


# COVID-19 epidemiology update: Summary

Last updated: 2023-05-16  PDF

Summary of COVID-19 cases, hospitalizations and deaths, cases following vaccination, testing and variants of concern across Canada and over time. Older versions of this report are available on the [archived reports page](#).

**Update schedule:** We update all sections of this page every Tuesday, except for 'Hospital use', which we update every Thursday. This page was last updated on May 16, 2023, 9 am ET.

## Holiday update change

This page will next be updated Wednesday May 24, 2023, instead of Tuesday May 23, 2023.

## Weekly highlights

### General trends

- Nationally, in the latest reporting week, COVID-19 activity continued to decrease or remained relatively stable in most reporting provinces and territories, with most jurisdictions reporting low to moderate activity levels.
- The number of weekly reported COVID-19 cases and percent positivity were both relatively stable in the latest reporting week. Longer-term trends show gradual decreases in COVID-19 cases, and percent positivity since January 2023.
- Overall outbreak incidence has been relatively stable or decreasing in all outbreak settings since January 2023, with small fluctuations in different setting types over time.
- There continues to be variation in COVID-19 trends across provinces and territories.

### Hospitalizations and deaths

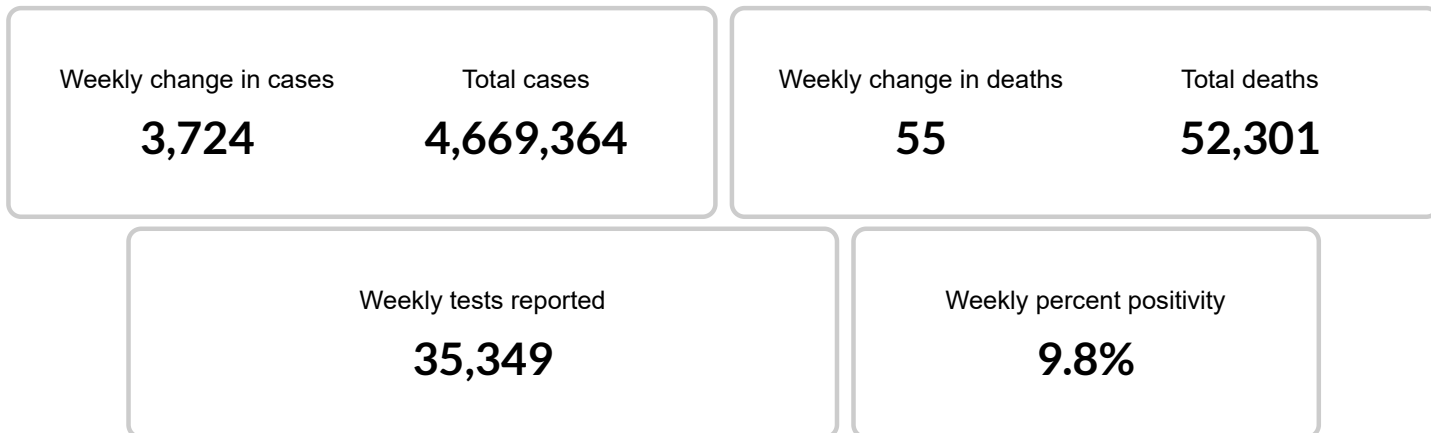
- From April 25 to May 2, 2023, [the number COVID-19 patients in hospital](#) decreased nationally.
- [COVID-19 deaths](#) have been decreasing since January.
- The [weekly rates of COVID-19 cases hospitalized and admitted to ICU](#) remained highest among individuals aged 80 years and older.

### Variants

- Nationally, [XBB.1.16](#), [XBB.1.9](#), [FD.1.1](#), and [XBB.2.3](#) are the only lineages that are increasing in [proportion](#); all other lineages are either stable or decreasing.

- While the data we publish under Latest COVID-19 numbers in the Current Situation tab may include provincial or territorial data corrections or backfill (sometimes described as bulk reporting) in the week they are reported, the weekly highlights account for these data corrections and focus on recent trends.

## Latest COVID-19 numbers (Last data update May 16, 2023, 9 am ET)



- Case and death information are up to May 6, 2023.
- Weekly change in cases includes data from 5 of the 13 Canadian provinces and territories reporting updates for the week of April 30 to May 6, 2023. Weekly change in deaths includes data from 4 of the 13 Canadian provinces and territories reporting updates for the week of April 30 to May 6, 2023.
- These reflect the changes in the case and death counts at the end of the week compared to the end of the previous week.
- Laboratory testing information is based on data from the Respiratory Virus Detection Surveillance System (RVDSS) (see [Data notes](#)).
- Weekly percent positivity is calculated as the number of positive tests divided by the total number of tests performed during the epidemiological week.
- Laboratory data represents specimens received by labs up to May 6, 2023.
- Due to changes in COVID-19 testing policies in many jurisdictions since December 2021, case counts are under-estimated.
- As of October 19, 2022, the Statistics Canada population estimates as of July 1, 2022 are being used for denominators in rate calculations.

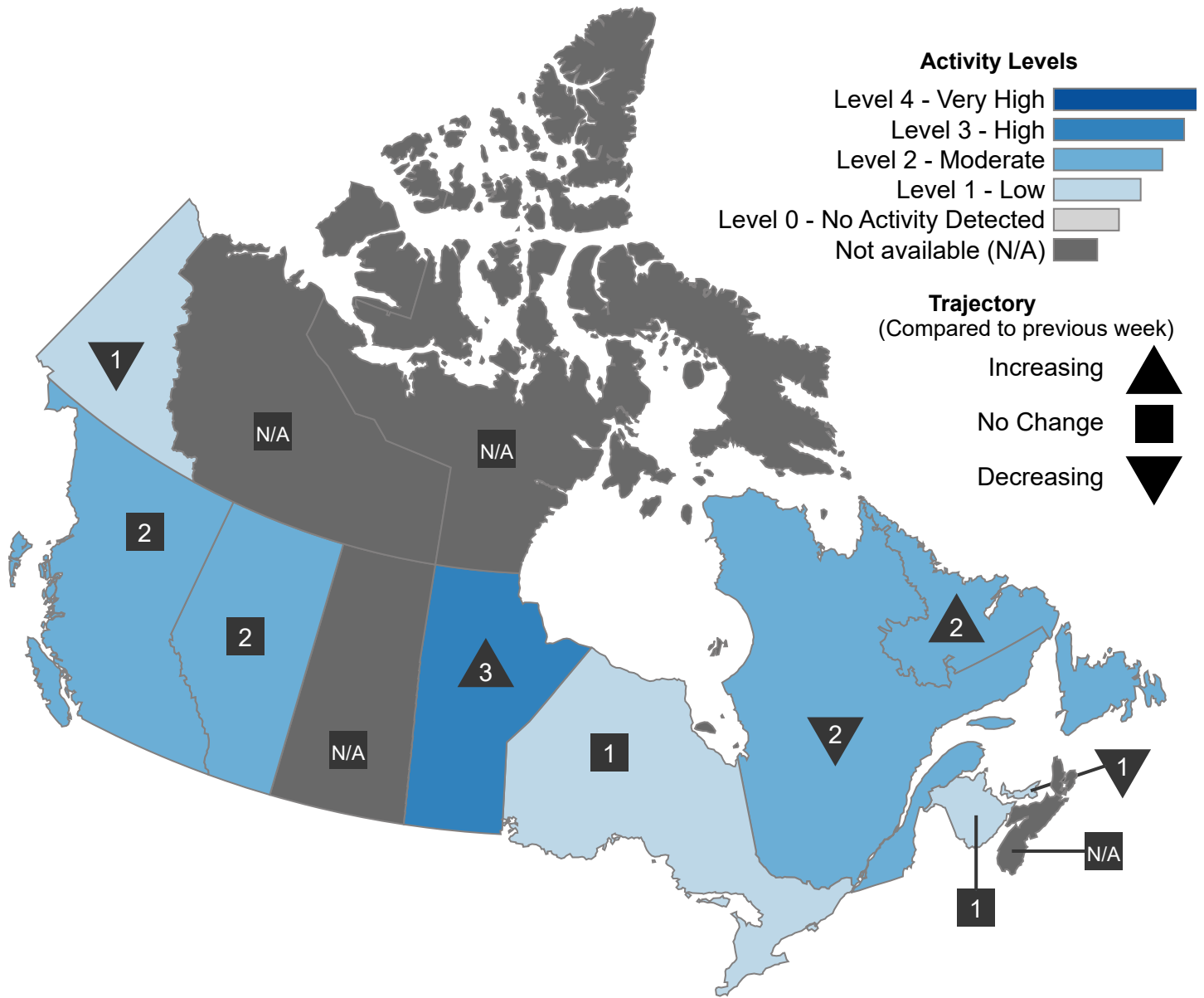
## COVID-19 Activity Levels

COVID-19 activity levels provide a high-level summary to describe when and where COVID-19 is circulating across Canada. The level of COVID-19 activity for each jurisdiction is determined by provincial and territorial ministries of health. The weekly COVID-19 activity level is based on:

- percent positivity

- long-term care facility outbreaks per 1,000,000 population, and
- wastewater trends.

**Figure 1. Map of COVID-19 activity levels in Canada, by province or territory for the week of April 30 to May 6, 2023** (Last updated May 16, 2023, 9 am ET)



**COVID-19 activity levels in Canada, by province or territory for the week of April 30 to May 6, 2023** (Last updated May 16, 2023, 9 am ET)

Province or territory	Overall COVID-19 activity level	Overall change
British Columbia	Moderate Activity (2)	No change
Alberta	Moderate Activity (2)	No change

Saskatchewan	Not available (N/A)	Not available (N/A)
Manitoba	High Activity (3)	Increasing
Ontario	Low Activity (1)	No change
Quebec	Moderate Activity (2)	Decreasing
Newfoundland and Labrador	Moderate Activity (2)	Increasing
New Brunswick	Low Activity (1)	No change
Nova Scotia	Not available (N/A)	Not available (N/A)
Prince Edward Island	Low Activity (1)	Decreasing
Yukon	Low Activity (1)	Decreasing
Northwest Territories	Not available (N/A)	Not available (N/A)
Nunavut	Not available (N/A)	Not available (N/A)

- a. COVID-19 activity level assessments are based on data from provincial and territorial partners for the week of April 30 to May 6, 2023. For more information on public health recommendations or risk assessments, please refer to the [provincial and territorial websites](#). More information on COVID-19 activity levels, how they are calculated, and relevant data caveats, can be found in the [Technical Notes](#).

COVID-19 activity levels are based on data from provincial and territorial (PT) partners. National COVID-19 activity levels were developed with PT partners to monitor COVID-19 activity at the national and PT levels using a standard set of core indicators. Based on these indicators, COVID-19 activity can range from level 0 (no activity) to level 4 (high activity). They are presented with the overall change (increase, decrease, no change) from the previous week.

