

## WEEKLY EPIDEMIOLOGICAL SUMMARY

# COVID-19 in Ontario: Focus on January 2, 2022 to January 8, 2022

This report includes the most current information available from CCM as of **January 11, 2022**.

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

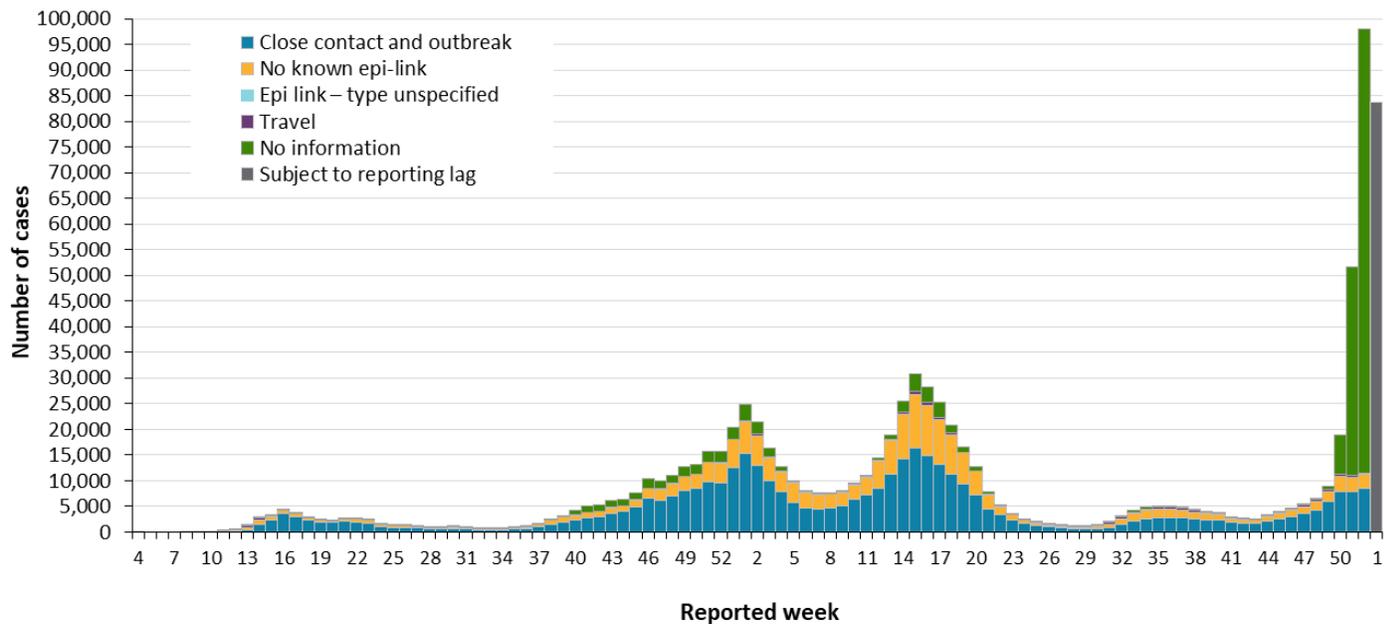
- There are a total of 885,350 confirmed cases of COVID-19 in Ontario with a public health unit reported date up to January 8, 2022.
- For the period with a public health unit (PHU) reported date between January 2 to January 8, 2022(Week 1):
  - A total of 83,673 cases were reported to public health compared to 98,058 cases the previous week (December 26, 2021 to January 1, 2022). The number of cases should be interpreted with caution due to changes in testing availability.
  - In week 52 of 2021 to week 1 of 2022, there was a 110.1% increase in the number of cases of COVID-19 associated with long-term care (LTC) outbreaks in residents (from 504 to 1,059) and a 41.2% increase in deaths among residents (from 17 to 24).
  - There was a 60.3% increase in cases among health care workers from 812 in week 52 to 1,302 in week 1.
  - There was a 75.9% increase in the number of deaths (from 79 in week 52 to 139 in week 1). This is the highest number of reported deaths since Week 20 (May 2021; 155 deaths).

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 1 (January 2 and 8, 2022). See [Table 1A](#) in Appendix A for a list of the weeks and corresponding start and end dates.

**Data Source:** CCM

## Case Characteristics

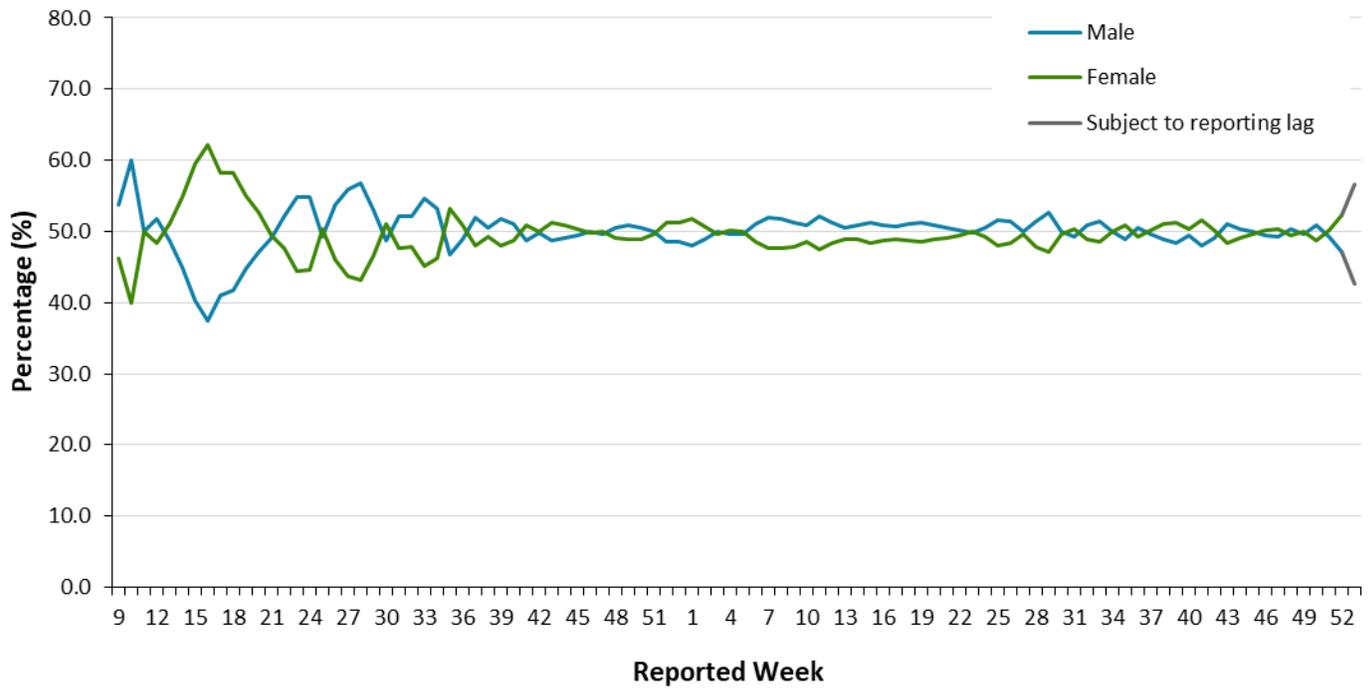
**Table 1. Summary of confirmed cases of COVID-19 by public health unit reported date: Ontario**

