

#### WEEKLY EPIDEMIOLOGICAL SUMMARY

# COVID-19 in Ontario: Focus on January 30, 2022 to February 5, 2022

Due to changes in the Ministry of Health's <u>updated guidance on testing and case</u>, <u>contact and outbreak management</u>, case counts in this report are an underestimate of the true number of individuals with COVID-19 in Ontario. Outbreaks in settings which are not among the highest risk settings prioritized for testing are also an underestimate as they are less likely to be declared, routinely reported or identified by public health units. In addition, data for hospitalizations, intensive care unit (ICU) admission and deaths in the most recent reporting period should be interpreted with caution due to data entry and reporting lags.

### Introduction

This report includes the most current information available from CCM as of February 8, 2022.

Please visit the interactive <u>Ontario COVID-19 Data Tool</u> to explore recent COVID-19 data by public health unit, age group, sex, and trends over time.

A <u>daily summary</u> 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.

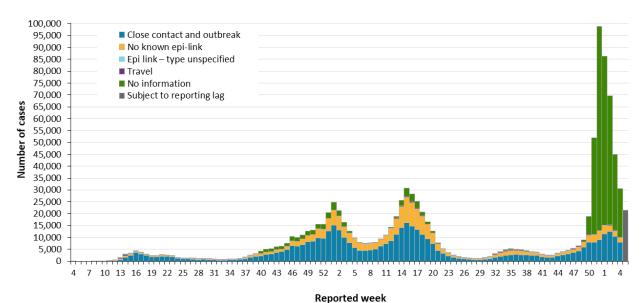
The term public health unit reported date in this document refers to the date local public health units were first notified of the case. Data corrections or updates can result in case records being removed and or updated from past reports. Thus comparisons of case counts by public health unit reported 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.

## Highlights

- There are a total of 1,055,750 confirmed cases of COVID-19 in Ontario with a public health unit reported date up to February 5, 2022.
- For the period with a public health unit (PHU) reported date between January 30 to February 5, 2022 (Week 5):
  - A total of 21,455 cases were reported to public health compared to 30,588 cases the previous week (January 23 to 29, 2022 or week 4). The number of cases should be interpreted with caution due to changes in testing availability.
  - In week 5, the number of cases associated with outbreaks reported in congregate care settings decreased by over 40% compared to week 4.
  - There was a 53.8% reduction in deaths in week 5 compared to week 4 among cases in the 80+ age group, which has reported the highest number of deaths throughout wave 4. However, the decreasing trend in deaths reported this week should be interpreted with caution due to reporting lags.

## **Cases Over Time**

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



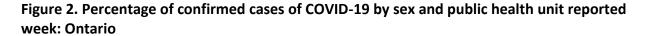
**Note**: Include cases with reported dates ranging from week-4 (January 19 and 25, 2020) to Week 5 (January 30 and February 5, 2022). See <u>Table 1A</u> in Appendix A for a list of the weeks and corresponding start and end dates. Changes in testing eligibility went into effect on December 31, 2021, limiting access to testing and resulting in a change in the population being tested.

