

WEEKLY EPIDEMIOLOGICAL SUMMARY

COVID-19 in Ontario: Focus on August 29, 2021 to September 4, 2021

This report includes the most current information available from CCM as of **September 7, 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.

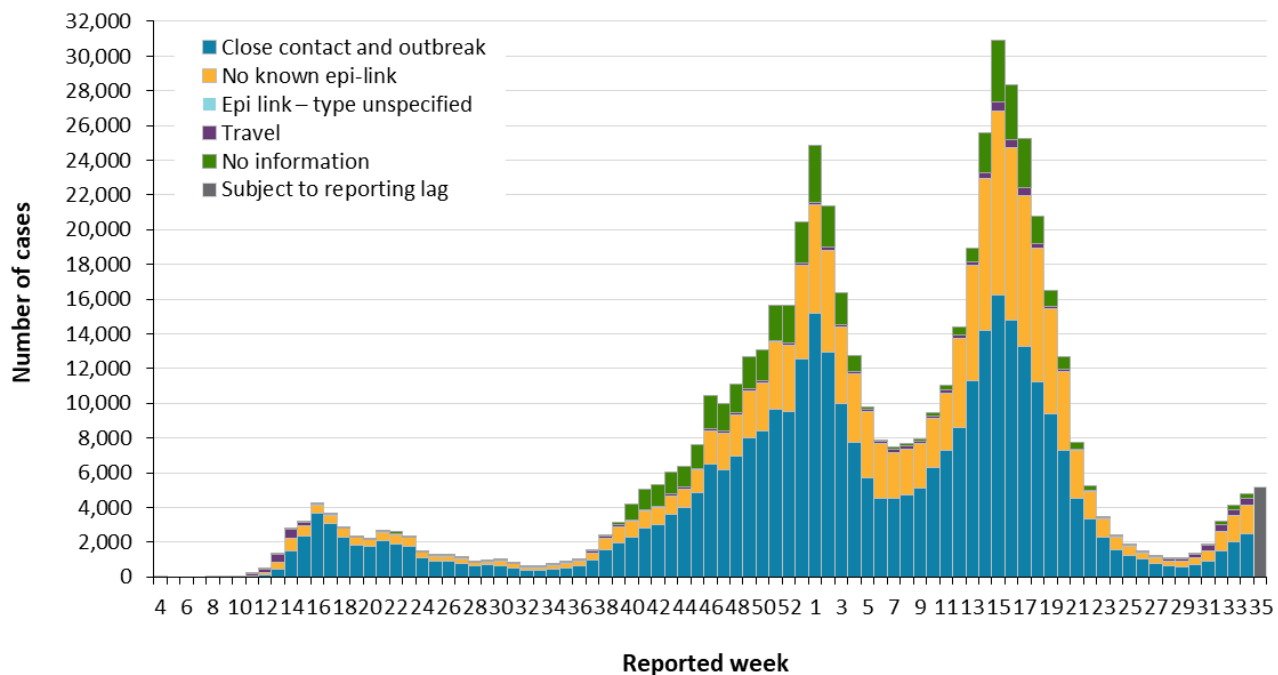
Highlights

- There are a total of 569,915 confirmed cases of COVID-19 in Ontario with a public health unit reported date up to September 4, 2021.
- For the period with a public health unit (PHU) reported date between August 29 to September 4, 2021 (week 35):
 - A total of 5,170 cases were reported to public health compared to 4,778 cases the previous week (August 22 to 28, 2021).
 - The rate of cases reported among cases age 20-39 has remained stable at approximately 50 cases per 100,000 population in the past three weeks. However, this week the rate of cases aged 5-11 surpassed the 20-39 age group to report the highest rate of disease among all age categories at 51.5.
 - Over the course of the 2021 summer camp season there were 19 outbreaks in camps, 16 of which were among day camps with a median outbreak size of 3 cases. The majority of cases associated with camp outbreaks were in cases <12 years of age (87.2%).

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

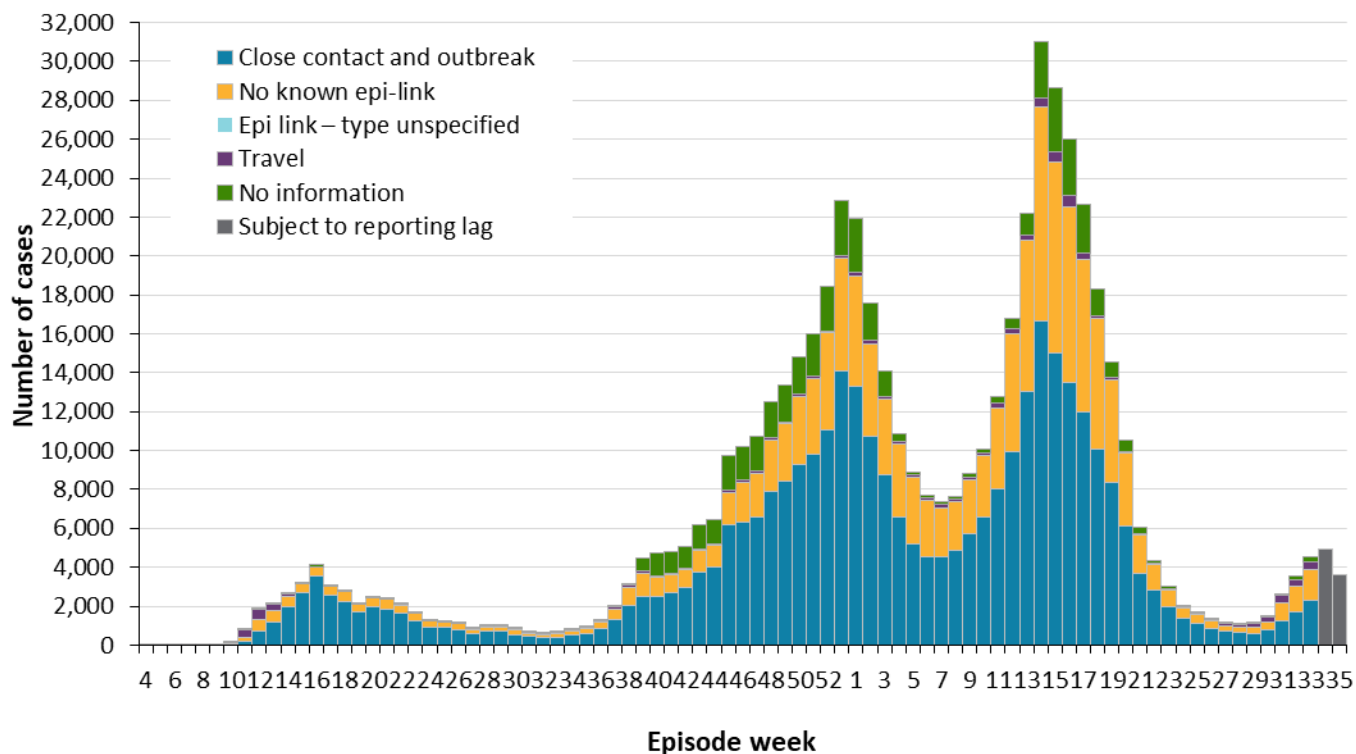
Figure 1. Confirmed cases of COVID-19 by likely source of acquisition and public health unit reported week: Ontario



Note: Include cases with reported dates ranging from week-4 (January 19 and 25, 2020) to week 35 (August 29 and September 4, 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 35 (August 29 and September 4, 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