	Reported week 52 (December 26, 2021 to January 1, 2022)	Reported week 1 (January 2 to January 8, 2022)	Cumulative case count up to January 8, 2022	Cumulative rate per 100,000 population
Total number of cases	98,058	83,673	885,350	6,008.9
Sex: Male	46,184	35,685	433,386	5,953.6
Sex: Female	51,317	47,469	448,355	6,014.5
Ages: 0-4	3,077	1,978	25,801	3,568.5
Ages: 5-11	6,547	3,892	54,631	5,065.3
Ages: 12-19	10,076	6,706	80,094	6,024.5
Ages: 20-39	41,127	33,755	341,924	8,235.4
Ages: 40-59	26,865	24,594	245,024	6,289.9
Ages: 60-79	8,634	9,462	105,143	3,625.9
Ages: 80 and over	1,701	3,233	32,522	4,958.9
Number resolved	N/A	N/A	761,945	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

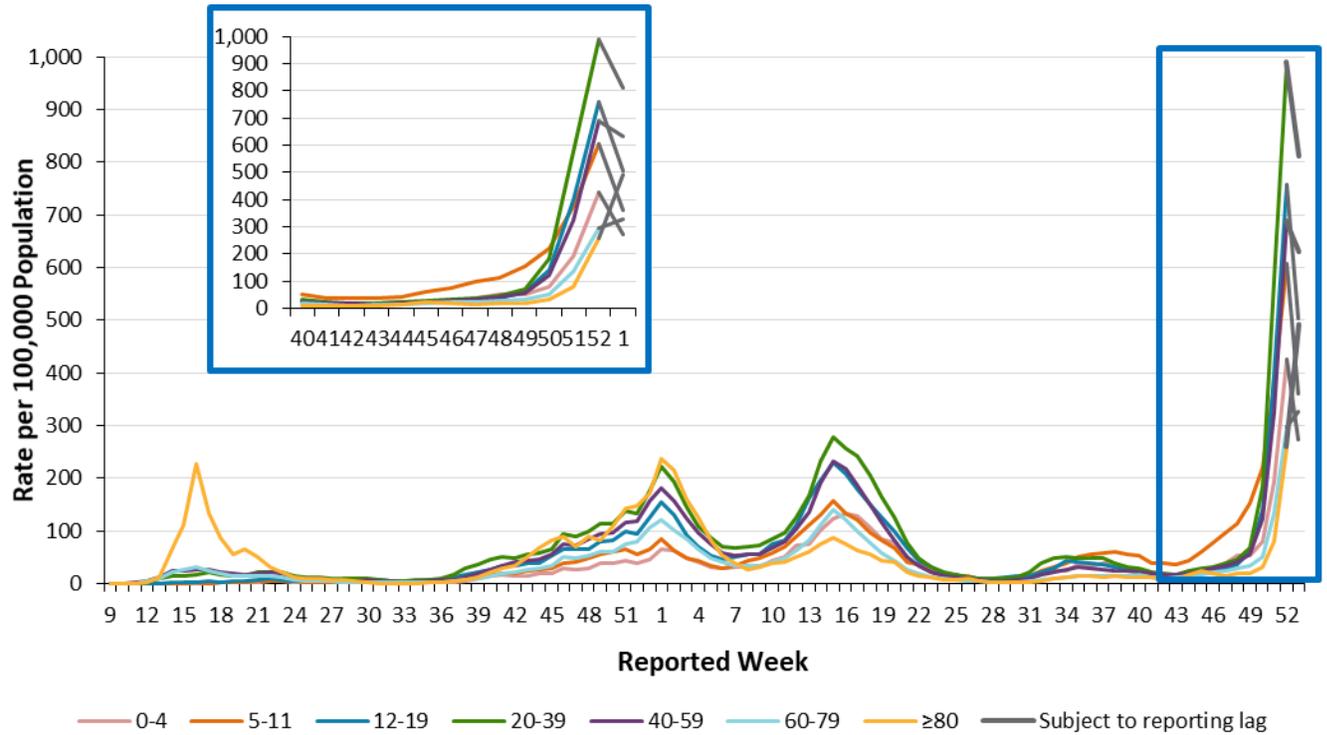
**Figure 2. Percentage of confirmed cases of COVID-19 by sex and public health unit reported week: Ontario**



**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 1 (January 2 and January 8, 2022). See [Table 1A](#) in Appendix A for a list of the weeks and corresponding start and end dates.

**Data Source:** CCM

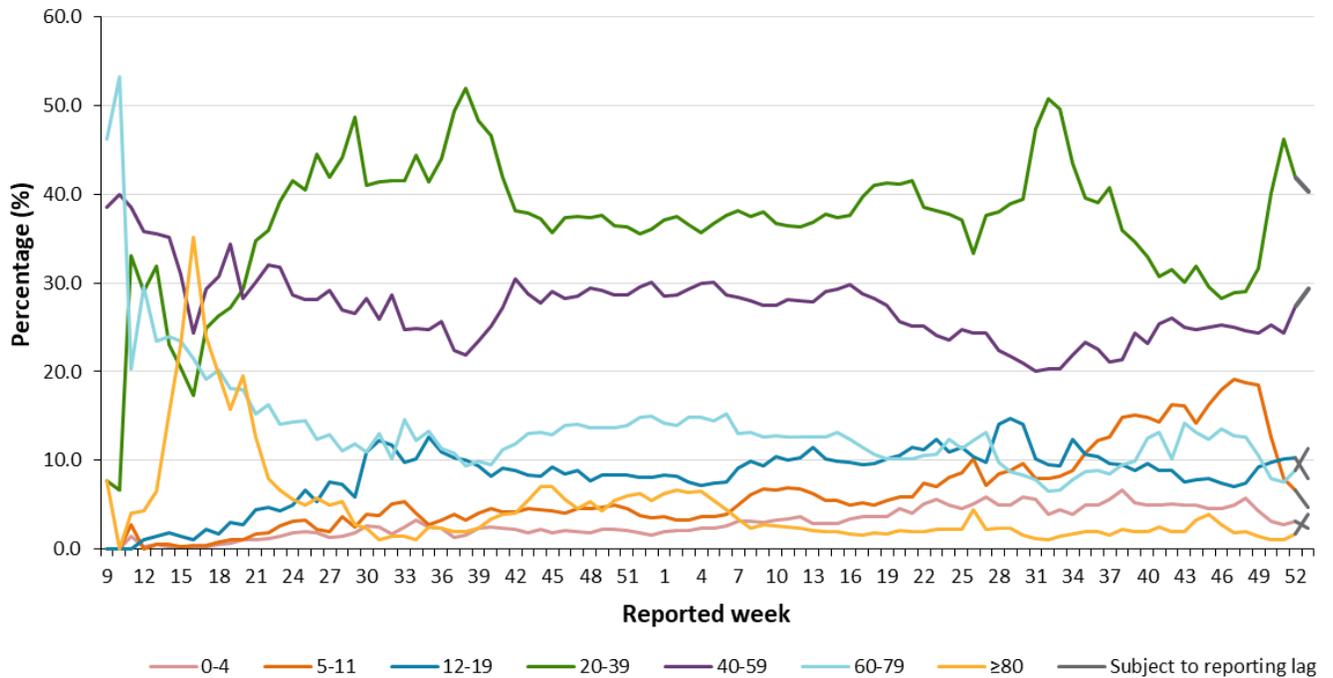
**Figure 3a. Rate of confirmed cases of COVID-19 per 100,000 population by age group and public health unit reported week: Ontario**