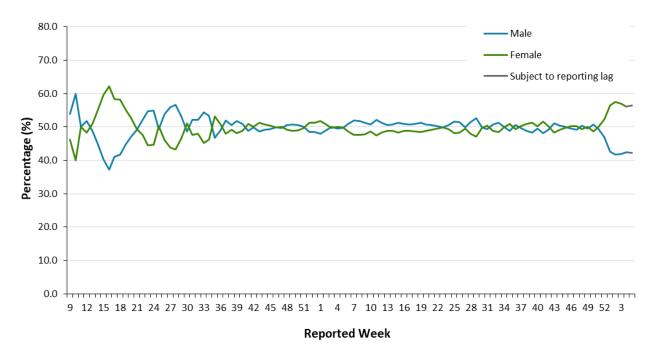
## **Case Characteristics**

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

	Reported week 4 (January 23 to 29, 2022)	Reported week 5 (January 30 to February 5, 2022)	Cumulative case count up to February 5, 2022	Cumulative rate per 100,000 population
Total number of cases	30,588	21,455	1,055,750	7,165.4
Sex: Male	13,015	9,075	504,861	6,935.4
Sex: Female	17,186	12,112	545,238	7,314.1
Ages: 0-4	1,083	973	30,919	4,276.4
Ages: 5-11	1,725	1,472	63,123	5,852.7
Ages: 12-19	1,698	1,257	90,413	6,800.6
Ages: 20-39	11,088	7,522	405,594	9,768.9
Ages: 40-59	8,041	5,525	293,124	7,524.7
Ages: 60-79	4,176	2,892	127,343	4,391.5
Ages: 80 and over	2,761	1,785	44,917	6,848.8
Number resolved	N/A	N/A	1,018,602	N/A

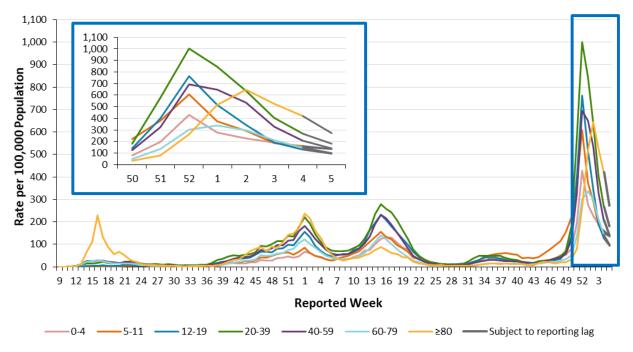
**Note:** Not all cases have an age or sex reported. Interpret information for the most recent week with caution due to reporting lags.





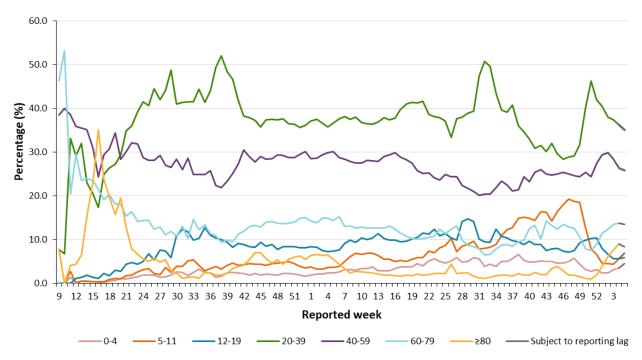
**Note:** Not all cases have a sex reported. The denominator for calculating weekly percentages includes all cases. Only weeks with more than 10 cases by public health unit reporting date are included (starting in week-9). Include cases with reported dates ranging from week-9 (February 23 and 29, 2020) to week 5 (January 30 and February 5, 2022). See <u>Table 1A</u> in Appendix A for a list of the weeks and corresponding start and end dates.

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 5 (January 30 and February 5, 2022). See <u>Table 1A</u> in Appendix A for a list of the weeks and corresponding start and end dates.

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 5 (January 30 and February 5, 2022). See Table 1A in Appendix A for a list of the weeks and corresponding start and end dates.

### **Deaths**

Number of deaths

Subject to reporting lag

Subject to reporting lag

150

100

4 7 10 13 16 19 22 25 28 31 34 37 40 43 46 49 52 2 5 8 11 14 17 20 23 26 29 32 35 38 41 44 47 50 1 4

Figure 4. Deaths among confirmed cases of COVID-19 by week of death: Ontario

Death week

**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 5 (January 30 and February 5, 2022). See <u>Table 1A</u> in Appendix A for a list of the weeks and corresponding start and end dates.

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

Deaths	Reported week 4 (January 23 to 29, 2022)	Reported week 5 (January 30 to February 5, 2022)	Cumulative case count up to February 5, 2022	Cumulative rate per 100,000 population
Number of deaths	184	73	11,940	81.0
Sex: Male	98	36	6,235	85.7
Sex: Female	83	35	5,637	75.6
Ages: 19 and under	0	0	10	0.3
Ages: 20- 39	4	1	131	3.2
Ages: 40- 59	15	2	854	21.9
Ages: 60- 79	59	21	3,967	136.8
Ages: 80 and over	106	49	6,976	1,063.7

