

## WEEKLY EPIDEMIOLOGICAL SUMMARY

# COVID-19 in Ontario: Focus on December 19, 2021 to December 25, 2021

This report includes the most current information available from CCM as of **December 28, 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

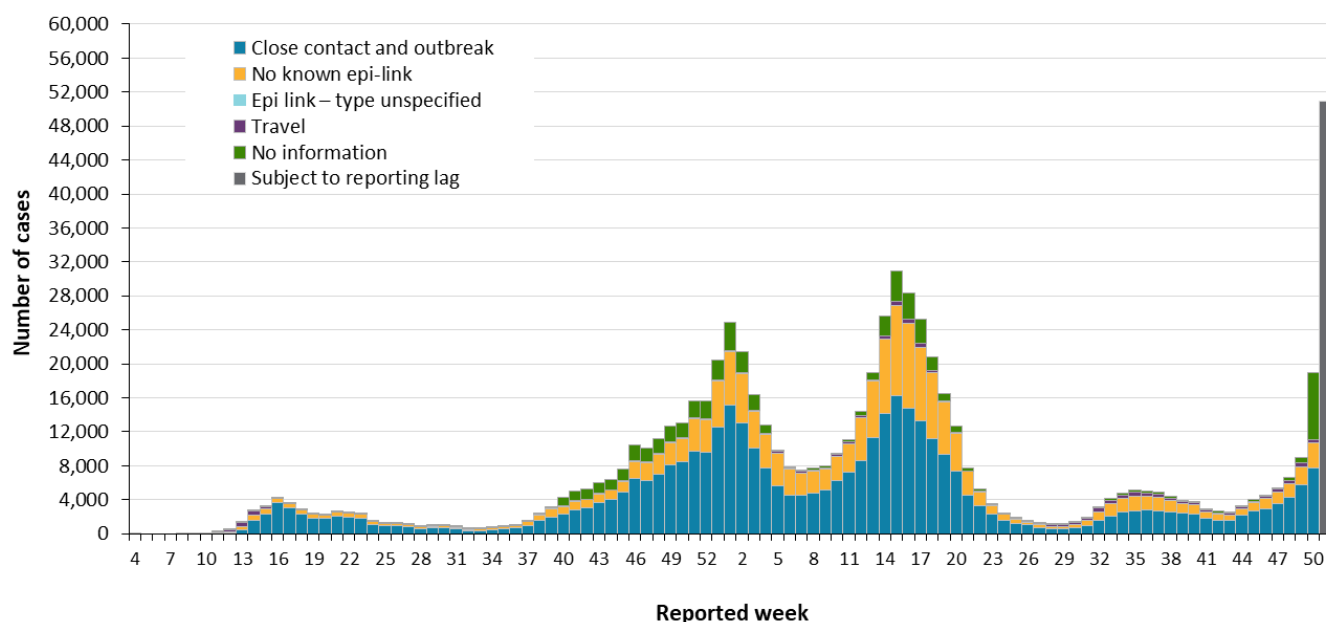
- There are a total of 702,848 confirmed cases of COVID-19 in Ontario with a public health unit reported date up to December 25, 2021.
- For the period with a public health unit (PHU) reported date between December 19 to 25, 2021 (week 51):
  - A total of 50,910 cases were reported to public health compared to 18,918 cases the previous week (December 12 to 18, 2021).
  - Over 50,000 cases were reported this week, breaking the previous record of 30,888 cases reported the week of April 11 to 17, 2021 (week 15) to become the highest ever case count reported in a single week during the pandemic.
  - For the first time since August (week 34), cases age 20 to 39 reported the highest rate of cases across all age groups (564.9 cases per 100,000 population), surpassing that of the 5 to 11 age group which has previously reported the highest case rate for 16 consecutive weeks.

Due to changes in the availability of testing, driven by increasing COVID-19 cases related to the Omicron variant, case counts in this report are an underestimate of the true number of individuals with COVID-19 in Ontario. As such, data should be interpreted with caution. For more information, please see our data caveats and check out [our blog](#).

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

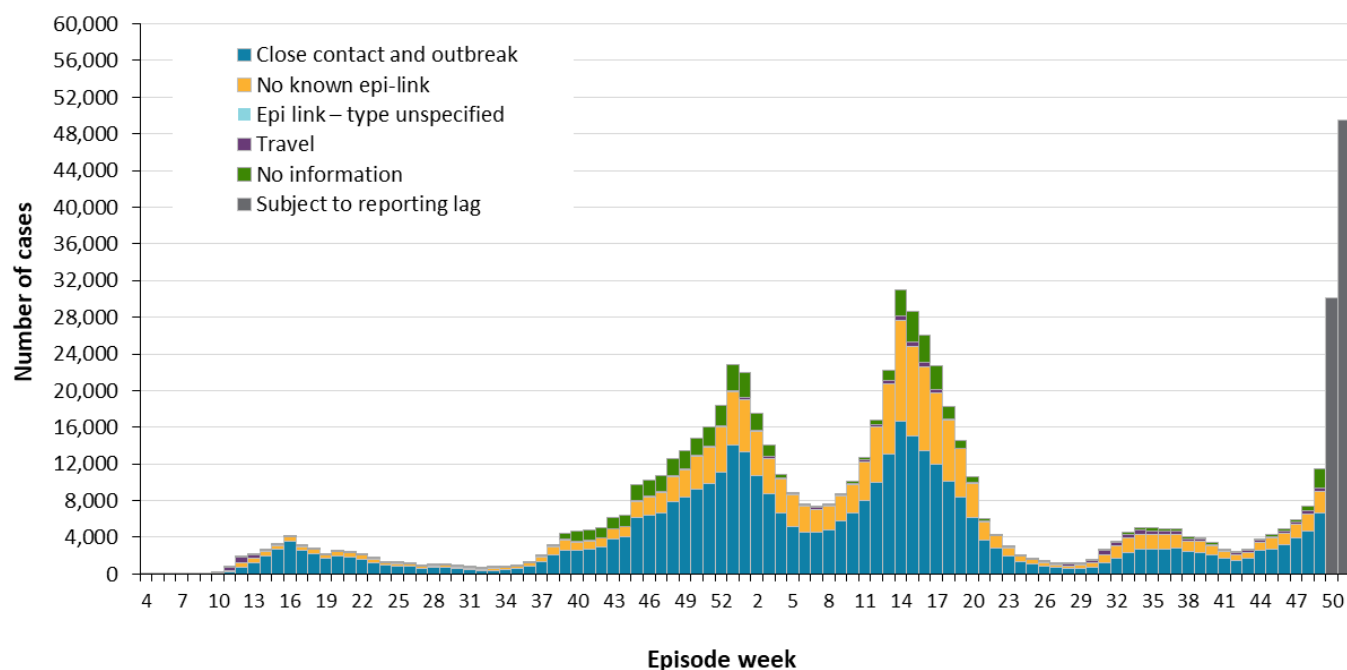
**Figure 1. Confirmed cases of COVID-19 by likely source of acquisition and public health unit reported week: Ontario**



**Note:** Include cases with reported dates ranging from week-4 (January 19 and 25, 2020) to week 51 (December 19 and 25, 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 51 (December 19 and 25, 2021). See [Table 1A](#) in Appendix A for a list of the weeks and corresponding start and end dates.