**Indicators:** The overall COVID-19 activity level is assessed based on the following three indicators, where available:

**1. Weekly percent positivity**

Weekly number of lab positive tests / Weekly total number of tests x 100.

Note: This indicator is only incorporated into overall assessment if the testing rate is greater than or equal to 100 tests per 100,000 population per week. This indicator is used to provide information about overall activity level and trajectory.

**2. Weekly long term care facility (LTCF) outbreaks per 1,000,000 population**

Weekly number of LTCF outbreaks / Total population in jurisdiction x 1,000,000.

Note: This indicator is used to provide information on overall activity level and trajectory.

## COVID-19 and mental health

- [Mental Illness during the Pandemic: Survey on COVID-19 and Mental Health \(Cycles 1 and 2\)](#)
- [Map of Canadian mental health during the COVID-19 pandemic](#)
- [Inequalities in the mental health of adults before and during the COVID-19 pandemic](#)

## Impacts of COVID-19

- [Frequency and impact of longer-term symptoms following COVID-19 in Canadian adults](#)
- [Impacts of the COVID-19 Pandemic on Canadian Children with Cognitive, Behavioural or Emotional Disabilities](#)

## COVID-19 inequalities

- [Social inequalities in COVID-19 deaths in Canada](#)

# Provincial, territorial and international reporting

For more information, please refer to provincial or territorial COVID-19 webpages:

- [British Columbia](#)
- [Alberta](#)
- [Saskatchewan](#)
- [Manitoba](#)
- [Ontario](#)
- [Quebec](#)
- [Newfoundland and Labrador](#)
- [New Brunswick](#)
- [Nova Scotia](#)
- [Prince Edward Island](#)
- [Yukon](#)
- [Northwest Territories](#)
- [Nunavut](#)

For more information, please refer to international COVID-19 webpages:

- [World Health Organization](#)
- [US Centers for Disease Control and Prevention](#)
- [European Centre for Disease Control and Prevention](#)

## You might also be interested in

### [COVID-19 wastewater surveillance dashboard](#)

Trend data about the levels of COVID-19 in the wastewater.

### [COVID-19 vaccination](#)

Number of COVID-19 vaccine doses that have been administered in Canada.

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# COVID-19 epidemiology update: Current situation

Last updated: 2023-05-16

 PDF

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# Latest COVID-19 numbers (Last data update May 16, 2023, 9 am ET)

Weekly change in cases

**3,724**

Total cases

**4,669,364**

Weekly change in deaths

**55**

Total deaths

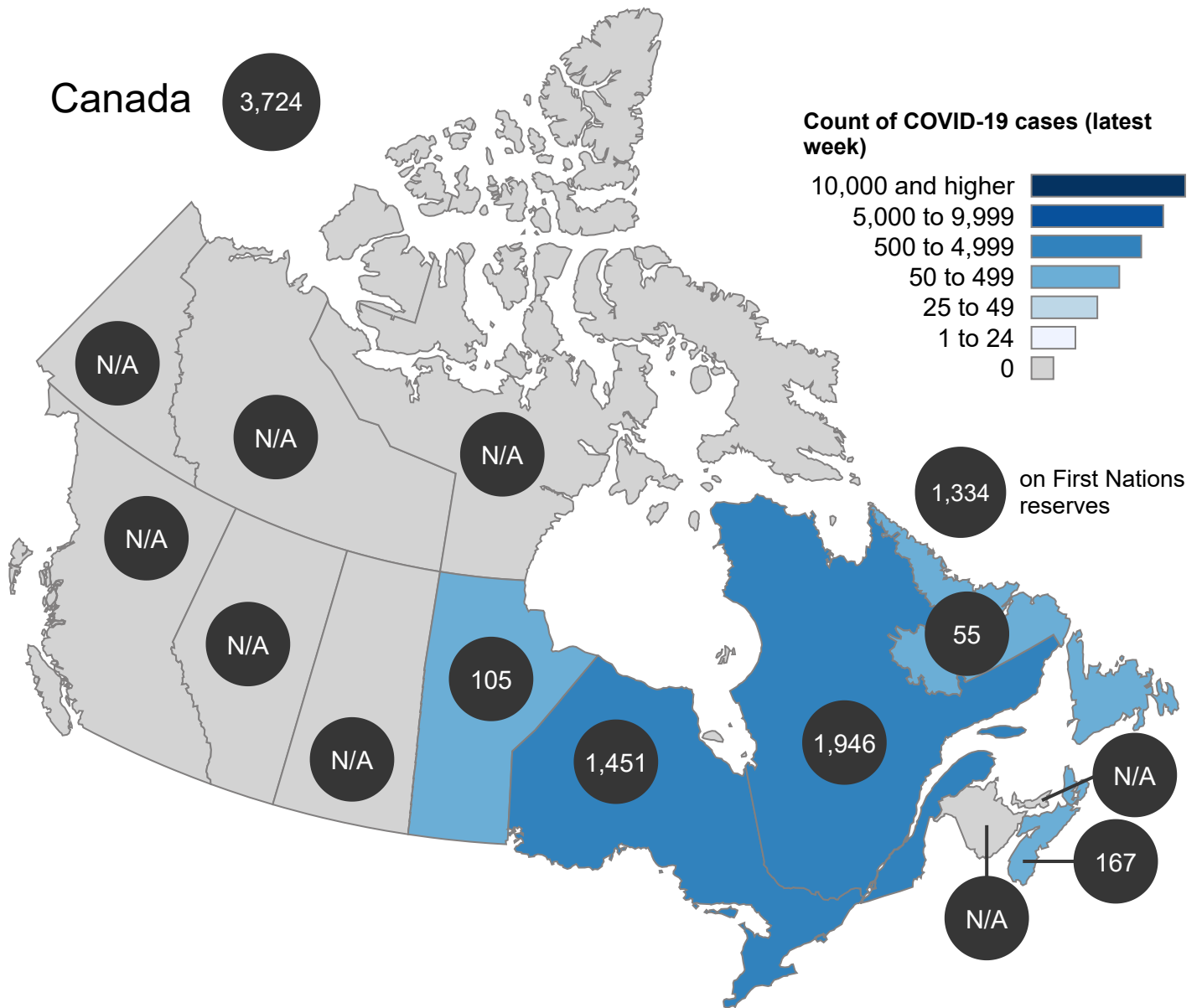
**52,301**

- Case and death information are up to May 6, 2023.
- Weekly change in cases includes data from 5 of the 13 Canadian provinces and territories reporting updates for the week of April 30 to May 6, 2023. Weekly change in deaths includes data from 4 of the 13 Canadian provinces and territories reporting updates for the week of April 30 to May 6, 2023.
- These reflect the changes in the case and death counts at the end of the week compared to the end of the previous week.
- Due to changes in COVID-19 testing policies in many jurisdictions since December 2021, case counts are under-estimated.
- As of October 19, 2022, the Statistics Canada population estimates as of July 1, 2022 are being used for denominators in rate calculations.

## National and regional trends

Figure 1.  of  of COVID-19,  for the week of April 30 to May 06, 2023

(Last data update May 16, 2023, 9 am ET)



The count of cases of COVID-19 for the week of April 30 to May 06, 2023 in **Canada** was **3,724**.

- This information is based on data our provincial and territorial partners published on cases and deaths. The numbers provided reflect cases, deaths up to November 26, 2022. For the most up to date data for any province, territory or city, please visit their website. The number of cases or deaths reported may differ slightly from those on the provincial and territorial websites as these websites may update historic case and death counts as new information becomes available.
- Due to changes in COVID-19 testing policies in many jurisdictions since December 2021, case counts are under-estimated.
- On April 23, 2023, BC started reporting on people who had had multiple COVID-19 infections. Previously, BC only reported 1 COVID-19 infection per person. For this reason, BC data after April 23, 2023 shouldn't be compared to earlier data.
- As of April 11, 2022, Nunavut no longer publishes regular COVID-19 updates.

- As of June 13, 2022, Northwest Territories no longer publishes regular COVID-19 updates.
- As of November 16, 2022, Yukon no longer publishes regular COVID-19 updates.

Areas in Canada with cases of COVID-19

Location	Total cases		Cases (latest week)		Cases (latest 2 weeks)		Total deaths		Deaths (latest week)		Deaths (latest 2 weeks)	
	Count	Rate <sup>a</sup>	Count	Rate <sup>a</sup>	Count	Rate <sup>a</sup>	Count	Rate <sup>a</sup>	Count	Rate <sup>a</sup>	Count	Rate <sup>a</sup>
British Columbia	400,661	7,532	N/A	N/A	N/A	N/A	5,518	104	N/A	N/A	N/A	N/A
Alberta	632,099	13,913	N/A	N/A	N/A	N/A	5,720	126	N/A	N/A	N/A	N/A
Saskatchewan	155,381	13,005	N/A	N/A	N/A	N/A	1,960	164	N/A	N/A	N/A	N/A
Manitoba	156,049	11,073	105	7	201	14	2,501	177	2	0.1	8	0.6
Ontario	1,617,673	10,706	1,451	10	2,965	20	16,514	109	16	0.1	31	0.2
Quebec	1,341,086	15,422	1,946	22	4,119	47	17,841	205	26	0.3	58	0.7
Newfoundland and Labrador	55,360	10,525	55	10	99	19	341	65	N/A	N/A	4	0.8
New Brunswick	90,652	11,163	N/A	N/A	N/A	N/A	883	109	N/A	N/A	N/A	N/A
Nova Scotia	143,108	14,034	167	16	331	32	859	84	9	0.9	18	1.8
Prince Edward Island	57,251	33,541	N/A	N/A	N/A	N/A	103	60	N/A	N/A	N/A	N/A
Yukon	4,989	11,393	N/A	N/A	N/A	N/A	32	73	N/A	N/A	N/A	N/A
Northwest Territories	11,511	25,241	N/A	N/A	N/A	N/A	22	48	N/A	N/A	N/A	N/A
Nunavut	3,531	8,713	N/A	N/A	N/A	N/A	7	17	N/A	N/A	N/A	N/A
<b>Canada</b>	<b>4,669,364</b>	<b>11,994</b>	<b>3,724</b>	<b>10</b>	<b>8,795</b>	<b>23</b>	<b>52,301</b>	<b>134</b>	<b>55</b>	<b>0.1</b>	<b>180</b>	<b>0.5</b>