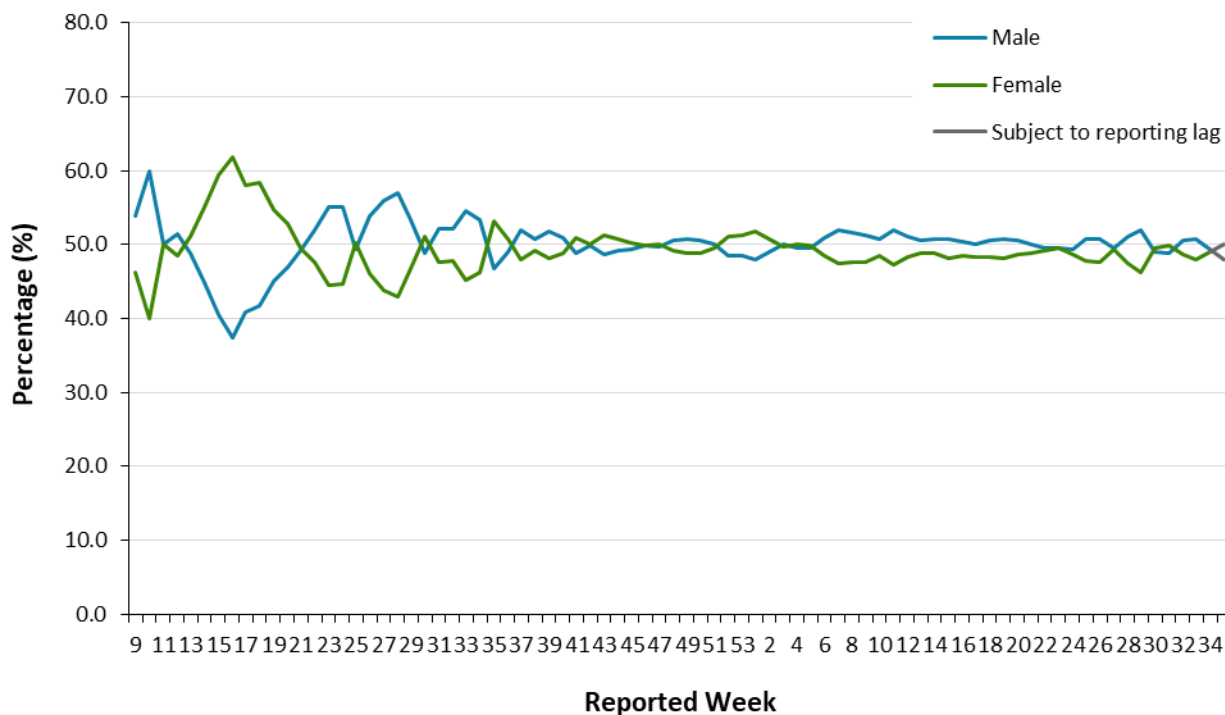
	Reported week 34 (August 22 to 28)	Reported week 35 (August 29 to September 4)	Cumulative case count up to September 4	Cumulative rate per 100,000 population
Total number of cases	4,778	5,170	569,915	3,868.0
Gender: Male	2,360	2,474	284,040	3,901.9
Gender: Female	2,340	2,583	281,992	3,782.8
Ages: 0-4	185	259	15,548	2,150.4
Ages: 5-11	419	555	27,552	2,554.6
Ages: 12-19	591	550	50,734	3,816.1
Ages: 20-39	2,080	2,050	215,007	5,178.5
Ages: 40-59	1,049	1,205	160,990	4,132.7
Ages: 60-79	374	452	74,471	2,568.2
Ages: 80 and over	78	99	25,507	3,889.2
Number resolved	N/A	N/A	555,666	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

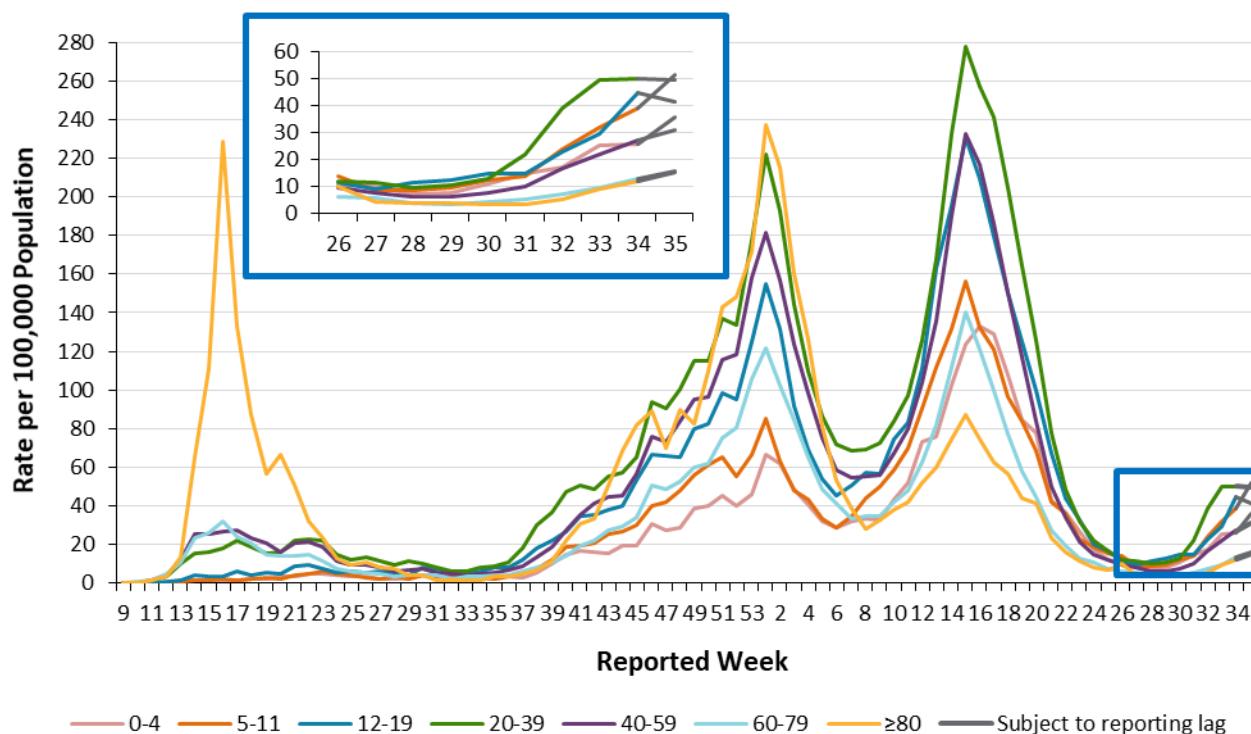
Figure 3. Percentage of confirmed cases of COVID-19 by gender and public health unit reported week: Ontario



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 35 (August 29 and September 4, 2021). See [Table 1A](#) in Appendix A for a list of the weeks and corresponding start and end dates.