**Data Source:** CCM

## Case Characteristics

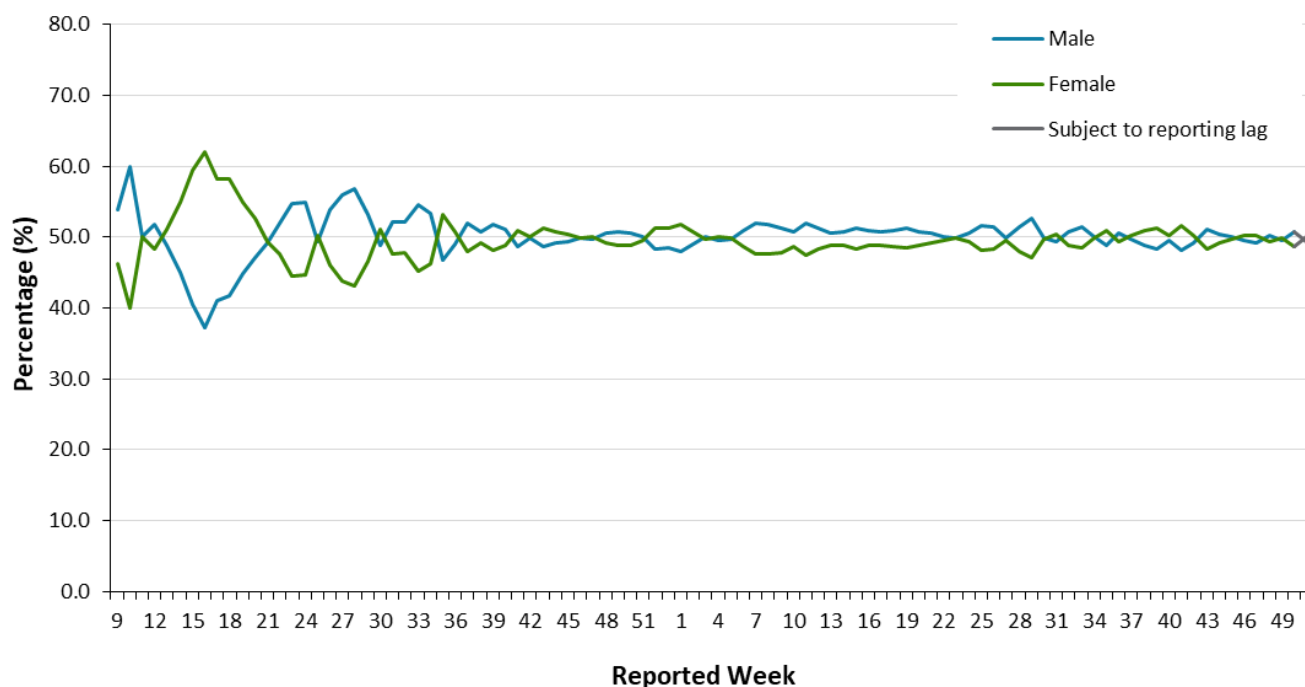
**Table 1. Summary of confirmed cases of COVID-19 by public health unit reported date: Ontario**

	Reported week 50 (December 12 to 18)	Reported week 51 (December 19 to 25)	Cumulative case count up to December 25	Cumulative rate per 100,000 population
Total number of cases	18,918	50,910	702,848	4,770.2
Sex: Male	9,596	25,077	351,106	4,823.3
Sex: Female	9,209	25,486	349,121	4,683.3
Ages: 0-4	586	1,386	20,732	2,867.4
Ages: 5-11	2,388	4,018	44,152	4,093.7
Ages: 12-19	1,857	5,198	63,244	4,757.1
Ages: 20-39	7,588	23,456	266,595	6,421.1
Ages: 40-59	4,781	12,476	193,410	4,965.0
Ages: 60-79	1,495	3,838	86,989	2,999.9
Ages: 80 and over	216	508	27,581	4,205.5
Number resolved	N/A	N/A	638,566	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

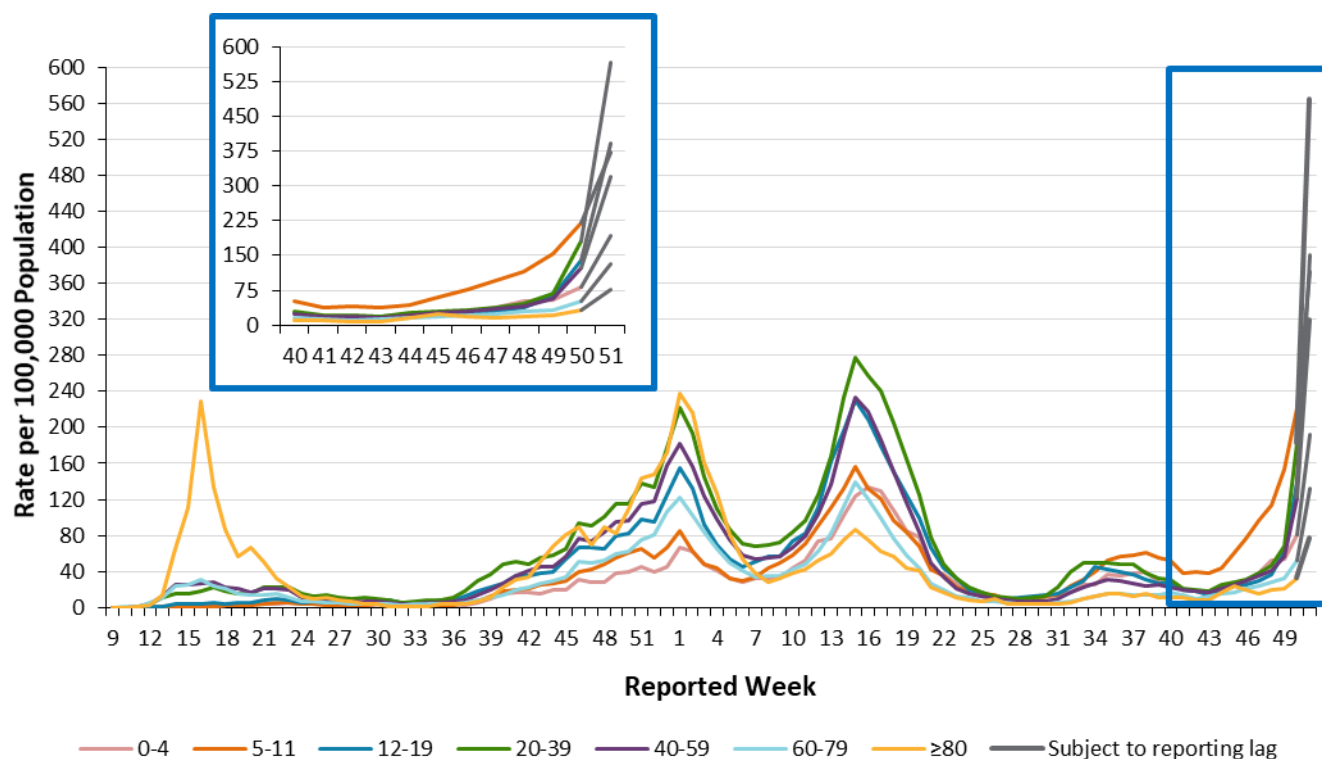
**Figure 3. Percentage of confirmed cases of COVID-19 by sex and public health unit reported week: Ontario**



**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 51 (December 19 and 25, 2021). See [Table 1A](#) in Appendix A for a list of the weeks and corresponding start and end dates.