a. \* Rate per 100,000 population

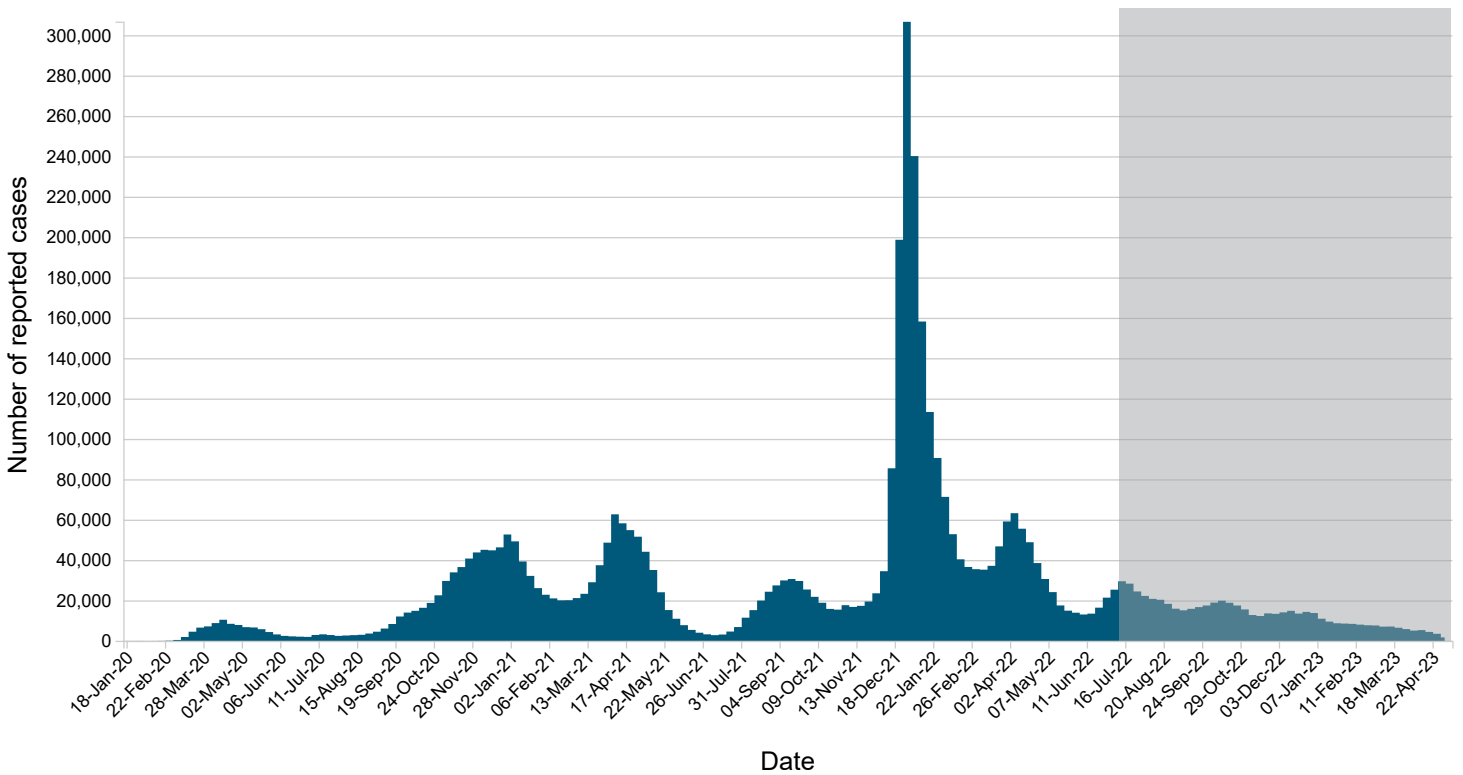
## Epidemic curve

As of May 16, 2023, 8 am ET, PHAC has received detailed case report data on 4,382,617 cases.

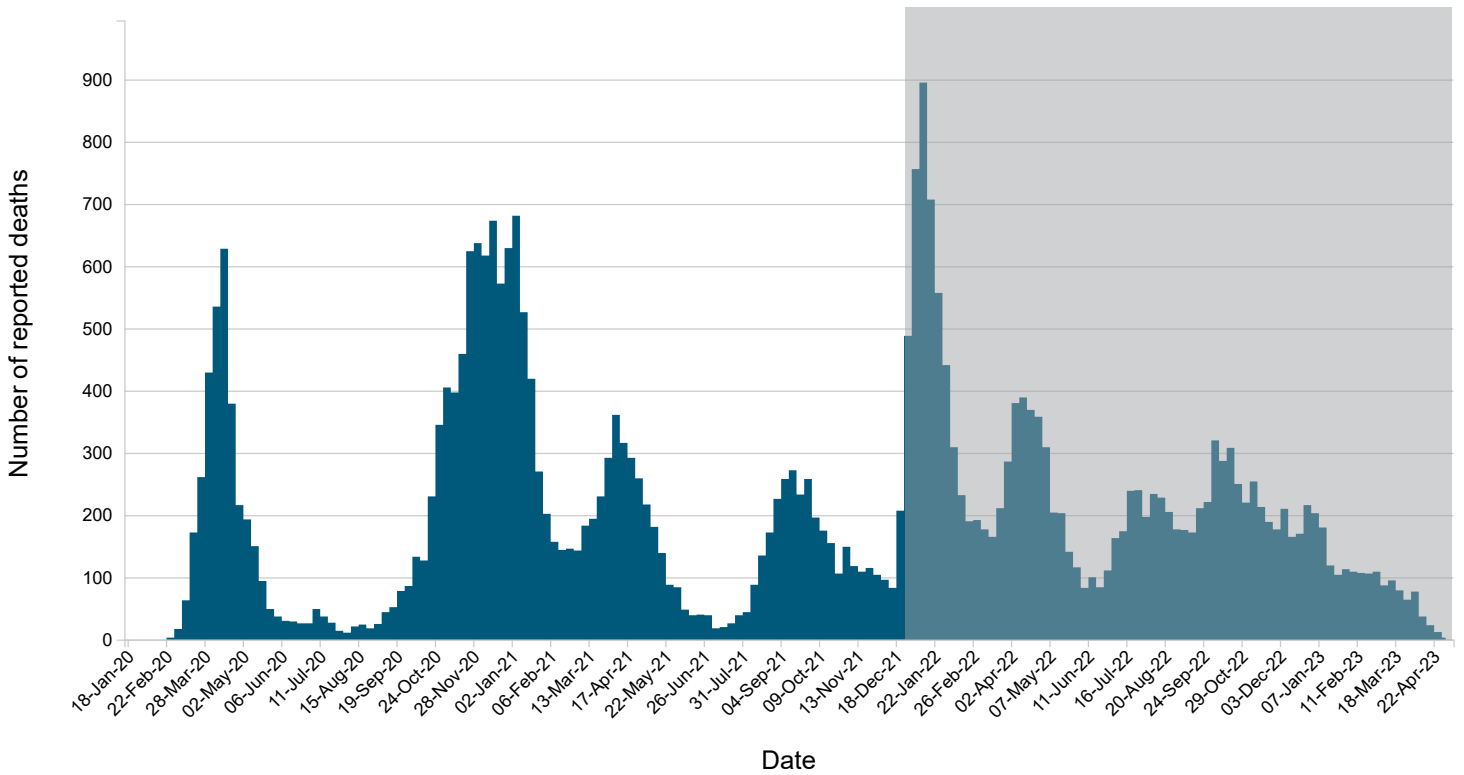
The shaded area for Figures 2 and 3 represents a period of accumulating data where it is known or expected that cases, and severe outcomes have occurred but have not yet been reported nationally. We update this information as it becomes available.

Due to changes in COVID-19 testing policies in many jurisdictions since December 2021, case counts are under-estimated.

**Figure 2a. COVID-19 cases (n=4,382,475) in Canada by date as of May 16, 2023, 8 am ET (total cases)**



**Figure 2b. COVID-19 deaths (n=34,459) in Canada by date as of May 16, 2023, 8 am ET (total deaths)**



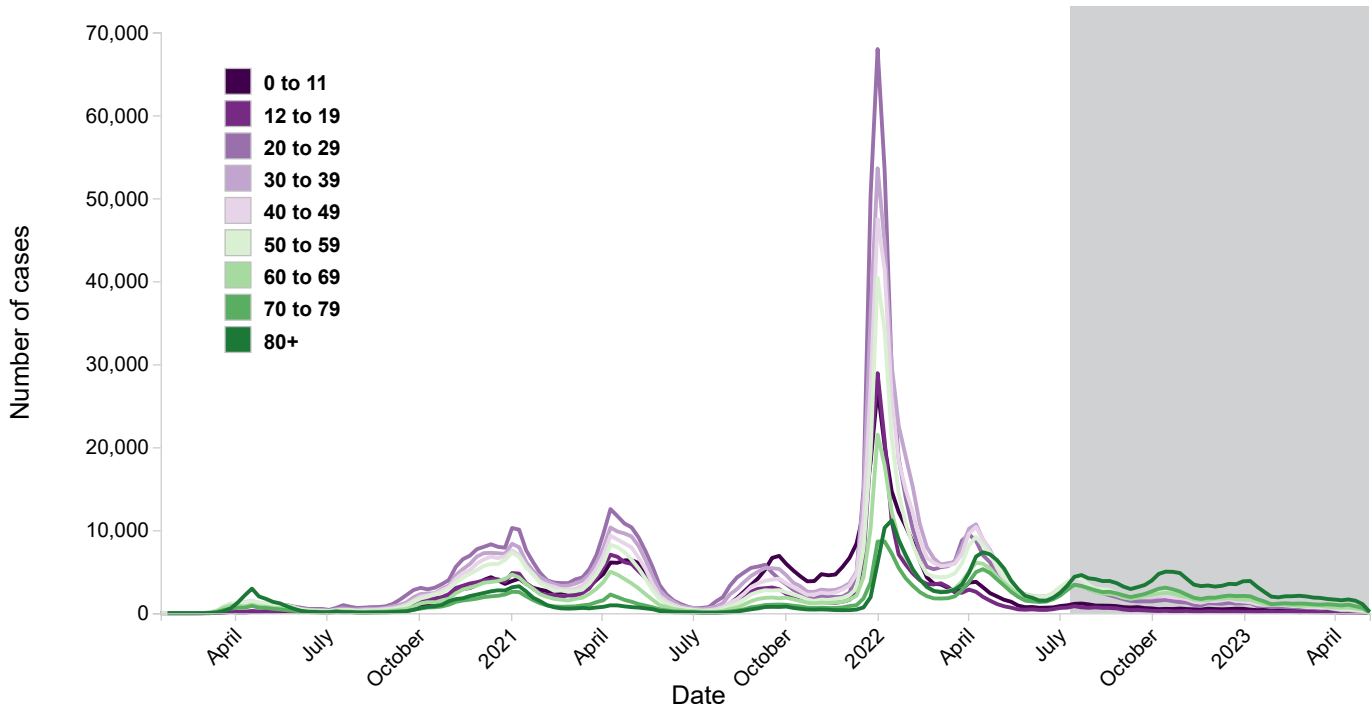
- a. This figure reflects detailed case information provided to the Public Health Agency of Canada (PHAC) by health authorities in the provinces and territories. This data is updated every week. It may change as we get more information about cases.
- b. The earliest of the following dates were used to determine the week in which a case or death is presented: Onset date, Specimen Collection Date, Laboratory Testing Date, Date Reported to Province or Territory, or Date Reported to PHAC.

