

WEEKLY EPIDEMIOLOGICAL SUMMARY

COVID-19 in Ontario: Focus on September 12, 2021 to September 18, 2021

This report includes the most current information available from CCM as of **September 21, 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.

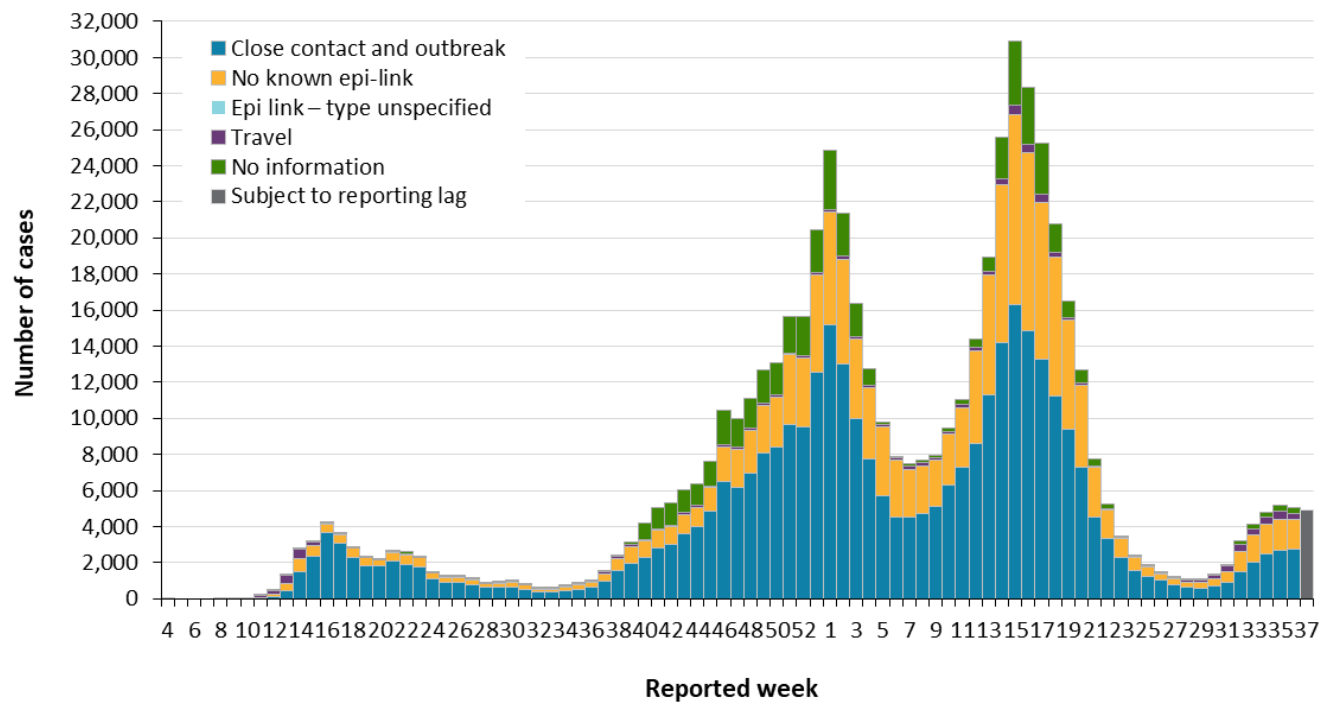
Highlights

- There are a total of 579,920 confirmed cases of COVID-19 in Ontario with a public health unit reported date up to September 18, 2021.
- For the period with a public health unit (PHU) reported date between September 12 to 18, 2021 (week 37):
 - A total of 4,926 cases were reported to public health compared to 5,057 cases the previous week (September 5 to 11, 2021).
 - This week, the number of cases reported in the province has decreased (-2.6%) with half of all public health units reporting a decrease in rate. While an upward trend in the proportion of cases (9.6% to 12.2%) and rate (25.0 cases per 100,000 population to 31.0) in Eastern Region was reported this week, the proportion of cases from this region is still among the lowest in the province.
 - The number of outbreaks reported in elementary school settings increased from 2 to 38 this week with a quarter (25.8%) of outbreak-associated cases reported in this setting.

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

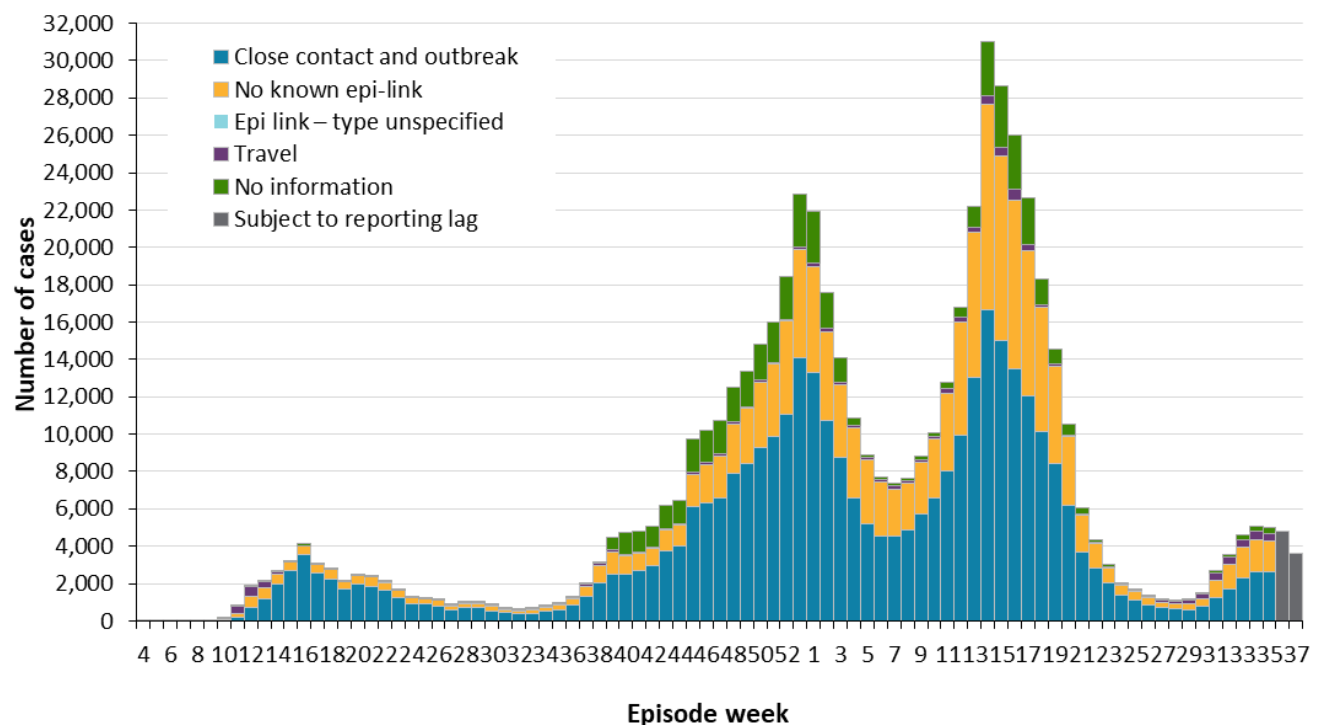
Figure 1. Confirmed cases of COVID-19 by likely source of acquisition and public health unit reported week: Ontario



Note: Include cases with reported dates ranging from week-4 (January 19 and 25, 2020) to week 37 (September 12 and 18, 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 37 (September 12 and 18, 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