**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.

## **Exposure**

Table 3. Confirmed cases of COVID-19 by likely source of acquisition and public health unit reported week: Ontario

	Reported week 4 (January 23 to 29, 2022)	Percentage	Reported week 5 (January 30 to February 5, 2022)	Percentage	Cumulative case count up to February 5, 2022	Cumulative percentage
Travel	363	1.2%	326	1.5%	17,926	1.7%
Outbreak- associated or close contact of a confirmed case	7,883	25.8%	5,567	25.9%	453,423	42.9%
Epidemiological link – type unspecified	0	0.0%	0	0.0%	43	0.0%
No known epidemiological link	1,834	6.0%	1,641	7.6%	203,806	19.3%
Information missing or unknown	20,508	67.0%	13,921	64.9%	380,552	36.0%
Total	30,588		21,455		1,055,750	

**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.

## Sub-populations of interest

Table 4. Summary of cases of COVID-19 among health care workers: Ontario

Health care workers	Reported week 4 (January 23 to 29, 2022)	Reported week 5 (January 30 to February 5, 2022)	Cumulative case count up to February 5, 2022
Number of cases	1,023	819	34,662
Ever hospitalized	0	2	497
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

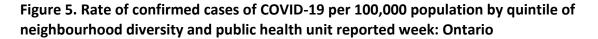
Long-term care home associated cases	Reported week 4 (January 23 to 29, 2022)	Reported week 5 (January 30 to February 5, 2022)	Cumulative case count up to February 5, 2022
Residents	1,296	827	23,574
Deaths among residents	27	21	4,384
Health care workers	233	127	10,078
Deaths among health care workers	0	0	10

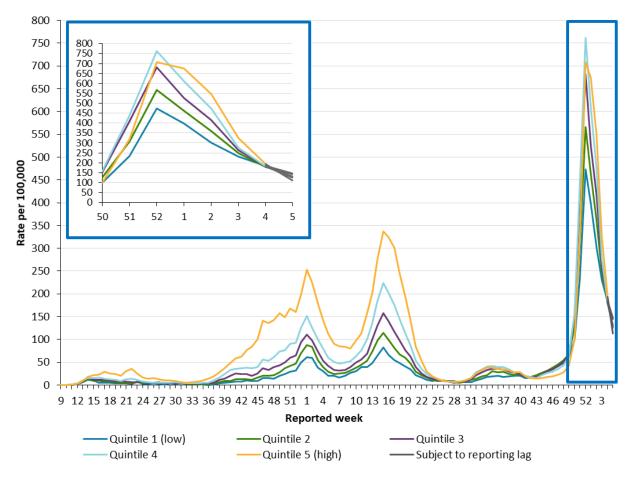
**Note:** Information on how long-term care home residents and health care workers are identified is available in the technical notes. Interpret information for the most recent week with caution due to reporting lags.

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

Age Group	Reported week 4 (January 23 to 29, 2022)	Reported week 5 (January 30 to February 5, 2022)	Cumulative count from November 1, 2020 up to February 5, 2022	Percent of reinfection cases
Ages: 0-4	6	7	58	1.0%
Ages: 5-11	19	11	111	2.0%
Ages: 12-19	27	23	308	5.4%
Ages: 20-39	347	253	2,624	46.1%
Ages: 40-59	234	171	1,682	29.6%
Ages: 60-79	94	63	515	9.1%
Ages: 80 and over	79	53	389	6.8%
Total reinfection cases	806	581	5,687	100.0%

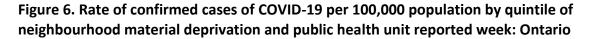
**Note:** Cases identified as reinfections meeting the <u>provincial definition</u> as either a laboratory-based reinfection or a time-based reinfection, as indicated by public health units. The provincial confirmed reinfection case definition was updated January 17, 2022 to include a time-based reinfection definition. 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.

