

WEEKLY EPIDEMIOLOGICAL SUMMARY

COVID-19 in Ontario: Focus on November 21, 2021 to November 27, 2021

This report includes the most current information available from CCM as of **November 30, 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.

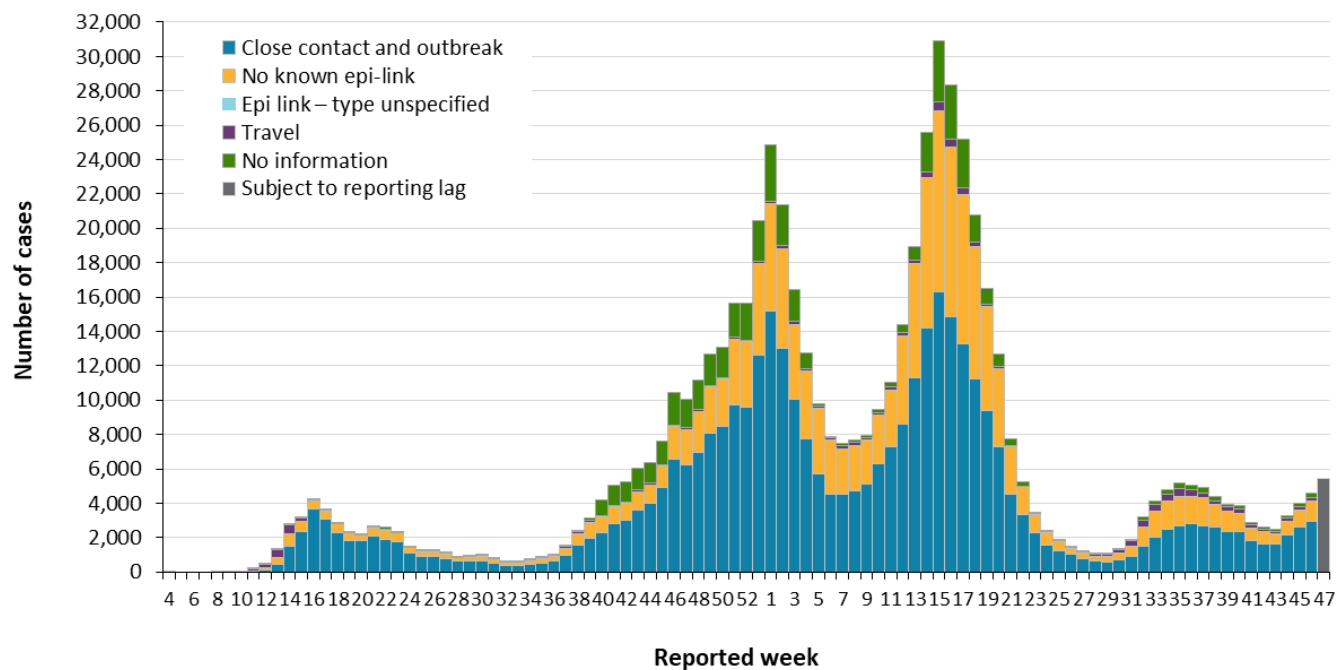
Highlights

- There are a total of 617,440 confirmed cases of COVID-19 in Ontario with a public health unit reported date up to November 27, 2021.
- For the period with a public health unit (PHU) reported date between November 21 to 27, 2021 (week 47):
 - A total of 5,414 cases were reported to public health compared to 4,573 cases the previous week (November 14 to 20, 2021).
 - While the highest rate of cases continues to be reported among the 5 to 11 age group (95.9 per 100,000 in week 47), cases in the 0 to 4 age group account for the second highest rate of cases reported in week 47 (37.9) and the highest percentage increase in rates seen among all age groups from week 46 to week 47 (29.4%).
 - Three PHUs in the North East region, Timiskaming (194.8), Algoma (169.7) and Public Health Sudbury and Districts (99.9), reported some of the highest rates of cases per 100,000 population in week 47, along with Windsor-Essex (107.7) and Kingston, Frontenac and Lennox and Addington (102.8) PHUs.

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

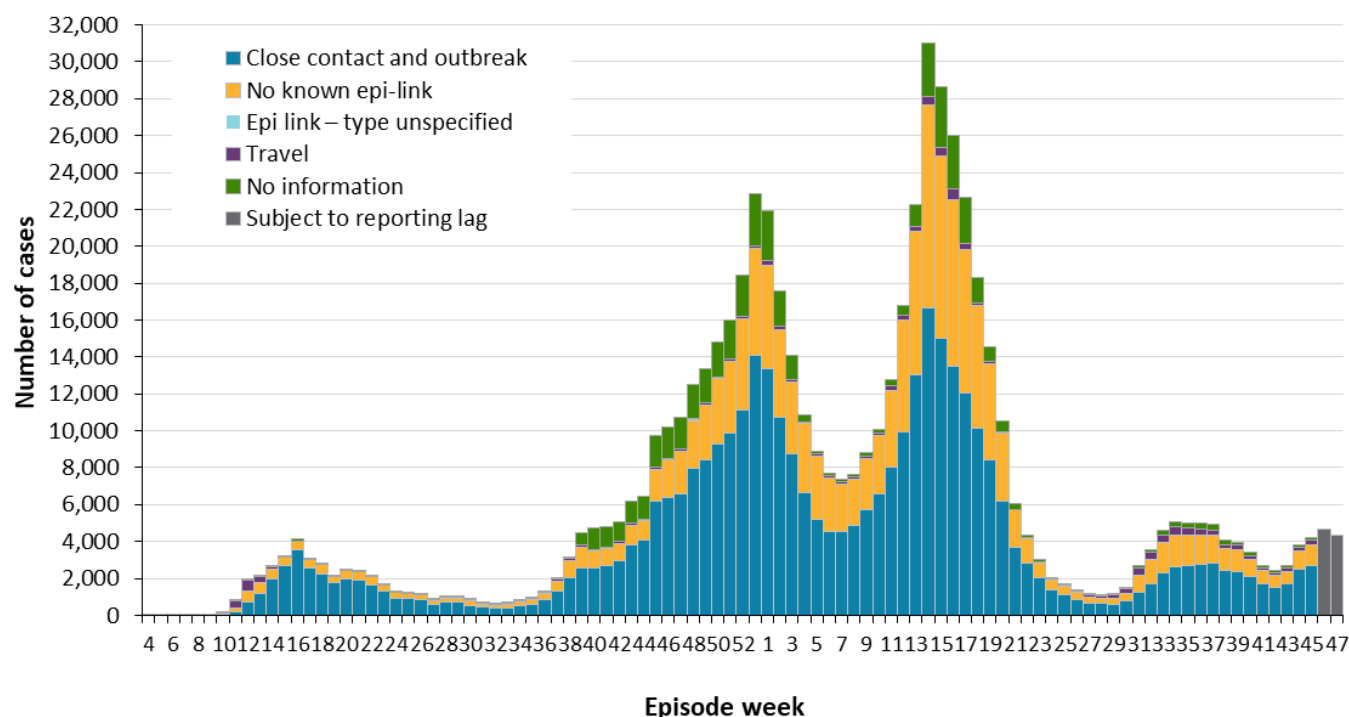
Figure 1. Confirmed cases of COVID-19 by likely source of acquisition and public health unit reported week: Ontario



Note: Include cases with reported dates ranging from week-4 (January 19 and 25, 2020) to week 47 (November 21 and 27, 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 47 (November 21 and 27, 2021). See [Table 1A](#) in Appendix A for a list of the weeks and corresponding start and end dates.