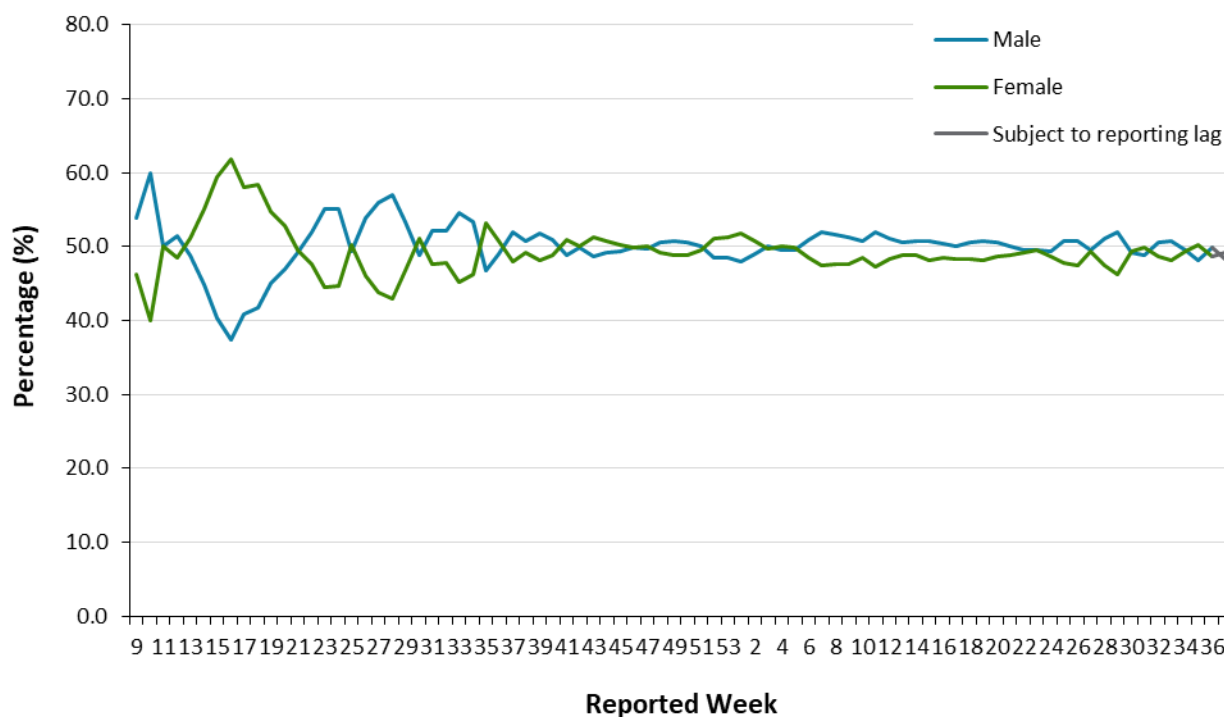
	Reported week 36 (September 5 to 11)	Reported week 37 (September 12 to 18)	Cumulative case count up to September 18	Cumulative rate per 100,000 population
Total number of cases	5,057	4,926	579,920	3,935.9
Gender: Male	2,519	2,384	288,977	3,969.8
Gender: Female	2,458	2,421	286,920	3,848.9
Ages: 0-4	252	277	16,076	2,223.5
Ages: 5-11	615	623	28,792	2,669.6
Ages: 12-19	527	480	51,749	3,892.4
Ages: 20-39	1,974	1,995	218,988	5,274.4
Ages: 40-59	1,142	1,043	163,175	4,188.8
Ages: 60-79	449	426	75,344	2,598.3
Ages: 80 and over	98	82	25,688	3,916.8
Number resolved	N/A	N/A	565,659	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

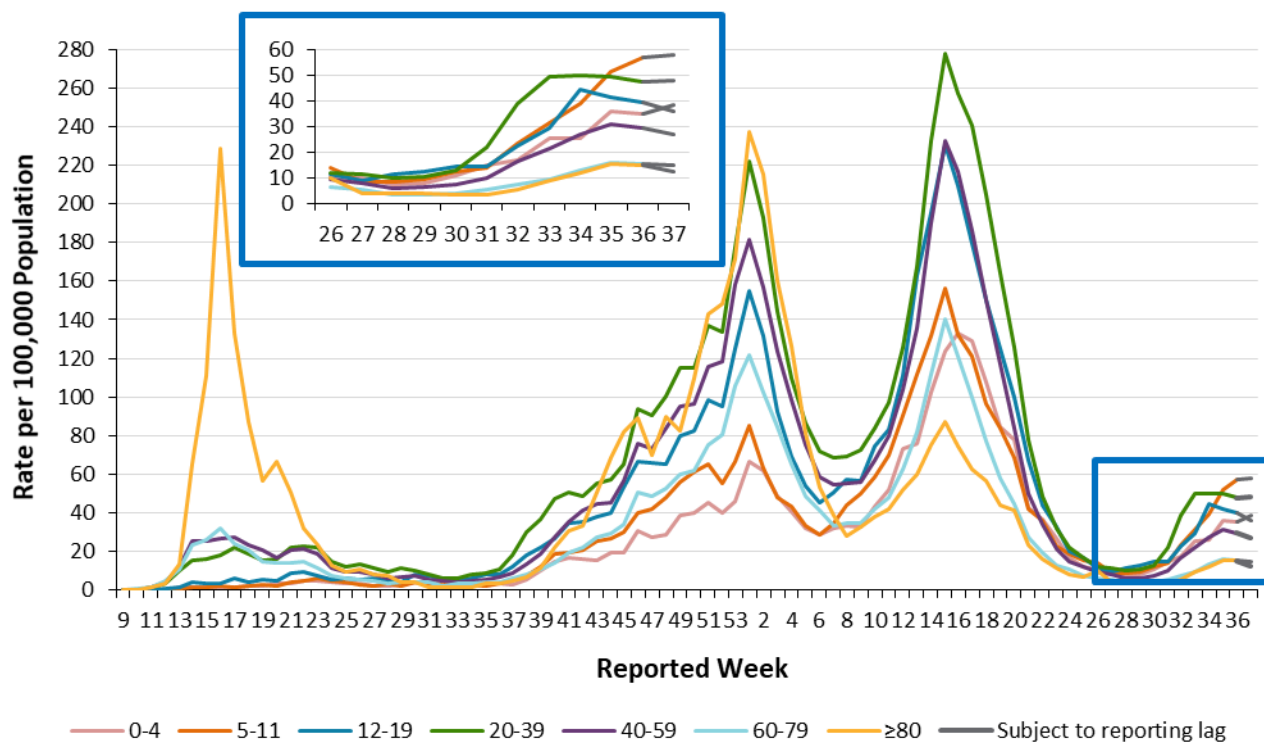
Figure 3. Percentage of confirmed cases of COVID-19 by gender and public health unit reported week: Ontario



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 37 (September 12 and 18, 2021). See [Table 1A](#) in Appendix A for a list of the weeks and corresponding start and end dates.

