

Epidemiologic Summary

COVID-19 in Ontario: January 15, 2020 to April 28, 2020

This report includes the most current information available from the integrated Public Health Information System (iPHIS) as of **4 p.m. April 28, 2020** and from the Toronto Public Health Coronavirus Rapid Entry System (CORES) as of **2 p.m. April 28, 2020**.

Purpose

- This daily report provides an epidemiologic summary of COVID-19 activity in Ontario to date.

Highlights

- There are 15,728 confirmed cases of COVID-19 in Ontario reported to date in iPHIS. This represents an increase of 347 confirmed cases from the previous report.
 - 41.6% of cases are male, 57.5% are female.
 - 44.8% of cases are 60 years of age and older.
 - Greater Toronto Area public health units account for 59.2% of cases.
 - 11.4% of cases were hospitalized.
- 996 deaths have been reported (please note there may be a reporting delay for deaths in iPHIS). This is an increase of 45 deaths from the previous report.
- 181 outbreaks have been reported in long-term care homes. This is an increase of 5 outbreaks from the previous report.
- 521 deaths have been reported among residents/patients in long-term care homes. This is an increase of 45 deaths from the previous report.

Case Characteristics

Table 1. Summary of cases of COVID-19: Ontario, January 15, 2020 to April 28, 2020

	Number	Percentage
Number of cases ¹	15,728	N/A
Change from previous report	347	2.3% increase
Gender: Male	6,546	41.6
Gender: Female	9,041	57.5
Ages: 19 and under	363	2.3
Ages: 20-39	3,583	22.8
Ages: 40-59	4,725	30.0
Ages: 60-79	3,486	22.2
Ages: 80 and over	3,564	22.7
Number of cases in health care workers	2,193	13.9

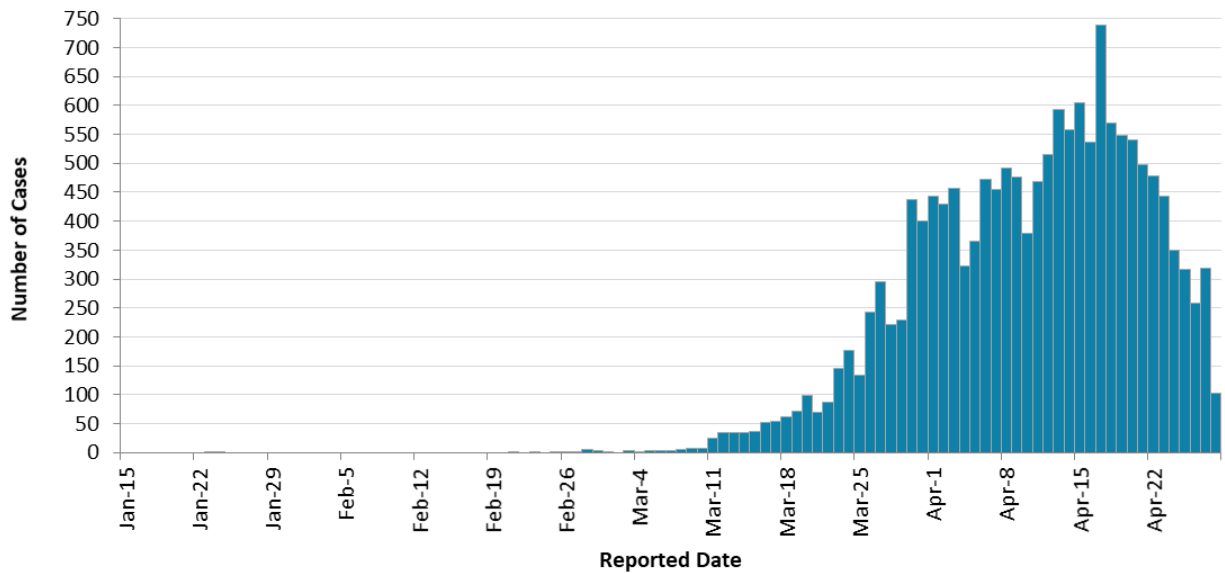
¹ Cases and rates by public health units are provided in [Appendix A](#).