Data Source: CCM

Case Characteristics

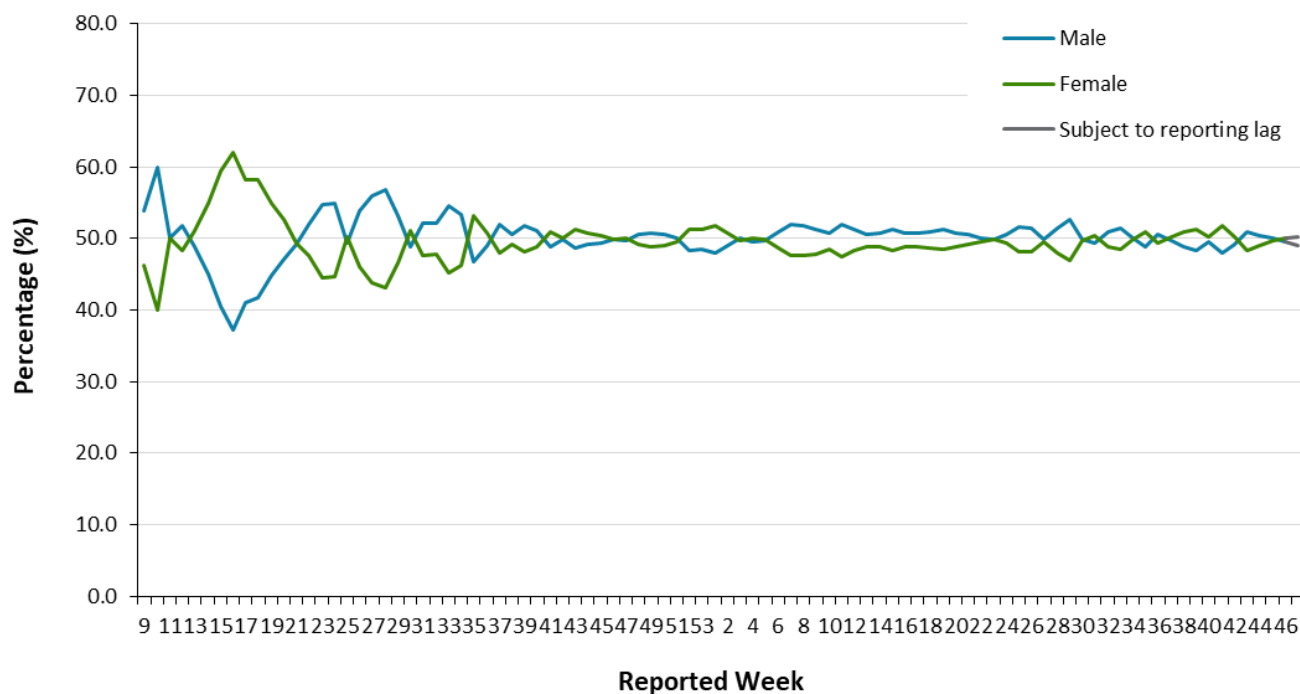
Table 1. Summary of confirmed cases of COVID-19 by public health unit reported date: Ontario

	Reported Week 46 (November 14 to 20)	Reported week 47 (November 21 to 27)	Cumulative case count up to November 27	Cumulative rate per 100,000 population
Total number of cases	4,573	5,414	617,440	4,190.6
Sex: Male	2,262	2,651	308,631	4,239.8
Sex: Female	2,291	2,724	306,637	4,113.4
Ages: 0-4	212	274	17,993	2,488.6
Ages: 5-11	825	1,034	34,843	3,230.6
Ages: 12-19	339	386	54,874	4,127.5
Ages: 20-39	1,295	1,565	230,804	5,559.0
Ages: 40-59	1,158	1,358	172,347	4,424.3
Ages: 60-79	618	695	79,873	2,754.5
Ages: 80 and over	126	100	26,598	4,055.6
Number resolved	N/A	N/A	602,468	N/A

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

Data Source: CCM

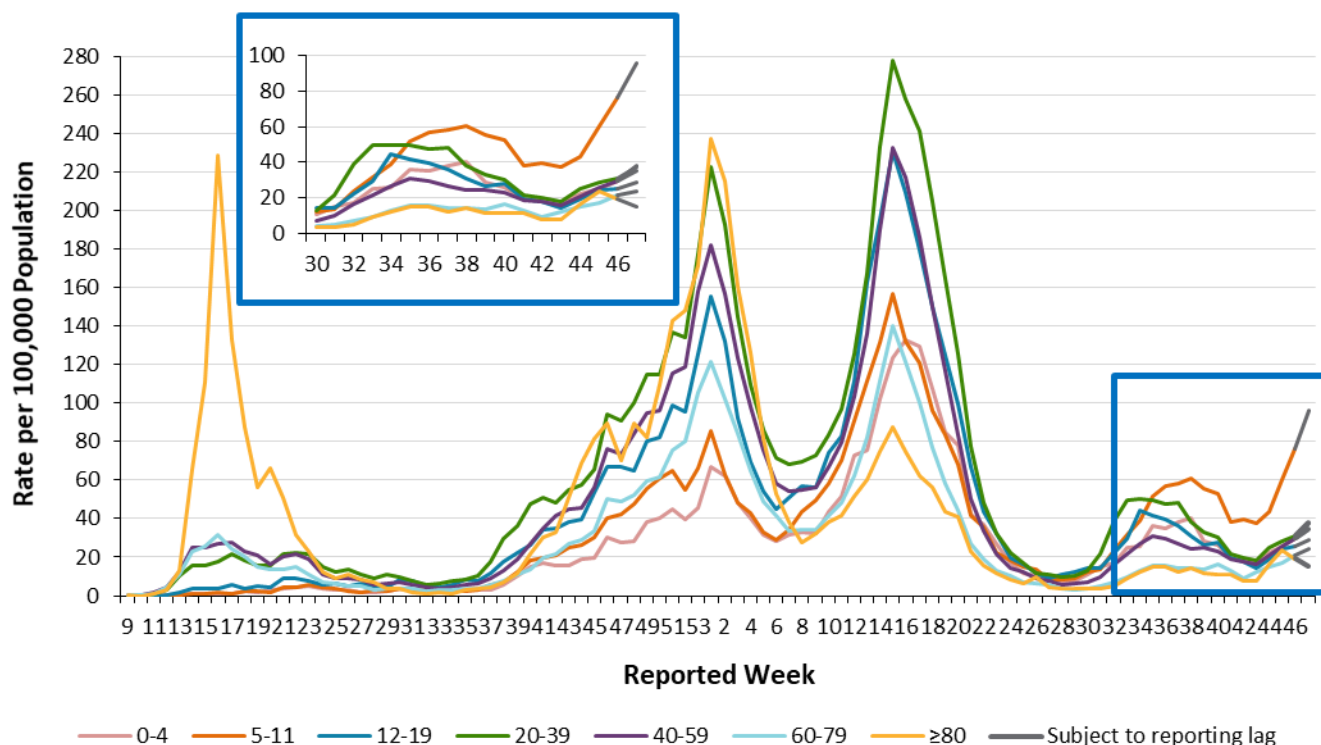
Figure 3. Percentage of confirmed cases of COVID-19 by sex and public health unit reported week: Ontario