**Data Source:** CCM

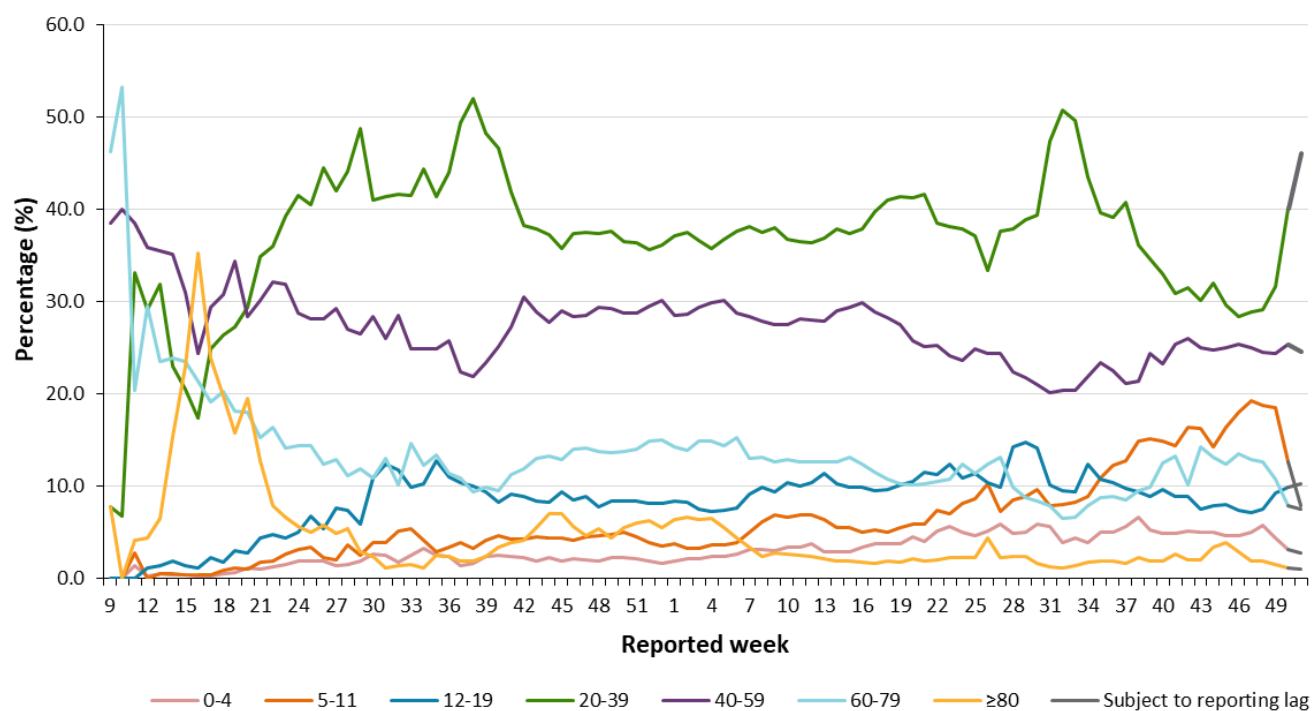
**Figure 4a. Rate of confirmed cases of COVID-19 per 100,000 population by age group and public health unit reported week: Ontario**



**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 51 (December 19 and 25, 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**

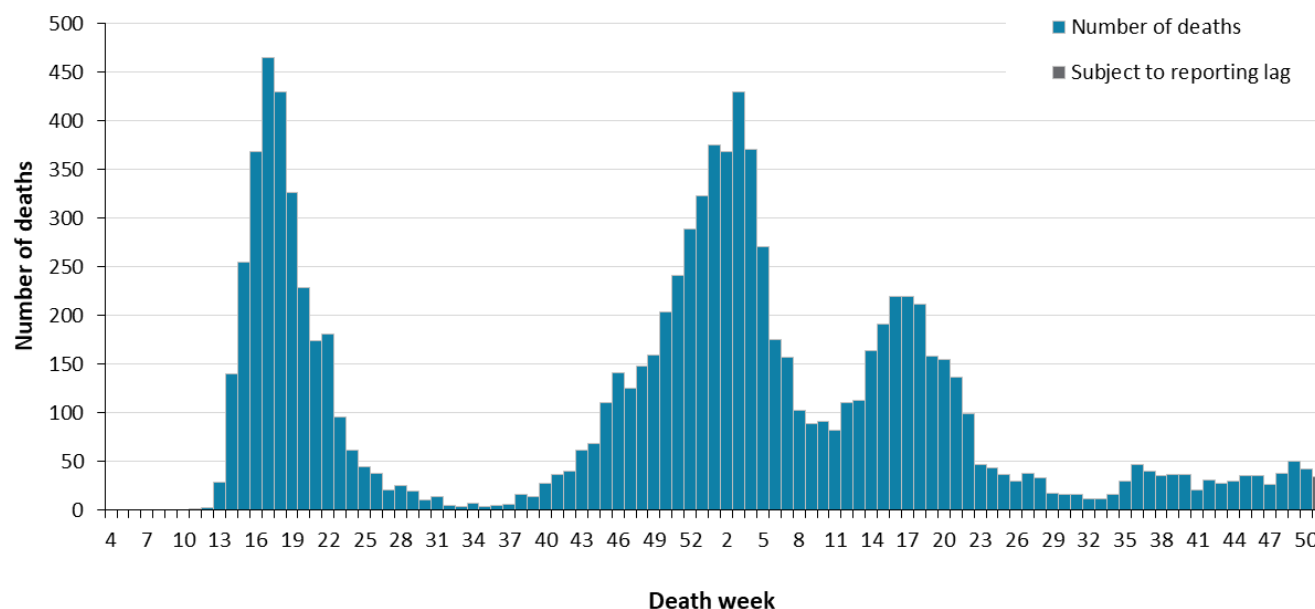


**Note:** Only weeks with more than 10 cases by public health unit reporting date are included (starting in week-9). Include cases with reported dates ranging from week-9 (February 23 and 29, 2020) to week 51 (December 19 and 25, 2021). See Table 1A in Appendix A for a list of the weeks and corresponding 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 51 (December 19 and 25, 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 50 (December 12 to 18)	Reported week 51 (December 19 to 25)	Cumulative case count up to December 25	Cumulative rate per 100,000 population
Number of deaths	20	14	10,171	69.0
Sex: Male	16	8	5,257	72.2
Sex: Female	4	5	4,857	65.2
Ages: 19 and under	0	1	8	0.3
Ages: 20- 39	0	1	113	2.7
Ages: 40- 59	3	1	726	18.6
Ages: 60- 79	9	6	3,365	116.0
Ages: 80 and over	8	5	5,958	908.5

