming Health Unit | 8 | 23.6 | 1 | 3.0 |
| **TOTAL NORTH EAST** | **63** | **11.0** | **56** | **9.8** |
| Ottawa Public Health | 381 | 36.5 | 349 | 33.5 |
| Eastern Ontario Health Unit | 176 | 81.5 | 148 | 68.6 |
| Hastings Prince Edward Public Health | 23 | 13.3 | 27 | 15.6 |
| Kingston, Frontenac and Lennox & Addington Public Health | 27 | 12.9 | 34 | 16.3 |
| Leeds, Grenville & Lanark District Health Unit | 16 | 8.9 | 23 | 12.8 |
| Renfrew County and District Health Unit | 4 | 3.7 | 10 | 9.2 |
| **TOTAL EASTERN** | **627** | **32.5** | **591** | **30.6** |
| Durham Region Health Department | 188 | 26.4 | 181 | 25.4 |

| Public Health Unit Name | Cases reported week 38 | Rate per 100,000 population<br>Reported week 38 | Cases reported week 39 | Rate per 100,000 population<br>Reported week 39 |
|---|---|---|---|---|
| Haliburton, Kawartha, Pine Ridge District Health Unit | 27 | 14.2 | 12 | 6.3 |
| Peel Public Health | 509 | 32.6 | 421 | 26.9 |
| Peterborough Public Health | 27 | 18.2 | 22 | 14.9 |
| Simcoe Muskoka District Health Unit | 106 | 17.5 | 98 | 16.2 |
| York Region Public Health | 366 | 30.5 | 275 | 22.9 |
| **TOTAL CENTRAL EAST** | **1,223** | **27.7** | **1,009** | **22.8** |
| Toronto Public Health | 831 | 27.8 | 742 | 24.8 |
| **TOTAL TORONTO** | **831** | **27.8** | **742** | **24.8** |
| Chatham-Kent Public Health | 80 | 75.0 | 108 | 101.3 |
| Grey Bruce Health Unit | 9 | 5.1 | 7 | 4.0 |
| Huron Perth Public Health | 40 | 27.4 | 40 | 27.4 |
| Lambton Public Health | 65 | 48.9 | 81 | 60.9 |
| Middlesex-London Health Unit | 130 | 25.5 | 139 | 27.2 |
| Southwestern Public Health | 29 | 13.2 | 74 | 33.8 |
| Windsor-Essex County Health Unit | 263 | 61.0 | 252 | 58.5 |
| **TOTAL SOUTH WEST** | **616** | **35.8** | **701** | **40.7** |
| Brant County Health Unit | 79 | 51.4 | 38 | 24.7 |
| City of Hamilton Public Health Services | 295 | 50.7 | 248 | 42.6 |
| Haldimand-Norfolk Health Unit | 19 | 15.8 | 27 | 22.5 |
| Halton Region Public Health | 179 | 29.3 | 117 | 19.2 |
| Niagara Region Public Health | 171 | 35.5 | 210 | 43.6 |

| Public Health Unit Name | Cases reported week 38 | Rate per 100,000 population<br><br>Reported week 38 | Cases reported week 39 | Rate per 100,000 population<br><br>Reported week 39 |
|---|---|---|---|---|
| Region of Waterloo Public Health and Emergency Services | 154 | 25.4 | 123 | 20.3 |
| Wellington-Dufferin-Guelph Public Health | 124 | 39.7 | 60 | 19.2 |
| **TOTAL CENTRAL WEST** | **1,021** | **35.6** | **823** | **28.7** |
| **TOTAL ONTARIO** | **4,396** | **29.8** | **3,948** | **26.8** |

**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 October 2 for Lineage B.1.1.7 (Alpha)* | Cumulative case count up to October 2 for Lineage B.1.351 (Beta)** | Cumulative case count up to October 2 for Lineage P.1 (Gamma)*** | Cumulative case count up to October 2 for Lineage B.1.617.2 (Delta)† | Cumulative count up to October 2 for Mutations‡ |
|---|---|---|---|---|---|
| Northwestern Health Unit | 63 | 0 | 1 | 21 | 17 |
| Thunder Bay District Health Unit | 104 | 1 | 2 | 22 | 74 |
| **TOTAL NORTH WEST** | **167** | **1** | **3** | **43** | **91** |
| Algoma Public Health | 68 | 0 | 14 | 24 | 26 |
| North Bay Parry Sound District Health Unit | 235 | 28 | 3 | 73 | 13 |
| Porcupine Health Unit | 1,108 | 2 | 0 | 69 | 8 |
| Public Health Sudbury & Districts | 689 | 13 | 10 | 57 | 268 |
| Timiskaming Health Unit | 84 | 1 | 0 | 2 | 0 |
| **TOTAL NORTH EAST** | **2,184** | **44** | **27** | **225** | **315** |
| Ottawa Public Health | 6,852 | 515 | 55 | 558 | 471 |
| Eastern Ontario Health Unit | 665 | 46 | 21 | 109 | 268 |
| Hastings Prince Edward Public Health | 111 | 0 | 18 | 110 | 393 |
| Kingston, Frontenac and Lennox & | 458 | 2 | 35 | 63 | 132 |