Data Source: CCM

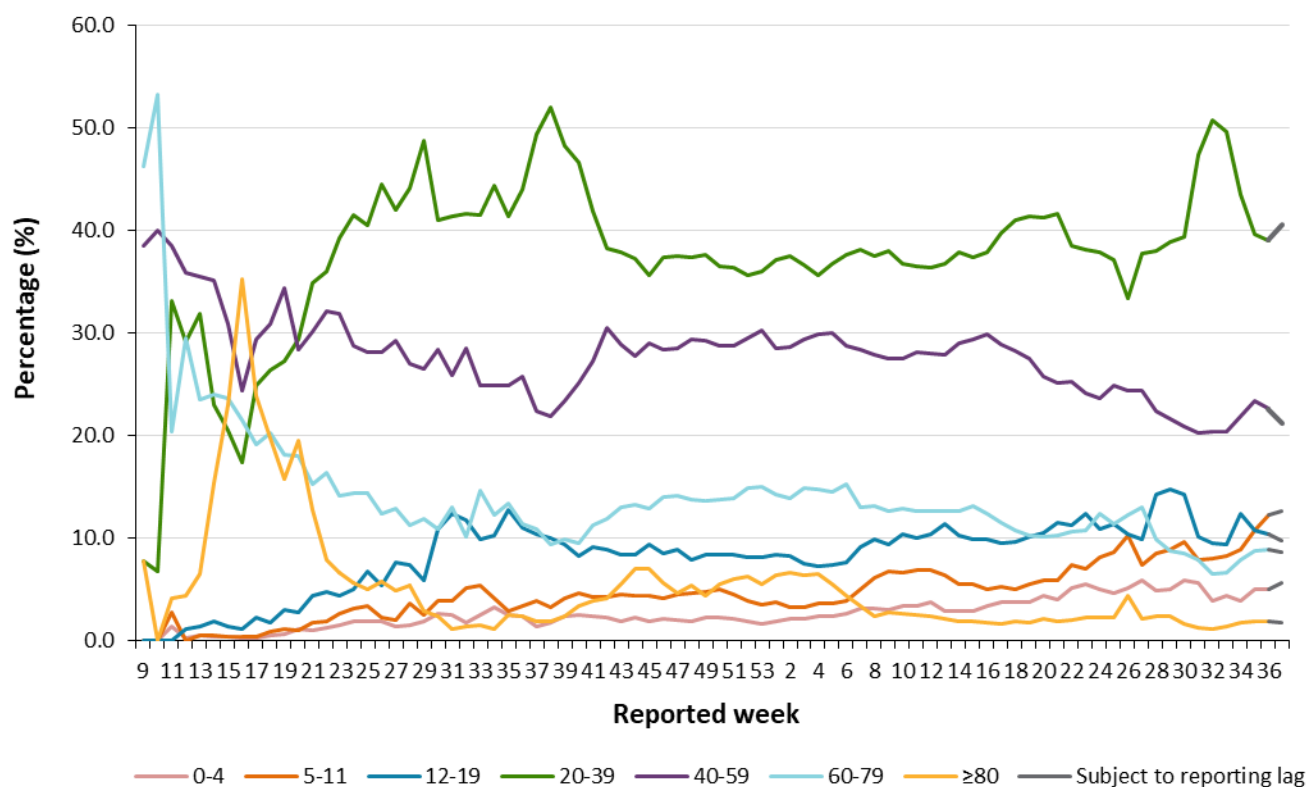
Figure 4a. Rate of confirmed cases of COVID-19 per 100,000 population by age group and public health unit reported week: Ontario



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 37 (September 12 and 18, 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 37 (September 12 and 18, 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

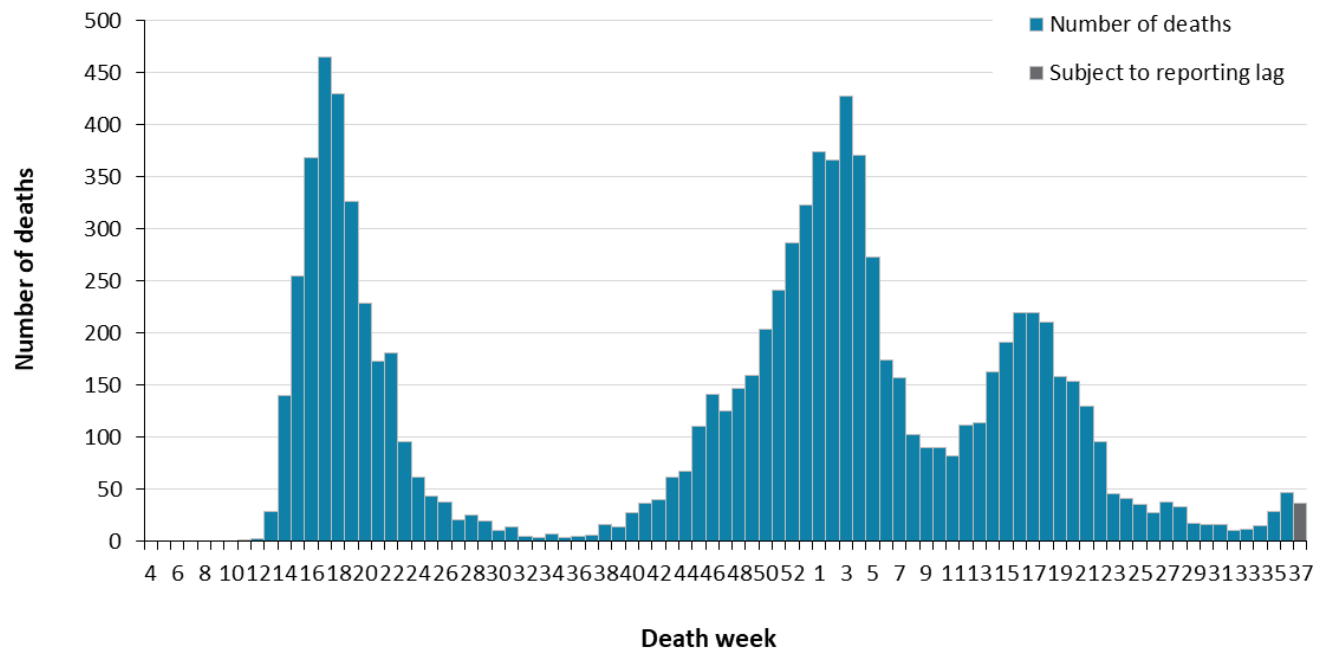


Table 2. Summary of deaths among confirmed cases of COVID-19 by public health unit reported week: Ontario

Deaths	Reported week 36 (September 5 to 11)	Reported week 37 (September 12 to 18)	Cumulative case count up to September 18	Cumulative rate per 100,000 population
Number of deaths	21	9	9,670	65.6
Gender: Male	13	3	4,938	67.8
Gender: Female	7	5	4,668	62.6
Ages: 19 and under	0	1	6	0.2
Ages: 20-39	1	1	95	2.3
Ages: 40-59	3	1	654	16.8
Ages: 60-79	4	3	3,141	108.3
Ages: 80 and over	13	3	5,773	880.3

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 36 (September 5 to 11)	Percentage	Reported week 37 (September 12 to 18)	Percentage	Cumulative case count up to September 18	Cumulative percentage
Travel	352	7.0%	297	6.0%	12,196	2.1%
Outbreak-associated or close contact of a confirmed case	2,769	54.8%	2,585	52.5%	346,120	59.7%
Epidemiological link – type unspecified	0	0.0%	0	0.0%	47	<0.1%
No known epidemiological link	1,620	32.0%	1,592	32.3%	169,185	29.2%
Information missing or unknown	316	6.2%	452	9.2%	52,372	9.0%
Total	5,057		4,926		579,920	

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 36 (September 5 to 11)	Reported week 37 (September 12 to 18)	Cumulative case count up to September 18
Number of cases	94	97	24,310
Ever hospitalized	3	0	476
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 36 (September 5 to 11)	Reported week 37 (September 12 to 18)	Cumulative case count up to September 18
Residents	30	16	15,554
Deaths among residents	5	0	4,007
Health care workers	4	9	7,322
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