**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 50 (December 12 to 18)	Percentage	Reported week 51 (December 19 to 25)	Percentage	Cumulative case count up to December 25	Cumulative percentage
Travel	422	2.2%	248	0.5%	15,827	2.3%
Outbreak-associated or close contact of a confirmed case	7,743	40.9%	6,126	12.0%	394,396	56.1%
Epidemiological link – type unspecified	0	0.0%	0	0.0%	44	<0.1%
No known epidemiological link	2,899	15.3%	2,084	4.1%	187,716	26.7%
Information missing or unknown	7,854	41.5%	42,452	83.4%	104,865	14.9%
<b>Total</b>	<b>18,918</b>		<b>50,910</b>		<b>702,848</b>	

**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 50 (December 12 to 18)	Reported week 51 (December 19 to 25)	Cumulative case count up to December 25
Number of cases	247	307	26,059
Ever hospitalized	0	0	485
Ever in ICU	0	0	100

**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 50 (December 12 to 18)	Reported week 51 (December 19 to 25)	Cumulative case count up to December 25
Residents	22	76	15,787
Deaths among residents	1	0	4,032
Health care workers	18	32	7,494
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

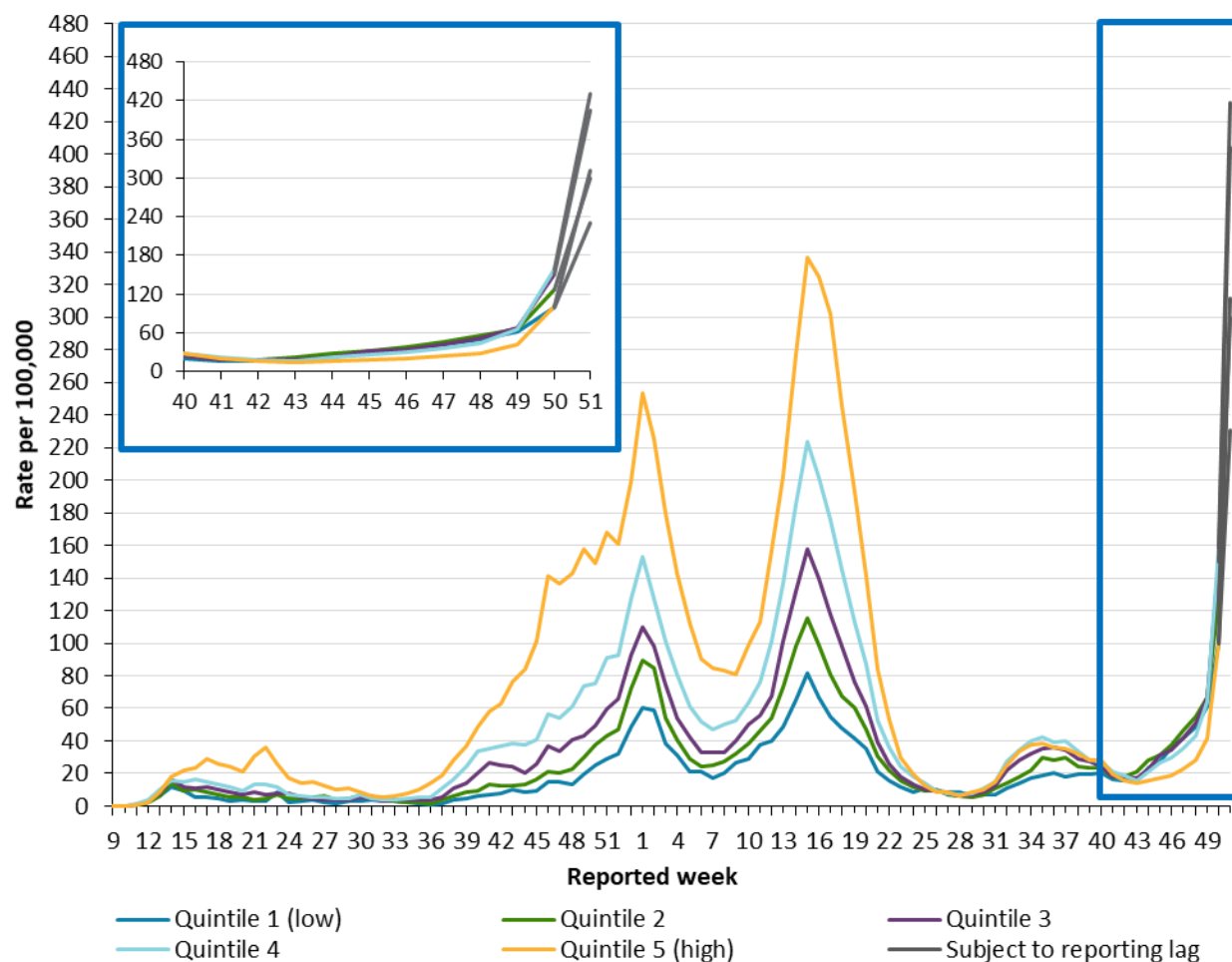
**Table 6: Summary of reinfection cases of COVID-19 by age group and public health unit reported week: Ontario**

Age Group	Reported week 50 (December 12 to 18)	Reported week 51 (December 19 to 25)	Cumulative count from November 1, 2020 up to December 25, 2021	Percent of reinfection cases
Ages: 0-4	1	1	23	3.2%
Ages: 5-11	9	5	32	4.4%
Ages: 12-19	9	18	70	9.7%
Ages: 20-39	38	101	355	49.0%
Ages: 40-59	14	47	179	24.7%
Ages: 60-79	3	9	51	7.0%
Ages: 80 and over	1	1	14	1.9%
<b>Total reinfection cases</b>	<b>75</b>	<b>182</b>	<b>724</b>	<b>100.0%</b>