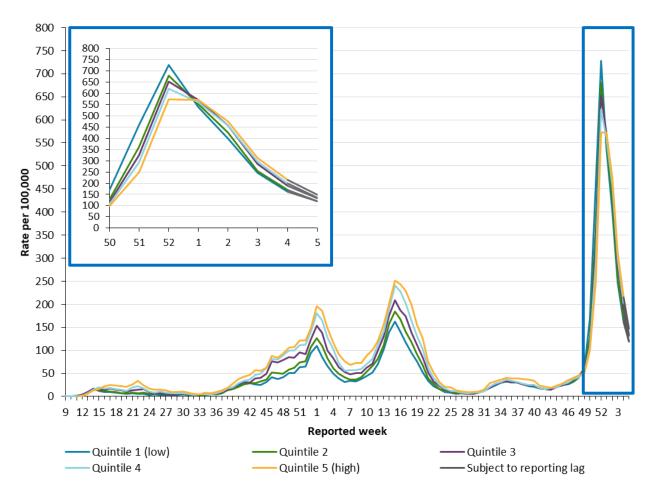




**Note:** Neighbourhood diversity is measured using the ethnic concentration dimension of the Ontario Marginalization Index. The ethnic concentration dimension is based on the proportion of non-white and non-Indigenous residents and/or the proportion of immigrants that arrived in Canada within the past 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 5 (January 30 to February 5, 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





**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 5 (January 30 to February 5, 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 4 (January 23 to 29, 2022)	Cases Reported Week 5 (January 30 to February 5, 2022)	Cumulative case count up to February 5, 2022	Cumulative rate per 100,000 population up to February 5, 2022
Quintile 1 (least diverse)	4,099	3,285	85,246	3,837.8
Quintile 2	4,234	3,426	112,928	4,768.7
Quintile 3	4,688	3,412	150,909	5,821.9
Quintile 4	5,672	3,951	224,202	7,168.4
Quintile 5 (most diverse)	8,355	4,876	412,421	9,541.8

**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

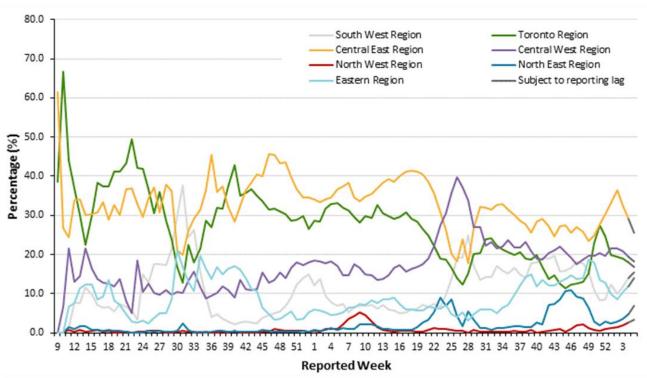
	Cases Reported Week 4(January 23 to 29, 2022)	Cases Reported Week 5 (January 30 to February 5, 2022)	Cumulative case count up to February 5, 2022	Cumulative rate per 100,000 population up to February 5, 2022
Quintile 1 (least material deprivation)	5,548	4,088	199,802	5,797.8
Quintile 2	5,286	3,729	189,316	6,097.8
Quintile 3	5,196	3,647	188,565	6,800.2
Quintile 4	5,249	3,538	192,953	7,343.4
Quintile 5 (most material deprivation)	5,769	3,948	215,070	8,025.0

**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

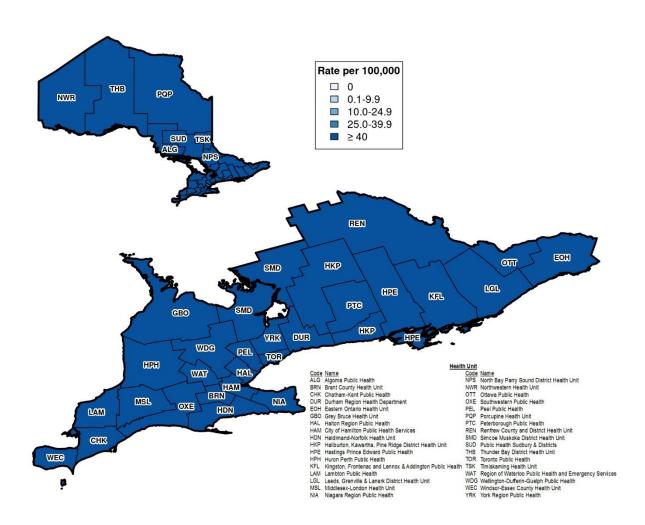
## Geography

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 5 (January 30 and February 5, 2022). Table 2A in Appendix A has a listing of public health units by region.