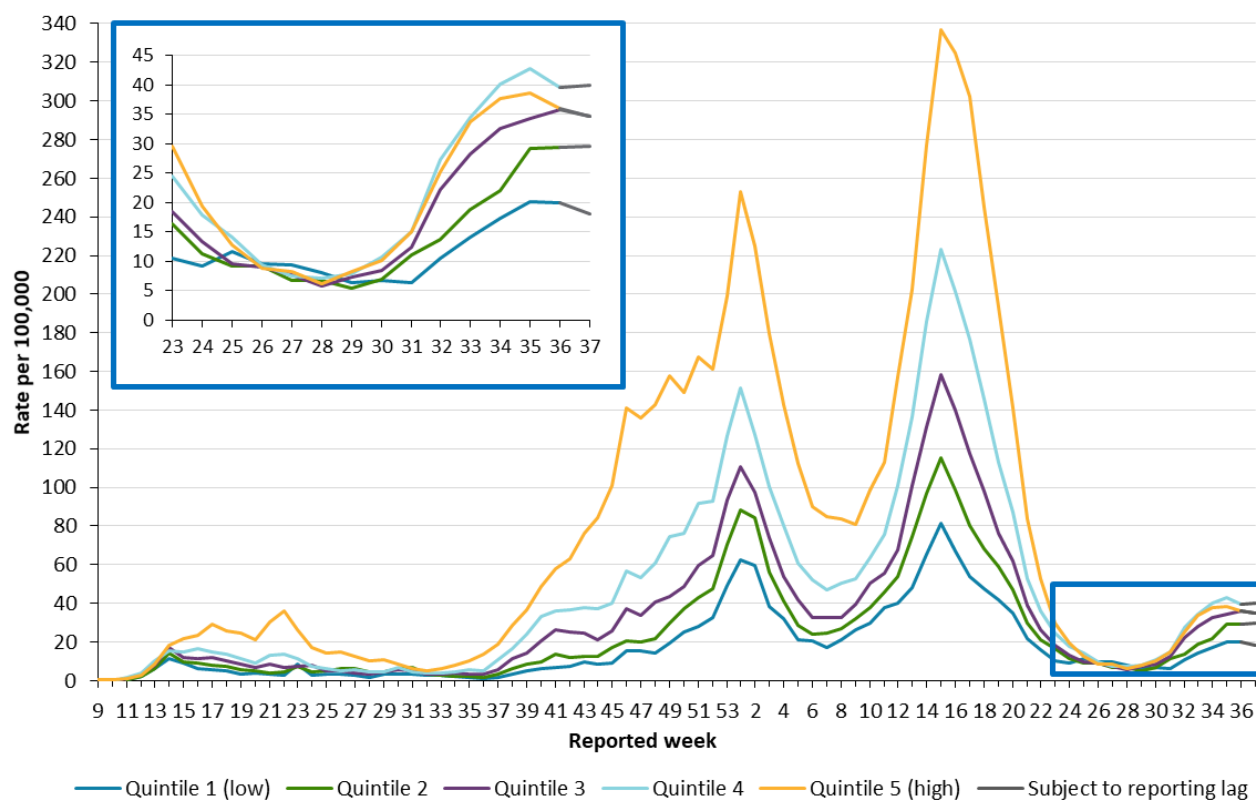
Table 6: Summary of reinfection cases of COVID-19 by age group and public health unit reported week: Ontario

Age Group	Reported Week 36 (September 5 to 11)	Reported Week 37 (September 12 to 18)	Cumulative count from November 1 up to September 18	Percent of reinfection cases
Ages: 0-4	1	2	13	4.1%
Ages: 5-11	0	0	2	0.6%
Ages: 12-19	2	1	35	11.0%
Ages: 20-39	5	4	150	47.2%
Ages: 40-59	1	1	83	26.1%
Ages: 60-79	3	0	25	7.9%
Ages: 80 and over	1	0	10	3.1%
Total reinfection cases	13	8	318	

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

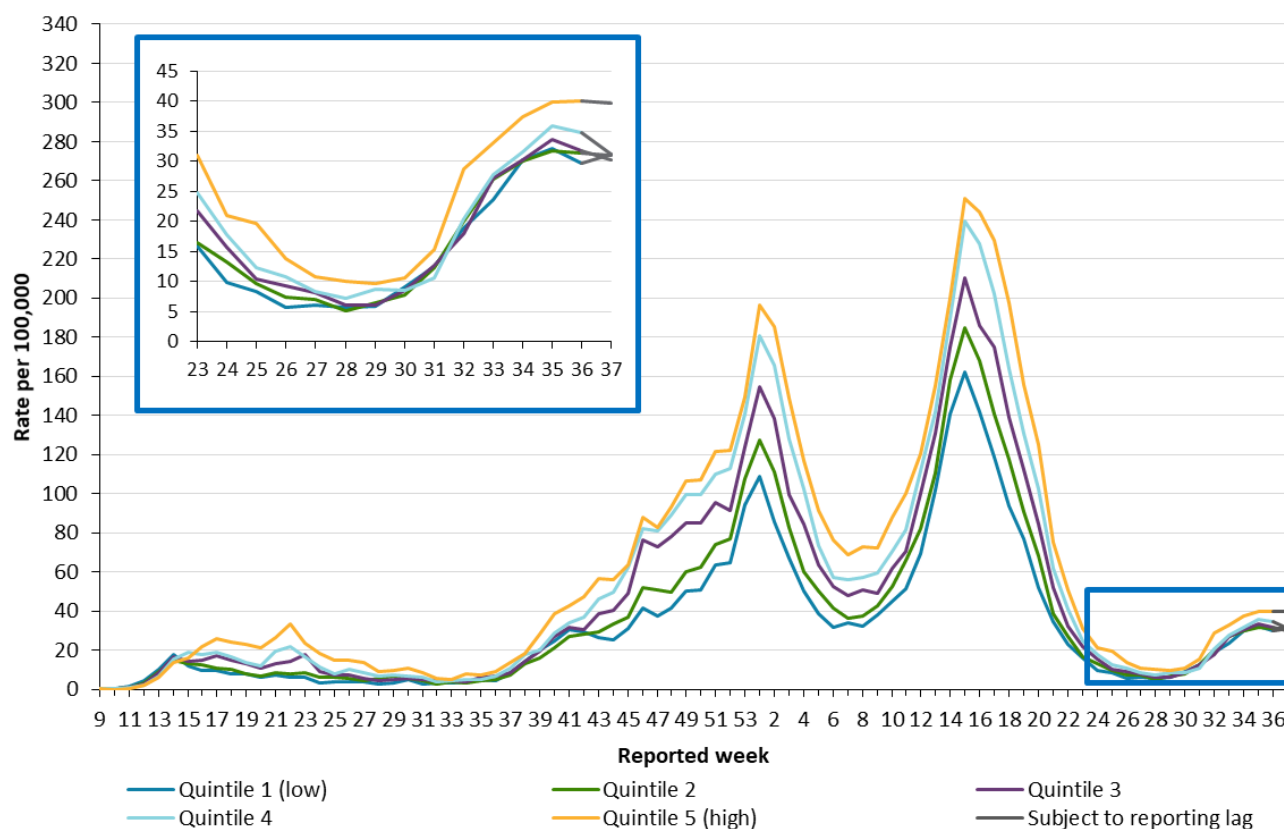
Figure 6. Rate of confirmed cases of COVID-19 per 100,000 population by quintile of neighbourhood diversity and public health unit reported week: Ontario



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 37 (September 12 to 18, 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 37 (September 12 to 18, 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 36(September 5 to 11)	Cases Reported Week 37 (September 12 to 18)	Cumulative case count up to September 18	Cumulative rate per 100,000 population up to September 18
Quintile 1 (least diverse)	444	402	31,606	1,422.9
Quintile 2	697	702	47,074	1,987.8
Quintile 3	929	899	69,601	2,685.1
Quintile 4	1,239	1,248	118,299	3,782.4
Quintile 5 (most diverse)	1,559	1,500	271,513	6,281.7