Data Source: CCM

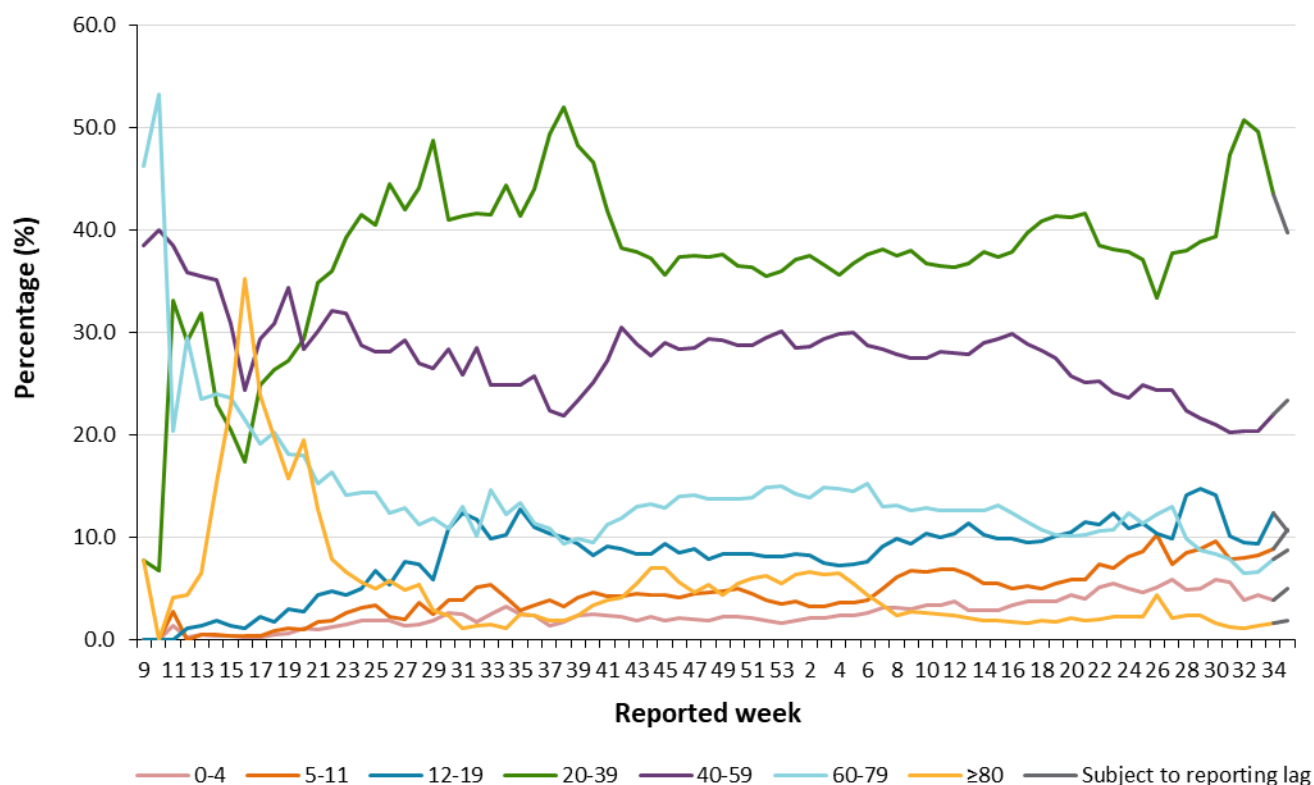
Figure 4a. Rate of confirmed cases of COVID-19 per 100,000 population by age group and public health unit reported week: Ontario



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 35 (August 29 and September 4, 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 35 (August 29 and September 4, 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

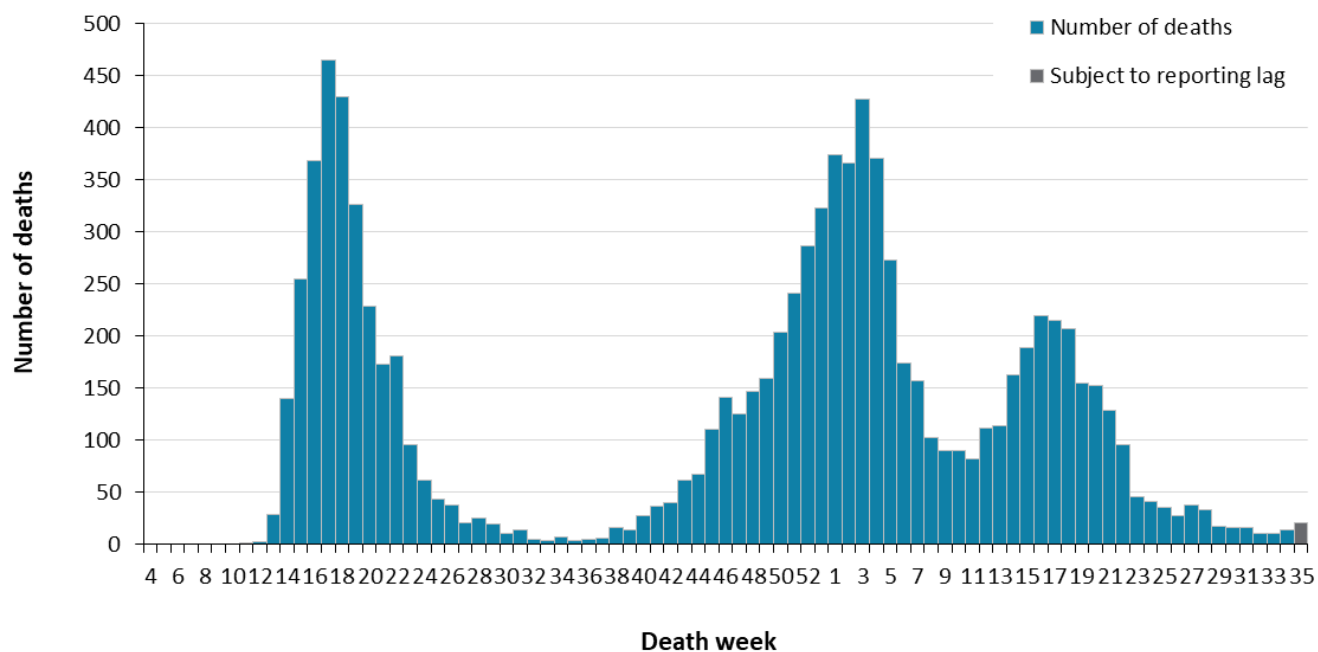


Table 2. Summary of deaths among confirmed cases of COVID-19 by public health unit reported week: Ontario

Deaths	Reported week 34 (August 22 to 28)	Reported week 35 (August 29 to September 4)	Cumulative case count up to September 4	Cumulative rate per 100,000 population
Number of deaths	18	4	9,569	64.9
Gender: Male	9	2	4,882	67.1
Gender: Female	9	2	4,625	62.0
Ages: 19 and under	0	0	5	0.2
Ages: 20-39	0	0	91	2.2
Ages: 40-59	4	0	634	16.3
Ages: 60-79	6	1	3,102	107.0
Ages: 80 and over	8	3	5,736	874.6

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 34 (August 22 to 28)	Percentage	Reported week 35 (August 29 to September 4)	Percentage	Cumulative case count up to September 4	Cumulative percentage
Travel	402	8.4%	403	7.8%	11,514	2.0%
Outbreak-associated or close contact of a confirmed case	2,473	51.8%	2,509	48.5%	340,418	59.7%
Epidemiological link – type unspecified	0	0.0%	0	0.0%	47	<0.1%
No known epidemiological link	1,641	34.3%	1,680	32.5%	166,009	29.1%
Information missing or unknown	262	5.5%	578	11.2%	51,927	9.1%
Total	4,778		5,170		569,915	

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 34 (August 22 to 28)	Reported week 35 (August 29 to September 4)	Cumulative case count up to September 4
Number of cases	96	95	24,103
Ever hospitalized	3	2	471
Ever in ICU	0	0	98

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 34 (August 22 to 28)	Reported week 35 (August 29 to September 4)	Cumulative case count up to September 4
Residents	19	18	15,506
Deaths among residents	3	2	3,993
Health care workers	6	8	7,300
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 confirmed COVID-19 outbreaks in camps and cases associated with camp outbreaks reported July 4, 2021 to September 4, 2021: Ontario

	Camp – Day	Camp - Overnight	Camp - Unspecified	Total
Cases in camp outbreaks by age	90	11	8	109
<12 years of age	84	9	2	95
12 years of age and older	6	2	6	14
N cases per outbreak				
≤ 1 case*	3	0	0	3
2 cases	4	0	1	5
3-5 cases	4	0	0	4
6-9 cases	1	0	1	2
≥10 cases	4	1	0	5
Median number of cases per outbreak (IQR)	3 (2-9.5)	11 (11-11)	4 (2-6)	3 (2-11)

IQR: Interquartile Range

Note: Due to reporting delays and potential variations in data entry processes across public health units, there may be additional camp-associated COVID-19 cases that have not yet been entered in CCM, or have not been entered as linked to a camp-associated outbreak. Results should be interpreted with caution due to potential under-detection of outbreak associated cases.

*There may be COVID-19 outbreaks in camps that have zero cases linked to the outbreak in CCM. Median number of cases per outbreak includes cases in individuals that may include camp attendees and/or staff.