**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 1 (January 2 and 8, 2022). See [Table 1A](#) in Appendix A for a list of the weeks and corresponding start and end dates.

**Data Source:** CCM

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

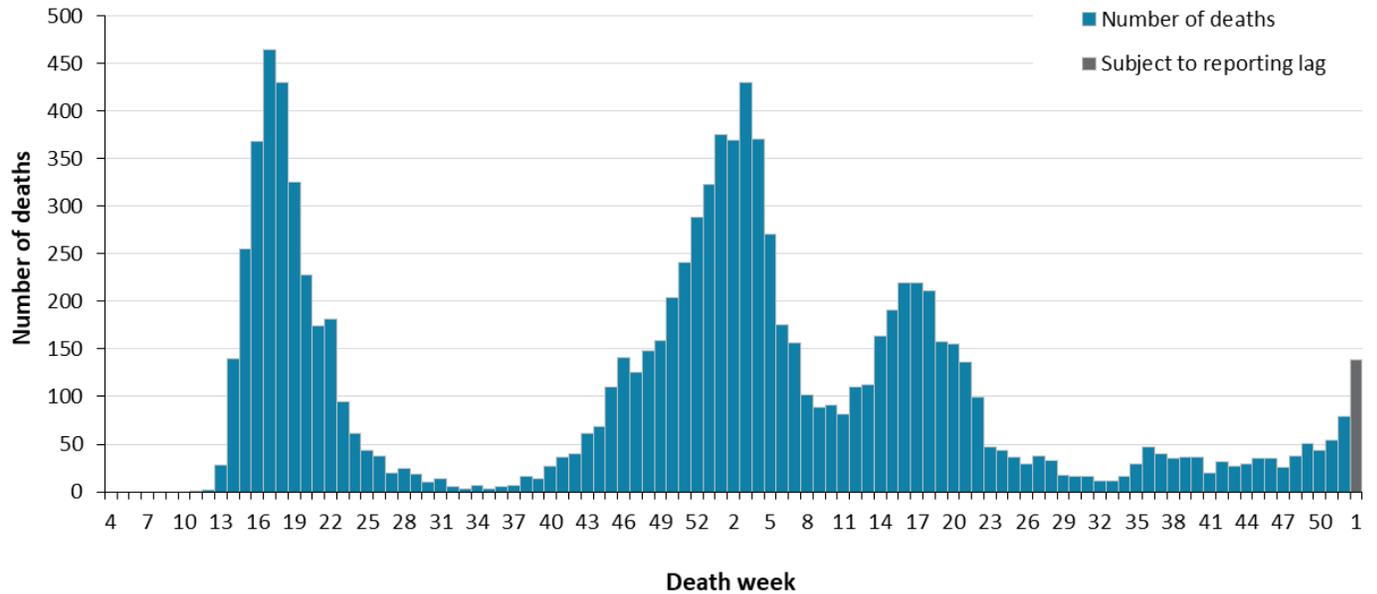


**Note:** Only weeks with more than 10 cases by public health unit reporting date are included (starting in week-9). Include cases with reported dates ranging from week-9 (February 23 and 29, 2020) to Week 1 (January 2 and January 8, 2022). See Table 1A in Appendix A for a list of the weeks and corresponding start and end dates.

**Data Source:** CCM

# Deaths

**Figure 4. 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 1 (January 2 and 8, 2022). 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 52 (December 26, 2021 to January 1, 2022)	Reported week 1 (January 2 to January 8, 2022)	Cumulative case count up to January 8, 2022	Cumulative rate per 100,000 population
Number of deaths	80	99	10,433	70.8
Sex: Male	48	54	5,407	74.3
Sex: Female	32	44	4,969	66.7
Ages: 19 and under	1	1	9	0.3
Ages: 20- 39	1	2	118	2.8
Ages: 40- 59	3	8	751	19.3
Ages: 60- 79	32	38	3,473	119.8
Ages: 80 and over	43	50	6,081	927.2

**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 4 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 52 (December 26, 2021 to January 1, 2022)	Percentage	Reported week 1 (January 2 to January 8, 2022)	Percentage	Cumulative case count up to January 8, 2022	Cumulative percentage
Travel	223	0.2%	192	0.2%	16,324	1.8%
Outbreak-associated or close contact of a confirmed case	8,401	8.6%	8,871	10.6%	413,551	46.7%
Epidemiological link – type unspecified	0	0.0%	0	0.0%	43	<0.1%
No known epidemiological link	2,940	3.0%	2,391	2.9%	193,926	21.9%
Information missing or unknown	86,494	88.2%	72,219	86.3%	261,506	29.5%
<b>Total</b>	<b>98,058</b>		<b>83,673</b>		<b>885,350</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 52 (December 26, 2021 to January 1, 2022)	Reported week 1 (January 2 to January 8, 2022)	Cumulative case count up to January 8, 2022
Number of cases	812	1,302	28,336
Ever hospitalized	2	2	490
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 52 (December 26, 2021 to January 1, 2022)	Reported week 1 (January 2 to January 8, 2022)	Cumulative case count up to January 8, 2022
Residents	504	1,059	17,376
Deaths among residents	17	24	4,075
Health care workers	281	362	8,178
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