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

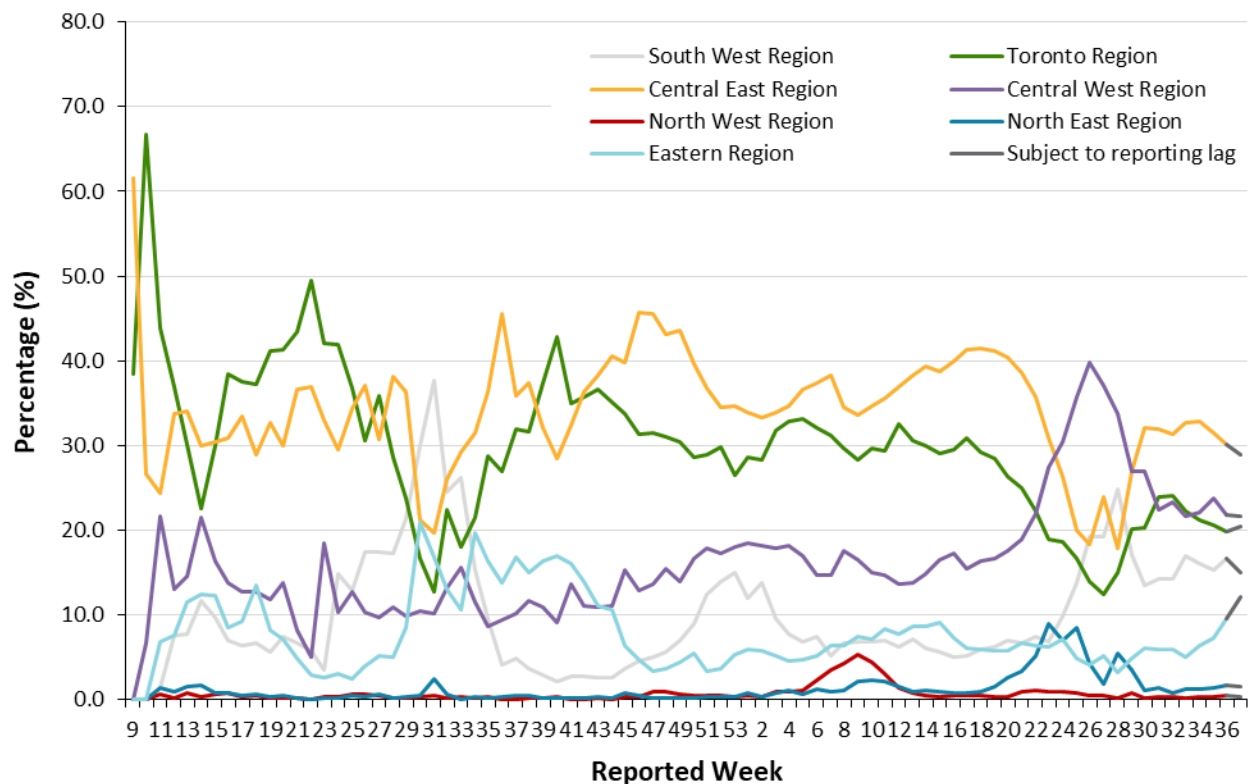
	Cases Reported Week 36(September 5 to 11)	Cases Reported Week 37 (September 12 to 18)	Cumulative case count up to September 18	Cumulative rate per 100,000 population up to September 18
Quintile 1 (least material deprivation)	1,025	1,073	91,365	2,651.2
Quintile 2	974	961	95,444	3,074.2
Quintile 3	881	836	103,818	3,744.0
Quintile 4	915	819	113,730	4,328.3
Quintile 5 (most material deprivation)	1,073	1,062	133,736	4,990.1

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

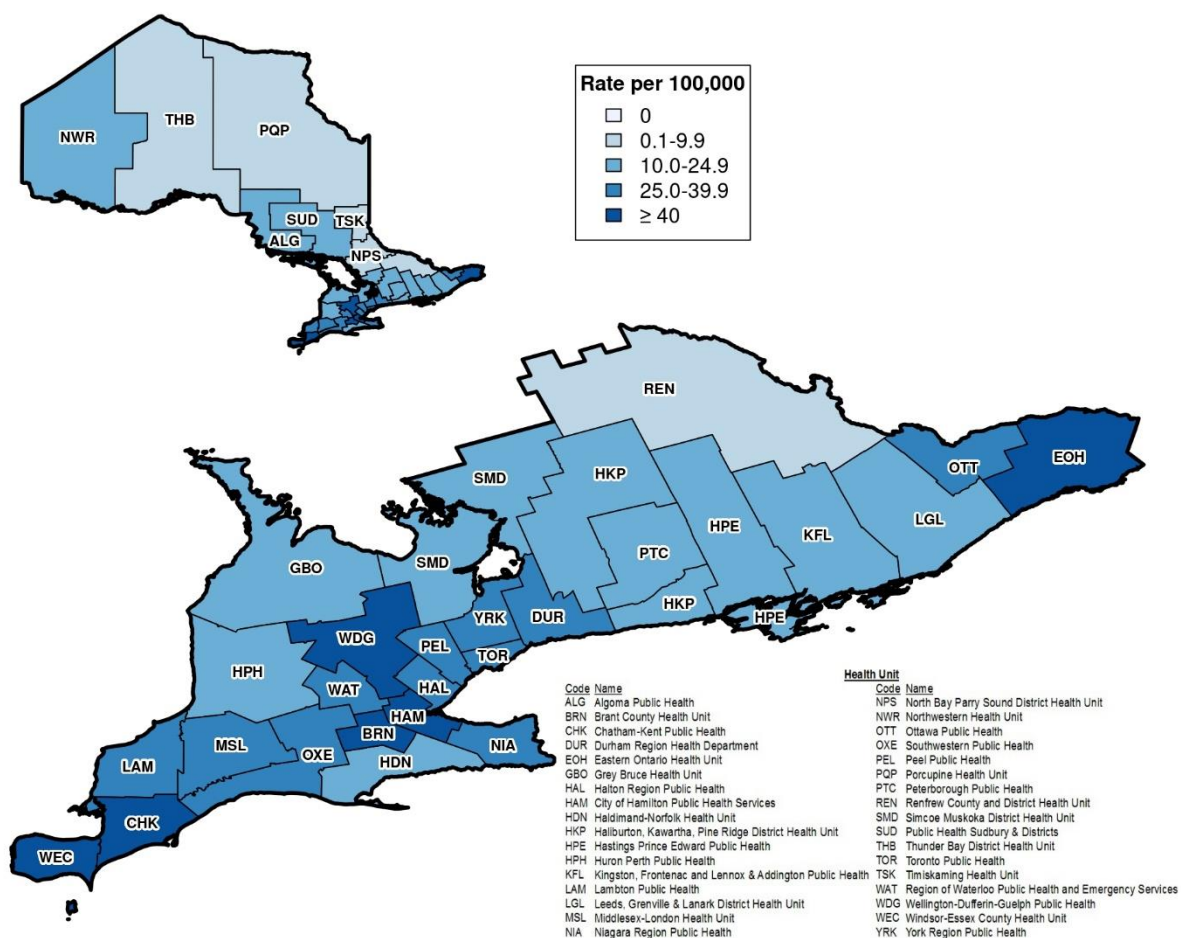
Figure 8. Percentage of COVID-19 cases by geographic region and public health unit reported week: Ontario



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 37 (September 12 and 18, 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 37 (September 12 to 18, 2021) by public health unit: Ontario



Note: The provincial rate of confirmed cases of COVID-19 reported in week 37 was 33.4 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 37 (September 12 to 18)	Number of ongoing outbreaks	Cumulative number of outbreaks reported to September 18
Congregate Care	6	23	2,988
Long-term care homes	6	14	1,510
Retirement homes	0	6	888
Hospitals	0	3	590
Congregate Living	6	14	1,367
Correctional facility	1	2	64
Shelter	1	3	282
Group Home/supportive housing	3	4	795
Short-term accommodations	0	0	45
Congregate other	1	5	181
Education and Childcare	63	98	2,611
Child care	11	27	1,085
Camp – Day*	0	1	21
Camp – Overnight*	0	0	1
Camp – Unspecified*	0	0	2
School – Elementary**	38	55	1,118
School – Elementary/secondary**	2	2	66
School – Secondary**	10	10	267
School – Post-secondary**	2	3	51
Other settings	35	84	4,533