# Cases by age and gender

We have detailed case report data from 4,382,617 cases. We know the age of patients in 99.9% of cases, and both age and gender in 100.0% of cases.

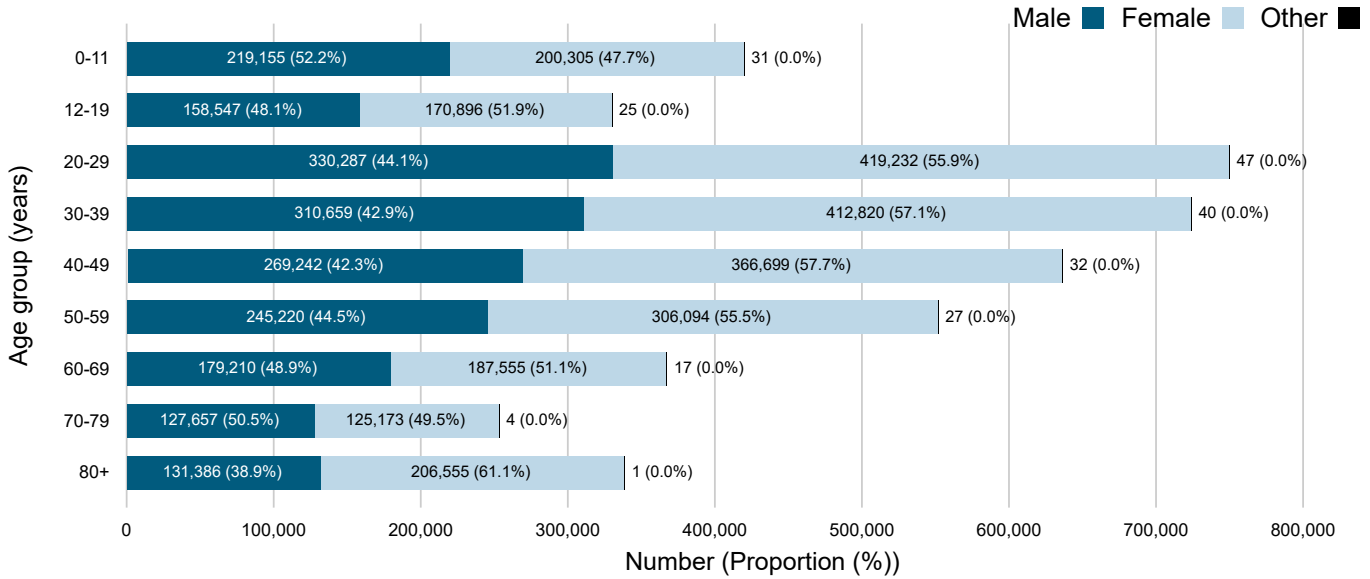
Of the cases reported in Canada so far, 54.9% were female and 33.8% were between 20 and 39 years old (Figure 3).

**Figure 3. Weekly number of COVID-19 cases by age group in Canada as of May 6, 2023**

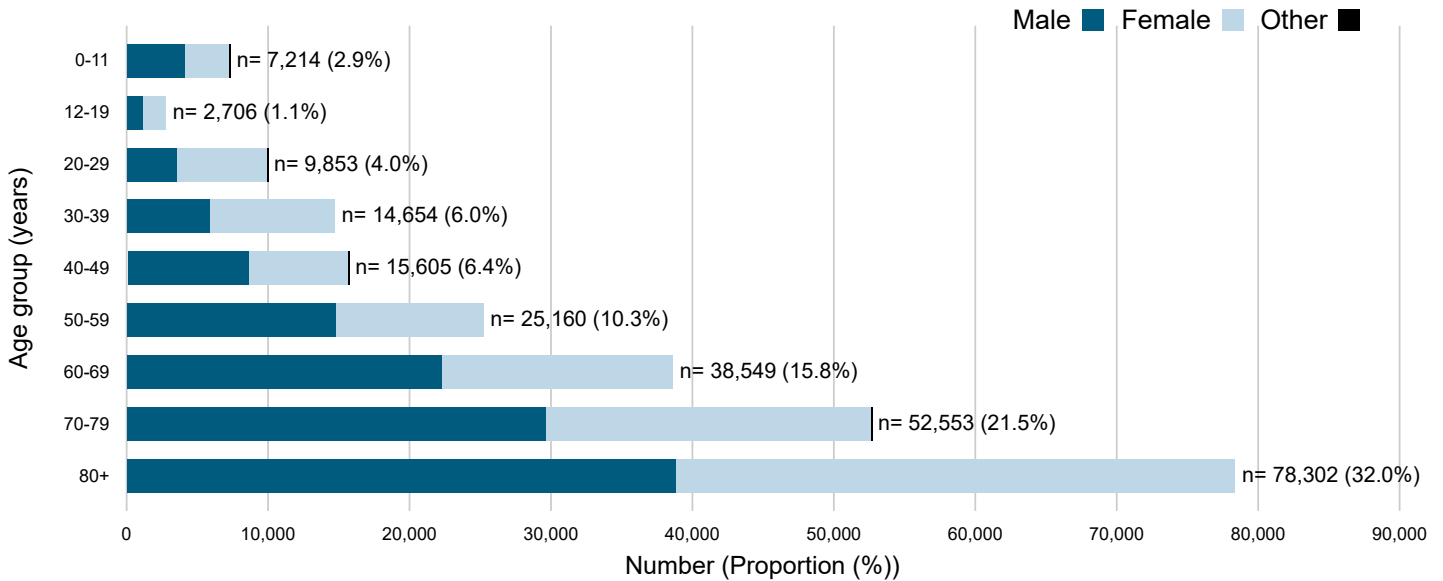


- This figure reflects detailed case information provided to the Public Health Agency of Canada (PHAC) by health authorities in the provinces and territories. This data is updated every week. It may change as we get more information about cases.
- The earliest of the following dates were used to determine the week in which a case or death is presented: Onset date, Specimen Collection Date, Laboratory Testing Date, Date Reported to Province or Territory, or Date Reported to PHAC.
- Due to changes in COVID-19 testing policies in many jurisdictions since December 2021, case counts are under-estimated
- As of October 19, 2022, the Statistics Canada population estimates as of July 1, 2022 are being used for denominators in rate calculations.

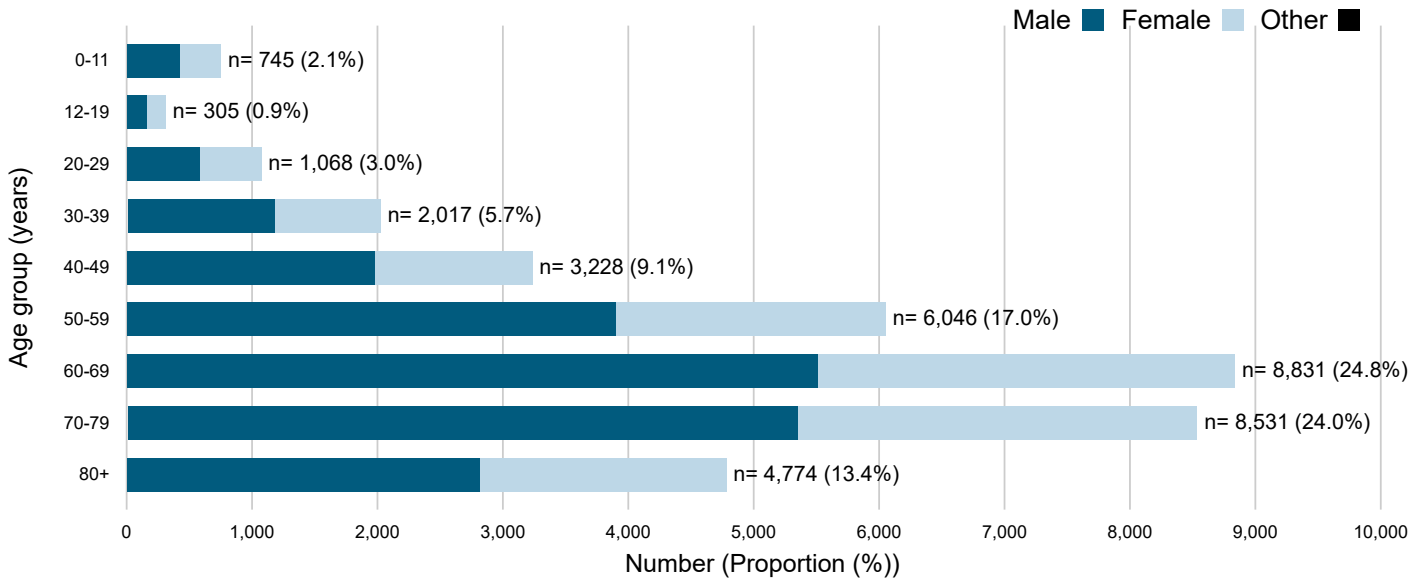
**Figure 4a. Age and gender distribution of COVID-19 cases in Canada as of May 16, 2023, 8 am ET (n=4,366,916)**