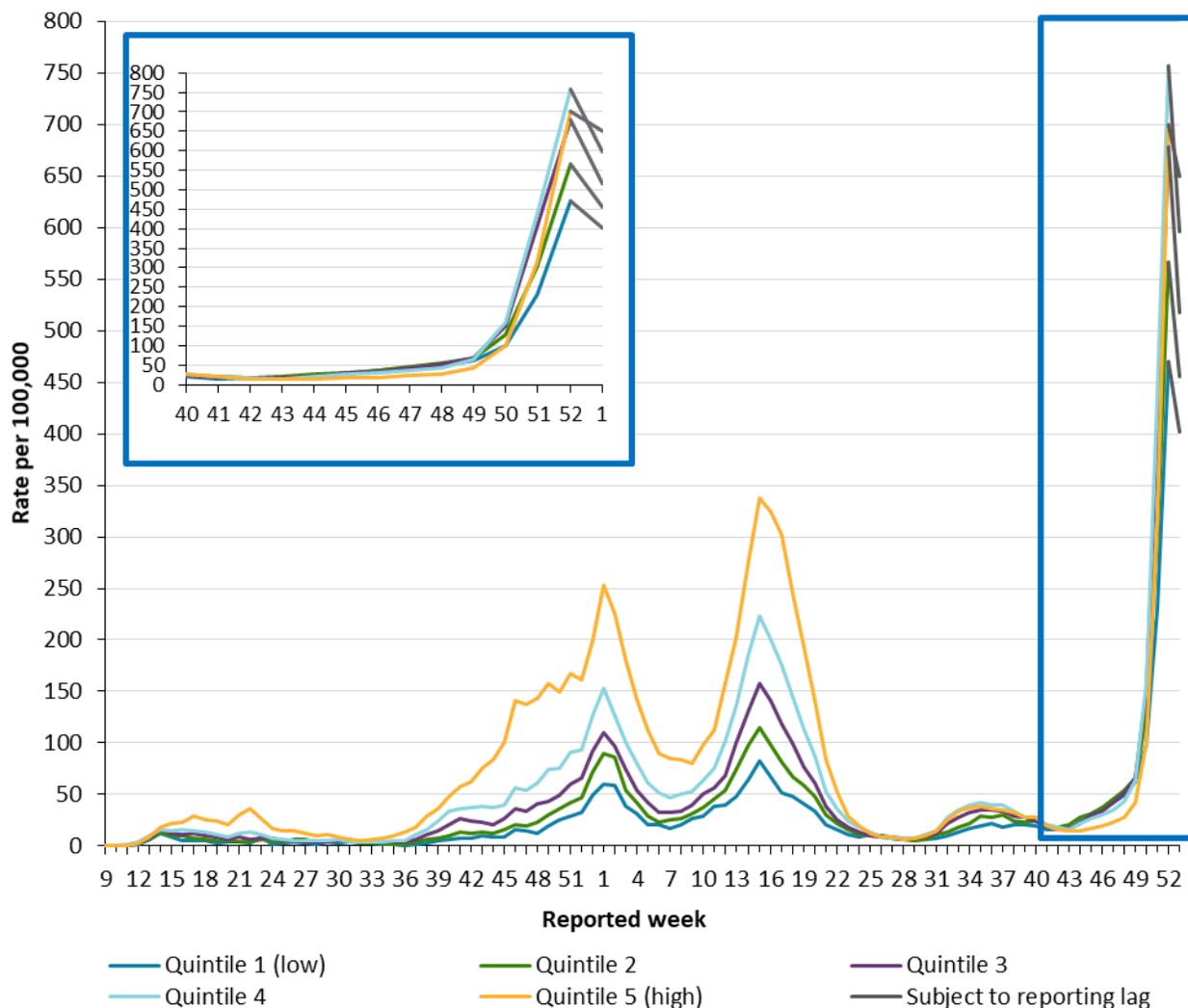
**Table 6: Summary of reinfection cases of COVID-19 by age group and public health unit reported week: Ontario**

Age Group	Reported week 52 (December 26, 2021 to January 1, 2022)	Reported week 1 (January 2 to January 8, 2022)	Cumulative count from November 1, 2020 up to January 8, 2022	Percent of reinfection cases
Ages: 0-4	5	5	35	2.1%
Ages: 5-11	10	10	52	3.1%
Ages: 12-19	34	27	138	8.3%
Ages: 20-39	231	208	832	49.9%
Ages: 40-59	116	128	437	26.2%
Ages: 60-79	29	35	124	7.4%
Ages: 80 and over	9	23	49	2.9%
<b>Total reinfection cases</b>	<b>434</b>	<b>436</b>	<b>1,667</b>	<b>100%</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

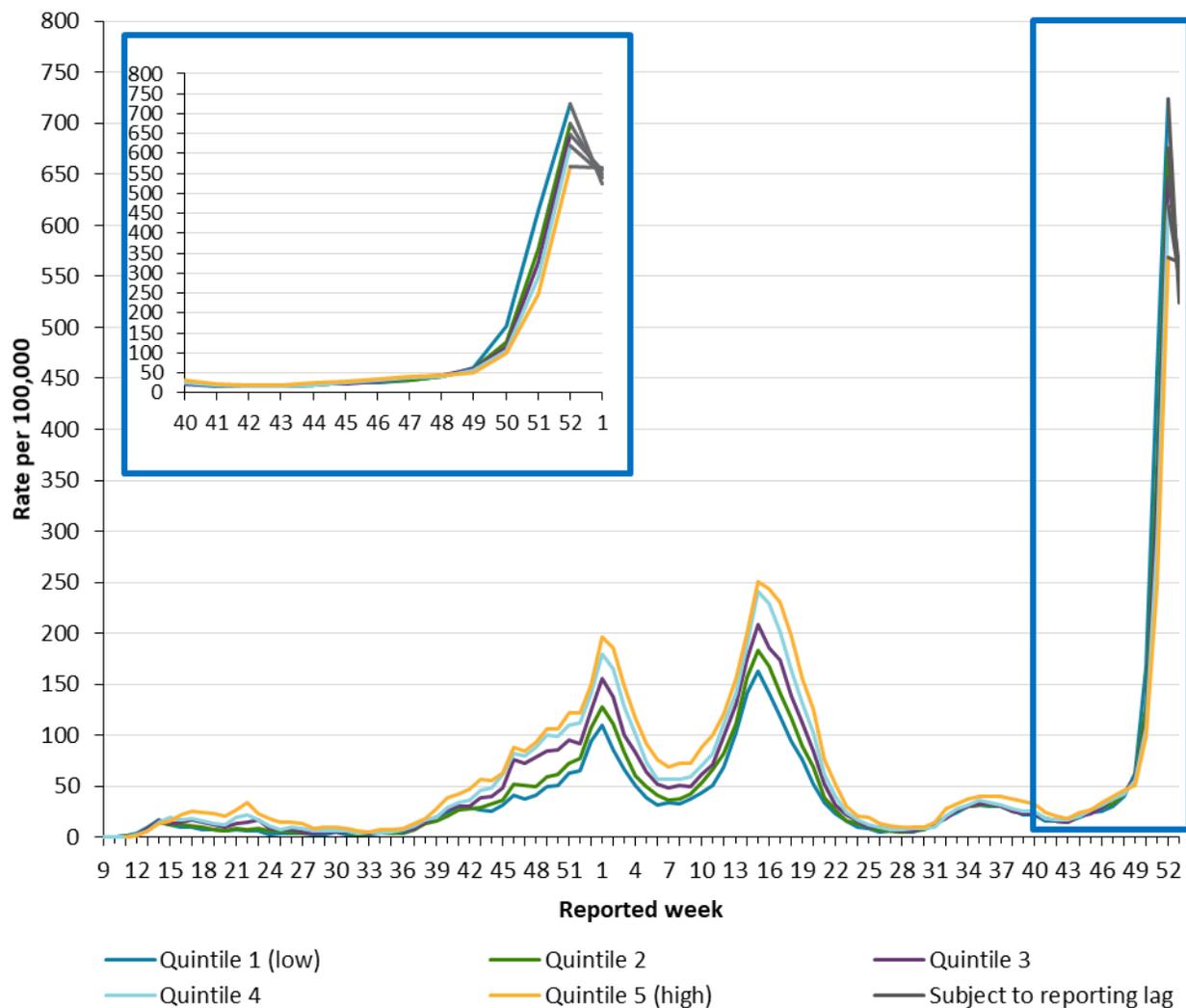
**Figure 5. Rate of confirmed cases of COVID-19 per 100,000 population by quintile of neighbourhood diversity and public health unit reported week: Ontario**