Note: Not all cases have a sex 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 47 (November 21 and 27, 2021). See [Table 1A](#) in Appendix A for a list of the weeks and corresponding start and end dates.

Data Source: CCM

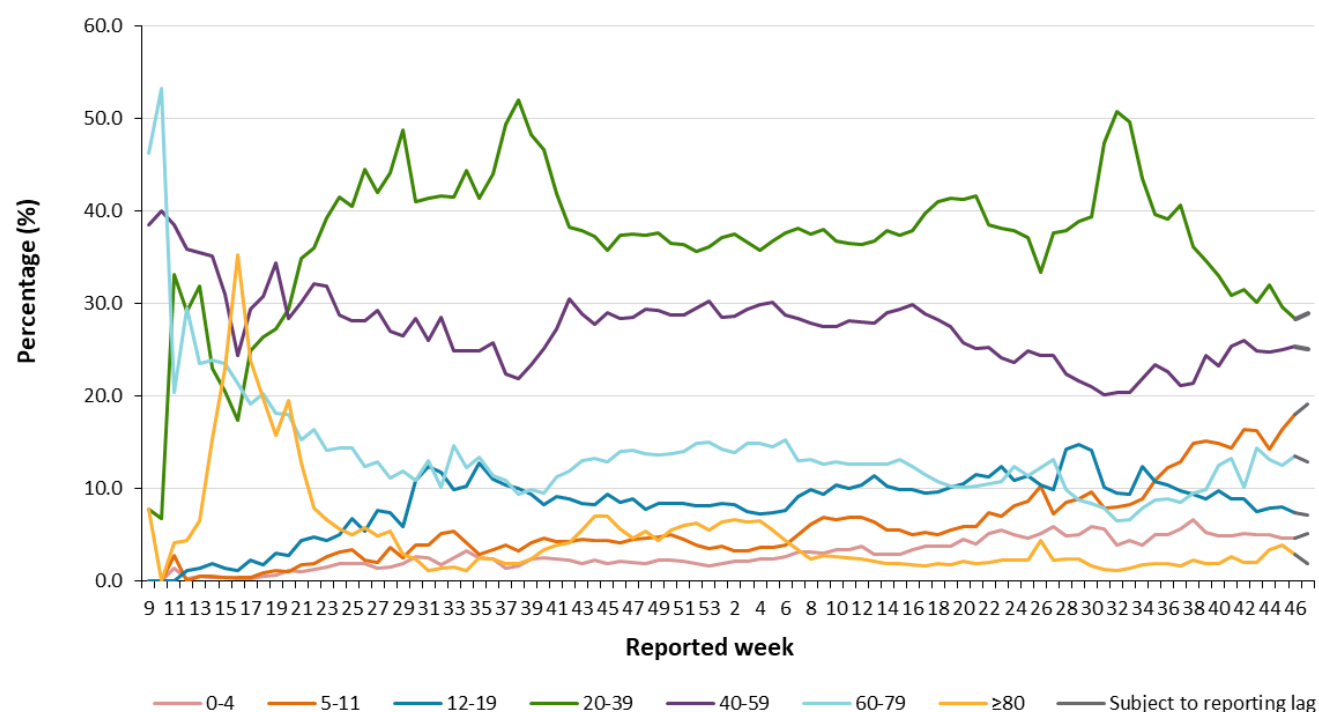
Figure 4a. Rate of confirmed cases of COVID-19 per 100,000 population by age group and public health unit reported week: Ontario



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 47 (November 21 and 27, 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