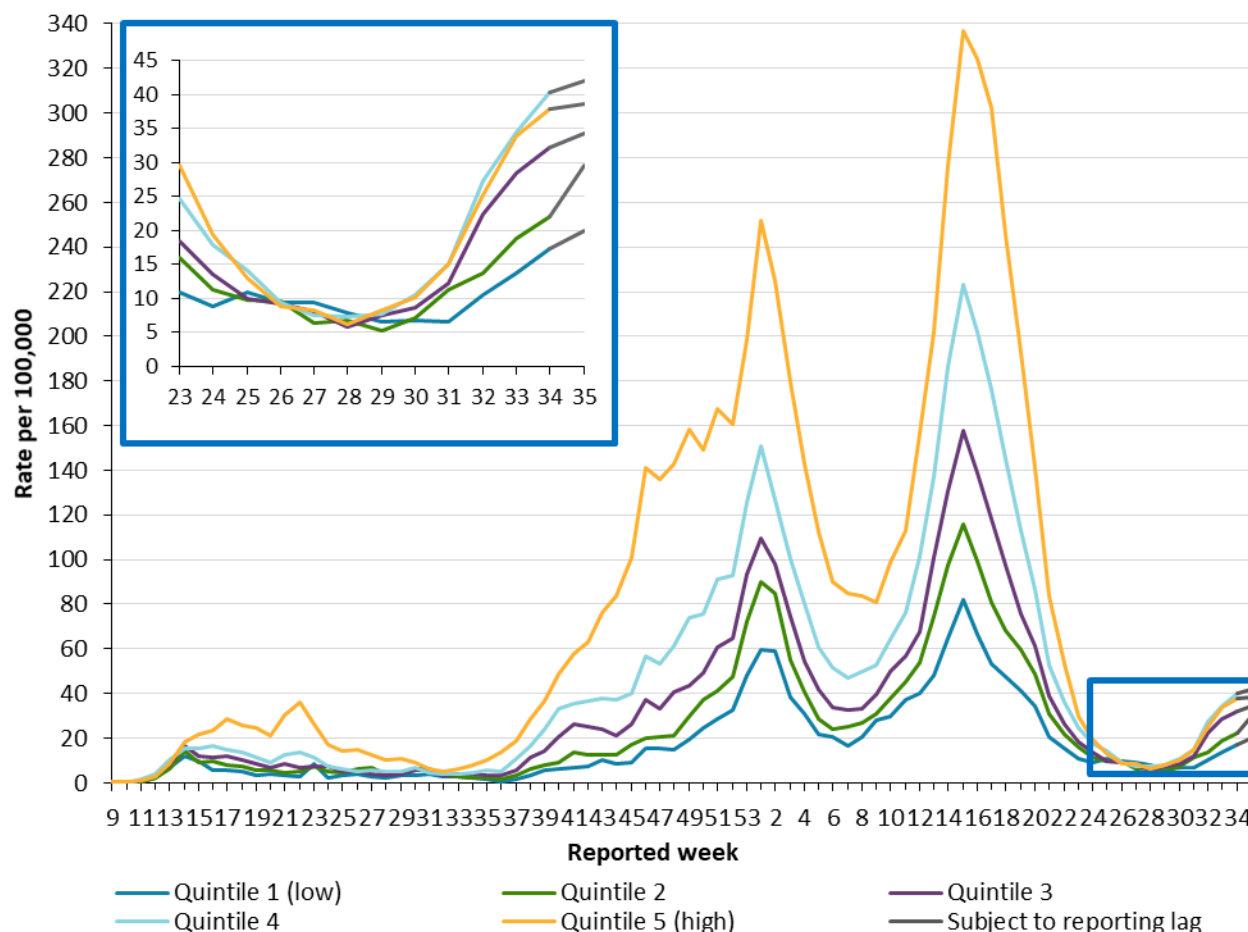
Table 7: Summary of reinfection cases of COVID-19 by age group and public health unit reported week: Ontario

Age Group	Reported Week 34 (August 22 to 28)	Reported Week 35 (August 29 to September 4)	Cumulative count from November 1 up to September 4	Percent of reinfection cases
Ages: 0-4	2	0	10	3.3%
Ages: 5-11	0	0	2	0.7%
Ages: 12-19	1	0	32	10.6%
Ages: 20-39	10	7	144	47.7%
Ages: 40-59	3	2	83	27.5%
Ages: 60-79	0	0	22	7.3%
Ages: 80 and over	0	0	9	3.0%
Total reinfection cases	16	9	302	

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

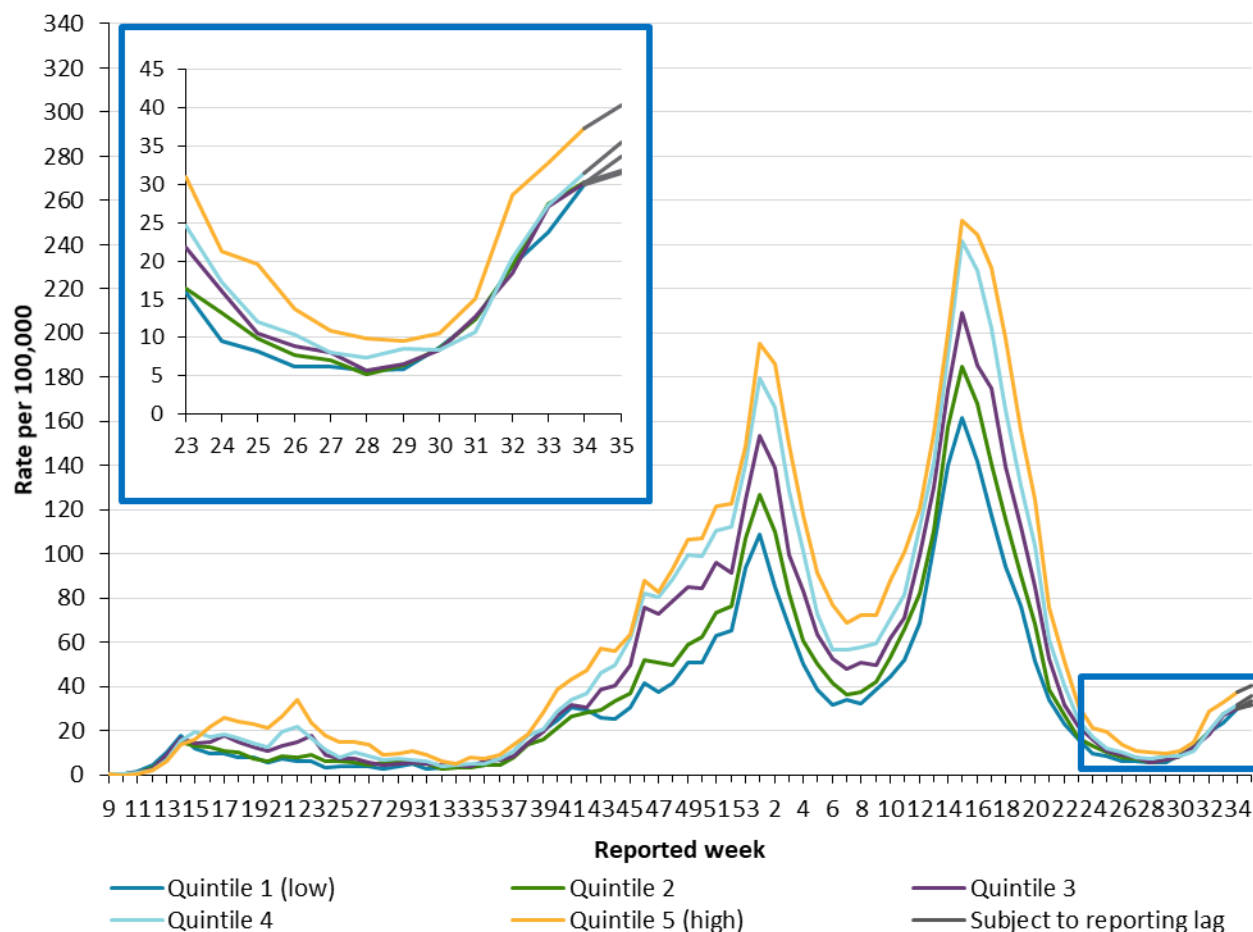
Figure 6. Rate of confirmed cases of COVID-19 per 100,000 population by quintile of neighbourhood diversity and public health unit reported week: Ontario