Setting Type	Reported week 37 (September 12 to 18)	Number of ongoing outbreaks	Cumulative number of outbreaks reported to September 18
Bar/restaurant/nightclub	2	6	391
Medical/health services	1	2	161
Personal service settings	1	2	36
Recreational fitness	1	2	109
Retail	4	9	496
Other recreation/community	8	17	270
Workplace – Farm	2	6	241
Workplace - Food processing	1	2	280
Other types of workplaces	10	25	2,507
Other	0	3	9
Unknown	5	10	33
Total number of outbreaks	110	219	11,499

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 36 (September 5 to 11)	Reported week 37 (September 12 to 18)	Cumulative number of cases
Congregate Care	62	47	40,386
Long-term care homes	41	40	26,669
Retirement homes	10	7	7,290
Hospitals	11	0	6,427
Congregate Living	37	21	10,226
Correctional facility	18	7	1,784
Shelter	7	6	2,822
Group Home/supportive housing	1	6	3,671
Short-term accommodations	2	0	242
Congregate other	9	2	1,707
Education and Childcare	89	192	11,121
Child care	48	44	4,493
Camp – Day*	10	1	109
Camp – Overnight*	0	0	11
Camp – Unspecified*	0	0	8
School – Elementary**	19	115	4,584
School – Elementary/secondary**	0	6	349
School – Secondary**	10	21	1,138
School – Post-secondary**	2	5	429
Other settings	203	186	36,210
Bar/restaurant/nightclub	17	30	1,895
Medical/health services	0	2	738

Cases associated with the outbreak setting type	Reported week 36 (September 5 to 11)	Reported week 37 (September 12 to 18)	Cumulative number of cases
Personal service settings	0	2	128
Recreational fitness	6	3	796
Retail	15	14	2,644
Other recreation/community	77	63	3,422
Workplace - Farm	6	11	3,192
Workplace - Food processing	0	4	3,760
Other types of workplaces	51	32	19,400
Other	9	3	56
Unknown	22	22	179
Total number of cases	391	446	97,943

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.

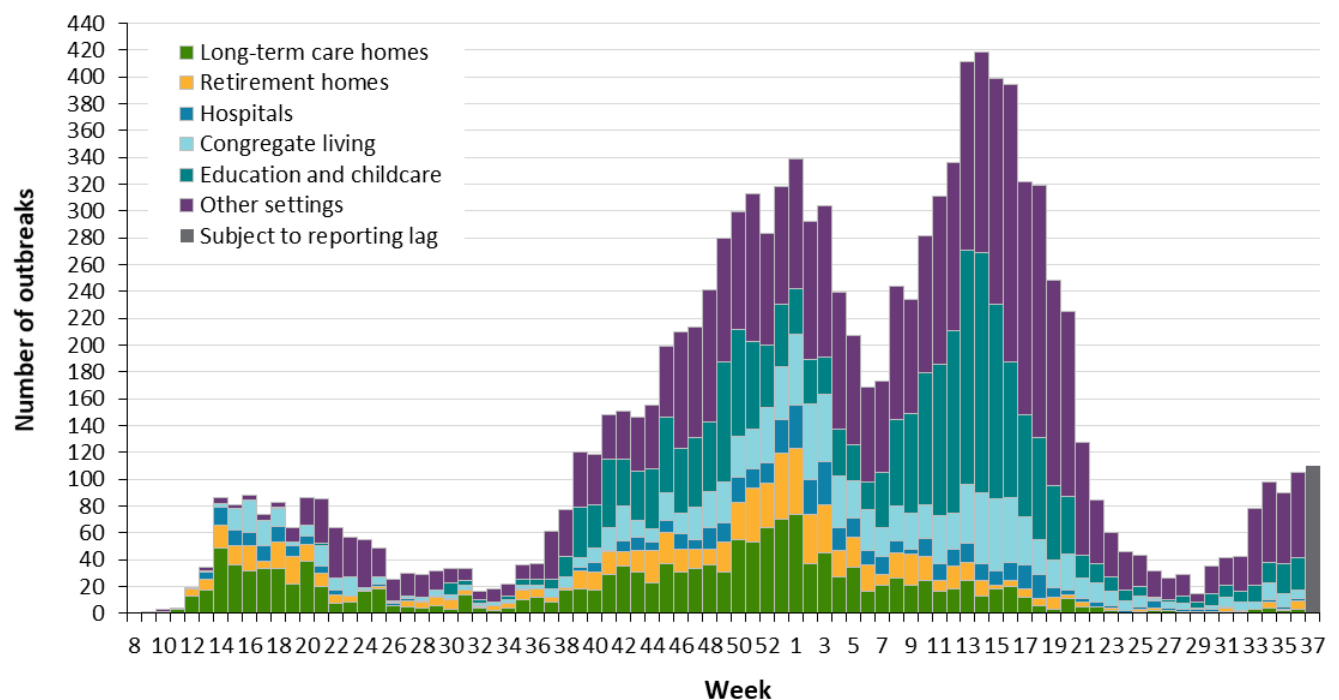
*Cumulative counts include cases of COVID-19 camp outbreaks reported starting week-27 of 2021 (July 4 to 10, 2021).

**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 37 refers to September 12 and 18, 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 September 18, 2021
Gender: Male	73,963	736	2,709	8,899	11,871	12,917	111,095
Gender: Female	71,565	761	2,487	8,519	10,932	12,764	107,028
Ages: 19 and under	27,809	250	905	4,046	4,652	5,494	43,156
Ages: 20-39	55,583	484	1,946	7,693	8,980	10,382	85,068
Ages: 40-59	42,827	491	1,572	3,990	6,298	6,654	61,832
Ages: 60-79	17,431	236	669	1,531	2,706	2,822	25,395
Ages: 80 and over	2,793	41	137	332	452	588	4,343

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 September 18, 2021	Cumulative percentage
Travel	842	0.6%	38	2.5%	70	1.3%	1,345	7.6%	320	1.4%	2,615	1.3%
Outbreak-associated or close contact of a confirmed case	81,675	55.8%	961	64.0%	3,318	63.5%	9,772	55.5%	14,976	64.9%	110,702	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	52,241	35.7%	404	26.9%	1,611	30.8%	5,688	32.3%	6,699	29.0%	66,643	34.4%
Information missing or unknown	11,694	8.0%	99	6.6%	230	4.4%	787	4.5%	1,094	4.7%	13,904	7.2%
Total	146,452		1,502		5,229		17,592		23,089		193,864	

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.