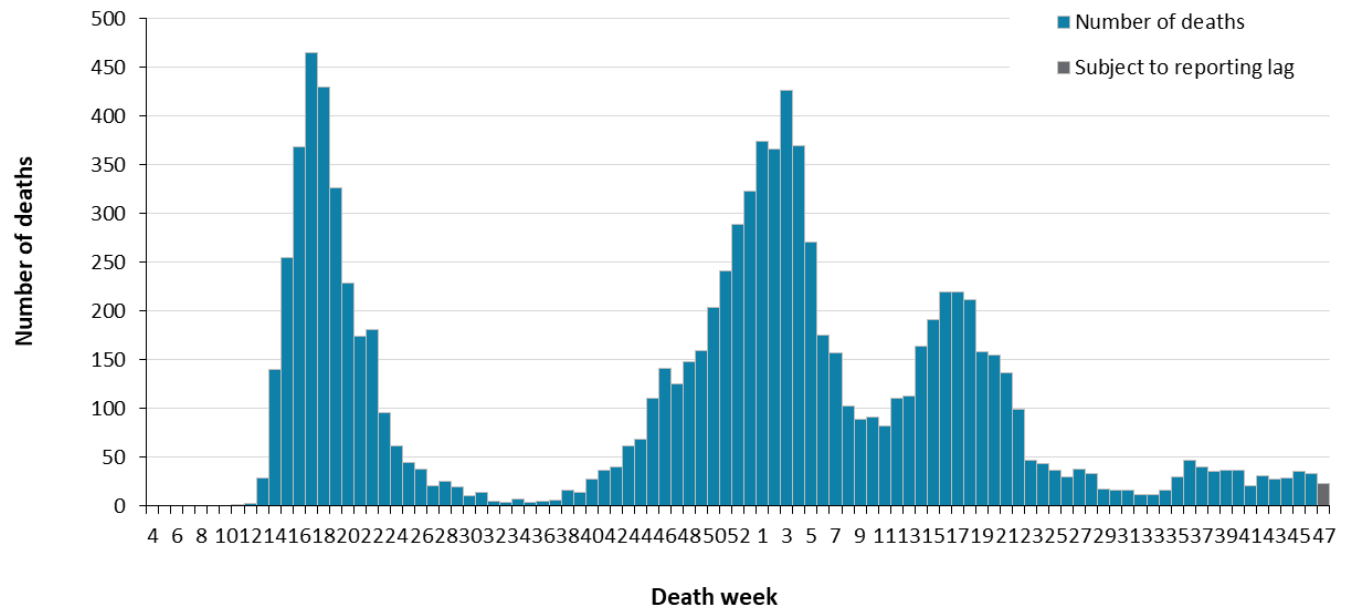


Note: Only weeks with more than 10 cases by public health unit reporting date are included (starting in week-9). Include cases with reported dates ranging from week-9 (February 23 and 29, 2020) to week 47 (November 21 and 27, 2021). See Table 1A in Appendix A for a list of the weeks and corresponding start and end dates.

Data Source: CCM

Deaths

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



Note: Cases without a death date are not included in the figure. Include cases with date of death ranging from week-4 (January 19 and 25, 2020) to week 47 (November 21 and 27, 2021). See [Table 1A](#) in Appendix A for a list of the weeks and corresponding start and end dates.

Data Source: CCM

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

Deaths	Reported Week 46 (November 14 to 20)	Reported week 47 (November 21 to 27)	Cumulative case count up to November 27	Cumulative rate per 100,000 population
Number of deaths	16	6	10,005	67.9
Sex: Male	12	4	5,147	70.7
Sex: Female	4	2	4,803	64.4
Ages: 19 and under	0	0	7	0.2
Ages: 20-39	0	1	107	2.6
Ages: 40-59	4	0	698	17.9
Ages: 60-79	6	3	3,290	113.5
Ages: 80 and over	6	2	5,902	899.9

Note: Age and sex 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 46 (November 14 to 20)	Percentage	Reported week 47 (November 21 to 27)	Percentage	Cumulative case count up to November 27	Cumulative percentage
Travel	219	4.8%	253	4.7%	14,383	2.3%
Outbreak- associated or close contact of a confirmed case	2,916	63.8%	3,379	62.4%	370,147	59.9%
Epidemiological link – type unspecified	0	0.0%	0	0.0%	45	0.0%
No known epidemiological link	1,217	26.6%	1,405	26.0%	179,084	29.0%
Information missing or unknown	221	4.8%	377	7.0%	53,781	8.7%
Total	4,573		5,414		617,440	

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 46 (November 14 to 20)	Reported week 47 (November 21 to 27)	Cumulative case count up to November 27
Number of cases	118	120	25,206
Ever hospitalized	1	1	483
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 46 (November 14 to 20)	Reported week 47 (November 21 to 27)	Cumulative case count up to November 27
Residents	9	1	15,654
Deaths among residents	1	0	4,025
Health care workers	3	4	7,415
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

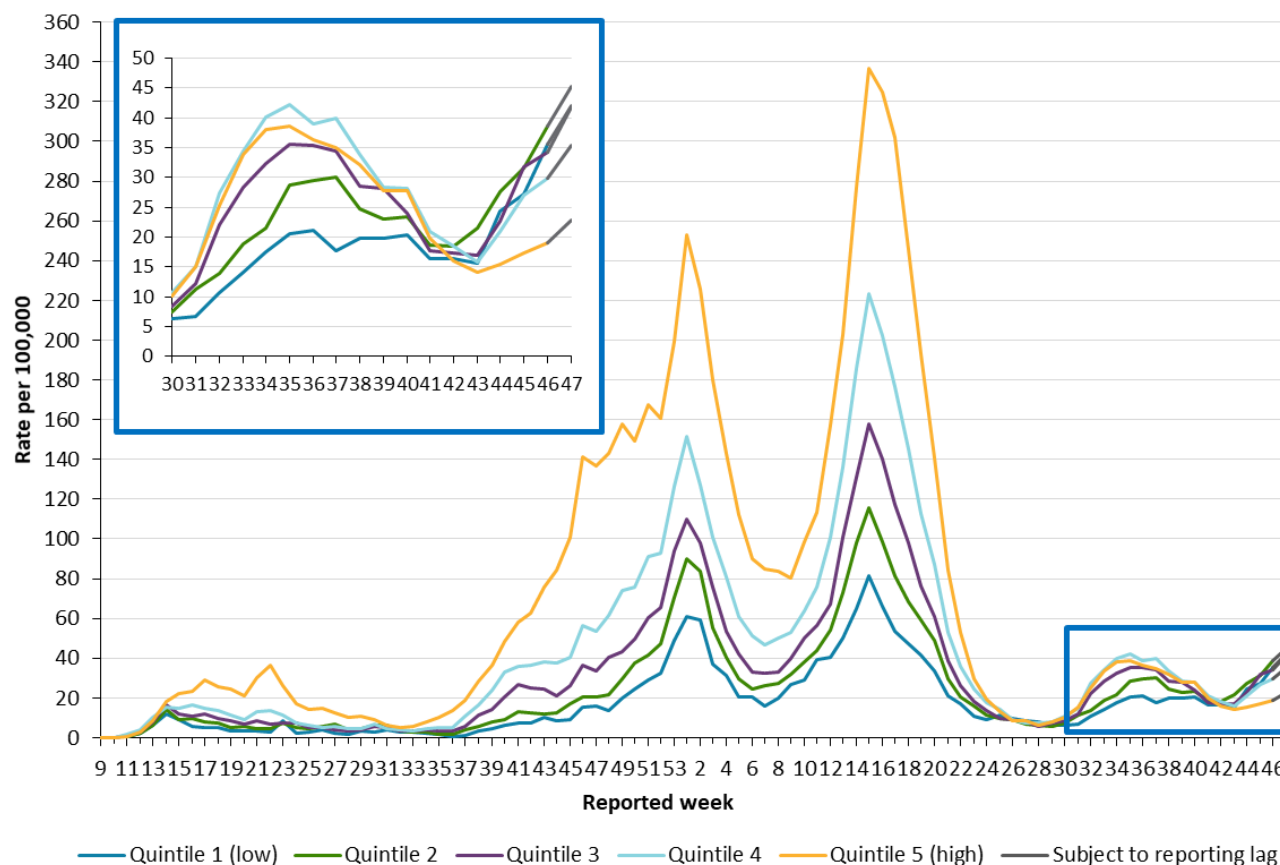
Table 6: Summary of reinfection cases of COVID-19 by age group and public health unit reported week: Ontario