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 35 (August 29 to September 4, 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 35 (August 29 to September 4, 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 8: Summary of cases of COVID-19 by quintile of neighbourhood diversity and public health unit reported week: Ontario

	Cases Reported Week 34(August 22 to 28)	Cases Reported Week 35 (August 29 to September 4)	Cumulative case count up to September 4	Cumulative rate per 100,000 population up to September 4
Quintile 1 (least diverse)	384	443	30,581	1,376.8
Quintile 2	523	700	45,778	1,933.1
Quintile 3	833	889	67,782	2,614.9
Quintile 4	1,262	1,313	115,720	3,699.9
Quintile 5 (most diverse)	1,633	1,669	268,324	6,207.9

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

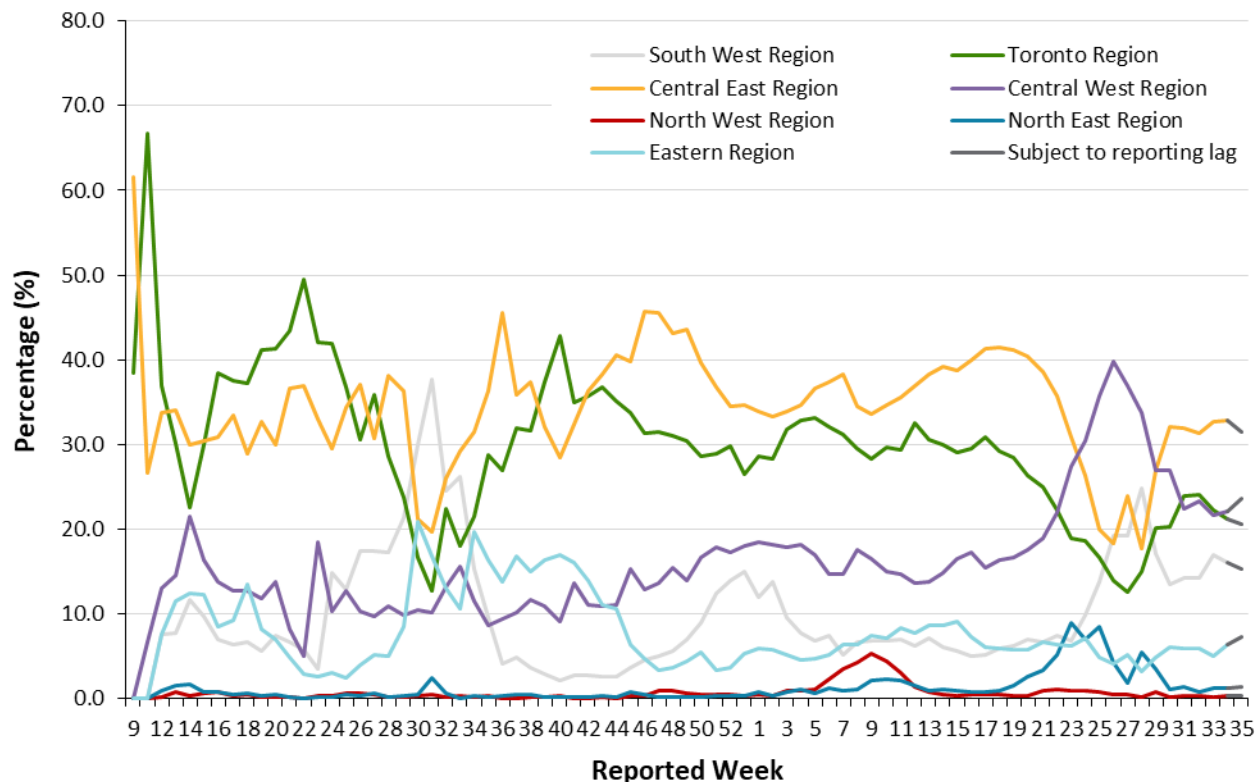
	Cases Reported Week 34(August 22 to 28)	Cases Reported Week 35 (August 29 to September 4)	Cumulative case count up to September 4	Cumulative rate per 100,000 population up to September 4
Quintile 1 (least material deprivation)	1,033	1,084	89,093	2,585.3
Quintile 2	941	985	93,403	3,008.5
Quintile 3	834	933	102,031	3,679.5
Quintile 4	826	932	111,994	4,262.3
Quintile 5 (most material deprivation)	1,001	1,080	131,664	4,912.8

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

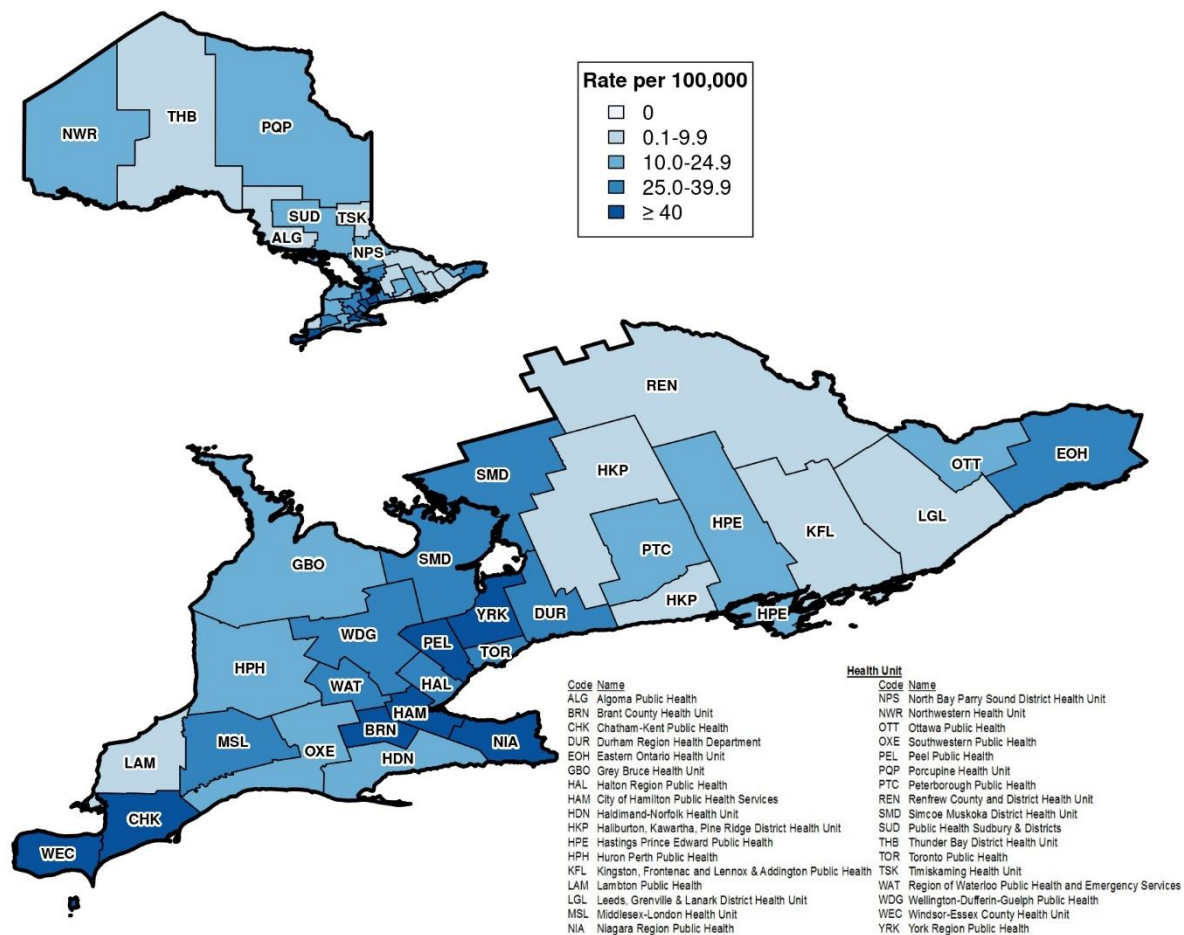
Figure 8. Percentage of COVID-19 cases by geographic region and public health unit reported week: Ontario