Note: 141 cases did not specify male or female. Seven cases had an unknown age.

Data Source: integrated Public Health Information System (iPHIS) database, Coronavirus Rapid Entry System (CORES) database.

Time

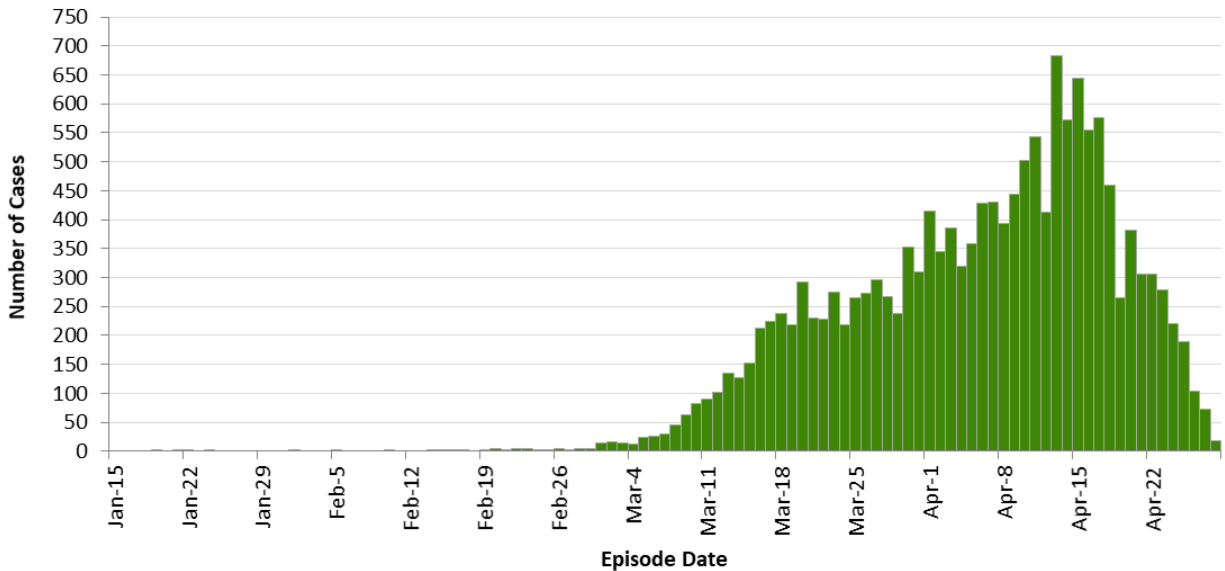
Figure 1. Confirmed cases (n=15,728) of COVID-19 by reported date: Ontario, January 15, 2020 to April 28, 2020¹



¹ Interpret case counts for the most recent days (approximately 3 days) with caution due to reporting lags.

Data Source: integrated Public Health Information System (iPHIS) database, Coronavirus Rapid Entry System (CORES) database.

Figure 2. Confirmed cases (n=15,728) of COVID-19 by an approximation of symptom onset date¹: Ontario, January 15, 2020 to April 28, 2020²