Age Group	Reported Week 46 (November 14 to 20)	Reported Week 47 (November 21 to 27)	Cumulative count from November 1, 2020 up to November 27, 2021	Percent of reinfection cases
Ages: 0-4	1	0	20	4.9%
Ages: 5-11	2	1	11	2.7%
Ages: 12-19	0	0	37	9.1%
Ages: 20-39	9	7	190	46.7%
Ages: 40-59	2	2	105	25.8%
Ages: 60-79	2	0	34	8.4%
Ages: 80 and over	0	0	10	2.5%
Total reinfection cases	16	10	407	100.0%

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 sex. 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, sex) differing from past publicly reported case counts.

Data Source: CCM

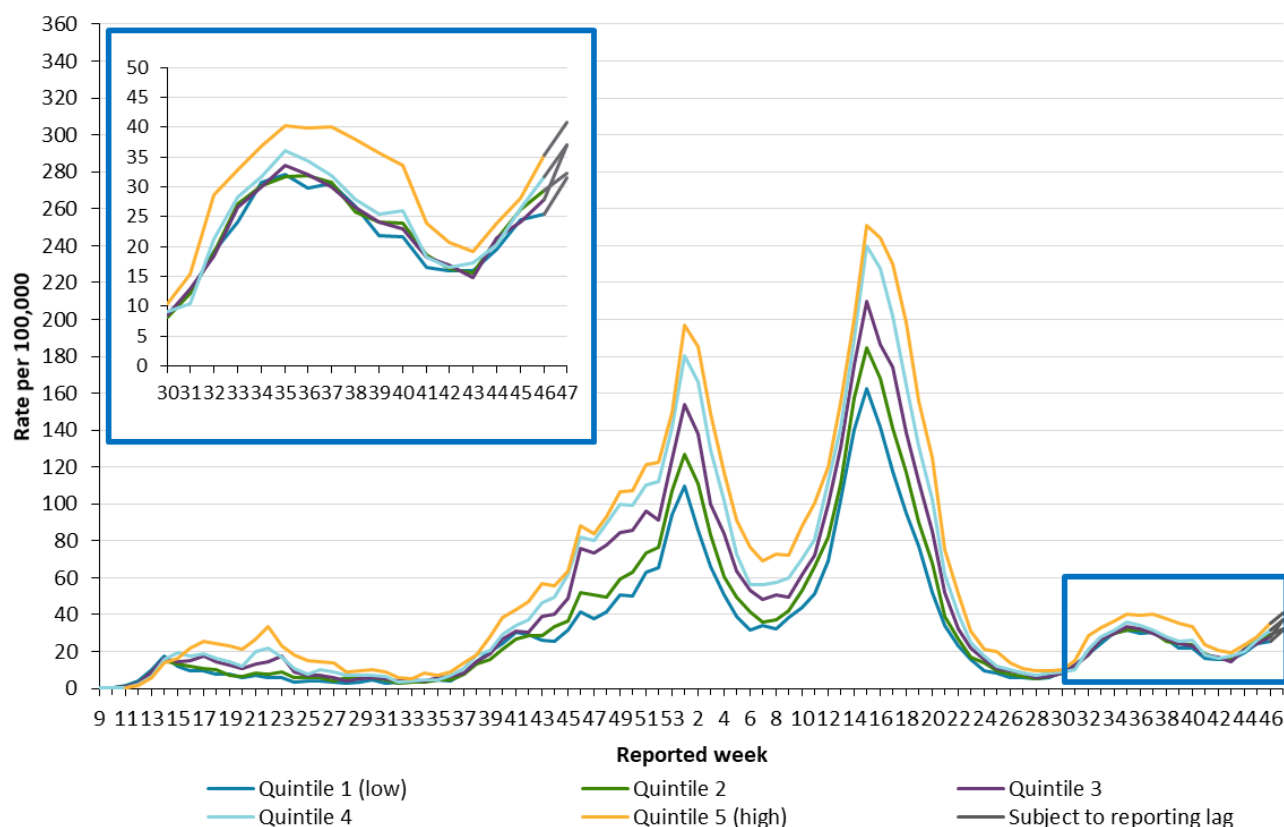
Figure 6. Rate of confirmed cases of COVID-19 per 100,000 population by quintile of neighbourhood diversity and public health unit reported week: Ontario



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 47 (November 21 to 27, 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 47 (November 21 to 27, 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 46 (November 14 to 20)	Cases Reported Week 47 (November 21 to 27)	Cumulative case count up to November 27	Cumulative rate per 100,000 population up to November 27
Quintile 1 (least diverse)	789	934	36,799	1,656.7
Quintile 2	914	1,070	53,588	2,262.9
Quintile 3	886	1,084	76,512	2,951.7
Quintile 4	931	1,106	126,372	4,040.5
Quintile 5 (most diverse)	821	984	280,821	6,497.1