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 35 (August 29 and September 4, 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 35 (August 29 to September 4, 2021) by public health unit: Ontario



Note: The provincial rate of confirmed cases of COVID-19 reported in week 35 was 35.1 cases per 100,000 population.
Data Source: CCM

Outbreaks

Table 10. Number of public health unit declared COVID-19 outbreaks by setting type: Ontario

Setting Type	Reported week 35 (August 29 to September 4)	Number of ongoing outbreaks	Cumulative number of outbreaks reported to September 4
Congregate Care	5	18	2,972
Long-term care homes	2	7	1,501
Retirement homes	1	5	882
Hospitals	2	6	589
Congregate Living	8	16	1,353
Correctional facility	1	2	62
Shelter	1	3	277
Group Home/supportive housing	4	5	792
Short-term accommodations	0	1	44
Congregate other	2	5	178
Education and Childcare	17	29	2,519
Child care	13	21	1,059
Camp – Day*	3	6	16
Camp – Overnight*	0	0	1
Camp – Unspecified*	1	1	2
School – Elementary**	0	1	1,073
School – Elementary/secondary**	0	0	64
School – Secondary**	0	0	257
School – Post-secondary**	0	0	47
Other settings	43	81	4,423
Bar/restaurant/nightclub	4	10	378

Setting Type	Reported week 35 (August 29 to September 4)	Number of ongoing outbreaks	Cumulative number of outbreaks reported to September 4
Medical/health services	1	2	160
Personal service settings	3	3	35
Recreational fitness	3	4	103
Retail	2	5	483
Other recreation/community	7	13	247
Workplace – Farm	2	4	234
Workplace - Food processing	0	1	279
Other types of workplaces	21	37	2,473
Other	0	2	8
Unknown	0	0	23
Total number of outbreaks	73	144	11,267

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 11. 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 34 (August 22 to 28)	Reported week 35 (August 29 to September 4)	Cumulative number of cases
Congregate Care	63	64	40,263
Long-term care homes	25	32	26,577
Retirement homes	30	20	7,268
Hospitals	8	12	6,418
Congregate Living	37	10	10,164
Correctional facility	0	2	1,758
Shelter	7	2	2,807
Group Home/supportive housing	11	3	3,664
Short-term accommodations	11	0	238
Congregate other	8	3	1,697
Education and Childcare	59	78	10,821
Child care	46	58	4,392
Camp – Day*	7	19	90
Camp – Overnight*	0	0	11
Camp – Unspecified*	6	1	8
School – Elementary**	0	0	4,450
School – Elementary/secondary**	0	0	343
School – Secondary**	0	0	1,107
School – Post-secondary**	0	0	420
Other settings	287	145	35,631
Bar/restaurant/nightclub	60	19	1,819
Medical/health services	6	2	735

Cases associated with the outbreak setting type	Reported week 34 (August 22 to 28)	Reported week 35 (August 29 to September 4)	Cumulative number of cases
Personal service settings	4	5	125
Recreational fitness	30	4	786
Retail	15	2	2,606
Other recreation/community	103	76	3,260
Workplace - Farm	2	1	3,156
Workplace - Food processing	0	0	3,736
Other types of workplaces	66	36	19,243
Other	1	0	44
Unknown	0	0	121
Total number of cases	446	297	96,879

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.

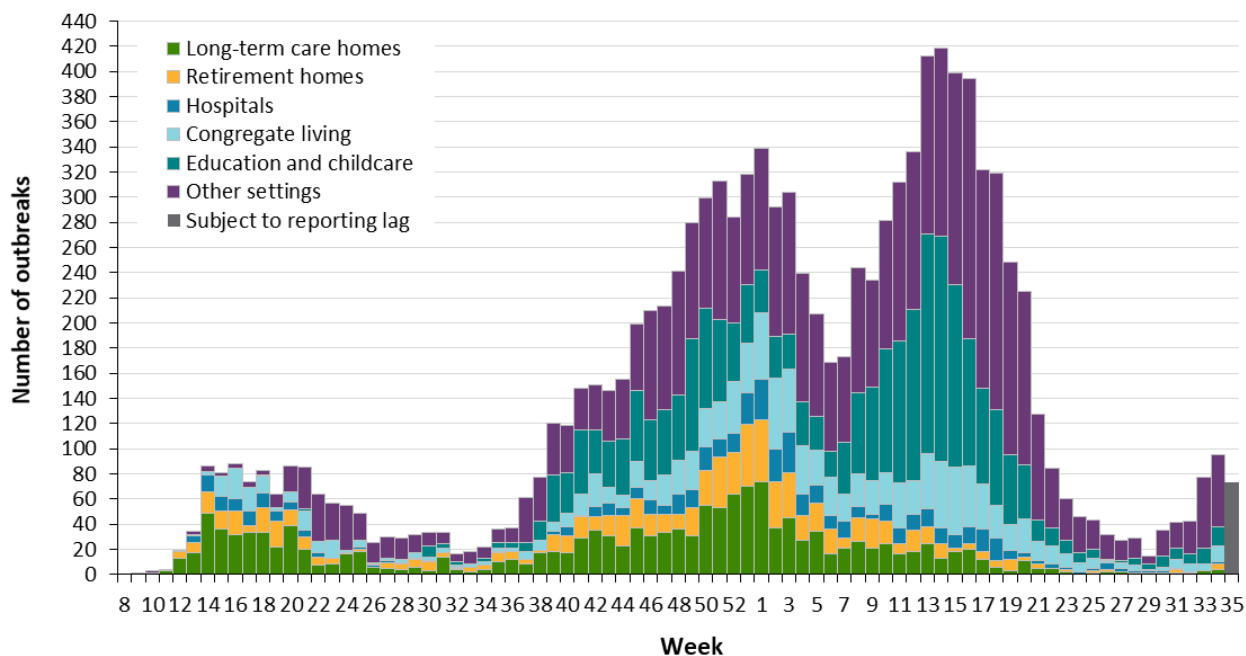
*Cumulative counts include COVID-19 camp outbreaks reported starting week-27 of 2021 (July 4 to 10, 2021).

**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 35 refers to August 29 and September 4, 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 12. 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 September 4, 2021
Gender: Male	73,954	736	2,707	6,630	11,870	11,237	107,134
Gender: Female	71,558	760	2,483	6,251	10,928	11,137	103,117
Ages: 19 and under	27,804	249	905	2,869	4,655	4,583	41,065
Ages: 20-39	55,583	484	1,944	5,830	8,976	9,067	81,884
Ages: 40-59	42,818	491	1,569	2,965	6,296	5,885	60,024
Ages: 60-79	17,430	236	668	1,115	2,704	2,520	24,673
Ages: 80 and over	2,791	41	137	225	451	535	4,180

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 13. 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 September 4, 2021	Cumulative percentage
Travel	842	0.6%	38	2.5%	67	1.3%	977	7.5%	319	1.4%	2,243	1.2%
Outbreak-associated or close contact of a confirmed case	81,590	55.7%	960	64.0%	3,313	63.4%	7,295	56.1%	14,966	64.8%	108,124	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	52,293	35.7%	404	26.9%	1,613	30.9%	4,200	32.3%	6,703	29.0%	65,213	34.5%
Information missing or unknown	11,711	8.0%	99	6.6%	230	4.4%	532	4.1%	1,095	4.7%	13,667	7.2%
Total	146,436		1,501		5,223		13,004		23,083		189,247	

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.