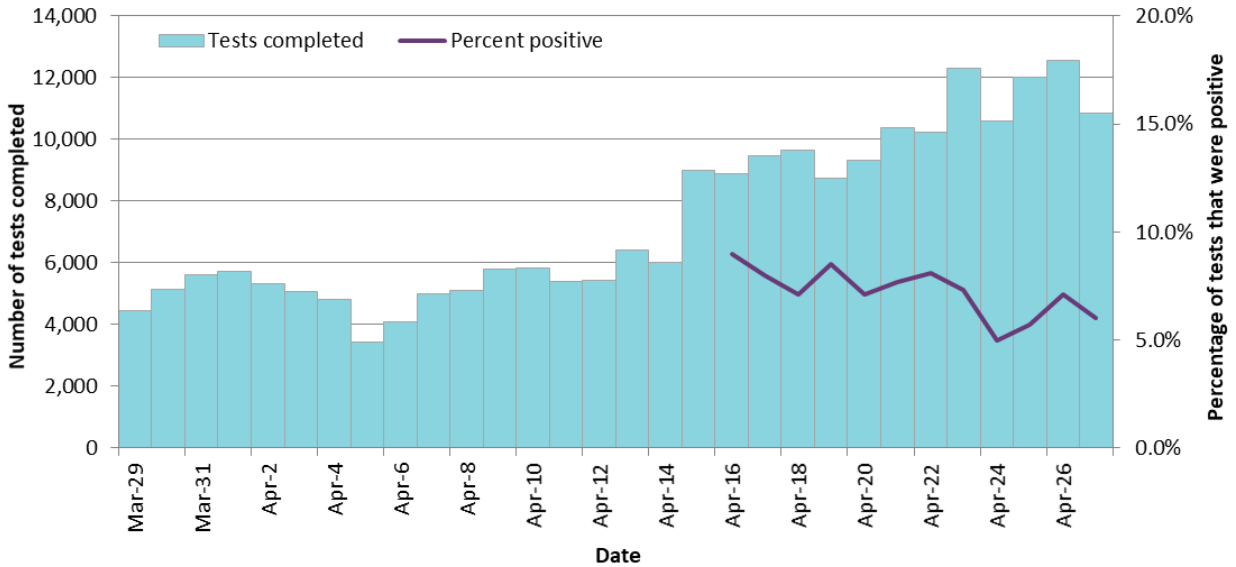


¹ This date, referred to as episode date, is intended to approximate symptom onset date. It is calculated based on either the date of symptom onset, specimen collection/test date, or the date reported to public health.

² Interpret case counts for the most recent days (approximately 14 days) with caution due to reporting lags.

Data Source: integrated Public Health Information System (iPHIS) database, Coronavirus Rapid Entry System (CORES) database.

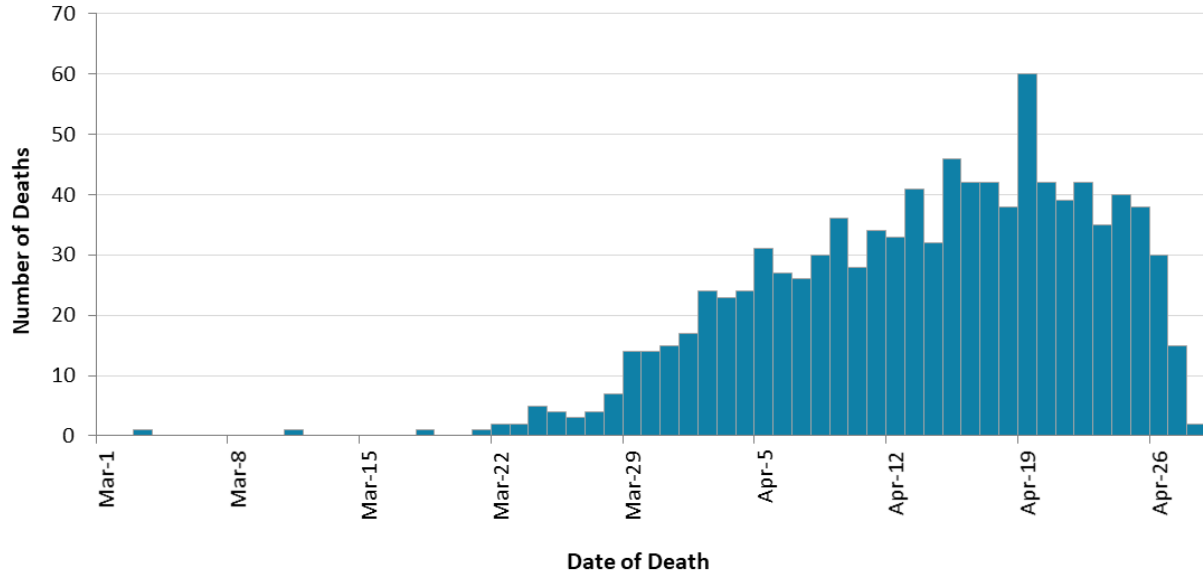
Figure 3. Number of COVID-19 tests completed¹ and percent positivity: Ontario, March 29, 2020 to April 27, 2020



Data Source: The Provincial COVID-19 Diagnostics Network, data reported by member microbiology laboratories.