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

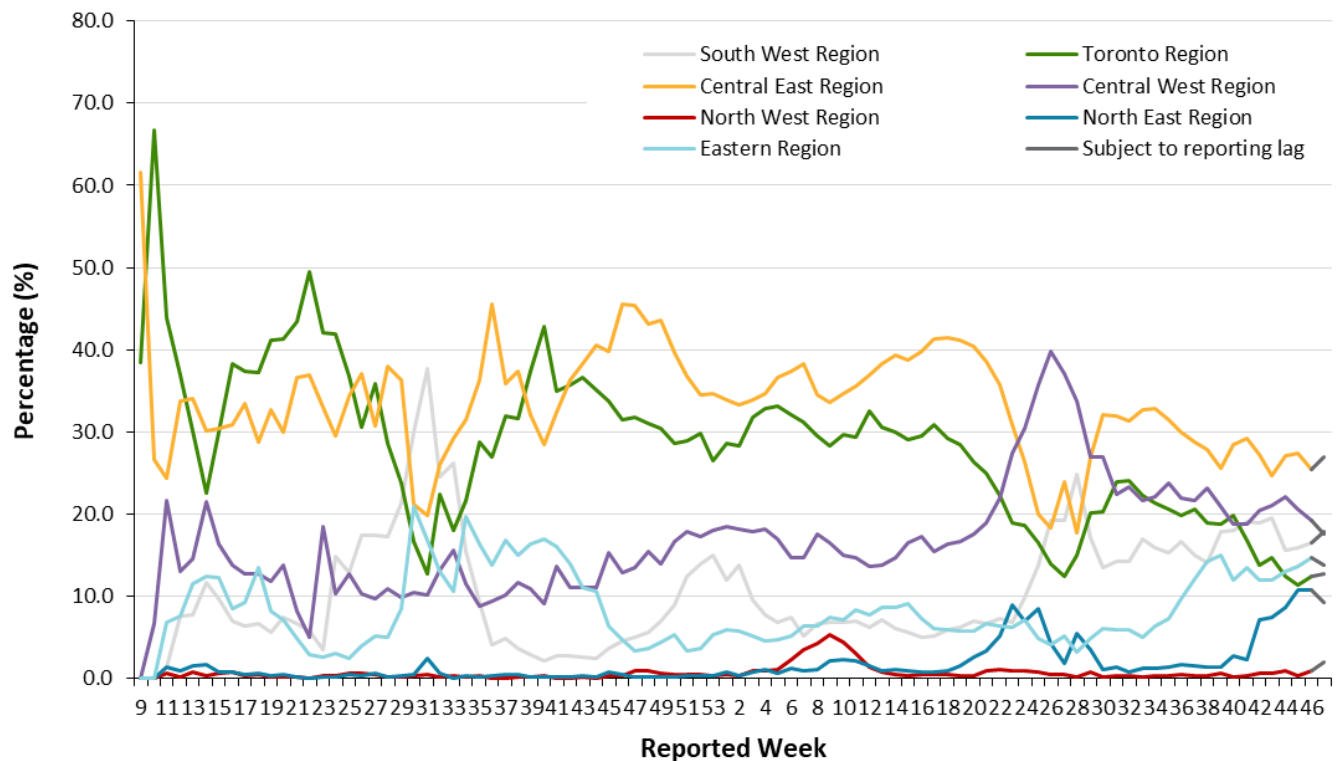
	Cases Reported Week 46 (November 14 to 20)	Cases Reported Week 47 (November 21 to 27)	Cumulative case count up to November 27	Cumulative rate per 100,000 population up to November 27
Quintile 1 (least material deprivation)	878	1,085	98,965	2,871.7
Quintile 2	912	999	102,588	3,304.3
Quintile 3	774	1,026	110,324	3,978.6
Quintile 4	832	973	120,289	4,578.0
Quintile 5 (most material deprivation)	945	1,095	141,926	5,295.7

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 47 (November 21 and 27, 2021). [Table 2A](#) in Appendix A has a listing of public health units by region.

Data Source: CCM

COVID-19 in Ontario: Focus on November 21, 2021 to November 27, 2021



Data Source: CCM

Outbreaks

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

Setting Type	Reported week 47 (November 21 to 27)	Number of ongoing outbreaks	Cumulative number of outbreaks reported to November 27
Congregate Care	4	19	3,094
Long-term care homes	1	4	1,552
Retirement homes	1	8	923
Hospitals	2	7	619
Congregate Living	6	20	1,450
Correctional facility	0	3	72
Shelter	1	6	302
Group Home/supportive housing	4	8	840
Short-term accommodations	0	0	48
Congregate other	1	3	188
Education and Childcare	96	233	3,421
Child care	10	27	1,199
Camp – Day*	0	0	21
Camp – Overnight*	0	0	1
Camp – Unspecified*	0	0	1
School – Elementary**	75	188	1,710
School – Elementary/secondary**	4	6	84
School – Secondary**	6	10	349
School – Post-secondary**	1	2	56
Other settings	85	144	5,029

Setting Type	Reported week 47 (November 21 to 27)	Number of ongoing outbreaks	Cumulative number of outbreaks reported to November 27
Bar/restaurant/nightclub	7	11	430
Medical/health services	2	7	176
Personal service settings	0	1	39
Recreational fitness	5	10	156
Retail	3	7	531
Other recreation/community	5	4	315
Workplace – Farm	1	1	253
Workplace - Food processing	2	3	293
Other types of workplaces	36	56	2,726
Other	3	11	16
Unknown	21	33	94
Total number of outbreaks	191	416	12,994

Note: Reported week is based on the outbreak reported date, and if unavailable, the date the public health unit created the outbreak. Ongoing outbreaks are those that are reported in CCM as 'Open' and without a 'Declared Over Date' recorded. 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 46 (November 14 to 20)	Reported week 47 (November 21 to 27)	Cumulative number of cases
Congregate Care	83	28	41,213
Long-term care homes	14	4	26,914
Retirement homes	54	7	7,603
Hospitals	15	17	6,696
Congregate Living	49	50	10,715
Correctional facility	15	24	1,986
Shelter	14	8	2,931
Group Home/supportive housing	14	14	3,791
Short-term accommodations	2	1	262
Congregate other	4	3	1,745
Education and Childcare	481	518	14,664
Child care	26	29	4,836
Camp – Day*	0	0	109
Camp – Overnight*	0	0	11
Camp – Unspecified*	0	0	2
School – Elementary**	412	465	7,452
School – Elementary/secondary**	18	7	448
School – Secondary**	21	14	1,368
School – Post-secondary**	4	3	438
Other settings	264	380	39,563
Bar/restaurant/nightclub	8	53	2,124
Medical/health services	12	11	769

Cases associated with the outbreak setting type	Reported Week 46 (November 14 to 20)	Reported week 47 (November 21 to 27)	Cumulative number of cases
Personal service settings	0	1	138
Recreational fitness	16	30	1,014
Retail	12	10	2,884
Other recreation/community	23	13	3,890
Workplace - Farm	0	3	3,238
Workplace - Food processing	11	29	3,995
Other types of workplaces	81	96	20,949
Other	49	23	88
Unknown	52	111	474
Total number of cases	877	976	106,155

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.