**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

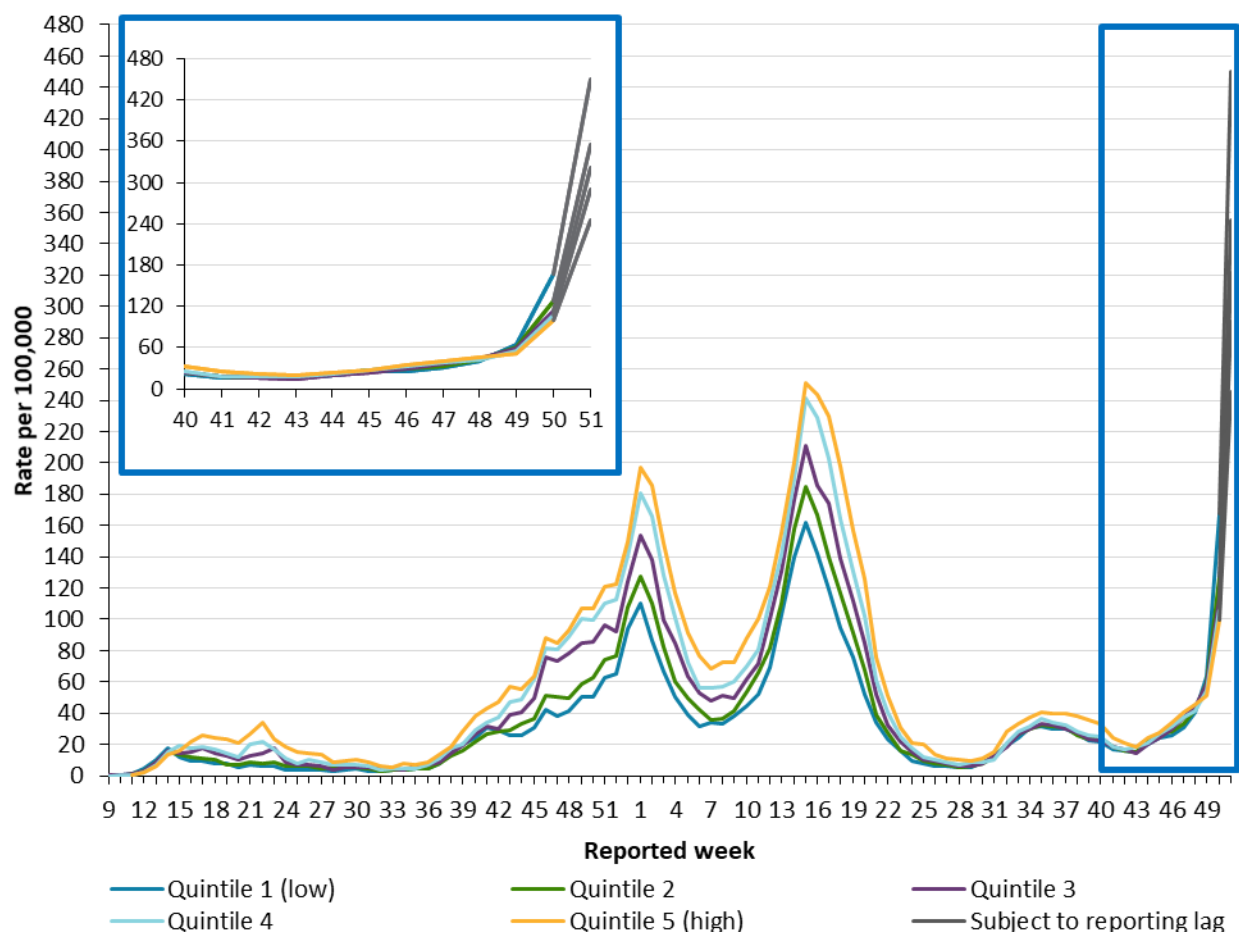
**Figure 6. Rate of confirmed cases of COVID-19 per 100,000 population by quintile of neighbourhood diversity and public health unit reported week: Ontario**



**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 51 (December 19 to 25, 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 51 (December 19 to 25, 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 50 (December 12 to 18)	Cases Reported Week 51 (December 19 to 25)	Cumulative case count up to December 25	Cumulative rate per 100,000 population up to December 25
Quintile 1 (least diverse)	2,211	5,119	46,536	2,095.1
Quintile 2	2,991	7,102	66,649	2,814.4
Quintile 3	3,884	10,477	93,861	3,621.0
Quintile 4	4,950	13,496	148,210	4,738.7
Quintile 5 (most diverse)	4,335	13,475	301,636	6,978.6

**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**

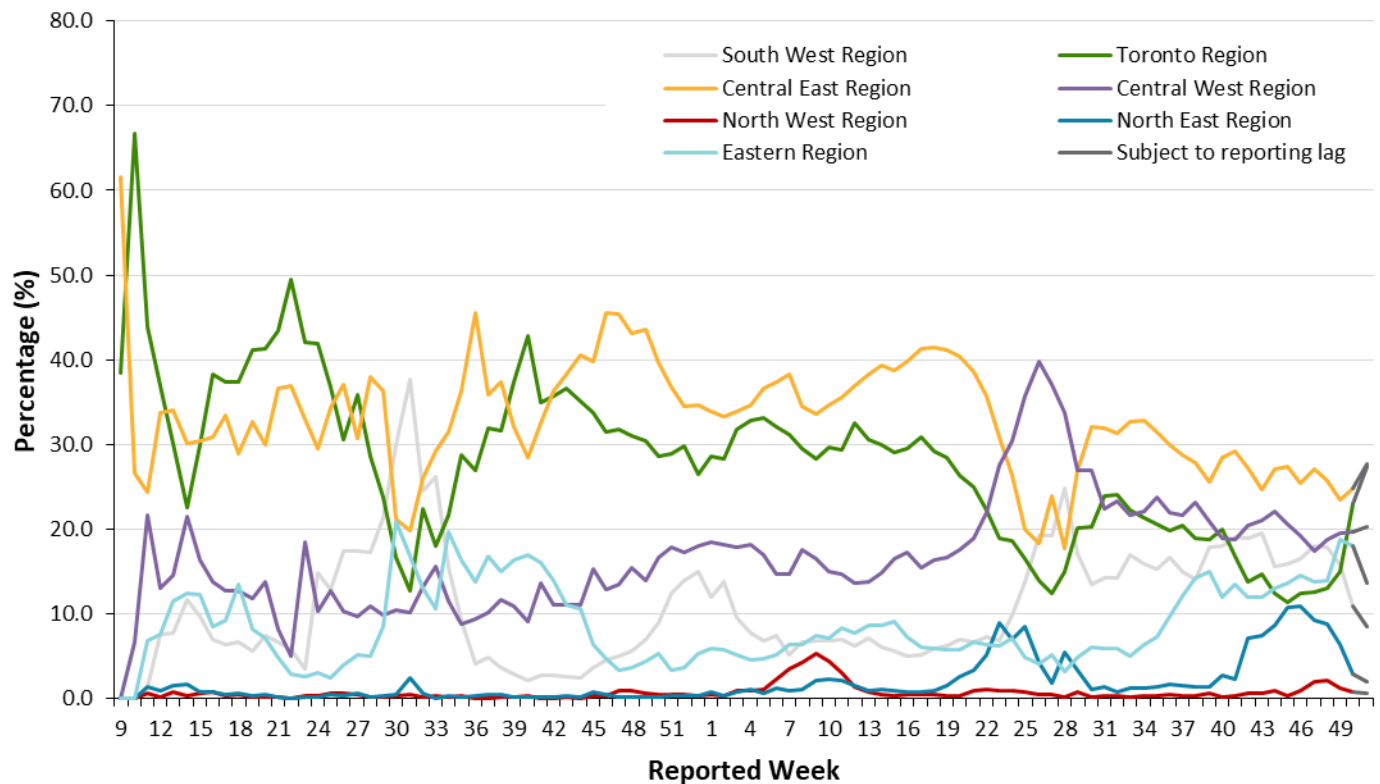
	Cases Reported Week 50 (December 12 to 18)	Cases Reported Week 51 (December 19 to 25)	Cumulative case count up to December 25	Cumulative rate per 100,000 population up to December 25
Quintile 1 (least material deprivation)	5,774	15,516	123,841	3,593.6
Quintile 2	3,968	11,034	120,749	3,889.3
Quintile 3	3,154	8,912	125,257	4,517.1
Quintile 4	2,813	7,636	133,312	5,073.6
Quintile 5 (most material deprivation)	2,662	6,571	153,733	5,736.3

**Note:** Neighbourhood material deprivation is measured using the material deprivation dimension of the Ontario Marginalization Index. The material deprivation dimension uses Canadian census data on income, quality of housing, educational attainment and family structure characteristics to assess the ability of individuals and communities to access and attain basic material needs. Cumulative counts and rates include cases of COVID-19 reported starting week 9 (February 23 to 29, 2020).