**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 1 (January 2 to January 8, 2022). 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 6. 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 1 (January 2 to January 8, 2022). 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 52 (December 26, 2021 to January 1, 2022)	Cases Reported Week 1 (January 2 to January 8, 2022)	Cumulative case count up to January 8, 2022	Cumulative rate per 100,000 population up to January 8, 2022
Quintile 1 (least diverse)	10,437	8,938	66,055	2,973.8
Quintile 2	13,416	10,795	90,863	3,836.9
Quintile 3	17,578	13,402	124,969	4,821.1
Quintile 4	23,666	18,650	190,679	6,096.6
Quintile 5 (most diverse)	30,250	28,073	360,190	8,333.3

**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**

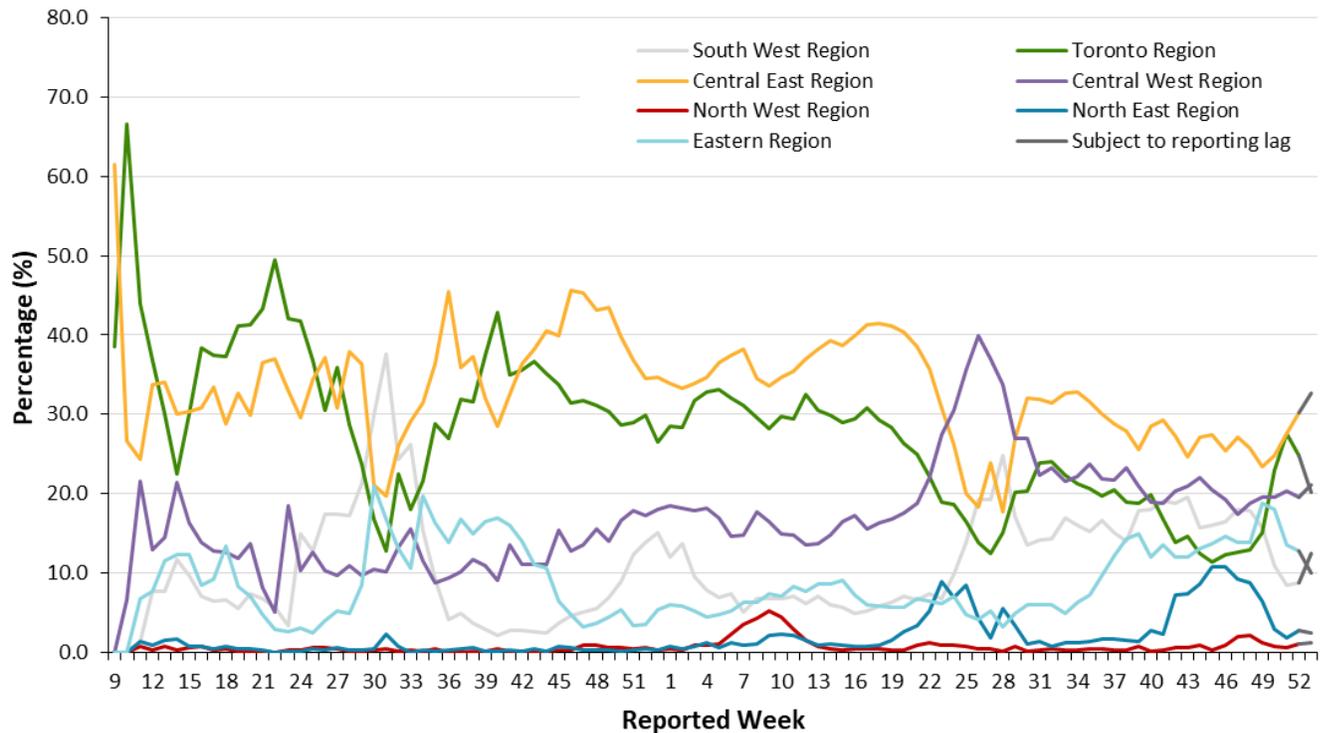
	Cases Reported Week 52(December 26, 2021 to January 1, 2022)	Cases Reported Week 1 (January 2 to January 8, 2022)	Cumulative case count up to January 8, 2022	Cumulative rate per 100,000 population up to January 8, 2022
Quintile 1 (least material deprivation)	24,929	18,067	167,103	4,848.9
Quintile 2	20,994	16,784	158,906	5,118.3
Quintile 3	17,923	15,497	158,712	5,723.6
Quintile 4	16,277	14,387	163,908	6,238.0
Quintile 5 (most material deprivation)	15,224	15,123	184,127	6,870.4