| Public Health Unit Name | Cumulative case count up to October 2 for Lineage B.1.1.7 (Alpha)* | Cumulative case count up to October 2 for Lineage B.1.351 (Beta)** | Cumulative case count up to October 2 for Lineage P.1 (Gamma)*** | Cumulative case count up to October 2 for Lineage B.1.617.2 (Delta)† | Cumulative count up to October 2 for Mutations‡ |
|---|---|---|---|---|---|
| Addington Public Health | | | | | |
| Leeds, Grenville & Lanark District Health Unit | 294 | 19 | 0 | 50 | 44 |
| Renfrew County and District Health Unit | 232 | 8 | 7 | 12 | 12 |
| **TOTAL EASTERN** | **8,612** | **590** | **136** | **902** | **1,320** |
| Durham Region Health Department | 9,523 | 66 | 270 | 729 | 1,213 |
| Haliburton, Kawartha, Pine Ridge District Health Unit | 443 | 0 | 23 | 154 | 309 |
| Peel Public Health | 31,189 | 163 | 1,774 | 2,566 | 2,857 |
| Peterborough Public Health | 630 | 4 | 8 | 110 | 161 |
| Simcoe Muskoka District Health Unit | 4,004 | 36 | 173 | 598 | 685 |
| York Region Public Health | 15,872 | 79 | 482 | 1,550 | 2,741 |
| **TOTAL CENTRAL EAST** | **61,661** | **348** | **2,730** | **5,707** | **7,966** |
| Toronto Public Health | 46,070 | 375 | 1,524 | 3,895 | 7,480 |
| **TOTAL TORONTO** | **46,070** | **375** | **1,524** | **3,895** | **7,480** |
| Chatham-Kent Public Health | 131 | 5 | 16 | 192 | 108 |

| Public Health Unit Name | Cumulative case count up to October 2 for Lineage B.1.1.7 (Alpha)* | Cumulative case count up to October 2 for Lineage B.1.351 (Beta)** | Cumulative case count up to October 2 for Lineage P.1 (Gamma)*** | Cumulative case count up to October 2 for Lineage B.1.617.2 (Delta)† | Cumulative count up to October 2 for Mutations‡ |
|---|---|---|---|---|---|
| Grey Bruce Health Unit | 310 | 0 | 6 | 602 | 55 |
| Huron Perth Public Health | 279 | 0 | 12 | 140 | 28 |
| Lambton Public Health | 438 | 0 | 18 | 108 | 127 |
| Middlesex-London Health Unit | 3,384 | 2 | 124 | 745 | 186 |
| Southwestern Public Health | 689 | 3 | 21 | 180 | 160 |
| Windsor-Essex County Health Unit | 1,856 | 8 | 19 | 1,098 | 138 |
| **TOTAL SOUTH WEST** | **7,087** | **18** | **216** | **3,065** | **802** |
| Brant County Health Unit | 670 | 2 | 97 | 281 | 508 |
| City of Hamilton Public Health Services | 5,065 | 66 | 105 | 1,614 | 2,093 |
| Haldimand-Norfolk Health Unit | 369 | 3 | 23 | 101 | 408 |
| Halton Region Public Health | 5,090 | 30 | 169 | 661 | 619 |
| Niagara Region Public Health | 4,286 | 4 | 20 | 191 | 1,104 |
| Region of Waterloo Public Health and Emergency Services | 3,133 | 21 | 98 | 1,839 | 254 |

| Public Health Unit Name | Cumulative case count up to October 2 for Lineage B.1.1.7 (Alpha)* | Cumulative case count up to October 2 for Lineage B.1.351 (Beta)** | Cumulative case count up to October 2 for Lineage P.1 (Gamma)*** | Cumulative case count up to October 2 for Lineage B.1.617.2 (Delta)† | Cumulative count up to October 2 for Mutations‡ |
|---|---|---|---|---|---|
| Wellington-Dufferin-Guelph Public Health | 2,085 | 1 | 81 | 416 | 177 |
| **TOTAL CENTRAL WEST** | **20,698** | **127** | **593** | **5,103** | **5,163** |
| **TOTAL ONTARIO** | **146,479** | **1,503** | **5,229** | **18,940** | **23,137** |

**Note:** Interpret the VOC and mutation 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. Data for calculating the cumulative case count uses data from the Investigation Subtype field only. Data for cases with a B.1.1.7 (Alpha), B.1.351 (Beta), P.1 (Gamma) and B.1.617.2 (Delta) lineage detected or a mutation are determined using the Investigation Subtype field only.

*Includes all confirmed COVID-19 cases where lineage B.1.1.7 (Alpha) was identified by genomic analysis and those presumed to be B.1.1.7 based on a positive N501Y and negative E484K mutation in the Investigation Subtype field.

**Includes B.1.351 (Beta) cases identified by genomic analysis and those presumed to be B.1.351 based on 'Mutation K417N+ and N501Y+ and E484K+' in the Investigation Subtype field

***Includes P.1 (Gamma) cases identified by genomic analysis and those presumed to be P.1 based on 'Mutation K417T+ and N501Y+ and E484K+' in the Investigation Subtype field

†Includes B.1.617.2 (Delta) and AY.3 cases identified by genomic analysis. Mutations common to B.1.617.2 are not included in the current VOC mutation test.

‡ Mutations includes all confirmed COVID-19 cases with the following mutations detected, reported from the Investigation Subtype field: N501Y and E484K, N501Y (E484K unknown), E484K (N501Y negative), E484K (N501Y unknown)

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# For Further Information

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# Public Health Ontario

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