Figure 8. Rate of confirmed cases of COVID-19 in public health reported Week 5 (January 30 to February 5, 2022) by public health unit: Ontario



**Note**: The provincial rate of confirmed cases of COVID-19 reported in Week 5 was 145.6 cases per 100,000 population.

## **Outbreaks**

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

Setting Type	Reported week 5 (January 30 to February 5, 2022)	Number of ongoing outbreaks	Cumulative number of outbreaks reported to February 5, 2022
Congregate Care	76	535	4,566
Long-term care homes	18	256	2,095
Retirement homes	25	150	1,382
Hospitals	33	129	1,089
Congregate Living	51	181	2,607
Correctional facility	3	17	112
Shelter	6	46	487
Group Home/supportive housing	34	98	1,588
Short-term accommodations	0*	0*	55*
Congregate other	8*	20*	365*
Education and Childcare	3*	17*	4,388*
Child care	3*	16*	1,431*
Camp – Day**	0*	0*	22*
Camp – Overnight**	0*	0*	1*
Camp – Unspecified**	0*	0*	2*
School – Elementary***	0*	1*	2,299*
School – Elementary/secondary***	0*	0*	105*
School – Secondary***	0*	0*	465*
School – Post-secondary***	0*	0*	63*
Other settings	14*	35*	5,565*

Setting Type	Reported week 5 (January 30 to February 5, 2022)	Number of ongoing outbreaks	Cumulative number of outbreaks reported to February 5, 2022
Bar/restaurant/nightclub	0*	0*	472*
Medical/health services	0*	2*	201*
Personal service settings	0*	0*	40*
Recreational fitness	0*	0*	252*
Retail	0*	0*	560*
Other recreation/community	2*	2*	376*
Workplace – Farm	1*	5*	278*
Workplace - Food processing	0*	0*	295*
Other types of workplaces	2*	11*	2,923*
Other	3*	4*	43*
Unknown	6*	11*	125*
Total number of outbreaks	144	768	17,126

**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.

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.

<sup>\*</sup> Outbreaks in these settings are less likely to be declared, routinely reported or identified by public health units as these settings are not among the highest risk settings prioritized for testing. Interpret these data with caution.

<sup>\*\*</sup>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).

Table 10. Confirmed cases of COVID-19 associated with COVID-19 outbreaks by setting type and public health unit reported week: Ontario

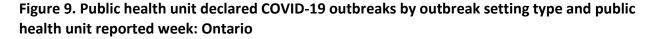
Cases associated with the outbreak setting type	Reported week 4 (January 23 to 29, 2022)	Reported week 5 (January 30 to February 5, 2022)	Cumulative number of cases
Congregate Care	4,069	2,406	70,714
Long-term care homes	2,453	1,432	45,291
Retirement homes	1,009	641	14,296
Hospitals	607	333	11,127
Congregate Living	1,094	605	19,106
Correctional facility	534	307	4,603
Shelter	137	65	4,552
Group Home/supportive housing	300	200	7,044
Short-term accommodations	5*	0*	332*
Congregate other	118*	33*	2,575*
Education and Childcare	15*	18*	19,173*
Child care	8*	11*	5,419*
Camp – Day**	0*	0*	111*
Camp – Overnight**	0*	0*	11*
Camp – Unspecified**	0*	0*	6*
School – Elementary***	7*	4*	10,587*
School – Elementary/secondary***	0*	3*	513*
School – Secondary***	0*	0*	2,062*
School – Post-secondary***	0*	0*	464*
Other settings	129*	42*	43,086*
Bar/restaurant/nightclub	0*	0*	2,475*