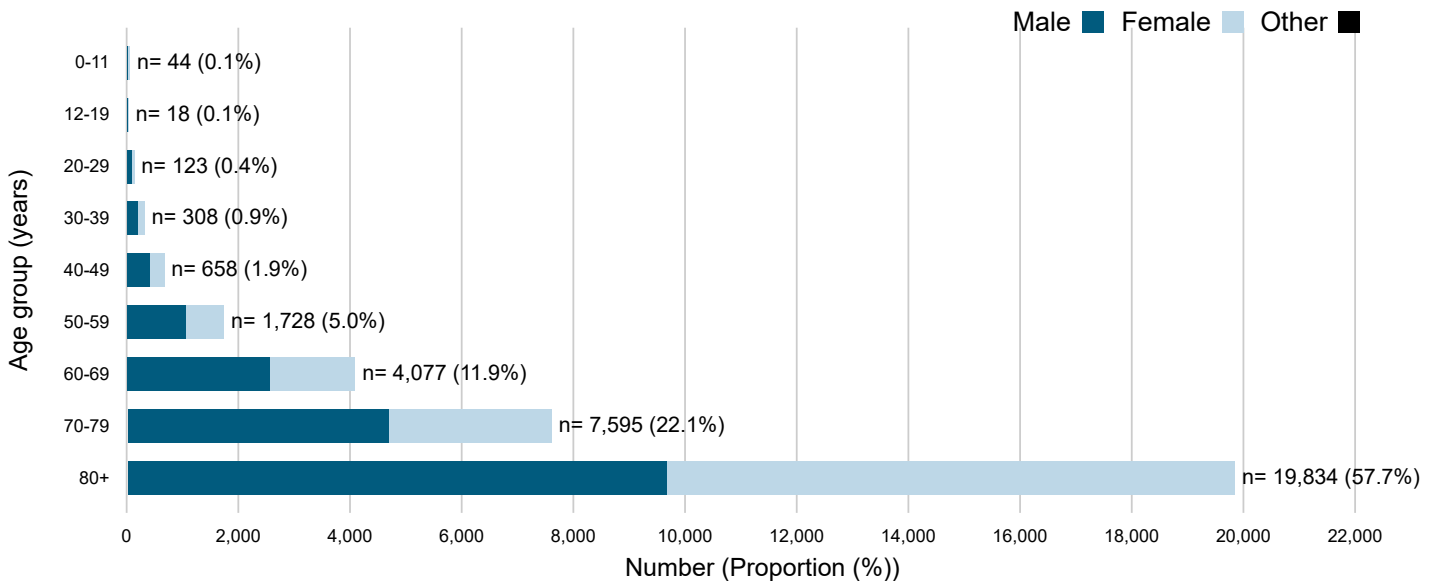
**Figure 4b. Age and gender distribution of COVID-19 cases hospitalized in Canada as of May 16, 2023, 8 am ET (n=244,596)**



**Figure 4c. Age and gender distribution of COVID-19 cases admitted to ICU in Canada as of May 16, 2023, 8 am ET (n=35,545)**



**Figure 4d. Age and gender distribution of COVID-19 cases deceased in Canada as of May 16, 2023, 8 am ET (n=34,385)**



- This figure reflects detailed case information provided to the Public Health Agency of Canada (PHAC) by health authorities in the provinces and territories. This data is updated every week. It may change as we get more information about cases.
- This figure includes COVID-19 cases hospitalized, admitted to ICU, and deceased for which age and gender information were available. Therefore, some COVID-19 hospitalizations, ICU admissions, and deaths may not be included.



**Age and gender distribution of COVID-19 cases in Canada as of May 16, 2023, 8 am ET (n=4,366,916)**

<b>Age group (years)</b>	<b>Number of cases with case reports (percentage)</b>	<b>Number of male cases (percentage)</b>	<b>Number of female cases (percentage)</b>	<b>Number of other cases (percentage)</b>
0-11	421,578 (9.6%)	219,155 (11.1%)	200,305 (8.4%)	31 (13.8%)
12-19	331,093 (7.6%)	158,547 (8.0%)	170,896 (7.1%)	25 (11.2%)
20-29	753,130 (17.2%)	330,287 (16.8%)	419,232 (17.5%)	47 (21.0%)
30-39	725,898 (16.6%)	310,659 (15.8%)	412,820 (17.2%)	40 (17.9%)
40-49	637,734 (14.6%)	269,242 (13.7%)	366,699 (15.3%)	32 (14.3%)
50-59	552,779 (12.6%)	245,220 (12.4%)	306,094 (12.8%)	27 (12.1%)
60-69	367,653 (8.4%)	179,210 (9.1%)	187,555 (7.8%)	17 (7.6%)
70-79	253,297 (5.8%)	127,657 (6.5%)	125,173 (5.2%)	4 (1.8%)
80+	338,477 (7.7%)	131,386 (6.7%)	206,555 (8.6%)	1 (0.4%)

**Age and gender distribution of COVID-19 cases hospitalized in Canada as of May 16, 2023, 8 am ET (n=244,596)**

<b>Age group (years)</b>	<b>Number of cases with case reports (percentage)</b>	<b>Number of male cases (percentage)</b>	<b>Number of female cases (percentage)</b>	<b>Number of other cases (percentage)</b>
0-11	7,214 (2.9%)	4,046 (1.7%)	3,167 (1.3%)	1 (0.0%)
12-19	2,706 (1.1%)	1,150 (0.5%)	1,556 (0.6%)	0 (0.0%)
20-29	9,853 (4.0%)	3,538 (1.4%)	6,314 (2.6%)	1 (0.0%)
30-39	14,654 (6.0%)	5,819 (2.4%)	8,835 (3.6%)	0 (0.0%)
40-49	15,605 (6.4%)	8,622 (3.5%)	6,982 (2.9%)	1 (0.0%)
50-59	25,160 (10.3%)	14,732 (6.0%)	10,428 (4.3%)	0 (0.0%)
60-69	38,549 (15.8%)	22,218 (9.1%)	16,331 (6.7%)	0 (0.0%)
70-79	52,553 (21.5%)	29,595 (12.1%)	22,957 (9.4%)	1 (0.0%)
80+	78,302 (32.0%)	38,832 (15.9%)	39,470 (16.1%)	0 (0.0%)

**Age and gender distribution of COVID-19 cases admitted to ICU in Canada as of May 16, 2023, 8 am ET (n=35,545)**


<b>Age group (years)</b>	<b>Number of cases with case reports (percentage)</b>	<b>Number of male cases (percentage)</b>	<b>Number of female cases (percentage)</b>	<b>Number of other cases (percentage)</b>
0-11	745 (2.1%)	420 (1.2%)	325 (0.9%)	0 (0.0%)
12-19	305 (0.9%)	161 (0.5%)	144 (0.4%)	0 (0.0%)
20-29	1,068 (3.0%)	581 (1.6%)	487 (1.4%)	0 (0.0%)
30-39	2,017 (5.7%)	1,172 (3.3%)	845 (2.4%)	0 (0.0%)
40-49	3,228 (9.1%)	1,972 (5.5%)	1,256 (3.5%)	0 (0.0%)
50-59	6,046 (17.0%)	3,895 (11.0%)	2,151 (6.1%)	0 (0.0%)
60-69	8,831 (24.8%)	5,510 (15.5%)	3,321 (9.3%)	0 (0.0%)
70-79	8,531 (24.0%)	5,350 (15.1%)	3,181 (8.9%)	0 (0.0%)
80+	4,774 (13.4%)	2,811 (7.9%)	1,963 (5.5%)	0 (0.0%)

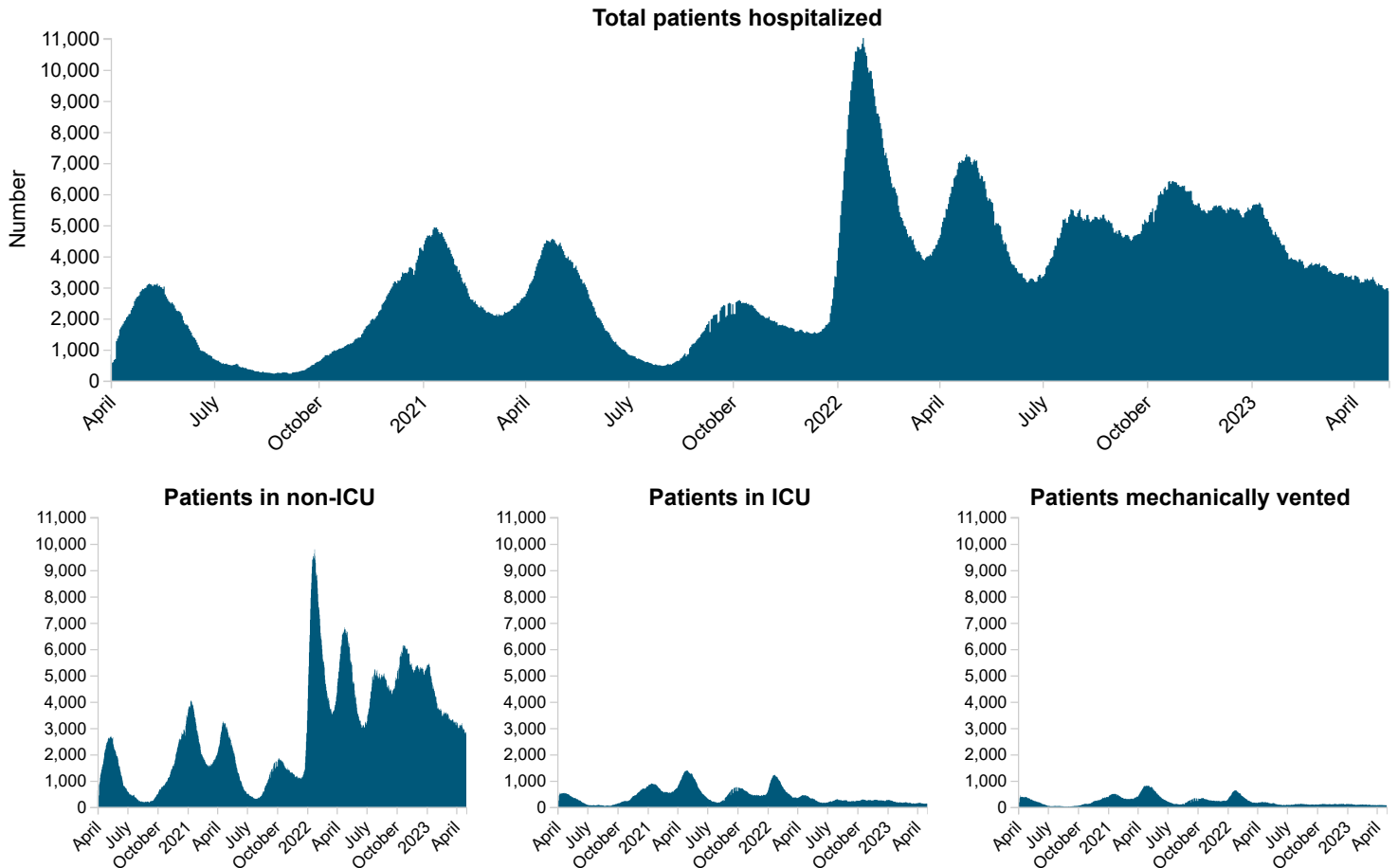
**Age and gender distribution of COVID-19 cases deceased in Canada as of May 16, 2023, 8 am ET (n=34,385)**

<b>Age group (years)</b>	<b>Number of cases with case reports (percentage)</b>	<b>Number of male cases (percentage)</b>	<b>Number of female cases (percentage)</b>	<b>Number of other cases (percentage)</b>
0-11	44 (0.1%)	20 (0.1%)	24 (0.1%)	0 (0.0%)
12-19	18 (0.1%)	10 (0.0%)	8 (0.0%)	0 (0.0%)
20-29	123 (0.4%)	73 (0.2%)	50 (0.1%)	0 (0.0%)
30-39	308 (0.9%)	193 (0.6%)	115 (0.3%)	0 (0.0%)
40-49	658 (1.9%)	407 (1.2%)	251 (0.7%)	0 (0.0%)
50-59	1,728 (5.0%)	1,049 (3.1%)	679 (2.0%)	0 (0.0%)
60-69	4,077 (11.9%)	2,557 (7.4%)	1,520 (4.4%)	0 (0.0%)
70-79	7,595 (22.1%)	4,692 (13.6%)	2,903 (8.4%)	0 (0.0%)
80+	19,834 (57.7%)	9,670 (28.1%)	10,164 (29.6%)	0 (0.00%)

# Hospital use

Figure 5. Daily number of hospital beds and ICU beds occupied by COVID-19 patients as of May 2, 2023

 Figure 5 was not updated for the week ending May 9, 2023, due to an issue with hospitalization data.