**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

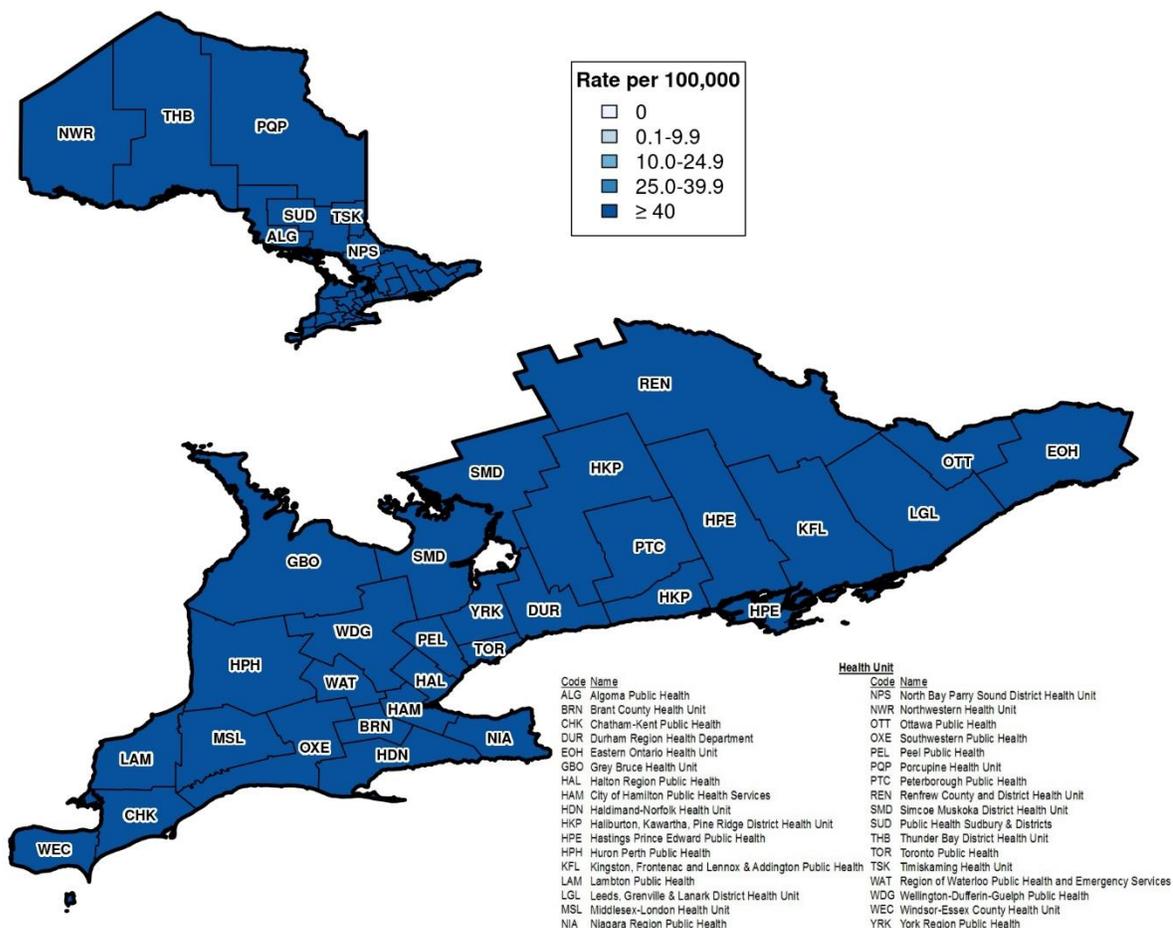
**Figure 7. Percentage of COVID-19 cases by geographic region and public health unit reported week: Ontario**



**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 1 (January 2 and 8, 2022). [Table 2A](#) in Appendix A has a listing of public health units by region.

**Data Source:** CCM

**Figure 8. Rate of confirmed cases of COVID-19 in public health reported Week 1 (January 2 to January 8, 2022) by public health unit: Ontario**



**Note:** The provincial rate of confirmed cases of COVID-19 reported in Week 1 was 567.9 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 1 (January 2 to January 8, 2022)	Number of ongoing outbreaks	Cumulative number of outbreaks reported to January 8, 2022
<b>Congregate Care</b>	<b>300</b>	<b>861</b>	<b>3,936</b>
Long-term care homes	93	389	1,947
Retirement homes	102	268	1,173
Hospitals	105	204	816
<b>Congregate Living</b>	<b>232</b>	<b>501</b>	<b>1,988</b>
Correctional facility	6	21	94
Shelter	40	99	402
Group Home/supportive housing	157	304	1,173
Short-term accommodations	1	1	53
Congregate other	28	76	266
<b>Education and Childcare</b>	<b>8</b>	<b>48</b>	<b>4,339</b>
Child care	7	35	1,387
Camp – Day*	0	0	22
Camp – Overnight*	0	0	1
Camp – Unspecified*	0	0	2
School – Elementary**	0	10	2,297
School – Elementary/secondary**	0	1	105
School – Secondary**	1	1	462
School – Post-secondary**	0	1	63
<b>Other settings</b>	<b>28</b>	<b>68</b>	<b>5,486</b>

Setting Type	Reported week 1 (January 2 to January 8, 2022)	Number of ongoing outbreaks	Cumulative number of outbreaks reported to January 8, 2022
Bar/restaurant/nightclub	1	4	471
Medical/health services	4	5	199
Personal service settings	0	0	40
Recreational fitness	0	0	252
Retail	2	2	558
Other recreation/community	1	5	368
Workplace – Farm	0	6	262
Workplace - Food processing	1	1	294
Other types of workplaces	8	23	2,895
Other	7	10	37
Unknown	4	12	110
<b>Total number of outbreaks</b>	<b>568</b>	<b>1,478</b>	<b>15,749</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 52 (December 26, 2021 to January 1, 2022)	Reported week 1 (January 2 to January 8, 2022)	Cumulative number of cases
<b>Congregate Care</b>	<b>2,254</b>	<b>4,502</b>	<b>48,875</b>
Long-term care homes	1,519	3,003	31,967
Retirement homes	321	969	8,997
Hospitals	414	530	7,911
<b>Congregate Living</b>	<b>605</b>	<b>1,051</b>	<b>13,304</b>
Correctional facility	134	271	2,686
Shelter	151	239	3,474
Group Home/supportive housing	282	473	4,861
Short-term accommodations	0	3	324
Congregate other	38	65	1,959
<b>Education and Childcare</b>	<b>228</b>	<b>14</b>	<b>19,036</b>
Child care	127	12	5,336
Camp – Day*	0	0	111
Camp – Overnight*	0	0	11
Camp – Unspecified*	2	0	6
School – Elementary**	38	0	10,557
School – Elementary/secondary**	3	1	509
School – Secondary**	54	1	2,042
School – Post-secondary**	4	0	464
<b>Other settings</b>	<b>221</b>	<b>170</b>	<b>42,442</b>
Bar/restaurant/nightclub	8	5	2,470

Cases associated with the outbreak setting type	Reported week 52 (December 26, 2021 to January 1, 2022)	Reported week 1 (January 2 to January 8, 2022)	Cumulative number of cases
Medical/health services	9	7	856
Personal service settings	0	0	140
Recreational fitness	10	0	1,681
Retail	8	0	2,991
Other recreation/community	12	8	4,388
Workplace - Farm	0	0	3,267
Workplace - Food processing	0	7	4,028
Other types of workplaces	49	15	21,561
Other	112	109	366
Unknown	13	19	694
<b>Total number of cases</b>	<b>3,308</b>	<b>5,737</b>	<b>123,657</b>