¹The number of tests performed does not reflect the number of specimens or persons tested. More than one test may be performed per specimen or per person. As such, the percentage of tests that were positive does not necessarily translate to the number of specimens or persons testing positive.

Figure 4. Confirmed deaths (n=991¹) among COVID-19 cases by date of death: Ontario, March 1, 2020 to April 28, 2020²



¹This count excludes the 5 cases that did not have a date of death reported.

²Interpret case counts for the most recent days with caution due to reporting lags.

Data Source: integrated Public Health Information System (iPHIS) database, Coronavirus Rapid Entry System (CORES) database.

Exposure

Table 2. Confirmed cases (n=15,728) of COVID-19 by exposure type: Ontario, January 15, 2020 to April 28, 2020

	Number	Percentage
Travel ¹	1,362	8.7
Close contact of a confirmed case	3,136	19.9
Community transmission	5,903	37.5
Information pending	5,327	33.9

¹Travel within the 14 days prior to becoming ill.

Data Source: integrated Public Health Information System (iPHIS) database, Coronavirus Rapid Entry System (CORES) database.

Severity

Table 3. Confirmed cases (n=15,728) of COVID-19 by severity: Ontario, January 15, 2020 to April 28, 2020

	Number	Percentage
Cumulative deaths reported (please note there may be a reporting delay for deaths in iPHIS)	996	6.3
Change from previous report	45	4.7% increase
Deaths reported in ages: 19 and under	0	0.0
Deaths reported in ages: 20-39	7	0.2
Deaths reported in ages: 40-59	45	1.0
Deaths reported in ages: 60-79	264	7.6
Deaths reported in ages: 80 and over	680	19.1
Cumulative intensive care ¹	448	2.8
Cumulative hospitalized ¹	1,798	11.4
Number of resolved ² cases	9,612	61.1

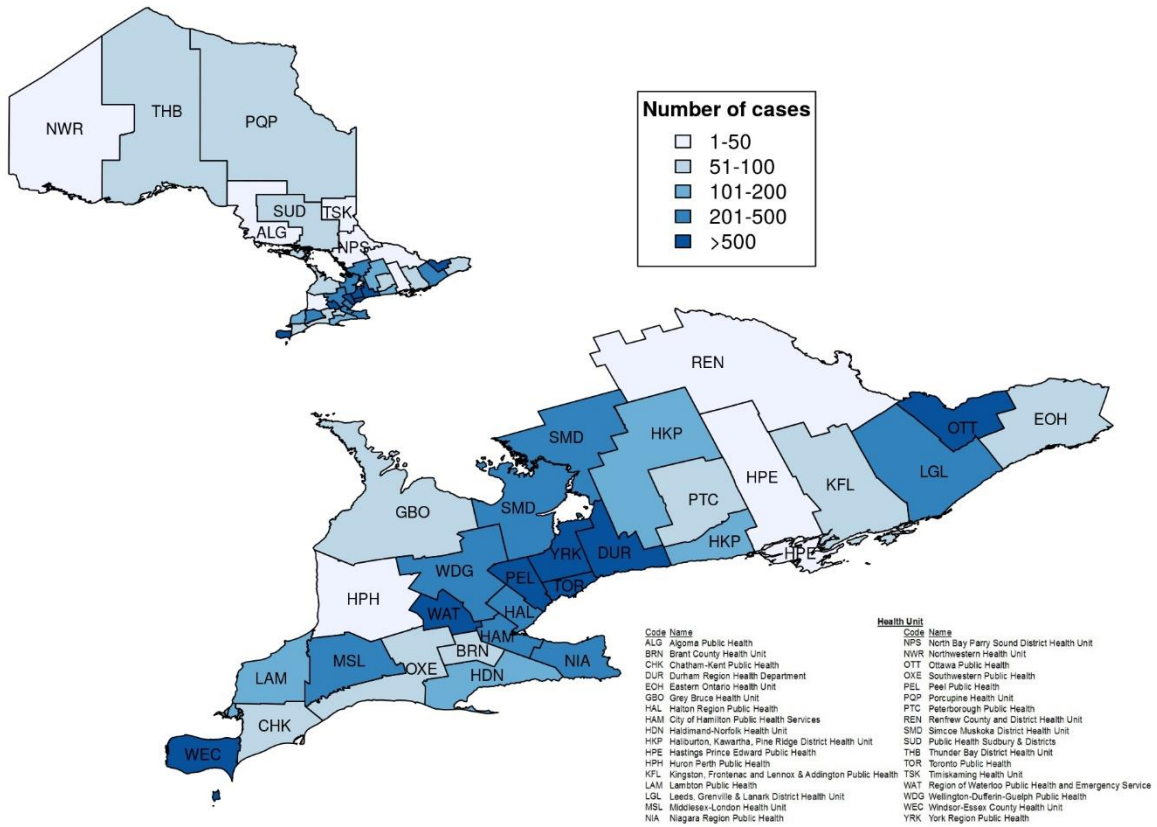
¹ These refer to all hospitalized or ICU admitted cases, not cases that are currently hospitalized or in ICU.