Between April 25, 2023 and May 2, 2023:

- the total number of **hospital beds** occupied by COVID-19 patients **decreased** from **3,072** to **2,881** beds.
- the number of **non-ICU beds** occupied by COVID-19 patients **decreased** from **2,944** to **2,753** beds.
- the number of **ICU beds** occupied by COVID-19 patients **remains unchanged** from **128** to **128** beds.
- the number of **COVID-19 patients who were mechanically vented** decreased from **70** to **69**.

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Trend data about the levels of COVID-19 in the wastewater.

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Number of COVID-19 vaccine doses that have been administered in Canada.

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# COVID-19 epidemiology update: Cases following vaccination

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## Changes to COVID-19 cases following vaccination reporting

We no longer report data on cases following vaccination. Historical data on cases following vaccination are still available on the [archived reports page](#). The most recent report was on October 14, 2022.

We no longer report data on cases following vaccination. We used to publish data on the vaccination status of COVID-19 cases, hospitalizations and deaths to help understand the impact of vaccination on COVID-19. We can no longer use this data for this purpose for the following reasons.

- A rapid increase in cases (starting in December 2021) led to changes in testing policies in order to preserve testing capacity. People at high risk of severe disease were now prioritized for laboratory testing. These same people were also [prioritized for COVID-19 boosters](#). This meant that the people being tested were more likely than the general population to have received boosters and to get severe illness. This leads to a data bias which could cause people to mistakenly conclude that more vaccines lead to severe disease.
- Most Canadians, whether vaccinated or not, have had COVID-19 at least once. This makes it difficult to separate the impacts of immunity from disease, immunity from vaccine and immunity from both. Learn more about [hybrid immunity](#).

There are other resources that provide analyses and evidence of the impact of vaccination on COVID-19 outcomes, including:

- [Provincial and territorial data](#)
- [COVID-19 vaccine chapter](#) of the *Canadian Immunization Guide*
- [Statements and guidance documents](#) published by the National Advisory Committee on Immunization

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# COVID-19 epidemiology update: Testing and variants

Last updated: 2023-05-16  PDF

Summary of COVID-19 cases, hospitalizations and deaths, cases following vaccination, testing and variants of concern across Canada and over time. Older versions of this report are available on the [archived reports page](#).

**Update schedule:** We update 'Key COVID-19 testing updates' and 'Testing in Canada' every Tuesday. We update 'COVID-19 variants in Canada' every Friday. This page was last updated on May 16, 2023, 9 am ET.

## Holiday update change

This page will next be updated Wednesday May 24, 2023, instead of Tuesday May 23, 2023.

## Key COVID-19 testing updates (Last data update May 16, 2023, 9 am ET)

Weekly tests reported

**35,349**

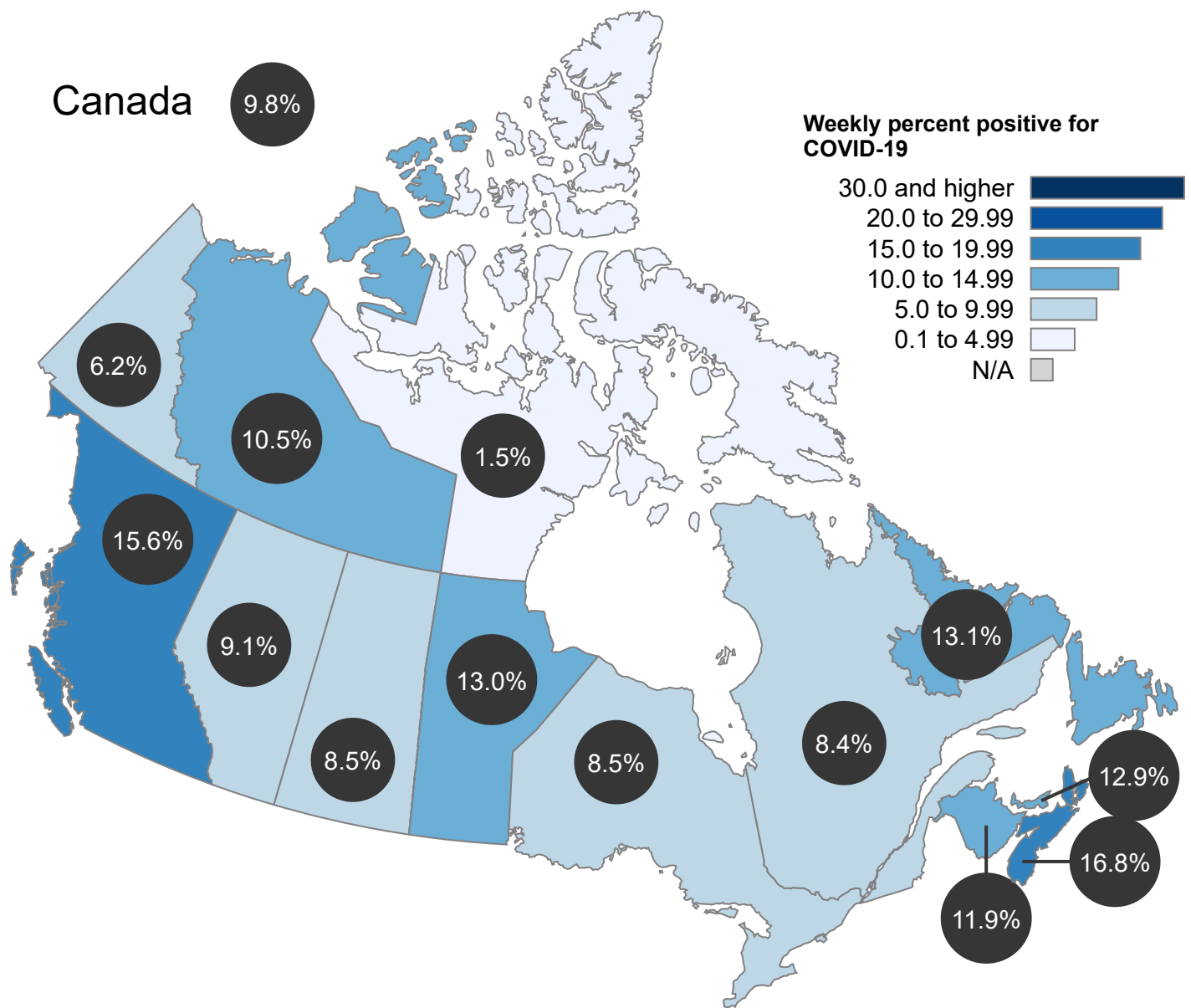
Weekly percent positivity

**9.8%**

- Laboratory testing information is based on data from the Respiratory Virus Detection Surveillance System (RVDSS) (see [Data notes](#)).
- Weekly percent positivity is calculated as the number of positive tests divided by the total number of tests performed during the epidemiological week.
- Laboratory data represents specimens received by labs up to May 6, 2023.
- Due to changes in COVID-19 testing policies in many jurisdictions since December 2021, case counts are under-estimated.

# Testing in Canada

Figure 1. **Weekly percent positive** for COVID-19 by select laboratories, by province or territory up to May 06, 2023 (Last data update May 16, 2023, 9 am ET)



The percentage of weekly positive tests up to May 06, 2023 in **Canada** was **9.8%**.

- This information is based on data from the Respiratory Virus Detection Surveillance System (RVDSS) (see Data notes).
- Weekly percent positivity is calculated as the number of positive tests divided by the total number of tests performed during the epidemiological week.
- Case counts are under-estimated due to changes in COVID-19 testing policies in many jurisdictions since December 2021.



- The data represent surveillance data available through RVDSS up to May 6, 2023. N.A represents missing data. We update data retroactively when we receive delayed data reports.

#### Testing in Canada for COVID-19

Location	Weekly tests reported	Weekly percent positive
British Columbia	3,123	15.6%
Alberta	3,720	9.1%
Saskatchewan	1,664	8.5%
Manitoba	1,350	13.0%
Ontario	8,231	8.5%
Quebec	14,317	8.4%
Newfoundland and Labrador	459	13.1%
New Brunswick	712	11.9%
Nova Scotia	1,425	16.8%
Prince Edward Island	147	12.9%
Yukon	48	6.2%
Northwest Territories	19	10.5%
Nunavut	134	1.5%
<b>Canada</b>	<b>35,349</b>	<b>9.8%</b>

On December 5, 2022, we changed surveillance systems for monitoring laboratory testing of SARS-CoV-2, the virus that causes COVID-19. We now use the Respiratory Virus Detection Surveillance System (RVDSS). Before December 5, we used the System for Analyzing Laboratory Test counts (SALT).

SALT was set up early in the COVID-19 pandemic to monitor daily SARS-CoV-2 testing volumes, and the percent of tests that were positive.

RVDSS is a longstanding surveillance system that collects data from laboratories across Canada on:

- the number of tests performed in participating laboratories and
- the number of positive tests for respiratory viruses

RVDSS mostly collects data from the tests of people who had COVID-19 symptoms or exposures, in order to assess trends in transmission via test positivity. RVDSS allows us to monitor COVID-19 in the context of other respiratory viruses.

The SALT and RVDSS data are not directly comparable.

- RVDSS data on COVID-19 is available starting the week of August 28, 2022 (Week 1 of the 2022/23 influenza season). SALT data are available starting February 1, 2020.

- Test positivity is higher in RVDSS than SALT. This is because tests reported to RVDSS are usually collected for clinical investigations, meaning people with symptoms or exposure to COVID-19, resulting in a higher proportion of positive tests.
- RVDSS presents all data by epidemiological week, while SALT presented daily data. [Historical SALT testing data is available.](#)

The number of laboratories participating in RVDSS can vary week to week and across provinces and territories. As a result, the numbers of tests performed cannot be directly compared between provinces and territories. The number of tests reported may be used to add context to interpret weekly percent positivity.