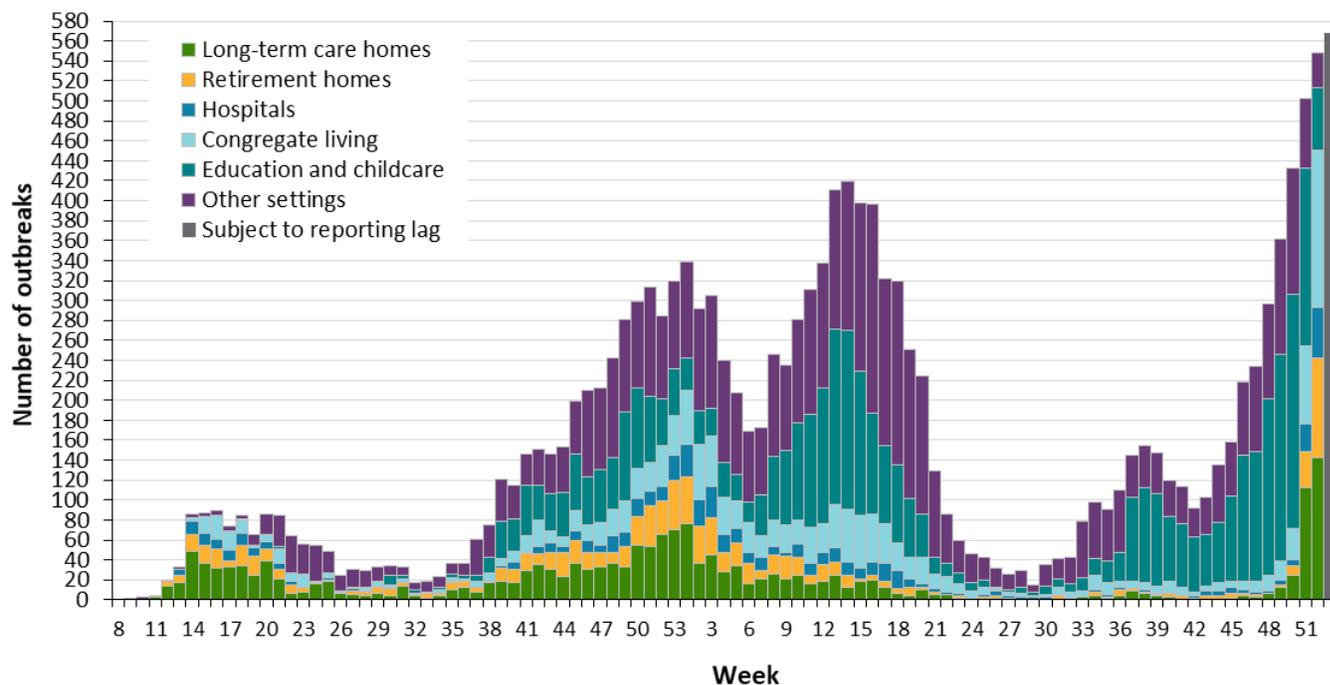
**Note:** Interpret case counts for the most recent week with caution due to reporting lags. Outbreak categories are mutually exclusive. Retail includes settings such as grocery stores, pharmacies, malls, etc. Other types of workplaces include settings such as offices as well as warehousing, shipping 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 9. 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 1 refers to January 2 and 8, 2022. 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 **January 11, 2022 at 1 p.m.** for cases reported from February 1, 2021 onwards and as of **January 10, 2022 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.
- 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
  - 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.

- '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	2,794	4,746
15	April 5, 2020	April 11, 2020	3,165	7,911
16	April 12, 2020	April 18, 2020	4,259	12,170
17	April 19, 2020	April 25, 2020	3,649	15,819
18	April 26, 2020	May 2, 2020	2,900	18,719
19	May 3, 2020	May 9, 2020	2,353	21,072
20	May 10, 2020	May 16, 2020	2,223	23,295
21	May 17, 2020	May 23, 2020	2,617	25,912
22	May 24, 2020	May 30, 2020	2,611	28,523
23	May 31, 2020	June 6, 2020	2,301	30,824

Reported Week	Start date	End date	Number of cases	Cumulative count
24	June 7, 2020	June 13, 2020	1,472	32,296
25	June 14, 2020	June 20, 2020	1,226	33,522
26	June 21, 2020	June 27, 2020	1,251	34,773
27	June 28, 2020	July 4, 2020	1,085	35,858
28	July 5, 2020	July 11, 2020	866	36,724
29	July 12, 2020	July 18, 2020	930	37,654
30	July 19, 2020	July 25, 2020	993	38,647
31	July 26, 2020	August 1, 2020	807	39,454
32	August 2, 2020	August 8, 2020	591	40,045
33	August 9, 2020	August 15, 2020	610	40,655
34	August 16, 2020	August 22, 2020	728	41,383
35	August 23, 2020	August 29, 2020	850	42,233
36	August 30, 2020	September 5, 2020	976	43,209
37	September 6, 2020	September 12, 2020	1,506	44,715
38	September 13, 2020	September 19, 2020	2,371	47,086
39	September 20, 2020	September 26, 2020	3,122	50,208
40	September 27, 2020	October 3, 2020	4,223	54,431
41	October 4, 2020	October 10, 2020	5,036	59,467
42	October 11, 2020	October 17, 2020	5,276	64,743
43	October 18, 2020	October 24, 2020	6,039	70,782
44	October 25, 2020	October 31, 2020	6,389	77,171
45	November 1, 2020	November 7, 2020	7,601	84,772
46	November 8, 2020	November 14, 2020	10,440	95,212
47	November 15, 2020	November 21, 2020	10,035	105,247
48	November 22, 2020	November 28, 2020	11,137	116,384

Reported Week	Start date	End date	Number of cases	Cumulative count
49	November 29, 2020	December 5, 2020	12,681	129,065
50	December 6, 2020	December 12, 2020	13,061	142,126
51	December 13, 2020	December 19, 2020	15,660	157,786
52	December 20, 2020	December 26, 2020	15,623	173,409
53	December 27, 2020	January 2, 2021	20,452	193,861
1	January 3, 2021	January 9, 2021	24,871	218,732
2	January 10, 2021	January 16, 2021	21,381	240,113
3	January 17, 2021	January 23, 2021	16,402	256,515
4	January 24, 2021	January 30, 2021	12,769	269,284
5	January 31, 2021	February 6, 2021	9,778	279,062
6	February 7, 2021	February 13, 2021	7,899	286,961
7	February 14, 2021	February 20, 2021	7,456	294,417
8	February 21, 2021	February 27, 2021	7,685	302,102
9	February 28, 2021	March 6, 2021	7,932	310,034
10	March 7, 2021	March 13, 2021	9,481	319,515
11	March 14, 2021	March 20, 2021	11,021	330,536
12	March 21, 2021	March 27, 2021	14,391	344,927
13	March 28, 2021	April 3, 2021	18,944	363,871
14	April 4, 2021	April 10, 2021	25,578	389,449
15	April 11, 2021	April 17, 2021	30,886	420,335
16	April 18, 2021	April 24, 2021	28,342	448,677
17	April 25, 2021	May 1, 2021	25,208	473,885
18	May 2, 2021	May 8, 2021	20,754	494,639
19	May 9, 2021	May 15, 2021	16,524	511,163
20	May 16, 2021	May 22, 2021	12,650	523,813