² Cases that are 14 days past symptom onset (if available) or 14 days past the episode date are classified as resolved for non-fatal cases that are not currently listed as hospitalized. Cases are also classified as resolved if the case is reported as “recovered” in iPHIS.

Data Source: integrated Public Health Information System (iPHIS) database, Coronavirus Rapid Entry System (CORES) database.

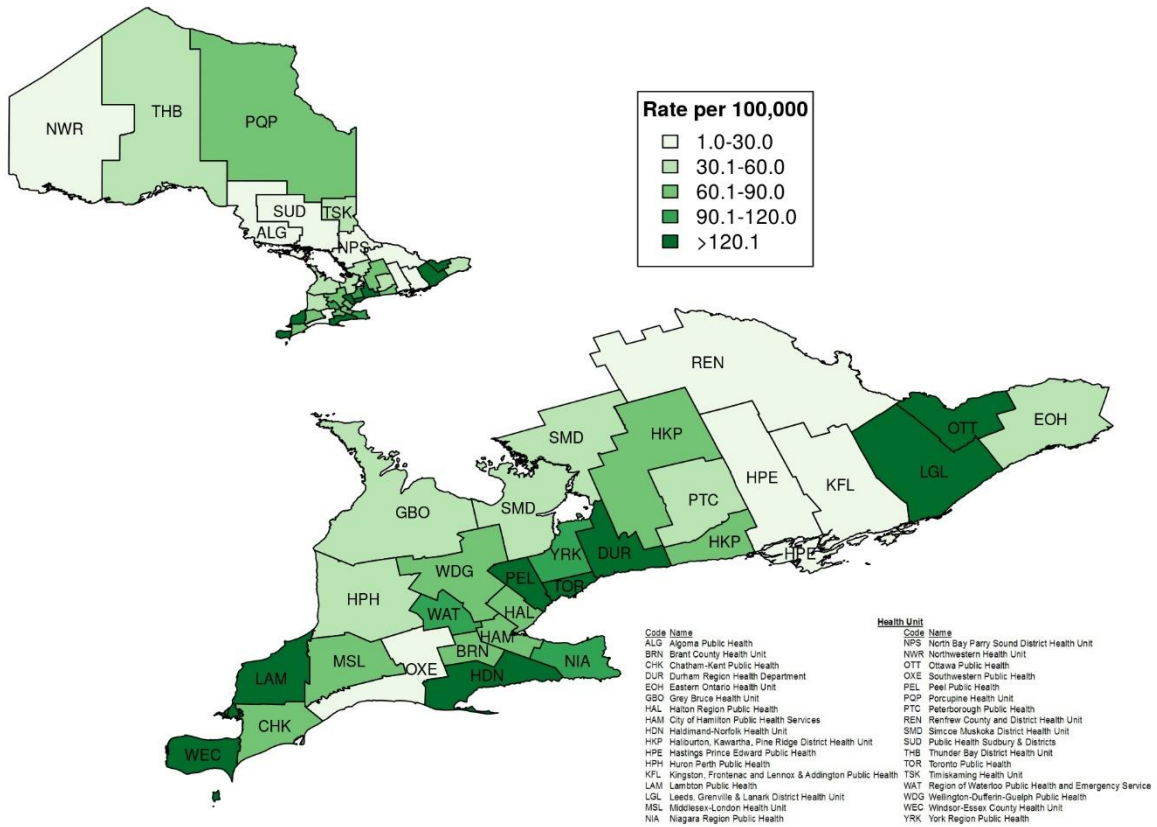
Geography

Figure 5. Confirmed cases (n=15,728) of COVID-19 by public health unit: Ontario, January 15, 2020 to April 28, 2020



Data Source: integrated Public Health Information System (iPHIS) database, Coronavirus Rapid Entry System (CORES) database.

Figure 6. Rate of confirmed cases of COVID-19 by public health unit: Ontario, January 15, 2020 to April 28, 2020



Data Source: integrated Public Health Information System (iPHIS) database, Coronavirus Rapid Entry System (CORES) database.

Outbreaks in Institutions and Public Hospitals

Table 4. Confirmed COVID-19 outbreaks reported in long-term care homes, retirement homes and hospitals and total number of associated cases: Ontario, January 15, 2020 to April 28, 2020

Indicator	Long-Term Care Homes	Retirement Homes	Hospitals
Cumulative number of confirmed COVID-19 outbreaks	181	67	57
Total number of cases ^{1,2,3} reported as part of the confirmed COVID-19 outbreaks	3,464	642	382
Cases reported among residents/patients	2,352	419	185
Cases reported among staff	1,108	223	194
Total number of deaths ^{1,2,3} reported as part of the confirmed COVID-19 outbreaks	522	77	27
Deaths reported among residents/patients	521	77	27
Deaths reported among staff	1	0	0

¹ Includes all outbreak-related cases and deaths reported in aggregate outbreak summary counts, regardless of whether the case was laboratory confirmed (deaths among non-laboratory confirmed cases reported here are not included in Table 3).

² May include cases and deaths other than residents/patients or staff, such as volunteers. As a result, the total number of cases and deaths may be greater than the number of cases and deaths reported in residents or staff.

³ Counts may fluctuate from previous reports due to updates made by health units as additional information about the outbreak is reported.