For information on other respiratory viruses circulating in Canada, and comparisons with COVID-19, please visit the [weekly RVDSS report.](#)

# COVID-19 variants in Canada

All viruses, including COVID-19, change over time. These changes are called mutations, and result in variants of the virus. Not all mutations are of concern. Most do not cause more severe illness. However, some mutations result in variants of concern or variants of interest.

A variant of concern has mutations that are significant to public health. Before a variant of interest is considered one of concern, scientists and public health professionals must determine if the mutations result in an actual change in the behaviour of the virus. For example, it might:

- spread more easily
- cause more severe illness
- require different treatments, or
- reduce vaccine effectiveness

The Public Health Agency of Canada (PHAC) works with provincial and territorial partners and the Canadian COVID-19 Genomics Network ([CanCOGeN](#)) to sequence a percentage of all positive COVID-19 test results. Sequencing reveals the genetic code of the virus, which tells us which variant is involved in a specific case of COVID-19. We report the proportion of COVID-19 variants in Canada every week.

We collect evidence to determine if new variants meet the definition for a variant of concern or a variant of interest. Many variants are being tracked across Canada and around the world.

Currently, Omicron and its sub-lineages are the primary variants of COVID-19 circulating in Canada. Evidence demonstrates that Omicron is more transmissible than previous variants of concern.

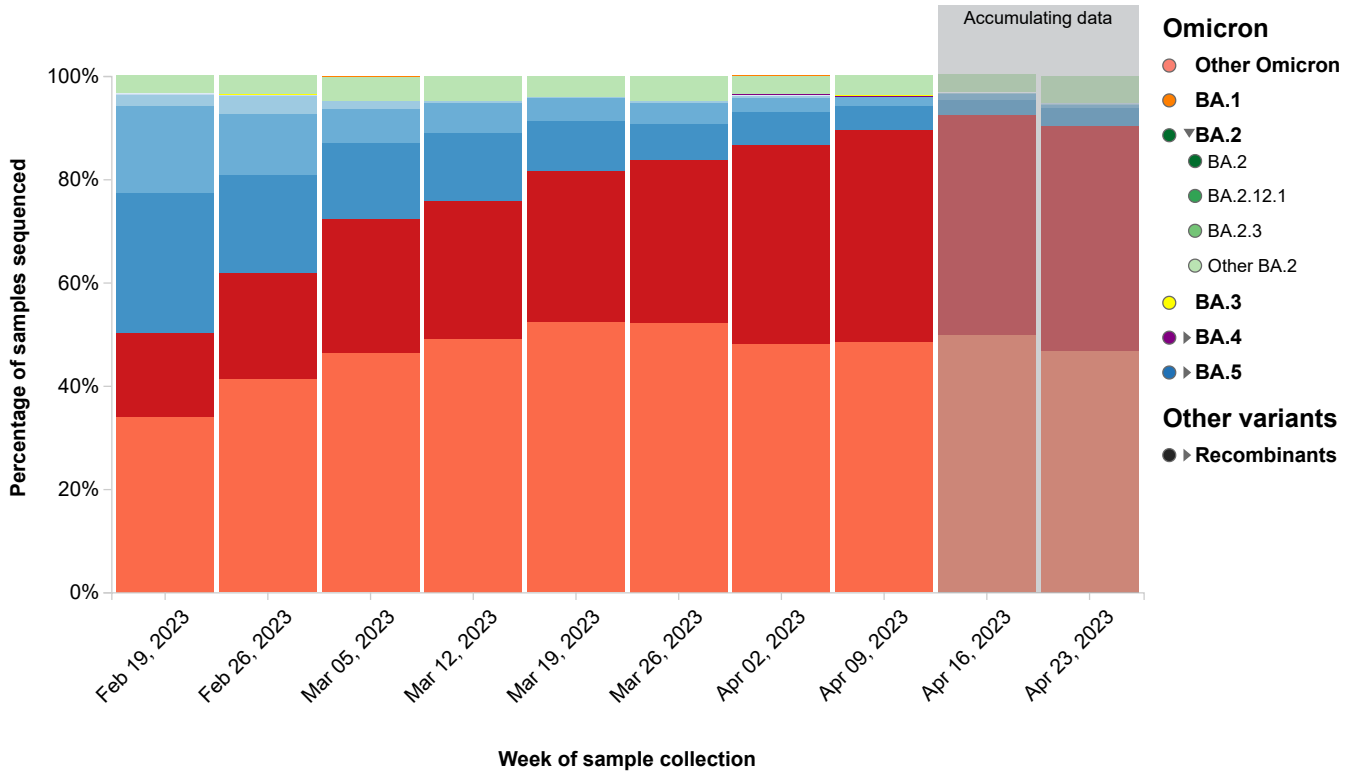
Previous variants of concern in Canada are as follows:

- Alpha
- Beta
- Gamma
- Delta

Staying up to date with COVID-19 vaccination continues to be one of the most effective ways to protect against serious illness, hospitalization, and death from COVID-19. Canada now has access to two updated bivalent vaccines that are expected to provide better protection against the Omicron variant of concern.

**Figure 2. Weekly variant breakdown** Updated: May 12, 2023, 4 pm EDT

**i** The graphic shows the percentage mix of COVID-19 variants detected in Canada through whole genome sequencing, by week of sample collection. You can see the numbers for each date by hovering over, tabbing to, or long-pressing any of the bars. To see a specific variant or variant grouping, click or press return. Repeat to restore the complete graph. Sublineages or offshoots for some variants can be revealed or hidden by clicking on the name of the variant in the legend.



This information is based on whole genome sequencing from surveillance testing in all provinces and territories. In addition to sequencing done by the National Microbiology Laboratory in Winnipeg, data is included from provincial and territorial laboratories.

Sequencing takes from 1 to 3 weeks to complete, so the proportions for recent weeks may change as more data are added. Surveillance in each province or territory is organized and prioritized according to local needs and may change from time to time. Because of differences in local sampling and reporting, the percentages illustrate trends rather than precise measurements.

## Weekly variant breakdown

Percentage of COVID-19 cases identified through whole genome sequencing, presented by variant and by week of sample collection.

### Percentage of COVID-19 cases identified through whole genome sequencing, presented by variant and by week of sample collection.

Variant Grouping	Feb 19, 2023 (n=2,811)	Feb 26, 2023 (n=2,467)	Mar 05, 2023 (n=2,679)	Mar 12, 2023 (n=2,683)	Mar 19, 2023 (n=2,588)	Mar 26, 2023 (n=2,394)	Apr 02, 2023 (n=2,046)	Apr 09, 2023 (n=2,137)	Apr 16, 2023 (n=1,891)
<b>Omicron</b>	<b>49.7%</b>	<b>38.2%</b>	<b>27.7%</b>	<b>24.2%</b>	<b>18.3%</b>	<b>16.2%</b>	<b>13.5%</b>	<b>10.4%</b>	<b>7.7%</b>
Other Omicron	-	-	-	-	0.0%	-	-	-	-
BA.1	-	0.0%	0.1%	-	-	-	0.1%	-	-
BA.2	3.3%	3.5%	4.6%	4.7%	3.9%	4.7%	3.5%	3.7%	3.3%
BA.2	-	0.0%	0.0%	-	-	-	-	-	-
BA.2.12.1	-	-	0.0%	-	0.0%	0.0%	-	-	-
BA.2.3	-	-	-	-	-	-	0.1%	-	-
Other BA.2	3.3%	3.5%	4.6%	4.7%	3.9%	4.7%	3.4%	3.7%	3.3%
BA.3	0.0%	0.1%	0.0%	-	0.0%	-	0.1%	0.1%	-
BA.4	0.0%	0.0%	-	-	-	-	0.2%	0.2%	-
BA.4	-	-	-	-	-	-	0.1%	0.2%	-
BA.4.6	-	-	-	-	-	-	0.1%	-	-
Other BA.4	0.0%	0.0%	-	-	-	-	-	-	-
BA.5	46.4%	34.6%	23.0%	19.5%	14.4%	11.5%	9.6%	6.4%	4.4%
BA.5.1	-	-	-	-	-	-	-	-	0.1%
BA.5.2	0.1%	-	0.0%	-	-	-	0.1%	-	-
BA.5.2.1	0.2%	0.2%	0.1%	0.1%	0.0%	0.0%	-	-	0.1%
BQ.1	2.3%	3.5%	1.4%	0.4%	0.2%	0.5%	0.5%	0.1%	0.2%
BQ.1.1	16.8%	11.8%	6.6%	5.8%	4.6%	3.9%	2.7%	1.6%	1.0%
Other BA.5	27.0%	19.1%	14.9%	13.2%	9.6%	7.1%	6.3%	4.7%	3.0%
<b>Other variants</b>	<b>50.3%</b>	<b>61.8%</b>	<b>72.2%</b>	<b>75.8%</b>	<b>81.6%</b>	<b>83.7%</b>	<b>86.7%</b>	<b>89.6%</b>	<b>92.5%</b>
Recombinants	50.3%	61.8%	72.2%	75.8%	81.6%	83.7%	86.7%	89.6%	92.5%
Other Recombinants	16.4%	20.4%	25.8%	26.6%	29.2%	31.4%	38.6%	41.2%	42.6%

<b>Variant Grouping</b>	<b>Feb 19, 2023</b> (n=2,811)	<b>Feb 26, 2023</b> (n=2,467)	<b>Mar 05, 2023</b> (n=2,679)	<b>Mar 12, 2023</b> (n=2,683)	<b>Mar 19, 2023</b> (n=2,588)	<b>Mar 26, 2023</b> (n=2,394)	<b>Apr 02, 2023</b> (n=2,046)	<b>Apr 09, 2023</b> (n=2,137)	<b>Apr 16, 2023</b> (n=1,891)
XBB.1.5	33.9%	41.4%	46.4%	49.2%	52.4%	52.3%	48.1%	48.4%	49.9%

[Downloadable data \(in .csv format\).](#)

**Note:** The shaded columns on the right represent a period of accumulating data.

### Contributing laboratories:

- Saskatchewan - Roy Romanow Provincial Laboratory (RRPL)
- Public Health Ontario (PHO)
- Nova Scotia Health Authority
- Newfoundland and Labrador - Eastern Health
- New Brunswick - Vitalité Health Network
- Manitoba Cadham Provincial Laboratory
- Laboratoire de santé publique du Québec (LSPQ)
- BCCDC Public Health Laboratory
- Alberta Precision Labs (APL)
- National Microbiology Laboratory (NML) - supplemental sequencing for all provinces and territories

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Trend data about the levels of COVID-19 in the wastewater.

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# COVID-19 epidemiology update: Outbreaks

Last updated: 2023-05-16  PDF

Summary of COVID-19 cases, hospitalizations and deaths, cases following vaccination, testing and variants of concern across Canada and over time. Older versions of this report are available on the [archived reports page](#).