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

## Geography

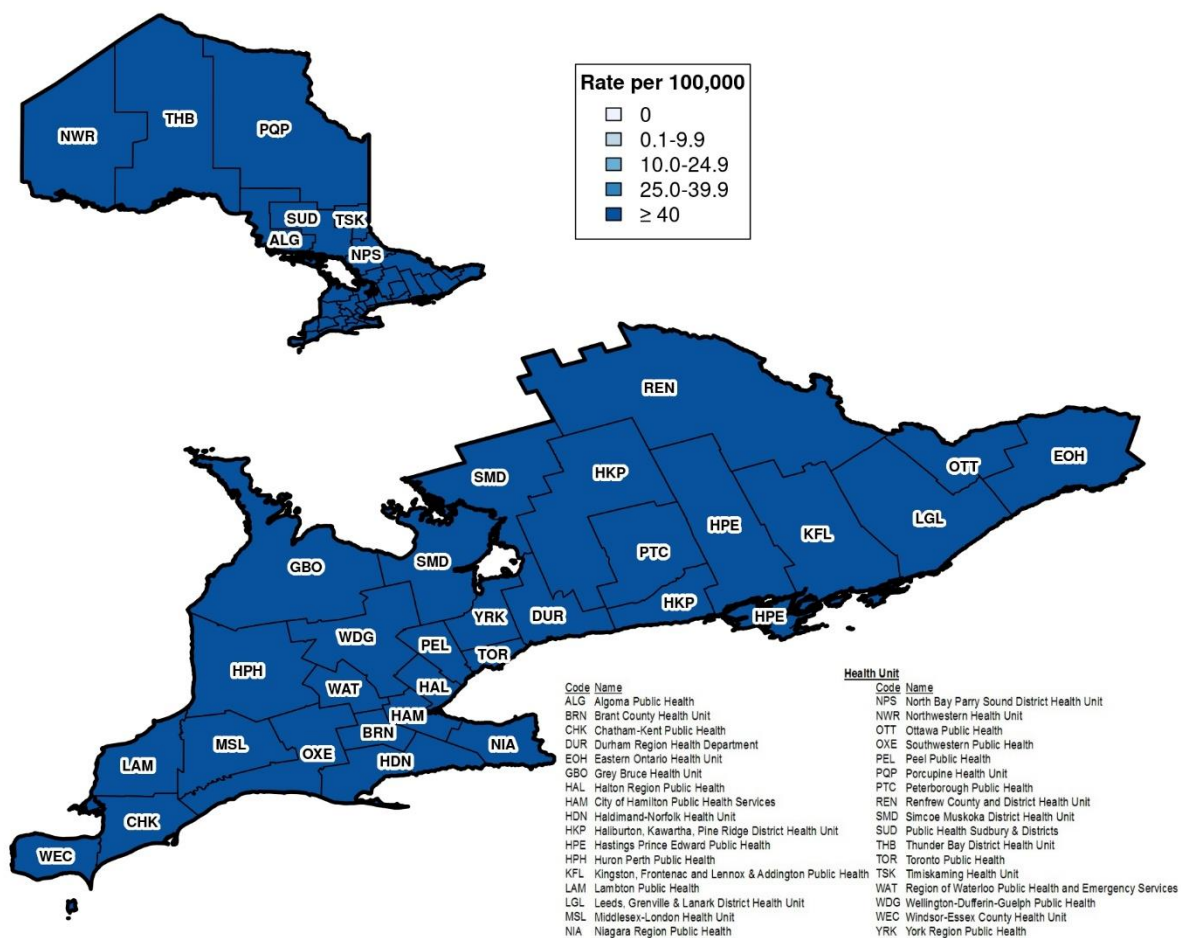
**Figure 8. Percentage of COVID-19 cases by geographic region and public health unit reported week: Ontario**



**Note:** Only weeks with more than 10 cases by public health unit reporting date are included (starting in week-9). Include cases with reported dates ranging from week-9 (February 23 and 29, 2020) to week 51 (December 19 and 25, 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 51 (December 19 to 25, 2021) by public health unit: Ontario**



**Note:** The provincial rate of confirmed cases of COVID-19 reported in week 51 was 345.5 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 51 (December 19 to 25)	Number of ongoing outbreaks	Cumulative number of outbreaks reported to December 25
<b>Congregate Care</b>	<b>85</b>	<b>159</b>	<b>3,232</b>
Long-term care homes	43	92	1,625
Retirement homes	14	24	945
Hospitals	28	43	662
<b>Congregate Living</b>	<b>37</b>	<b>86</b>	<b>1,556</b>
Correctional facility	4	11	83
Shelter	4	14	317
Group Home/supportive housing	27	50	894
Short-term accommodations	0	0	52
Congregate other	2	11	210
<b>Education and Childcare</b>	<b>133</b>	<b>459</b>	<b>4,212</b>
Child care	30	62	1,302
Camp – Day*	0	0	22
Camp – Overnight*	0	0	1
Camp – Unspecified*	0	0	1
School – Elementary**	75	304	2,270
School – Elementary/secondary**	2	14	102
School – Secondary**	26	78	453
School – Post-secondary**	0	1	61
<b>Other settings</b>	<b>50</b>	<b>154</b>	<b>5,400</b>

Setting Type	Reported week 51 (December 19 to 25)	Number of ongoing outbreaks	Cumulative number of outbreaks reported to December 25
Bar/restaurant/nightclub	7	14	466
Medical/health services	1	6	191
Personal service settings	0	1	40
Recreational fitness	13	25	247
Retail	2	9	555
Other recreation/community	2	11	365
Workplace – Farm	1	7	262
Workplace - Food processing	0	0	293
Other types of workplaces	15	57	2,861
Other	7	9	25
Unknown	2	15	95
<b>Total number of outbreaks</b>	<b>305</b>	<b>858</b>	<b>14,400</b>

**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 50 (December 12 to 18)	Reported week 51 (December 19 to 25)	Cumulative number of cases
<b>Congregate Care</b>	<b>109</b>	<b>364</b>	<b>41,836</b>
Long-term care homes	68	208	27,281
Retirement homes	15	38	7,663
Hospitals	26	118	6,892
<b>Congregate Living</b>	<b>231</b>	<b>251</b>	<b>11,539</b>
Correctional facility	83	50	2,256
Shelter	42	65	3,055
Group Home/supportive housing	68	121	4,064
Short-term accommodations	17	0	316
Congregate other	21	15	1,848
<b>Education and Childcare</b>	<b>1,246</b>	<b>693</b>	<b>18,565</b>
Child care	70	98	5,123
Camp – Day*	0	0	111
Camp – Overnight*	0	0	11
Camp – Unspecified*	0	0	2
School – Elementary**	907	360	10,404
School – Elementary/secondary**	16	20	498
School – Secondary**	241	213	1,956
School – Post-secondary**	12	2	460
<b>Other settings</b>	<b>662</b>	<b>352</b>	<b>41,818</b>
Bar/restaurant/nightclub	98	97	2,446