Reported Week	Start date	End date	Number of cases	Cumulative count
21	May 23, 2021	May 29, 2021	7,758	531,571
22	May 30, 2021	June 5, 2021	5,214	536,785
23	June 6, 2021	June 12, 2021	3,484	540,269
24	June 13, 2021	June 19, 2021	2,418	542,687
25	June 20, 2021	June 26, 2021	1,881	544,568
26	June 27, 2021	July 3, 2021	1,473	546,041
27	July 4, 2021	July 10, 2021	1,226	547,267
28	July 11, 2021	July 17, 2021	1,046	548,313
29	July 18, 2021	July 24, 2021	1,108	549,421
30	July 25, 2021	July 31, 2021	1,350	550,771
31	August 1, 2021	August 7, 2021	1,906	552,677
32	August 8, 2021	August 14, 2021	3,171	555,848
33	August 15, 2021	August 21, 2021	4,144	559,992
34	August 22, 2021	August 28, 2021	4,775	564,767
35	August 29, 2021	September 4, 2021	5,183	569,950
36	September 5, 2021	September 11, 2021	5,055	575,005
37	September 12, 2021	September 18, 2021	4,917	579,922
38	September 19, 2021	September 25, 2021	4,398	584,320
39	September 26, 2021	October 2, 2021	3,952	588,272
40	October 3, 2021	October 9, 2021	3,843	592,115
41	October 10, 2021	October 16, 2021	2,902	595,017
42	October 17, 2021	October 23, 2021	2,626	597,643
43	October 24, 2021	October 30, 2021	2,501	600,144
44	October 31, 2021	November 6, 2021	3,290	603,434
45	November 7, 2021	November 13, 2021	3,981	607,415

Reported Week	Start date	End date	Number of cases	Cumulative count
46	November 14, 2021	November 20, 2021	4,573	611,988
47	November 21, 2021	November 27, 2021	5,434	617,422
48	November 28, 2021	December 4, 2021	6,584	624,006
49	December 5, 2021	December 11, 2021	8,980	632,986
50	December 12, 2021	December 18, 2021	18,935	651,921
51	December 19, 2021	December 25, 2021	51,698	703,619
52	December 26, 2021	January 1, 2022	98,058	801,677
1	January 2, 2022	January 8, 2022	83,673	885,350

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

Public Health Unit Name	Cases reported week 52	Rate per 100,000 population	Cases reported week 1	Rate per 100,000 population
		Reported week 52		Reported week 1
Northwestern Health Unit	457	562.9	372	458.2
Thunder Bay District Health Unit	561	355.7	562	356.4
<b>TOTAL NORTH WEST</b>	<b>1,018</b>	<b>426.1</b>	<b>934</b>	<b>391.0</b>
Algoma Public Health	477	404.8	381	323.3
North Bay Parry Sound District Health Unit	477	368.9	328	253.7
Porcupine Health Unit	601	707.1	339	398.8
Public Health Sudbury & Districts	1,048	510.6	873	425.3
Timiskaming Health Unit	148	436.8	79	233.1
<b>TOTAL NORTH EAST</b>	<b>2,751</b>	<b>481.5</b>	<b>2,000</b>	<b>350.1</b>
Ottawa Public Health	6,882	659.7	4,673	448.0
Eastern Ontario Health Unit	1,733	802.8	1,462	677.3
Hastings Prince Edward Public Health	1,099	635.9	679	392.9
Kingston, Frontenac and Lennox & Addington Public Health	1,335	638.1	716	342.2
Leeds, Grenville & Lanark District Health Unit	1,081	600.7	443	246.2
Renfrew County and District Health Unit	434	400.1	446	411.2
<b>TOTAL EASTERN</b>	<b>12,564</b>	<b>651.2</b>	<b>8,419</b>	<b>436.3</b>
Durham Region Health Department	4,601	646.7	4,524	635.9

Public Health Unit Name	Cases reported week 52	Rate per 100,000 population	Cases reported week 1	Rate per 100,000 population
		Reported week 52		Reported week 1
Haliburton, Kawartha, Pine Ridge District Health Unit	831	435.7	700	367.0
Peel Public Health	10,565	675.7	10,701	684.4
Peterborough Public Health	714	482.0	615	415.2
Simcoe Muskoka District Health Unit	3,580	592.2	3,065	507.0
York Region Public Health	9,388	782.2	7,774	647.7
<b>TOTAL CENTRAL EAST</b>	<b>29,679</b>	<b>671.7</b>	<b>27,379</b>	<b>619.6</b>
Toronto Public Health	24,294	812.9	16,841	563.5
<b>TOTAL TORONTO</b>	<b>24,294</b>	<b>812.9</b>	<b>16,841</b>	<b>563.5</b>
Chatham-Kent Public Health	363	340.5	758	710.9
Grey Bruce Health Unit	691	392.3	698	396.3
Huron Perth Public Health	575	393.2	549	375.4
Lambton Public Health	865	650.5	1,038	780.6
Middlesex-London Health Unit	3,106	608.3	3,273	641.0
Southwestern Public Health	979	447.2	1,074	490.6
Windsor-Essex County Health Unit	1,944	451.1	3,035	704.3
<b>TOTAL SOUTH WEST</b>	<b>8,523</b>	<b>494.8</b>	<b>10,425</b>	<b>605.2</b>
Brant County Health Unit	1,028	669.5	838	545.7
City of Hamilton Public Health Services	5,047	867.6	4,111	706.7
Haldimand-Norfolk Health Unit	628	523.3	556	463.3
Halton Region Public Health	4,552	745.5	4,155	680.5

<b>Public Health Unit Name</b>	<b>Cases reported week 52</b>	<b>Rate per 100,000 population Reported week 52</b>	<b>Cases reported week 1</b>	<b>Rate per 100,000 population Reported week 1</b>
Niagara Region Public Health	2,270	471.2	2,755	571.9
Region of Waterloo Public Health and Emergency Services	3,559	588.0	3,915	646.9
Wellington-Dufferin-Guelph Public Health	2,145	687.5	1,345	431.1
<b>TOTAL CENTRAL WEST</b>	<b>19,229</b>	<b>671.2</b>	<b>17,675</b>	<b>617.0</b>
<b>TOTAL ONTARIO</b>	<b>98,058</b>	<b>665.5</b>	<b>83,673</b>	<b>567.9</b>

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

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