**Update schedule:** We update this page every Tuesday. This page was last updated on May 16, 2023, 9 am ET.

## Holiday update change

This page will next be updated Wednesday May 24, 2023, instead of Tuesday May 23, 2023.

The Public Health Agency of Canada (PHAC) regularly receives COVID-19 outbreak data from health authorities in the provinces and territories. This page summarizes outbreaks in Canada by setting and by size, and is updated weekly. Data may change retroactively if there are changes to:

- provincial or territorial COVID-19 testing strategies
- provincial or territorial reporting of outbreaks
- data collection methods, or
- outbreak management methods

Outbreak definitions vary across the country, but we use a national outbreak definition for all outbreaks. An outbreak is 2 or more confirmed cases of COVID-19 which are epidemiologically linked to a specific setting or location. It does **not** include:

- households (since household cases may not be declared or managed as an outbreak if the risk of transmission is contained)
- cases that are geographically clustered (such as in a region, city, or town) but not epidemiologically linked
- cases attributed to community transmission

In December 2021, the highly contagious Omicron variant caused a rapid increase in cases. This surge affected public health and testing capacity, which led to a change in testing strategies and limited contact tracing. This made it harder for provinces and territories to link cases. As a result, outbreaks were undercounted. The provinces and territories still consistently report cases of COVID-19 in high-priority settings. However, most no longer report cases in community settings, such as schools, recreational facilities and stores.

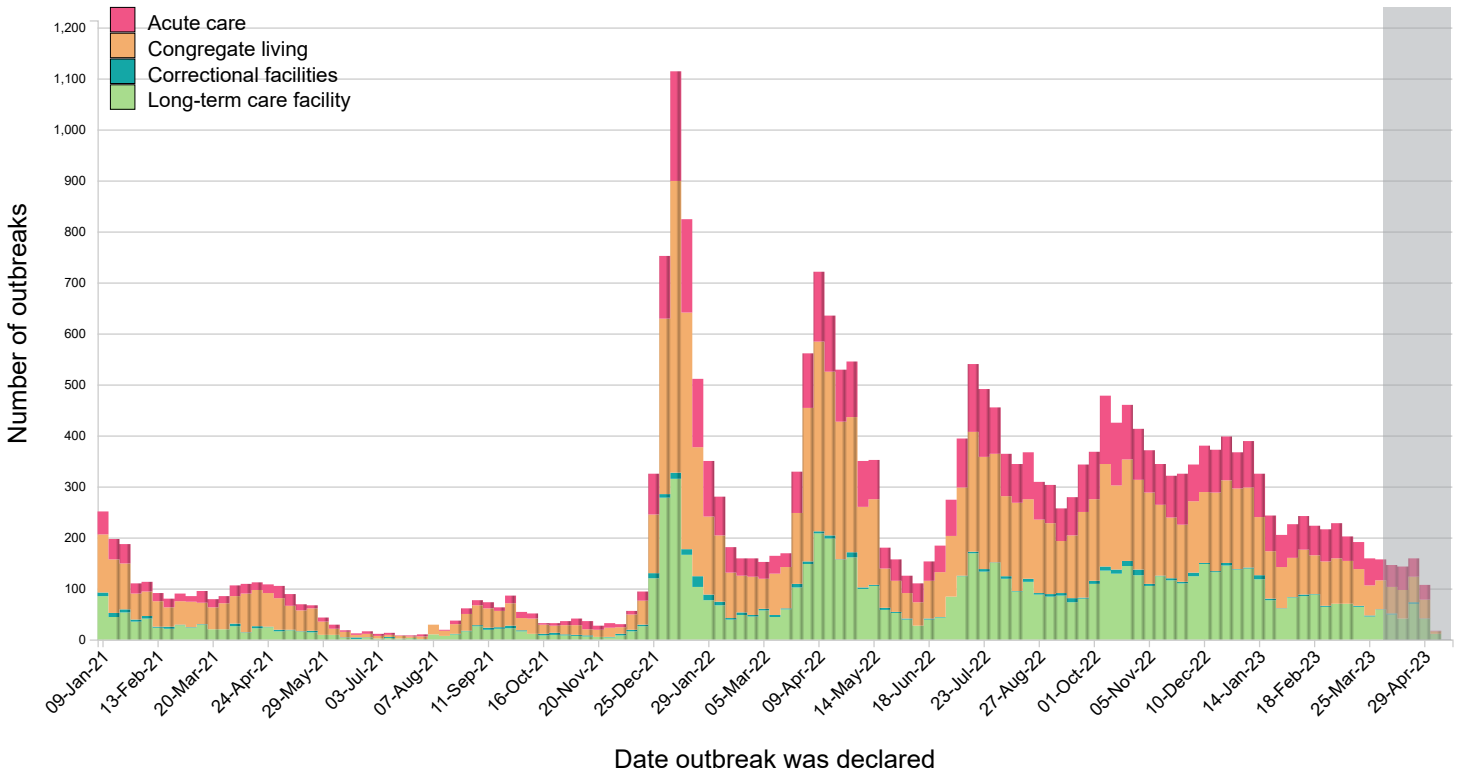


- **Acute care:** Hospital or similar setting where patients receive short-term treatment for an injury or severe episode of illness, an urgent medical condition, or during recovery from surgery. Acute care settings include:
  - hospitals
  - emergency departments
  - urgent care
  - transitional care
  - convalescent care
  - short-term inpatient rehabilitation centres
- **Congregate living** includes:
  - retirement residences
  - assisted/supportive living
  - group homes
  - residential treatment centres
  - transition centres
  - shelters
  - student dormitories
- **Correctional facilities** include:
  - provincial jails and prisons
  - federal jails and prisons
  - youth correction centres
- **Long-term care facilities** include both public and private facilities that provide living accommodations for people who require full-time supervised care, including professional health services, personal care, and other services (meals, laundry, cleaning)

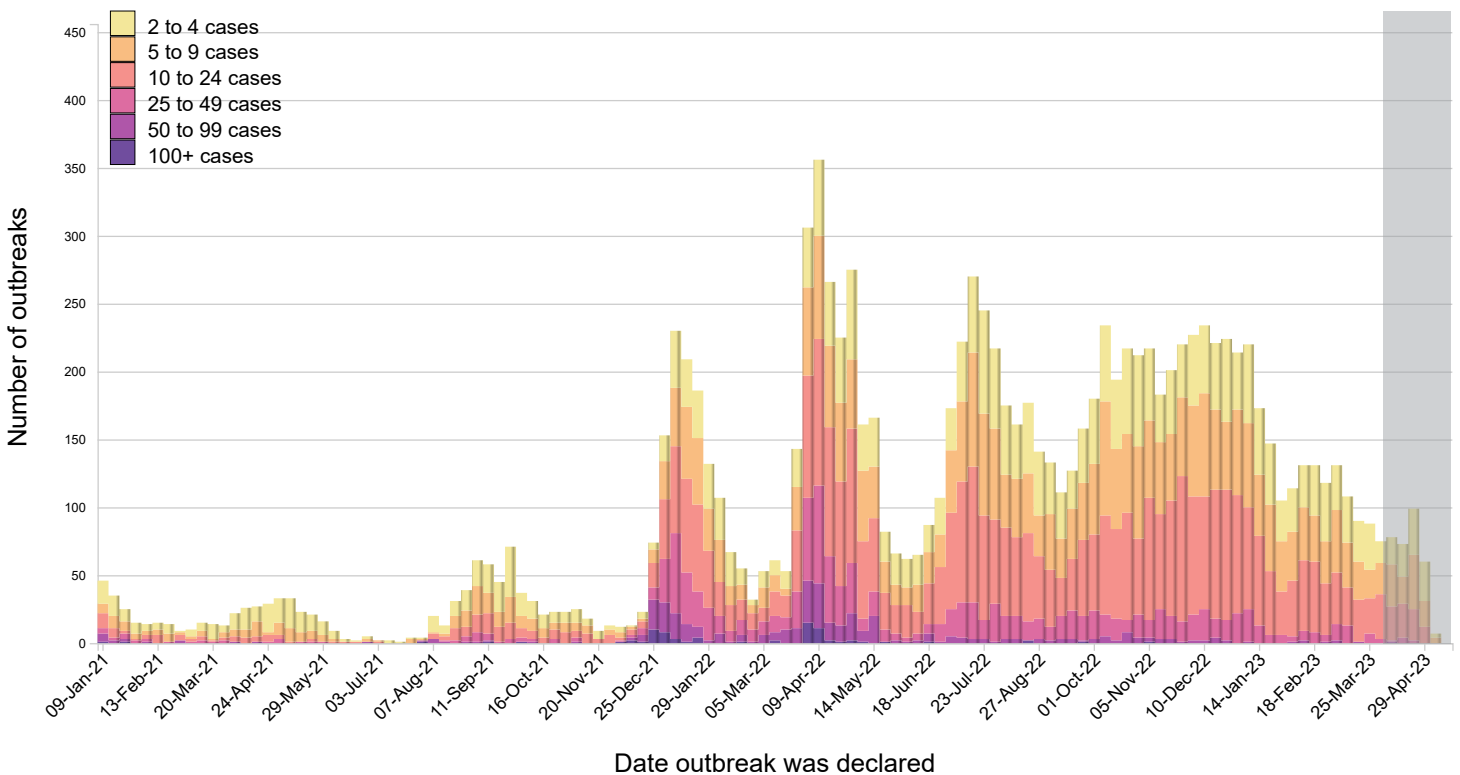
### **Showing outbreaks data from 2021-01-09 to 2023-05-06.**

The shaded area on the far right of Figure 1 and Figure 2 represents a period of accumulating data. This is the period of time (1 to 2 weeks) before the latest outbreaks are reported to PHAC. This delay is a result of the time required to identify cases and declare outbreaks. We update this figure as more data becomes available.

**Figure 1. Weekly number of outbreaks by setting**



**Figure 2. Weekly number of outbreaks by outbreak size for**



Between January 2, 2022 and May 6, 2023:

- Acute care accounted for 26% of outbreaks. The median outbreak size was 7 cases per outbreak.

- Congregate living accounted for 39% of outbreaks. The median outbreak size was 10 cases per outbreak.
- Correctional facilities accounted for 1% of outbreaks. Median outbreak size was 8 cases per outbreak.
- Long-term care facilities accounted for 34% of outbreaks. Median outbreak size was 11 cases per outbreak.

**Table 1. Summary statistics of COVID-19 outbreak size by setting, all time v**

Setting	Median case count	Average case count	Number of outbreaks
Acute care	7	9	3,119
Congregate living	10	16	4,590
Correctional facilities	8	23	169
Long-term care facility	11	16	3,971

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