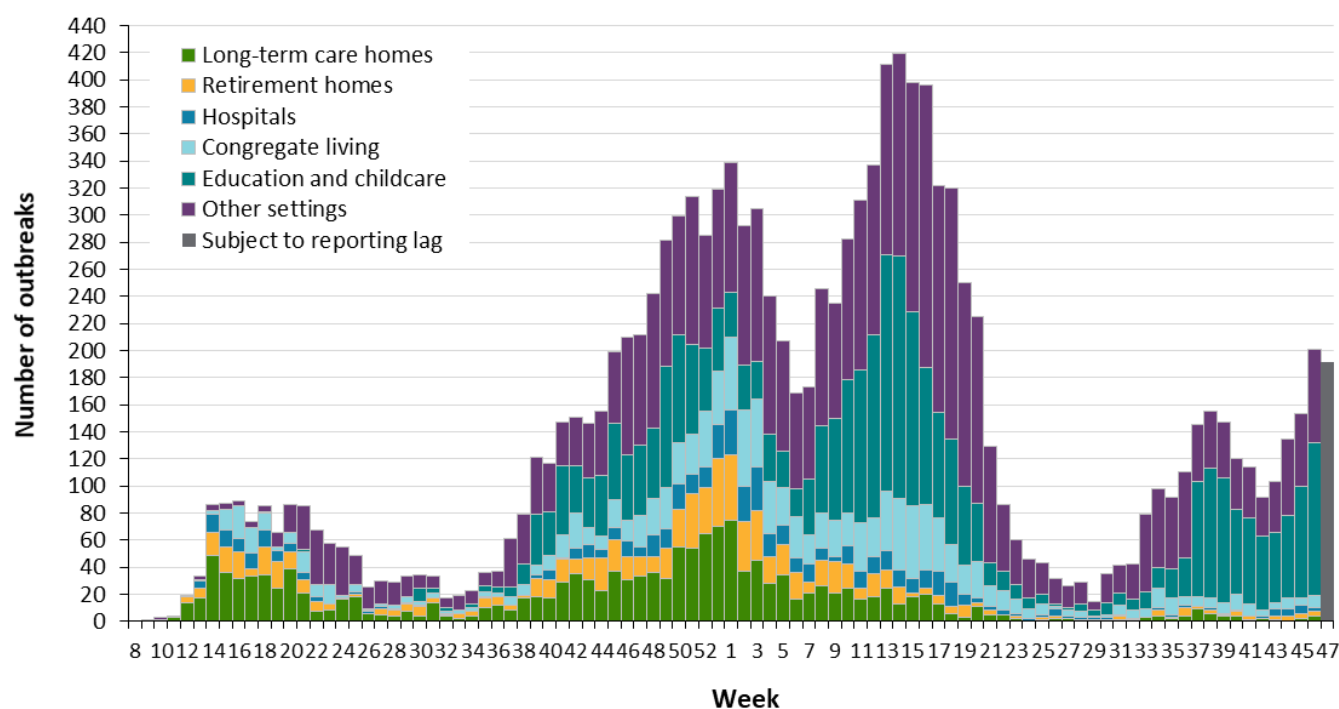
*Cumulative counts include cases of COVID-19 camp outbreaks reported starting week-27 of 2021 (July 4 to 10, 2021).

**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 47 refers to November 21 and 27, 2021. Congregate living include group homes, shelters, correctional facilities, etc. Other settings include outbreaks within workplaces, restaurants, recreation etc.

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 **November 30, 2021 at 1 p.m.** for cases reported from February 1, 2021 onwards and as of **November 29, 2021 at 9 a.m.** for cases reported up January 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.
- Male/Female information presented in this report are sourced from the Sex field in CCM and are intended to represent sex assigned at birth. On October 14, 2021, changes were made in CCM to enable reporting on the Sex field where this data field is supplemented by archived Male/Female information previously entered in the Gender field.
- 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).

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 Statistics 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	2,796	4,748
15	April 5, 2020	April 11, 2020	3,166	7,914
16	April 12, 2020	April 18, 2020	4,262	12,176
17	April 19, 2020	April 25, 2020	3,650	15,826
18	April 26, 2020	May 2, 2020	2,901	18,727
19	May 3, 2020	May 9, 2020	2,353	21,080
20	May 10, 2020	May 16, 2020	2,223	23,303
21	May 17, 2020	May 23, 2020	2,617	25,920
22	May 24, 2020	May 30, 2020	2,611	28,531
23	May 31, 2020	June 6, 2020	2,302	30,833

Reported Week	Start date	End date	Number of cases	Cumulative count
24	June 7, 2020	June 13, 2020	1,472	32,305
25	June 14, 2020	June 20, 2020	1,226	33,531
26	June 21, 2020	June 27, 2020	1,251	34,782
27	June 28, 2020	July 4, 2020	1,085	35,867
28	July 5, 2020	July 11, 2020	866	36,733
29	July 12, 2020	July 18, 2020	931	37,664
30	July 19, 2020	July 25, 2020	993	38,657
31	July 26, 2020	August 1, 2020	808	39,465
32	August 2, 2020	August 8, 2020	592	40,057
33	August 9, 2020	August 15, 2020	610	40,667
34	August 16, 2020	August 22, 2020	728	41,395
35	August 23, 2020	August 29, 2020	850	42,245
36	August 30, 2020	September 5, 2020	976	43,221
37	September 6, 2020	September 12, 2020	1,505	44,726
38	September 13, 2020	September 19, 2020	2,371	47,097
39	September 20, 2020	September 26, 2020	3,123	50,220
40	September 27, 2020	October 3, 2020	4,223	54,443
41	October 4, 2020	October 10, 2020	5,036	59,479
42	October 11, 2020	October 17, 2020	5,276	64,755
43	October 18, 2020	October 24, 2020	6,040	70,795
44	October 25, 2020	October 31, 2020	6,389	77,184
45	November 1, 2020	November 7, 2020	7,601	84,785
46	November 8, 2020	November 14, 2020	10,441	95,226
47	November 15, 2020	November 21, 2020	10,038	105,264
48	November 22, 2020	November 28, 2020	11,138	116,402

Reported Week	Start date	End date	Number of cases	Cumulative count
49	November 29, 2020	December 5, 2020	12,682	129,084
50	December 6, 2020	December 12, 2020	13,062	142,146
51	December 13, 2020	December 19, 2020	15,658	157,804
52	December 20, 2020	December 26, 2020	15,625	173,429
53	December 27, 2020	January 2, 2021	20,448	193,877
1	January 3, 2021	January 9, 2021	24,875	218,752
2	January 10, 2021	January 16, 2021	21,382	240,134
3	January 17, 2021	January 23, 2021	16,402	256,536
4	January 24, 2021	January 30, 2021	12,769	269,305
5	January 31, 2021	February 6, 2021	9,780	279,085
6	February 7, 2021	February 13, 2021	7,900	286,985
7	February 14, 2021	February 20, 2021	7,457	294,442
8	February 21, 2021	February 27, 2021	7,683	302,125
9	February 28, 2021	March 6, 2021	7,935	310,060
10	March 7, 2021	March 13, 2021	9,482	319,542
11	March 14, 2021	March 20, 2021	11,023	330,565
12	March 21, 2021	March 27, 2021	14,390	344,955
13	March 28, 2021	April 3, 2021	18,947	363,902
14	April 4, 2021	April 10, 2021	25,577	389,479
15	April 11, 2021	April 17, 2021	30,893	420,372
16	April 18, 2021	April 24, 2021	28,343	448,715
17	April 25, 2021	May 1, 2021	25,208	473,923
18	May 2, 2021	May 8, 2021	20,754	494,677
19	May 9, 2021	May 15, 2021	16,524	511,201
20	May 16, 2021	May 22, 2021	12,651	523,852