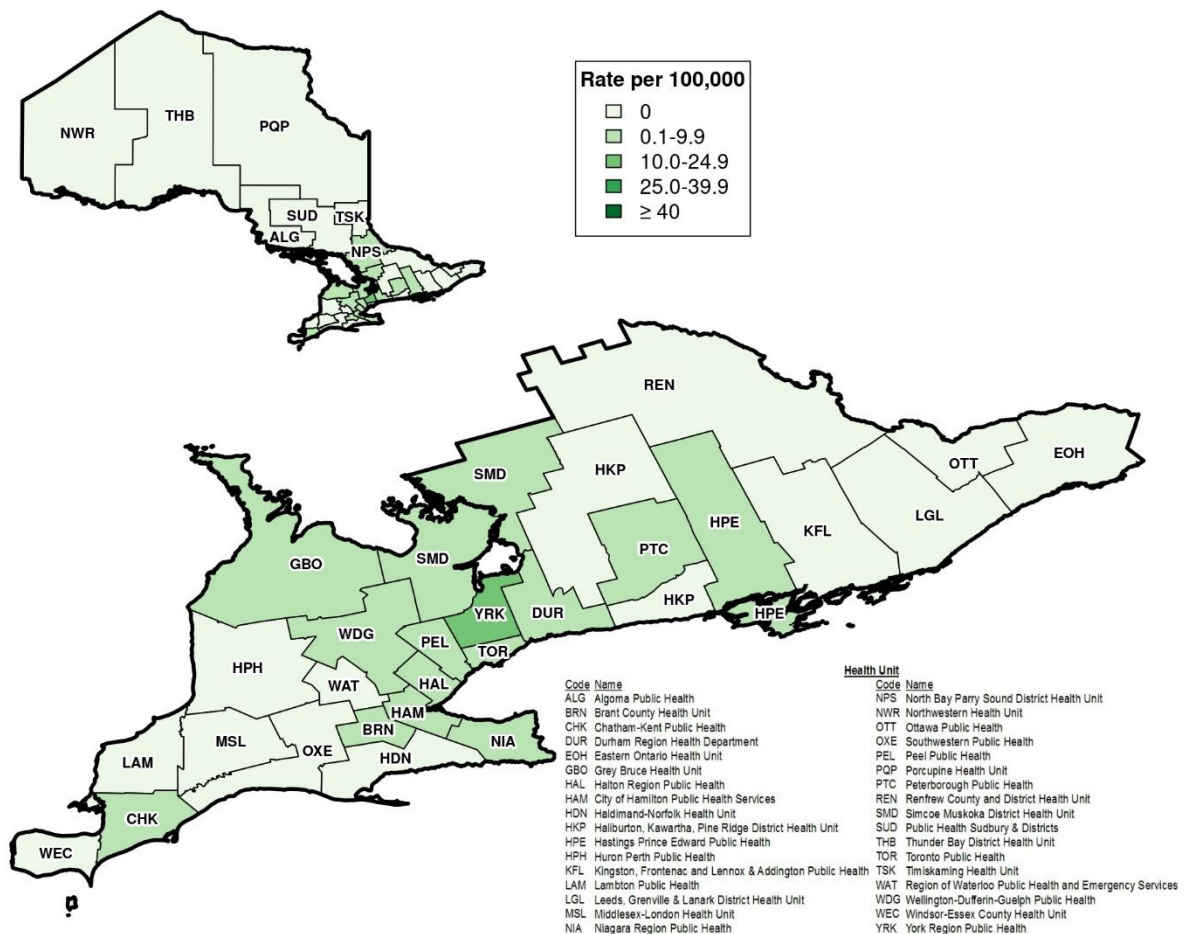
***Includes P.1 (Gamma) cases identified by genomic analysis and those presumed to be P.1 based on 'Mutation K417T+ and N501Y+ and E484K+' in the Investigation Subtype field.

†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 35 (August 29 to September 4, 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 35 was 2.8 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 **September 7, 2021 at 1 p.m.** for cases reported from February 1, 2021 onwards and as of **September 7, 2021 at 9 a.m.** for cases reported up January 31, 2021.
- VOC data for this report were based on information successfully extracted from CCM for all PHUs by PHO as of **September 7, 2021 at 1 p.m.** for cases reported from April 1, 2021 onwards and as of **September 7, 2021 at 9 a.m.** for cases reported up to March 31, 2021.
- 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-CoV-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	3,168	7,917
16	April 12, 2020	April 18, 2020	4,265	12,182
17	April 19, 2020	April 25, 2020	3,652	15,834
18	April 26, 2020	May 2, 2020	2,903	18,737
19	May 3, 2020	May 9, 2020	2,353	21,090
20	May 10, 2020	May 16, 2020	2,221	23,311
21	May 17, 2020	May 23, 2020	2,617	25,928
22	May 24, 2020	May 30, 2020	2,611	28,539
23	May 31, 2020	June 6, 2020	2,302	30,841

Reported Week	Start date	End date	Number of cases	Cumulative count
24	June 7, 2020	June 13, 2020	1,472	32,313
25	June 14, 2020	June 20, 2020	1,226	33,539
26	June 21, 2020	June 27, 2020	1,250	34,789
27	June 28, 2020	July 4, 2020	1,085	35,874
28	July 5, 2020	July 11, 2020	867	36,741
29	July 12, 2020	July 18, 2020	931	37,672
30	July 19, 2020	July 25, 2020	993	38,665
31	July 26, 2020	August 1, 2020	807	39,472
32	August 2, 2020	August 8, 2020	592	40,064
33	August 9, 2020	August 15, 2020	610	40,674
34	August 16, 2020	August 22, 2020	729	41,403
35	August 23, 2020	August 29, 2020	852	42,255
36	August 30, 2020	September 5, 2020	976	43,231
37	September 6, 2020	September 12, 2020	1,505	44,736
38	September 13, 2020	September 19, 2020	2,373	47,109
39	September 20, 2020	September 26, 2020	3,123	50,232
40	September 27, 2020	October 3, 2020	4,222	54,454
41	October 4, 2020	October 10, 2020	5,035	59,489
42	October 11, 2020	October 17, 2020	5,277	64,766
43	October 18, 2020	October 24, 2020	6,037	70,803
44	October 25, 2020	October 31, 2020	6,387	77,190
45	November 1, 2020	November 7, 2020	7,605	84,795
46	November 8, 2020	November 14, 2020	10,435	95,230
47	November 15, 2020	November 21, 2020	9,992	105,222
48	November 22, 2020	November 28, 2020	11,132	116,354

Reported Week	Start date	End date	Number of cases	Cumulative count
49	November 29, 2020	December 5, 2020	12,681	129,035
50	December 6, 2020	December 12, 2020	13,059	142,094
51	December 13, 2020	December 19, 2020	15,654	157,748
52	December 20, 2020	December 26, 2020	15,629	173,377
53	December 27, 2020	January 2, 2021	20,444	193,821
1	January 3, 2021	January 9, 2021	24,872	218,693
2	January 10, 2021	January 16, 2021	21,381	240,074
3	January 17, 2021	January 23, 2021	16,394	256,468
4	January 24, 2021	January 30, 2021	12,767	269,235
5	January 31, 2021	February 6, 2021	9,782	279,017
6	February 7, 2021	February 13, 2021	7,899	286,916
7	February 14, 2021	February 20, 2021	7,456	294,372
8	February 21, 2021	February 27, 2021	7,684	302,056
9	February 28, 2021	March 6, 2021	7,933	309,989
10	March 7, 2021	March 13, 2021	9,478	319,467
11	March 14, 2021	March 20, 2021	11,023	330,490
12	March 21, 2021	March 27, 2021	14,387	344,877
13	March 28, 2021	April 3, 2021	18,945	363,822
14	April 4, 2021	April 10, 2021	25,575	389,397
15	April 11, 2021	April 17, 2021	30,892	420,289
16	April 18, 2021	April 24, 2021	28,341	448,630
17	April 25, 2021	May 1, 2021	25,221	473,851
18	May 2, 2021	May 8, 2021	20,757	494,608
19	May 9, 2021	May 15, 2021	16,523	511,131
20	May 16, 2021	May 22, 2021	12,654	523,785