Data Source: integrated Public Health Information System (iPHIS) database.

Technical Notes

Data Sources (Case Data)

- The data for this report were based on information extracted from the Ontario Ministry of Health (MOH) integrated Public Health Information System (iPHIS) database, as of **April 28, 2020 at 4 p.m.** and data extracted from the Toronto Public Health (Coronavirus Rapid Entry System) CORES, as of **April 28, 2020 at 2 p.m.**
- iPHIS and CORES are dynamic disease reporting systems, which allows ongoing updates to data previously entered. As a result, data extracted from iPHIS and CORES represent a snapshot at the time of extraction and may differ from previous or subsequent reports.
- Ontario population projection data for 2020 were sourced from Ontario Ministry of Health, IntelliHEALTH Ontario. Data were extracted on November 26, 2019.

Data Caveats:

- The data only represent cases reported to public health and recorded in iPHIS and CORES. As a result, all counts will be 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.
- Lags in iPHIS and CORES data entry due to reduced holiday and weekend staffing may result in lower case counts than would otherwise be recorded.
- Only cases meeting the confirmed case classification as listed in the MOH [COVID-19 case definition](#) are included in the report counts from iPHIS or CORES.
- Case episode date is based on an estimate of the best date of disease onset. This date is calculated based on either the date of symptom onset, specimen collection/test date, or the date reported to public health.
- Orientation of case counts by geography is based on the diagnosing health unit (DHU). 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
- Exposure type is determined by examining the exposure and risk factor fields from iPHIS to determine whether a case travelled, was a contact of a case or neither. A hierarchy has been applied as follows: Travel-related > Close contact of a confirmed case > Community transmission > Information pending.
- Exposure type is determined from CORES by examining the risk factor fields from CORES to determine whether a case travelled, was a contact of a case or neither. A hierarchy has been

applied as follows: Travel-related > Close contact of a confirmed case > Community transmission > Information pending