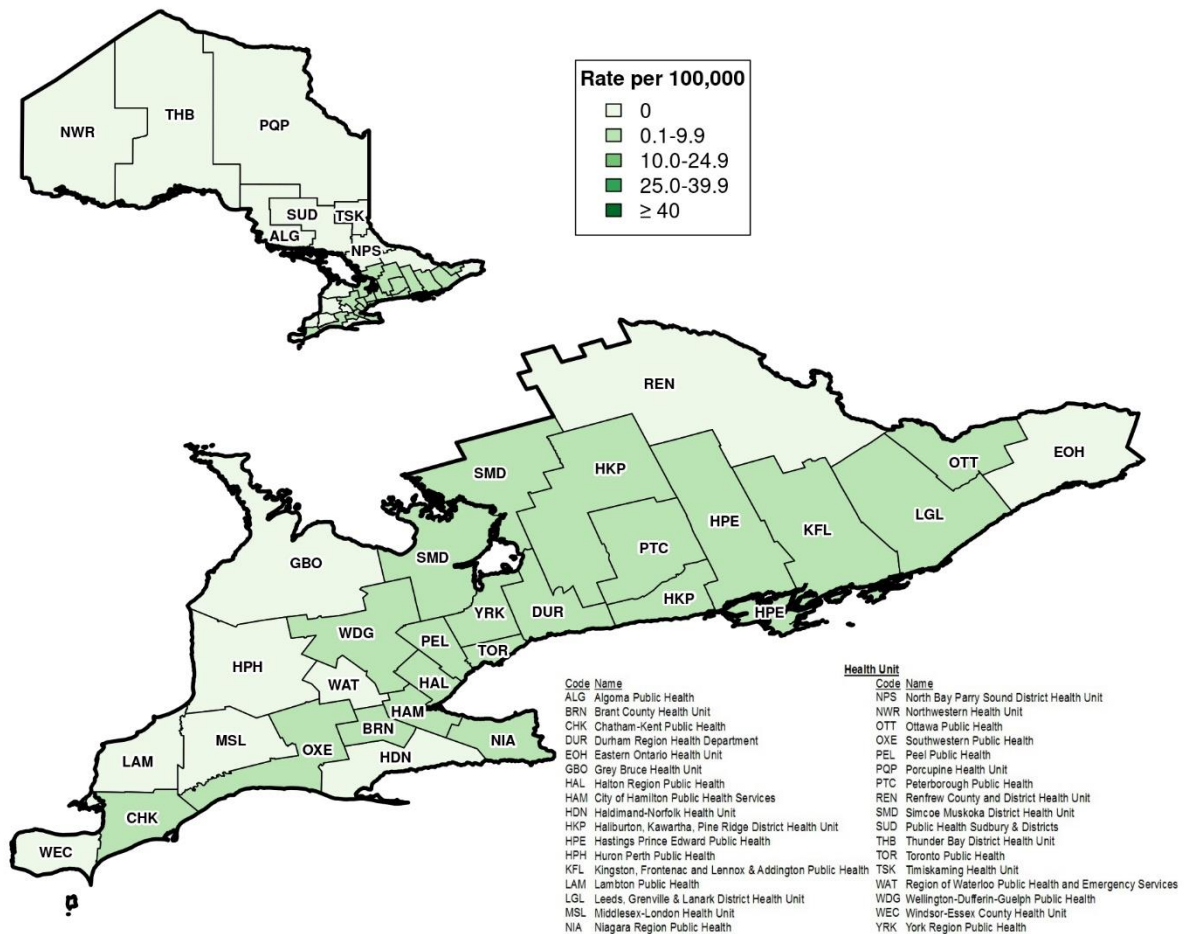
***Includes P.1 (Gamma) cases identified by genomic analysis and those presumed to be P.1 based on 'Mutation K417T+ and N501Y+ and E484K+' in the Investigation Subtype field.

†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 37 (September 12 to 18, 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 37 was 0.8 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 21, 2021 at 1 p.m.** for cases reported from February 1, 2021 onwards and as of **September 20, 2021 at 9 a.m.** for cases reported up to January 31, 2021.
- VOC data for this report were based on information successfully extracted from CCM for all PHUs by PHO as of **September 21, 2021 at 1 p.m.** for cases reported from April 1, 2021 onwards and as of **September 20, 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	3,167	7,916
16	April 12, 2020	April 18, 2020	4,263	12,179
17	April 19, 2020	April 25, 2020	3,652	15,831
18	April 26, 2020	May 2, 2020	2,903	18,734
19	May 3, 2020	May 9, 2020	2,353	21,087
20	May 10, 2020	May 16, 2020	2,223	23,310
21	May 17, 2020	May 23, 2020	2,617	25,927
22	May 24, 2020	May 30, 2020	2,611	28,538
23	May 31, 2020	June 6, 2020	2,302	30,840

Reported Week	Start date	End date	Number of cases	Cumulative count
24	June 7, 2020	June 13, 2020	1,472	32,312
25	June 14, 2020	June 20, 2020	1,226	33,538
26	June 21, 2020	June 27, 2020	1,250	34,788
27	June 28, 2020	July 4, 2020	1,085	35,873
28	July 5, 2020	July 11, 2020	867	36,740
29	July 12, 2020	July 18, 2020	931	37,671
30	July 19, 2020	July 25, 2020	993	38,664
31	July 26, 2020	August 1, 2020	807	39,471
32	August 2, 2020	August 8, 2020	592	40,063
33	August 9, 2020	August 15, 2020	610	40,673
34	August 16, 2020	August 22, 2020	729	41,402
35	August 23, 2020	August 29, 2020	852	42,254
36	August 30, 2020	September 5, 2020	976	43,230
37	September 6, 2020	September 12, 2020	1,505	44,735
38	September 13, 2020	September 19, 2020	2,373	47,108
39	September 20, 2020	September 26, 2020	3,123	50,231
40	September 27, 2020	October 3, 2020	4,222	54,453
41	October 4, 2020	October 10, 2020	5,035	59,488
42	October 11, 2020	October 17, 2020	5,277	64,765
43	October 18, 2020	October 24, 2020	6,039	70,804
44	October 25, 2020	October 31, 2020	6,387	77,191
45	November 1, 2020	November 7, 2020	7,605	84,796
46	November 8, 2020	November 14, 2020	10,435	95,231
47	November 15, 2020	November 21, 2020	9,993	105,224
48	November 22, 2020	November 28, 2020	11,133	116,357

Reported Week	Start date	End date	Number of cases	Cumulative count
49	November 29, 2020	December 5, 2020	12,682	129,039
50	December 6, 2020	December 12, 2020	13,060	142,099
51	December 13, 2020	December 19, 2020	15,656	157,755
52	December 20, 2020	December 26, 2020	15,628	173,383
53	December 27, 2020	January 2, 2021	20,444	193,827
1	January 3, 2021	January 9, 2021	24,872	218,699
2	January 10, 2021	January 16, 2021	21,381	240,080
3	January 17, 2021	January 23, 2021	16,396	256,476
4	January 24, 2021	January 30, 2021	12,767	269,243
5	January 31, 2021	February 6, 2021	9,782	279,025
6	February 7, 2021	February 13, 2021	7,899	286,924
7	February 14, 2021	February 20, 2021	7,456	294,380
8	February 21, 2021	February 27, 2021	7,685	302,065
9	February 28, 2021	March 6, 2021	7,934	309,999
10	March 7, 2021	March 13, 2021	9,480	319,479
11	March 14, 2021	March 20, 2021	11,022	330,501
12	March 21, 2021	March 27, 2021	14,386	344,887
13	March 28, 2021	April 3, 2021	18,945	363,832
14	April 4, 2021	April 10, 2021	25,577	389,409
15	April 11, 2021	April 17, 2021	30,891	420,300
16	April 18, 2021	April 24, 2021	28,341	448,641
17	April 25, 2021	May 1, 2021	25,220	473,861
18	May 2, 2021	May 8, 2021	20,757	494,618
19	May 9, 2021	May 15, 2021	16,523	511,141
20	May 16, 2021	May 22, 2021	12,656	523,797

Reported Week	Start date	End date	Number of cases	Cumulative count
21	May 23, 2021	May 29, 2021	7,759	531,556
22	May 30, 2021	June 5, 2021	5,213	536,769
23	June 6, 2021	June 12, 2021	3,482	540,251
24	June 13, 2021	June 19, 2021	2,418	542,669
25	June 20, 2021	June 26, 2021	1,882	544,551
26	June 27, 2021	July 3, 2021	1,473	546,024
27	July 4, 2021	July 10, 2021	1,227	547,251
28	July 11, 2021	July 17, 2021	1,045	548,296
29	July 18, 2021	July 24, 2021	1,109	549,405
30	July 25, 2021	July 31, 2021	1,349	550,754
31	August 1, 2021	August 7, 2021	1,909	552,663
32	August 8, 2021	August 14, 2021	3,172	555,835
33	August 15, 2021	August 21, 2021	4,140	559,975
34	August 22, 2021	August 28, 2021	4,778	564,753
35	August 29, 2021	September 4, 2021	5,184	569,937
36	September 5, 2021	September 11, 2021	5,057	574,994
37	September 12, 2021	September 18, 2021	4,926	579,920