Reported Week	Start date	End date	Number of cases	Cumulative count
21	May 23, 2021	May 29, 2021	7,759	531,611
22	May 30, 2021	June 5, 2021	5,215	536,826
23	June 6, 2021	June 12, 2021	3,482	540,308
24	June 13, 2021	June 19, 2021	2,418	542,726
25	June 20, 2021	June 26, 2021	1,881	544,607
26	June 27, 2021	July 3, 2021	1,472	546,079
27	July 4, 2021	July 10, 2021	1,226	547,305
28	July 11, 2021	July 17, 2021	1,044	548,349
29	July 18, 2021	July 24, 2021	1,109	549,458
30	July 25, 2021	July 31, 2021	1,350	550,808
31	August 1, 2021	August 7, 2021	1,906	552,714
32	August 8, 2021	August 14, 2021	3,172	555,886
33	August 15, 2021	August 21, 2021	4,144	560,030
34	August 22, 2021	August 28, 2021	4,774	564,804
35	August 29, 2021	September 4, 2021	5,184	569,988
36	September 5, 2021	September 11, 2021	5,054	575,042
37	September 12, 2021	September 18, 2021	4,915	579,957
38	September 19, 2021	September 25, 2021	4,399	584,356
39	September 26, 2021	October 2, 2021	3,952	588,308
40	October 3, 2021	October 9, 2021	3,844	592,152
41	October 10, 2021	October 16, 2021	2,901	595,053
42	October 17, 2021	October 23, 2021	2,626	597,679
43	October 24, 2021	October 30, 2021	2,503	600,182
44	October 31, 2021	November 6, 2021	3,288	603,470
45	November 7, 2021	November 13, 2021	3,983	607,453

Reported Week	Start date	End date	Number of cases	Cumulative count
46	November 14, 2021	November 20, 2021	4,573	612,026
47	November 21, 2021	November 27, 2021	5,414	617,440

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

Public Health Unit Name	Cases reported Week 46	Rate per 100,000 population Reported Week 46	Cases reported week 47	Rate per 100,000 population Reported week 47
Northwestern Health Unit	16	19.7	13	16.0
Thunder Bay District Health Unit	25	15.9	90	57.1
TOTAL NORTH WEST	41	17.2	103	43.1
Algoma Public Health	164	139.2	200	169.7
North Bay Parry Sound District Health Unit	22	17.0	18	13.9
Porcupine Health Unit	11	12.9	10	11.8
Public Health Sudbury & Districts	249	121.3	205	99.9
Timiskaming Health Unit	49	144.6	66	194.8
TOTAL NORTH EAST	495	86.6	499	87.3
Ottawa Public Health	285	27.3	288	27.6
Eastern Ontario Health Unit	86	39.8	84	38.9
Hastings Prince Edward Public Health	60	34.7	112	64.8
Kingston, Frontenac and Lennox & Addington Public Health	167	79.8	215	102.8
Leeds, Grenville & Lanark District Health Unit	47	26.1	25	13.9
Renfrew County and District Health Unit	23	21.2	23	21.2
TOTAL EASTERN	668	34.6	747	38.7
Durham Region Health Department	182	25.6	209	29.4

Public Health Unit Name	Cases reported Week 46	Rate per 100,000 population Reported Week 46	Cases reported week 47	Rate per 100,000 population Reported week 47
Haliburton, Kawartha, Pine Ridge District Health Unit	15	7.9	29	15.2
Peel Public Health	279	17.8	332	21.2
Peterborough Public Health	28	18.9	38	25.7
Simcoe Muskoka District Health Unit	415	68.7	512	84.7
York Region Public Health	245	20.4	339	28.2
TOTAL CENTRAL EAST	1,164	26.3	1,459	33.0
Toronto Public Health	568	19.0	688	23.0
TOTAL TORONTO	568	19.0	688	23.0
Chatham-Kent Public Health	55	51.6	59	55.3
Grey Bruce Health Unit	19	10.8	46	26.1
Huron Perth Public Health	54	36.9	49	33.5
Lambton Public Health	46	34.6	49	36.8
Middlesex-London Health Unit	99	19.4	117	22.9
Southwestern Public Health	179	81.8	184	84.1
Windsor-Essex County Health Unit	304	70.5	464	107.7
TOTAL SOUTH WEST	756	43.9	968	56.2
Brant County Health Unit	77	50.1	134	87.3
City of Hamilton Public Health Services	153	26.3	149	25.6
Haldimand-Norfolk Health Unit	119	99.2	103	85.8
Halton Region Public Health	108	17.7	168	27.5
Niagara Region Public Health	154	32.0	120	24.9

Public Health Unit Name	Cases reported Week 46	Rate per 100,000 population Reported Week 46	Cases reported week 47	Rate per 100,000 population Reported week 47
Region of Waterloo Public Health and Emergency Services	211	34.9	211	34.9
Wellington-Dufferin-Guelph Public Health	59	18.9	65	20.8
TOTAL CENTRAL WEST	881	30.8	950	33.2
TOTAL ONTARIO	4,573	31.0	5,414	36.7

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

Citation

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Weekly epidemiologic summary: COVID-19 in Ontario – focus on November 21, 2021 to November 27, 2021. Toronto, ON: Queen’s Printer for Ontario; 2021.

Disclaimer

This document was developed by Public Health Ontario (PHO). PHO provides scientific and technical advice to Ontario’s government, public health organizations and health care providers. PHO’s work is guided by the current best available evidence at the time of publication. The application and use of this document is the responsibility of the user. PHO assumes no liability resulting from any such application or use. This document may be reproduced without permission for non-commercial purposes only and provided that appropriate credit is given to PHO. No changes and/or modifications may be made to this document without express written permission from PHO.

For Further Information

For more information, email cd@oahpp.ca.

Public Health Ontario

Public Health Ontario is an agency of the Government of Ontario dedicated to protecting and promoting the health of all Ontarians and reducing inequities in health. Public Health Ontario links public health practitioners, front-line health workers and researchers to the best scientific intelligence and knowledge from around the world.

For more information about PHO, visit publichealthontario.ca.

©Queen’s Printer for Ontario, 2021