- Deaths are determined by using the outcome field in iPHIS. Any case marked 'Fatal' is included in the deaths data. Deaths are included whether or not COVID-19 was determined to be a contributing or underlying cause of death as indicated in the iPHIS field Type of Death.
 - The date of death is determined using the outcome date field for cases marked as 'Fatal' in the outcome field.
- iPHIS cases for which the Disposition Status was reported as ENTERED IN ERROR, DOES NOT MEET DEFINITION, DUPLICATE-DO NOT USE, or any variation on these values have been excluded.
- To provide a measure of the impact of COVID-19 on long-term care homes and hospitals, the number of outbreaks and the associated cases are reported. To obtain the case and deaths data for these outbreaks, the aggregate counts recorded by public health units in the outbreak's summary counts section of iPHIS is used. This information is presented in table 4.
 - Previously only a select number of persons in institutional outbreaks would be tested for COVID-19, and there could still be circumstances where not all individuals end up being tested (e.g., the person dies before they can be tested).
 - These counts may not be updated as frequently as the information for laboratory-confirmed cases.
 - The information in the aggregate counts can not necessarily be reconciled with the laboratory-confirmed case data.

Appendix A

Table 1. Confirmed cases (n=15,728) of COVID-19 by public health unit: Ontario, January 15, 2020 to April 28, 2020

Public Health Unit Name	Cases	Rate per 100,000 population
Northwestern Health Unit	15	17.1
Thunder Bay District Health Unit	70	46.7
TOTAL NORTH WEST	85	35.8
Algoma Public Health	13	11.4
North Bay Parry Sound District Health Unit	14	10.8
Porcupine Health Unit	58	69.5
Public Health Sudbury & Districts	56	28.1
Timiskaming Health Unit	12	36.7
TOTAL NORTH EAST	153	27.4
Ottawa Public Health	1,271	120.5
Eastern Ontario Health Unit	91	43.6
Hastings Prince Edward Public Health	40	23.7
Kingston, Frontenac and Lennox & Addington Public Health	58	27.3
Leeds, Grenville & Lanark District Health Unit	309	178.4
Renfrew County and District Health Unit	15	13.8
TOTAL EASTERN	1,784	92.6
Durham Region Health Department	923	129.6
Haliburton, Kawartha, Pine Ridge District Health Unit	157	83.1
Peel Public Health	2,255	140.4

Public Health Unit Name	Cases	Rate per 100,000 population
Peterborough Public Health	86	58.1
Simcoe Muskoka District Health Unit	261	43.5
York Region Public Health	1,458	118.9
TOTAL CENTRAL EAST	5,140	114.7
Toronto Public Health	4,668	149.6
TOTAL TORONTO	4,668	149.6
Chatham-Kent Public Health	79	74.3
Grey Bruce Health Unit	77	45.3
Huron Perth Public Health	44	31.5
Lambton Public Health	178	135.9
Middlesex-London Health Unit	391	77.0
Southwestern Public Health	58	27.4
Windsor-Essex County Health Unit	571	134.4
TOTAL SOUTH WEST	1,398	82.7
Brant County Health Unit	99	63.8
City of Hamilton Public Health Services	411	69.4
Haldimand-Norfolk Health Unit	176	154.3
Halton Region Public Health	436	70.4
Niagara Region Public Health	474	100.3
Region of Waterloo Public Health and Emergency Services	637	109.0
Wellington-Dufferin-Guelph Public Health	267	85.6
TOTAL CENTRAL WEST	2,500	87.7
TOTAL ONTARIO	15,728	105.8

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For Further Information

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