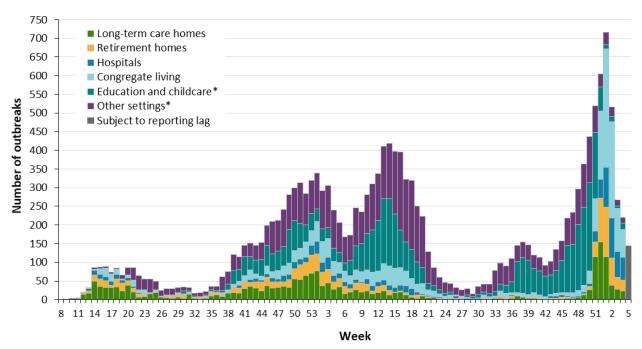
Cases associated with the outbreak setting type	Reported week 4 (January 23 to 29, 2022)	Reported week 5 (January 30 to February 5, 2022)	Cumulative number of cases
Medical/health services	4*	1*	882*
Personal service settings	0*	0*	140*
Recreational fitness	0*	0*	1,675*
Retail	0*	0*	2,998*
Other recreation/community	4*	5*	4,618*
Workplace - Farm	43*	10*	3,324*
Workplace - Food processing	0*	0*	4,049*
Other types of workplaces	40*	13*	21,796*
Other	21*	0*	299*
Unknown	17*	13*	830*
Total number of cases	5,307	3,071	152,079

**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. \* Outbreaks in these settings are less likely to be declared, routinely reported or identified by public health units as these settings are not among the <a href="highest risk settings prioritized for testing">highest risk settings prioritized for testing</a>. Interpret these data with caution. \*\*Cumulative counts include cases of COVID-19 camp outbreaks reported starting week-27 of 2021 (July 4 to 10, 2021).

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.

<sup>\*\*\*\*</sup>Cumulative counts include cases of COVID-19 associated with school outbreaks reported starting week-36 (August 30 to September 5, 2020).





**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 5 refers to January 30 and February 5, 2022. Congregate living include group homes, shelters, correctional facilities, etc. Other settings include outbreaks within workplaces, restaurants, recreation etc.

<sup>\*</sup> Outbreaks in these settings are less likely to be declared, routinely reported or identified by public health units as these settings are not among the highest risk settings prioritized for testing. Interpret these data with caution.

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 February 8, 2022 at 1
  p.m. for cases reported from May 1, 2021 onwards and as of February 7 2022 at 9 a.m. for cases
  reported up to April 30, 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 –
   <u>Coronavirus Disease (COVID-19) document</u> 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.

# 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	<b>Cumulative count</b>
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	1,327	1,954
14	March 29, 2020	April 4, 2020	2,793	4,747
15	April 5, 2020	April 11, 2020	3,165	7,912
16	April 12, 2020	April 18, 2020	4,258	12,170
17	April 19, 2020	April 25, 2020	3,648	15,818
18	April 26, 2020	May 2, 2020	2,899	18,717
19	May 3, 2020	May 9, 2020	2,353	21,070
20	May 10, 2020	May 16, 2020	2,224	23,294
21	May 17, 2020	May 23, 2020	2,616	25,910
22	May 24, 2020	May 30, 2020	2,611	28,521
23	May 31, 2020	June 6, 2020	2,301	30,822

Reported Week	Start date	End date	Number of cases	Cumulative count
24	June 7, 2020	June 13, 2020	1,472	32,294
25	June 14, 2020	June 20, 2020	1,225	33,519
26	June 21, 2020	June 27, 2020	1,251	34,770
27	June 28, 2020	July 4, 2020	1,085	35,855
28	July 5, 2020	July 11, 2020	866	36,721
29	July 12, 2020	July 18, 2020	931	37,652
30	July 19, 2020	July 25, 2020	993	38,645
31	July 26, 2020	August 1, 2020	808	39,453
32	August 2, 2020	August 8, 2020	591	40,044
33	August 9, 2020	August 15, 2020	610	40,654
34	August 16, 2020	August 22, 2020	728	41,382
35	August 23, 2020	August 29, 2020	850	42,232
36	August 30, 2020	September 5, 2020	976	43,208
37	September 6, 2020	September 12, 2020	1,506	44,714
38	September 13, 2020	September 19, 2020	2,371	47,085
39	September 20, 2020	September 26, 2020	3,124	50,209
40	September 27, 2020	October 3, 2020	4,223	54,432
41	October 4, 2020	October 10, 2020	5,037	59,469
42	October 11, 2020	October 17, 2020	5,276	64,745
43	October 18, 2020	October 24, 2020	6,039	70,784
44	October 25, 2020	October 31, 2020	6,389	77,173
45	November 1, 2020	November 7, 2020	7,601	84,774
46	November 8, 2020	November 14, 2020	10,440	95,214
47	November 15, 2020	November 21, 2020	10,036	105,250
48	November 22, 2020	November 28, 2020	11,137	116,387