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

Public Health Unit Name	Cases reported week 36	Rate per 100,000 population Reported week 36	Cases reported week 37	Rate per 100,000 population Reported week 37
Northwestern Health Unit	7	8.6	11	13.5
Thunder Bay District Health Unit	15	9.5	1	0.6
TOTAL NORTH WEST	22	9.2	12	5.0
Algoma Public Health	14	11.9	14	11.9
North Bay Parry Sound District Health Unit	29	22.4	7	5.4
Porcupine Health Unit	3	3.5	7	8.2
Public Health Sudbury & Districts	35	17.1	48	23.4
Timiskaming Health Unit	0	0.0	1	3.0
TOTAL NORTH EAST	81	14.2	77	13.5
Ottawa Public Health	330	31.6	407	39.0
Eastern Ontario Health Unit	56	25.9	106	49.1
Hastings Prince Edward Public Health	24	13.9	32	18.5
Kingston, Frontenac and Lennox & Addington Public Health	34	16.3	27	12.9
Leeds, Grenville & Lanark District Health Unit	23	12.8	23	12.8
Renfrew County and District Health Unit	16	14.8	4	3.7
TOTAL EASTERN	483	25.0	599	31.0
Durham Region Health Department	208	29.2	205	28.8

Public Health Unit Name	Cases reported week 36	Rate per 100,000 population Reported week 36	Cases reported week 37	Rate per 100,000 population Reported week 37
Haliburton, Kawartha, Pine Ridge District Health Unit	33	17.3	36	18.9
Peel Public Health	574	36.7	562	35.9
Peterborough Public Health	48	32.4	31	20.9
Simcoe Muskoka District Health Unit	198	32.8	142	23.5
York Region Public Health	459	38.2	444	37.0
TOTAL CENTRAL EAST	1,520	34.4	1,420	32.1
Toronto Public Health	1,004	33.6	1,010	33.8
TOTAL TORONTO	1,004	33.6	1,010	33.8
Chatham-Kent Public Health	120	112.5	102	95.7
Grey Bruce Health Unit	13	7.4	26	14.8
Huron Perth Public Health	33	22.6	29	19.8
Lambton Public Health	26	19.6	43	32.3
Middlesex-London Health Unit	143	28.0	160	31.3
Southwestern Public Health	55	25.1	70	32.0
Windsor-Essex County Health Unit	452	104.9	311	72.2
TOTAL SOUTH WEST	842	48.9	741	43.0
Brant County Health Unit	84	54.7	89	58.0
City of Hamilton Public Health Services	329	56.6	265	45.6
Haldimand-Norfolk Health Unit	22	18.3	27	22.5
Halton Region Public Health	170	27.8	165	27.0
Niagara Region Public Health	222	46.1	189	39.2

Public Health Unit Name	Cases reported week 36	Rate per 100,000 population Reported week 36	Cases reported week 37	Rate per 100,000 population Reported week 37
Region of Waterloo Public Health and Emergency Services	173	28.6	177	29.2
Wellington-Dufferin-Guelph Public Health	105	33.7	155	49.7
TOTAL CENTRAL WEST	1,105	38.6	1,067	37.2
TOTAL ONTARIO	5,057	34.3	4,926	33.4

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 18 for Lineage B.1.1.7 (Alpha)*	Cumulative case count up to September 18 for Lineage B.1.351 (Beta)**	Cumulative case count up to September 18 for Lineage P.1 (Gamma)***	Cumulative case count up to September 18 for Lineage B.1.617.2 (Delta)†	Cumulative count up to September 18 for Mutations‡
Northwestern Health Unit	59	0	1	16	16
Thunder Bay District Health Unit	104	1	2	21	74
TOTAL NORTH WEST	163	1	3	37	90
Algoma Public Health	68	0	14	20	26
North Bay Parry Sound District Health Unit	235	28	3	67	13
Porcupine Health Unit	1,108	2	0	68	8
Public Health Sudbury & Districts	689	13	10	50	268
Timiskaming Health Unit	82	1	0	2	0
TOTAL NORTH EAST	2,182	44	27	207	315
Ottawa Public Health	6,847	515	55	512	470
Eastern Ontario Health Unit	664	46	21	93	269
Hastings Prince Edward Public Health	111	0	18	93	393
Kingston, Frontenac and	458	2	35	48	132

Public Health Unit Name	Cumulative case count up to September 18 for Lineage B.1.1.7 (Alpha)*	Cumulative case count up to September 18 for Lineage B.1.351 (Beta)**	Cumulative case count up to September 18 for Lineage P.1 (Gamma)***	Cumulative case count up to September 18 for Lineage B.1.617.2 (Delta)†	Cumulative count up to September 18 for Mutations‡
Lennox & Addington Public Health					
Leeds, Grenville & Lanark District Health Unit	294	19	0	39	44
Renfrew County and District Health Unit	232	8	7	11	12
TOTAL EASTERN	8,606	590	136	796	1,320
Durham Region Health Department	9,523	66	270	678	1,212
Haliburton, Kawartha, Pine Ridge District Health Unit	443	0	23	138	309
Peel Public Health	31,189	162	1,775	2,372	2,827
Peterborough Public Health	629	4	8	85	162
Simcoe Muskoka District Health Unit	4,001	36	173	556	687
York Region Public Health	15,875	79	482	1,436	2,737
TOTAL CENTRAL EAST	61,660	347	2,731	5,265	7,934
Toronto Public Health	46,064	375	1,523	3,680	7,472
TOTAL TORONTO	46,064	375	1,523	3,680	7,472

Public Health Unit Name	Cumulative case count up to September 18 for Lineage B.1.1.7 (Alpha)*	Cumulative case count up to September 18 for Lineage B.1.351 (Beta)**	Cumulative case count up to September 18 for Lineage P.1 (Gamma)***	Cumulative case count up to September 18 for Lineage B.1.617.2 (Delta)†	Cumulative count up to September 18 for Mutations‡
Chatham-Kent Public Health	131	5	16	167	105
Grey Bruce Health Unit	310	0	6	600	55
Huron Perth Public Health	279	0	12	131	28
Lambton Public Health	438	0	18	101	126
Middlesex-London Health Unit	3,384	2	124	705	186
Southwestern Public Health	686	3	21	169	160
Windsor-Essex County Health Unit	1,852	8	19	1,047	138
TOTAL SOUTH WEST	7,080	18	216	2,920	798
Brant County Health Unit	670	2	97	261	501
City of Hamilton Public Health Services	5,064	66	105	1,363	2,096
Haldimand-Norfolk Health Unit	369	3	23	89	408
Halton Region Public Health	5,090	30	169	611	619
Niagara Region Public Health	4,286	4	20	164	1,103
Region of Waterloo Public Health and	3,133	21	98	1,806	256

Public Health Unit Name	Cumulative case count up to September 18 for Lineage B.1.1.7 (Alpha)*	Cumulative case count up to September 18 for Lineage B.1.351 (Beta)**	Cumulative case count up to September 18 for Lineage P.1 (Gamma)***	Cumulative case count up to September 18 for Lineage B.1.617.2 (Delta)†	Cumulative count up to September 18 for Mutations‡
Emergency Services					
Wellington-Dufferin-Guelph Public Health	2,085	1	81	393	177
TOTAL CENTRAL WEST	20,697	127	593	4,687	5,160
TOTAL ONTARIO	146,452	1,502	5,229	17,592	23,089

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

For more information, email cd@oahpp.ca.

Public Health Ontario

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