Cases associated with the outbreak setting type	Reported week 50 (December 12 to 18)	Reported week 51 (December 19 to 25)	Cumulative number of cases
Medical/health services	11	15	820
Personal service settings	2	0	140
Recreational fitness	176	79	1,616
Retail	25	11	2,984
Other recreation/community	138	33	4,363
Workplace - Farm	9	12	3,266
Workplace - Food processing	0	0	4,021
Other types of workplaces	167	46	21,384
Other	2	31	137
Unknown	34	28	641
<b>Total number of cases</b>	<b>2,248</b>	<b>1,660</b>	<b>113,758</b>

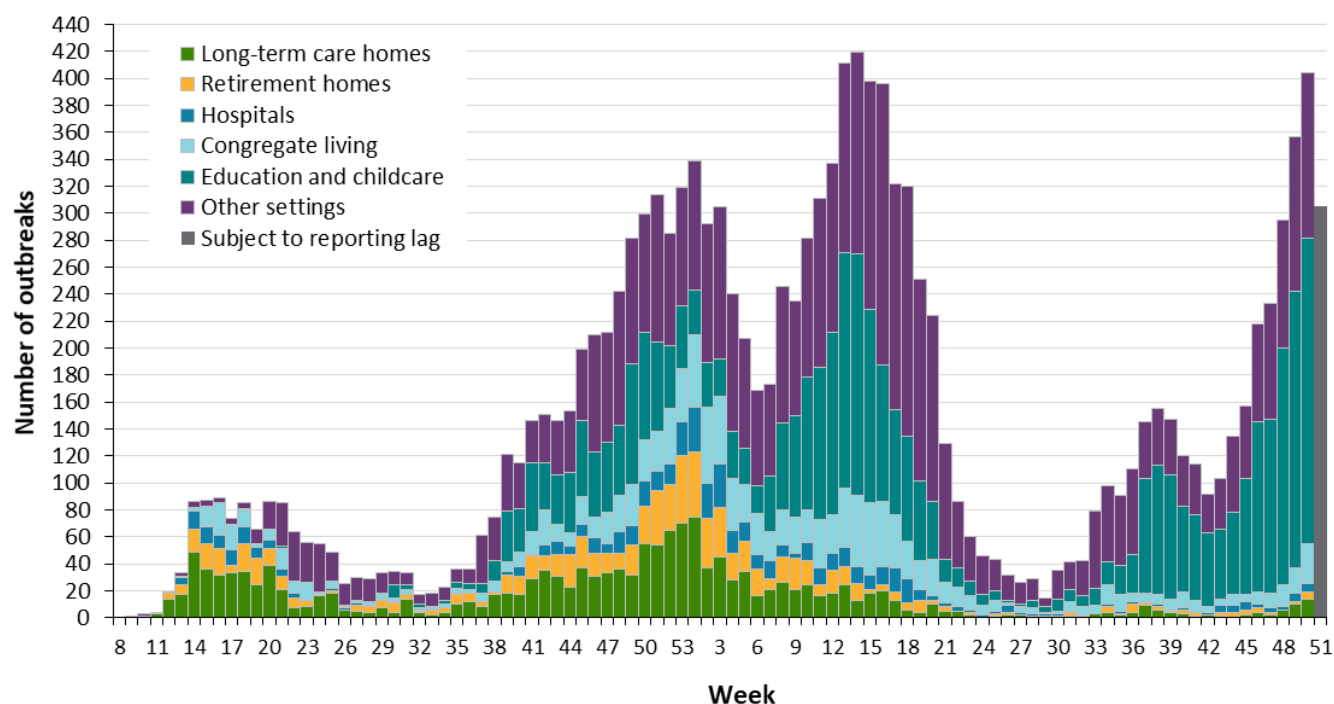
**Note:** Interpret case counts for the most recent week with caution due to reporting lags. Outbreak categories are mutually exclusive. Retail includes settings such as grocery stores, pharmacies, malls, etc. Other types of workplaces include settings such as offices as well as warehousing, shipping 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 51 refers to December 19 and 25, 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 **December 28, 2021 at 1 p.m.** for cases reported from February 1, 2021 onwards and as of **December 23, 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

- Due to changes in the availability of testing, driven by increasing COVID-19 cases related to the Omicron variant, case counts in this report are an underestimate of the true number of individuals with COVID-19 in Ontario. As such, data should be interpreted with caution.
- 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 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](http://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	2,900	18,726
19	May 3, 2020	May 9, 2020	2,353	21,079
20	May 10, 2020	May 16, 2020	2,223	23,302
21	May 17, 2020	May 23, 2020	2,617	25,919
22	May 24, 2020	May 30, 2020	2,611	28,530
23	May 31, 2020	June 6, 2020	2,302	30,832

Reported Week	Start date	End date	Number of cases	Cumulative count
24	June 7, 2020	June 13, 2020	1,472	32,304
25	June 14, 2020	June 20, 2020	1,226	33,530
26	June 21, 2020	June 27, 2020	1,251	34,781
27	June 28, 2020	July 4, 2020	1,085	35,866
28	July 5, 2020	July 11, 2020	866	36,732
29	July 12, 2020	July 18, 2020	931	37,663
30	July 19, 2020	July 25, 2020	993	38,656
31	July 26, 2020	August 1, 2020	808	39,464
32	August 2, 2020	August 8, 2020	592	40,056
33	August 9, 2020	August 15, 2020	610	40,666
34	August 16, 2020	August 22, 2020	728	41,394
35	August 23, 2020	August 29, 2020	850	42,244
36	August 30, 2020	September 5, 2020	976	43,220
37	September 6, 2020	September 12, 2020	1,505	44,725
38	September 13, 2020	September 19, 2020	2,371	47,096
39	September 20, 2020	September 26, 2020	3,123	50,219
40	September 27, 2020	October 3, 2020	4,222	54,441
41	October 4, 2020	October 10, 2020	5,034	59,475
42	October 11, 2020	October 17, 2020	5,276	64,751
43	October 18, 2020	October 24, 2020	6,041	70,792
44	October 25, 2020	October 31, 2020	6,389	77,181
45	November 1, 2020	November 7, 2020	7,601	84,782
46	November 8, 2020	November 14, 2020	10,441	95,223
47	November 15, 2020	November 21, 2020	10,037	105,260
48	November 22, 2020	November 28, 2020	11,136	116,396