Reported Week	Start date	End date	Number of cases	<b>Cumulative count</b>
49	November 29, 2020	December 5, 2020	12,682	129,069
50	December 6, 2020	December 12, 2020	13,061	142,130
51	December 13, 2020	December 19, 2020	15,662	157,792
52	December 20, 2020	December 26, 2020	15,624	173,416
53	December 27, 2020	January 2, 2021	20,454	193,870
1	January 3, 2021	January 9, 2021	24,870	218,740
2	January 10, 2021	January 16, 2021	21,382	240,122
3	January 17, 2021	January 23, 2021	16,402	256,524
4	January 24, 2021	January 30, 2021	12,768	269,292
5	January 31, 2021	February 6, 2021	9,779	279,071
6	February 7, 2021	February 13, 2021	7,899	286,970
7	February 14, 2021	February 20, 2021	7,455	294,425
8	February 21, 2021	February 27, 2021	7,684	302,109
9	February 28, 2021	March 6, 2021	7,932	310,041
10	March 7, 2021	March 13, 2021	9,481	319,522
11	March 14, 2021	March 20, 2021	11,023	330,545
12	March 21, 2021	March 27, 2021	14,391	344,936
13	March 28, 2021	April 3, 2021	18,943	363,879
14	April 4, 2021	April 10, 2021	25,578	389,457
15	April 11, 2021	April 17, 2021	30,885	420,342
16	April 18, 2021	April 24, 2021	28,342	448,684
17	April 25, 2021	May 1, 2021	25,205	473,889
18	May 2, 2021	May 8, 2021	20,755	494,644
19	May 9, 2021	May 15, 2021	16,523	511,167
20	May 16, 2021	May 22, 2021	12,650	523,817

Reported Week	Start date	End date	Number of cases	Cumulative count
21	May 23, 2021	May 29, 2021	7,758	531,575
22	May 30, 2021	June 5, 2021	5,214	536,789
23	June 6, 2021	June 12, 2021	3,484	540,273
24	June 13, 2021	June 19, 2021	2,418	542,691
25	June 20, 2021	June 26, 2021	1,882	544,573
26	June 27, 2021	July 3, 2021	1,473	546,046
27	July 4, 2021	July 10, 2021	1,226	547,272
28	July 11, 2021	July 17, 2021	1,046	548,318
29	July 18, 2021	July 24, 2021	1,108	549,426
30	July 25, 2021	July 31, 2021	1,350	550,776
31	August 1, 2021	August 7, 2021	1,906	552,682
32	August 8, 2021	August 14, 2021	3,171	555,853
33	August 15, 2021	August 21, 2021	4,143	559,996
34	August 22, 2021	August 28, 2021	4,774	564,770
35	August 29, 2021	September 4, 2021	5,183	569,953
36	September 5, 2021	September 11, 2021	5,055	575,008
37	September 12, 2021	September 18, 2021	4,917	579,925
38	September 19, 2021	September 25, 2021	4,398	584,323
39	September 26, 2021	October 2, 2021	3,952	588,275
40	October 3, 2021	October 9, 2021	3,842	592,117
41	October 10, 2021	October 16, 2021	2,902	595,019
42	October 17, 20210	October 23, 2021	2,626	597,645
43	October 24, 2021	October 30, 2021	2,501	600,146
44	October 31, 2021	November 6, 2021	3,291	603,437
45	November 7, 2021	November 13, 2021	3,981	607,418