Reported Week	Start date	End date	Number of cases	Cumulative count
21	May 23, 2021	May 29, 2021	7,758	531,543
22	May 30, 2021	June 5, 2021	5,212	536,755
23	June 6, 2021	June 12, 2021	3,482	540,237
24	June 13, 2021	June 19, 2021	2,418	542,655
25	June 20, 2021	June 26, 2021	1,882	544,537
26	June 27, 2021	July 3, 2021	1,472	546,009
27	July 4, 2021	July 10, 2021	1,227	547,236
28	July 11, 2021	July 17, 2021	1,046	548,282
29	July 18, 2021	July 24, 2021	1,109	549,391
30	July 25, 2021	July 31, 2021	1,350	550,741
31	August 1, 2021	August 7, 2021	1,909	552,650
32	August 8, 2021	August 14, 2021	3,174	555,824
33	August 15, 2021	August 21, 2021	4,143	559,967
34	August 22, 2021	August 28, 2021	4,778	564,745
35	August 29, 2021	September 4, 2021	5,170	569,915

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

Public Health Unit Name	Cases reported week 34	Rate per 100,000 population Reported week 34	Cases reported week 35	Rate per 100,000 population Reported week 35
Northwestern Health Unit	6	7.4	10	12.3
Thunder Bay District Health Unit	7	4.4	9	5.7
TOTAL NORTH WEST	13	5.4	19	8.0
Algoma Public Health	11	9.3	3	2.5
North Bay Parry Sound District Health Unit	6	4.6	29	22.4
Porcupine Health Unit	10	11.8	16	18.8
Public Health Sudbury & Districts	30	14.6	21	10.2
Timiskaming Health Unit	0	0.0	1	3.0
TOTAL NORTH EAST	57	10.0	70	12.3
Ottawa Public Health	192	18.4	248	23.8
Eastern Ontario Health Unit	63	29.2	65	30.1
Hastings Prince Edward Public Health	32	18.5	32	18.5
Kingston, Frontenac and Lennox & Addington Public Health	6	2.9	19	9.1
Leeds, Grenville & Lanark District Health Unit	8	4.4	9	5.0
Renfrew County and District Health Unit	1	0.9	1	0.9
TOTAL EASTERN	302	15.7	374	19.4
Durham Region Health Department	230	32.3	229	32.2

Public Health Unit Name	Cases reported week 34	Rate per 100,000 population Reported week 34	Cases reported week 35	Rate per 100,000 population Reported week 35
Haliburton, Kawartha, Pine Ridge District Health Unit	8	4.2	12	6.3
Peel Public Health	594	38.0	635	40.6
Peterborough Public Health	18	12.2	27	18.2
Simcoe Muskoka District Health Unit	152	25.1	201	33.2
York Region Public Health	569	47.4	525	43.7
TOTAL CENTRAL EAST	1,571	35.6	1,629	36.9
Toronto Public Health	1,015	34.0	1,063	35.6
TOTAL TORONTO	1,015	34.0	1,063	35.6
Chatham-Kent Public Health	48	45.0	81	76.0
Grey Bruce Health Unit	17	9.7	20	11.4
Huron Perth Public Health	27	18.5	29	19.8
Lambton Public Health	16	12.0	8	6.0
Middlesex-London Health Unit	187	36.6	160	31.3
Southwestern Public Health	23	10.5	29	13.2
Windsor-Essex County Health Unit	446	103.5	464	107.7
TOTAL SOUTH WEST	764	44.4	791	45.9
Brant County Health Unit	48	31.3	95	61.9
City of Hamilton Public Health Services	505	86.8	471	81.0
Haldimand-Norfolk Health Unit	27	22.5	20	16.7
Halton Region Public Health	122	20.0	165	27.0
Niagara Region Public Health	118	24.5	212	44.0

Public Health Unit Name	Cases reported week 34	Rate per 100,000 population Reported week 34	Cases reported week 35	Rate per 100,000 population Reported week 35
Region of Waterloo Public Health and Emergency Services	139	23.0	156	25.8
Wellington-Dufferin-Guelph Public Health	97	31.1	105	33.7
TOTAL CENTRAL WEST	1,056	36.9	1,224	42.7
TOTAL ONTARIO	4,778	32.4	5,170	35.1

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 September 4 for Lineage B.1.1.7 (Alpha)*	Cumulative case count up to September 4 for Lineage B.1.351 (Beta)**	Cumulative case count up to September 4 for Lineage P.1 (Gamma)***	Cumulative case count up to September 4 for Lineage B.1.617.2 (Delta)†	Cumulative count up to September 4 for Mutations‡
Northwestern Health Unit	59	0	1	10	16
Thunder Bay District Health Unit	104	1	2	9	74
TOTAL NORTH WEST	163	1	3	19	90
Algoma Public Health	68	0	14	9	26
North Bay Parry Sound District Health Unit	235	28	3	45	14
Porcupine Health Unit	1,108	2	0	57	8
Public Health Sudbury & Districts	691	13	10	27	268
Timiskaming Health Unit	82	1	0	1	0
TOTAL NORTH EAST	2,184	44	27	139	316
Ottawa Public Health	6,845	515	55	293	465
Eastern Ontario Health Unit	662	46	21	24	269
Hastings Prince Edward Public Health	111	0	18	44	393

Public Health Unit Name	Cumulative case count up to September 4 for Lineage B.1.1.7 (Alpha)*	Cumulative case count up to September 4 for Lineage B.1.351 (Beta)**	Cumulative case count up to September 4 for Lineage P.1 (Gamma)***	Cumulative case count up to September 4 for Lineage B.1.617.2 (Delta)†	Cumulative count up to September 4 for Mutations‡
Kingston, Frontenac and Lennox & Addington Public Health	457	2	35	22	132
Leeds, Grenville & Lanark District Health Unit	295	19	0	18	44
Renfrew County and District Health Unit	232	8	7	7	12
TOTAL EASTERN	8,602	590	136	408	1,315
Durham Region Health Department	9,522	66	270	582	1,212
Haliburton, Kawartha, Pine Ridge District Health Unit	443	0	23	105	308
Peel Public Health	31,185	161	1,774	1,749	2,832
Peterborough Public Health	629	4	8	41	162
Simcoe Muskoka District Health Unit	4,001	36	173	411	689
York Region Public Health	15,874	79	480	1,215	2,737
TOTAL CENTRAL EAST	61,654	346	2,728	4,103	7,940

Public Health Unit Name	Cumulative case count up to September 4 for Lineage B.1.1.7 (Alpha)*	Cumulative case count up to September 4 for Lineage B.1.351 (Beta)**	Cumulative case count up to September 4 for Lineage P.1 (Gamma)***	Cumulative case count up to September 4 for Lineage B.1.617.2 (Delta)†	Cumulative count up to September 4 for Mutations‡
Toronto Public Health	46,065	375	1,522	2,910	7,470
TOTAL TORONTO	46,065	375	1,522	2,910	7,470
Chatham-Kent Public Health	131	5	16	67	104
Grey Bruce Health Unit	310	0	6	581	54
Huron Perth Public Health	278	0	12	100	28
Lambton Public Health	438	0	18	80	126
Middlesex-London Health Unit	3,384	2	124	470	184
Southwestern Public Health	684	3	21	133	160
Windsor-Essex County Health Unit	1,852	8	19	493	139
TOTAL SOUTH WEST	7,077	18	216	1,924	795
Brant County Health Unit	670	2	97	170	499
City of Hamilton Public Health Services	5,062	66	105	798	2,094
Haldimand-Norfolk Health Unit	368	3	23	56	408

Public Health Unit Name	Cumulative case count up to September 4 for Lineage B.1.1.7 (Alpha)*	Cumulative case count up to September 4 for Lineage B.1.351 (Beta)**	Cumulative case count up to September 4 for Lineage P.1 (Gamma)***	Cumulative case count up to September 4 for Lineage B.1.617.2 (Delta)†	Cumulative count up to September 4 for Mutations‡
Halton Region Public Health	5,089	30	167	476	617
Niagara Region Public Health	4,285	4	20	113	1,103
Region of Waterloo Public Health and Emergency Services	3,132	21	98	1,594	257
Wellington-Dufferin-Guelph Public Health	2,085	1	81	294	179
TOTAL CENTRAL WEST	20,691	127	591	3,501	5,157
TOTAL ONTARIO	146,436	1,501	5,223	13,004	23,083

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)

Citation

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For Further Information

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Public Health Ontario

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