Reported Week	Start date	End date	Number of cases	Cumulative count
49	November 29, 2020	December 5, 2020	12,683	129,079
50	December 6, 2020	December 12, 2020	13,064	142,143
51	December 13, 2020	December 19, 2020	15,661	157,804
52	December 20, 2020	December 26, 2020	15,626	173,430
53	December 27, 2020	January 2, 2021	20,451	193,881
1	January 3, 2021	January 9, 2021	24,874	218,755
2	January 10, 2021	January 16, 2021	21,382	240,137
3	January 17, 2021	January 23, 2021	16,403	256,540
4	January 24, 2021	January 30, 2021	12,771	269,311
5	January 31, 2021	February 6, 2021	9,780	279,091
6	February 7, 2021	February 13, 2021	7,899	286,990
7	February 14, 2021	February 20, 2021	7,456	294,446
8	February 21, 2021	February 27, 2021	7,686	302,132
9	February 28, 2021	March 6, 2021	7,933	310,065
10	March 7, 2021	March 13, 2021	9,483	319,548
11	March 14, 2021	March 20, 2021	11,023	330,571
12	March 21, 2021	March 27, 2021	14,390	344,961
13	March 28, 2021	April 3, 2021	18,946	363,907
14	April 4, 2021	April 10, 2021	25,579	389,486
15	April 11, 2021	April 17, 2021	30,888	420,374
16	April 18, 2021	April 24, 2021	28,343	448,717
17	April 25, 2021	May 1, 2021	25,208	473,925
18	May 2, 2021	May 8, 2021	20,754	494,679
19	May 9, 2021	May 15, 2021	16,524	511,203
20	May 16, 2021	May 22, 2021	12,650	523,853

Reported Week	Start date	End date	Number of cases	Cumulative count
21	May 23, 2021	May 29, 2021	7,758	531,611
22	May 30, 2021	June 5, 2021	5,215	536,826
23	June 6, 2021	June 12, 2021	3,484	540,310
24	June 13, 2021	June 19, 2021	2,418	542,728
25	June 20, 2021	June 26, 2021	1,881	544,609
26	June 27, 2021	July 3, 2021	1,473	546,082
27	July 4, 2021	July 10, 2021	1,226	547,308
28	July 11, 2021	July 17, 2021	1,045	548,353
29	July 18, 2021	July 24, 2021	1,108	549,461
30	July 25, 2021	July 31, 2021	1,350	550,811
31	August 1, 2021	August 7, 2021	1,906	552,717
32	August 8, 2021	August 14, 2021	3,171	555,888
33	August 15, 2021	August 21, 2021	4,144	560,032
34	August 22, 2021	August 28, 2021	4,775	564,807
35	August 29, 2021	September 4, 2021	5,183	569,990
36	September 5, 2021	September 11, 2021	5,056	575,046
37	September 12, 2021	September 18, 2021	4,917	579,963
38	September 19, 2021	September 25, 2021	4,398	584,361
39	September 26, 2021	October 2, 2021	3,953	588,314
40	October 3, 2021	October 9, 2021	3,843	592,157
41	October 10, 2021	October 16, 2021	2,901	595,058
42	October 17, 2021	October 23, 2021	2,626	597,684
43	October 24, 2021	October 30, 2021	2,502	600,186
44	October 31, 2021	November 6, 2021	3,289	603,475
45	November 7, 2021	November 13, 2021	3,981	607,456

Reported Week	Start date	End date	Number of cases	Cumulative count
46	November 14, 2021	November 20, 2021	4,572	612,028
47	November 21, 2021	November 27, 2021	5,432	617,460
48	November 28, 2021	December 4, 2021	6,581	624,041
49	December 5, 2021	December 11, 2021	8,979	633,020
50	December 12, 2021	December 18, 2021	18,918	651,938
51	December 19, 2021	December 25, 2021	50,910	702,848

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

Public Health Unit Name	Cases reported week 50	Rate per 100,000 population Reported week 50	Cases reported week 51	Rate per 100,000 population Reported week 51
Northwestern Health Unit	103	126.9	167	205.7
Thunder Bay District Health Unit	49	31.1	124	78.6
<b>TOTAL NORTH WEST</b>	<b>152</b>	<b>63.6</b>	<b>291</b>	<b>121.8</b>
Algoma Public Health	159	134.9	147	124.7
North Bay Parry Sound District Health Unit	40	30.9	204	157.8
Porcupine Health Unit	52	61.2	233	274.1
Public Health Sudbury & Districts	231	112.5	342	166.6
Timiskaming Health Unit	53	156.4	45	132.8
<b>TOTAL NORTH EAST</b>	<b>535</b>	<b>93.6</b>	<b>971</b>	<b>170.0</b>
Ottawa Public Health	1,625	155.8	3,976	381.2
Eastern Ontario Health Unit	190	88.0	726	336.3
Hastings Prince Edward Public Health	264	152.8	547	316.5
Kingston, Frontenac and Lennox & Addington Public Health	1,041	497.5	988	472.2
Leeds, Grenville & Lanark District Health Unit	249	138.4	535	297.3
Renfrew County and District Health Unit	36	33.2	154	142.0
<b>TOTAL EASTERN</b>	<b>3,405</b>	<b>176.5</b>	<b>6,926</b>	<b>359.0</b>
Durham Region Health Department	847	119.1	2,402	337.6

Public Health Unit Name	Cases reported week 50	Rate per 100,000 population Reported week 50	Cases reported week 51	Rate per 100,000 population Reported week 51
Haliburton, Kawartha, Pine Ridge District Health Unit	107	56.1	360	188.8
Peel Public Health	1,313	84.0	4,782	305.8
Peterborough Public Health	95	64.1	408	275.5
Simcoe Muskoka District Health Unit	865	143.1	1,625	268.8
York Region Public Health	1,470	122.5	4,519	376.5
<b>TOTAL CENTRAL EAST</b>	<b>4,697</b>	<b>106.3</b>	<b>14,096</b>	<b>319.0</b>
Toronto Public Health	4,355	145.7	13,974	467.6
<b>TOTAL TORONTO</b>	<b>4,355</b>	<b>145.7</b>	<b>13,974</b>	<b>467.6</b>
Chatham-Kent Public Health	136	127.6	210	197.0
Grey Bruce Health Unit	162	92.0	377	214.0
Huron Perth Public Health	119	81.4	282	192.8
Lambton Public Health	167	125.6	472	355.0
Middlesex-London Health Unit	634	124.2	1,728	338.4
Southwestern Public Health	246	112.4	485	221.6
Windsor-Essex County Health Unit	601	139.5	801	185.9
<b>TOTAL SOUTH WEST</b>	<b>2,065</b>	<b>119.9</b>	<b>4,355</b>	<b>252.8</b>
Brant County Health Unit	164	106.8	384	250.1
City of Hamilton Public Health Services	793	136.3	2,631	452.3
Haldimand-Norfolk Health Unit	133	110.8	306	255.0
Halton Region Public Health	1,048	171.6	2,950	483.2

Public Health Unit Name	Cases reported week 50	Rate per 100,000 population Reported week 50	Cases reported week 51	Rate per 100,000 population Reported week 51
Niagara Region Public Health	497	103.2	1,288	267.4
Region of Waterloo Public Health and Emergency Services	653	107.9	1,675	276.8
Wellington-Dufferin-Guelph Public Health	421	134.9	1,063	340.7
<b>TOTAL CENTRAL WEST</b>	<b>3,709</b>	<b>129.5</b>	<b>10,297</b>	<b>359.4</b>
<b>TOTAL ONTARIO</b>	<b>18,918</b>	<b>128.4</b>	<b>50,910</b>	<b>345.5</b>

**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 December 19, 2021 to December 25, 2021. Toronto, ON: Queen's Printer for Ontario; 2021.

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