Reported Week	Start date	End date	Number of cases	<b>Cumulative count</b>
46	November 14, 2021	November 20, 2021	4,576	611,994
47	November 21, 2021	November 27, 2021	5,434	617,428
48	November 28, 2021	December 4, 2021	6,589	624,017
49	December 5, 2021	December 11, 2021	8,988	633,005
50	December 12, 2021	December 18, 2021	18,954	651,959
51	December 19, 2021	December 25, 2021	51,868	703,827
52	December 26, 2021	January 1, 2022	98,869	802,696
1	January 2, 2022	January 8, 2022	86,387	889,083
2	January 9, 2022	January 15, 2022	69,645	958,728
3	January 16, 2022	January 22, 2022	44,979	1,003,707
4	January 23, 2022	January 29, 2022	30,588	1,034,295
5	January 30, 2022	February 5, 2022	21,455	1,055,750

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

Public Health Unit Name	Cases reported week 4	Rate per 100,000 population  Reported week 4	Cases reported week 5	Rate per 100,000 population  Reported week 5
Northwestern Health Unit	295	363.4	281	346.1
Thunder Bay District Health Unit	535	339.2	435	275.8
TOTAL NORTH WEST	830	347.4	716	299.7
Algoma Public Health	357	303.0	323	274.1
North Bay Parry Sound District Health Unit	232	179.4	229	177.1
Porcupine Health Unit	213	250.6	272	320.0
Public Health Sudbury & Districts	604	294.3	594	289.4
Timiskaming Health Unit	47	138.7	43	126.9
TOTAL NORTH EAST	1,453	254.3	1,461	255.7
Ottawa Public Health	1,844	176.8	1,490	142.8
Eastern Ontario Health Unit	563	260.8	399	184.8
Hastings Prince Edward Public Health	335	193.8	282	163.2
Kingston, Frontenac and Lennox & Addington Public Health	335	160.1	291	139.1
Leeds, Grenville & Lanark District Health Unit	335	186.2	356	197.8
Renfrew County and District Health Unit	210	193.6	161	148.4
TOTAL EASTERN	3,622	187.7	2,979	154.4
Durham Region Health Department	1,317	185.1	935	131.4
Haliburton, Kawartha, Pine Ridge District Health Unit	406	212.9	280	146.8

Public Health Unit Name	Cases reported week 4	Rate per 100,000 population  Reported week 4	Cases reported week 5	Rate per 100,000 population  Reported week 5
Peel Public Health	3,801	243.1	2,051	131.2
Peterborough Public Health	241	162.7	193	130.3
Simcoe Muskoka District Health Unit	1,353	223.8	968	160.1
York Region Public Health	1,787	148.9	1,063	88.6
TOTAL CENTRAL EAST	8,905	201.5	5,490	124.2
Toronto Public Health	5,519	184.7	3,609	120.8
TOTAL TORONTO	5,519	184.7	3,609	120.8
Chatham-Kent Public Health	392	367.7	239	224.2
Grey Bruce Health Unit	243	138.0	229	130.0
Huron Perth Public Health	250	170.9	205	140.2
Lambton Public Health	357	268.5	347	261.0
Middlesex-London Health Unit	1,340	262.4	949	185.9
Southwestern Public Health	430	196.4	381	174.0
Windsor-Essex County Health Unit	1,278	296.6	933	216.5
TOTAL SOUTH WEST	4,290	249.1	3,283	190.6
Brant County Health Unit	342	222.7	225	146.5
City of Hamilton Public Health Services	1,321	227.1	919	158.0
Haldimand-Norfolk Health Unit	273	227.5	185	154.2
Halton Region Public Health	1,109	181.6	632	103.5
Niagara Region Public Health	1,212	251.6	835	173.3

Public Health Unit Name	Cases reported week 4	Rate per 100,000 population  Reported week 4	Cases reported week 5	Rate per 100,000 population  Reported week 5
Region of Waterloo Public Health and Emergency Services	1,183	195.5	732	120.9
Wellington-Dufferin-Guelph Public Health	529	169.6	389	124.7
TOTAL CENTRAL WEST	5,969	208.4	3,917	136.7
TOTAL ONTARIO	30,588	207.6	21,455	145.6

**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 January 30, 2022 to February 5, 2022. Toronto, ON: Queen's Printer for Ontario; 2022.

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