



COVID-19 epidemiology update

Summary of COVID-19 cases, hospitalizations and deaths, testing and variants of concern across Canada and over time.

Current update

Updated:

This summary of COVID-19 cases across Canada contains detailed data about the spread of the virus over time and in different regions of the country. Includes breakdowns by age and sex or gender. Provides an overview of testing, variants of concern, cases following vaccination and severe illness and outcomes.

Update schedule: We update all sections of this page every Friday, except for 'Cases following vaccination', which we update on Tuesdays.

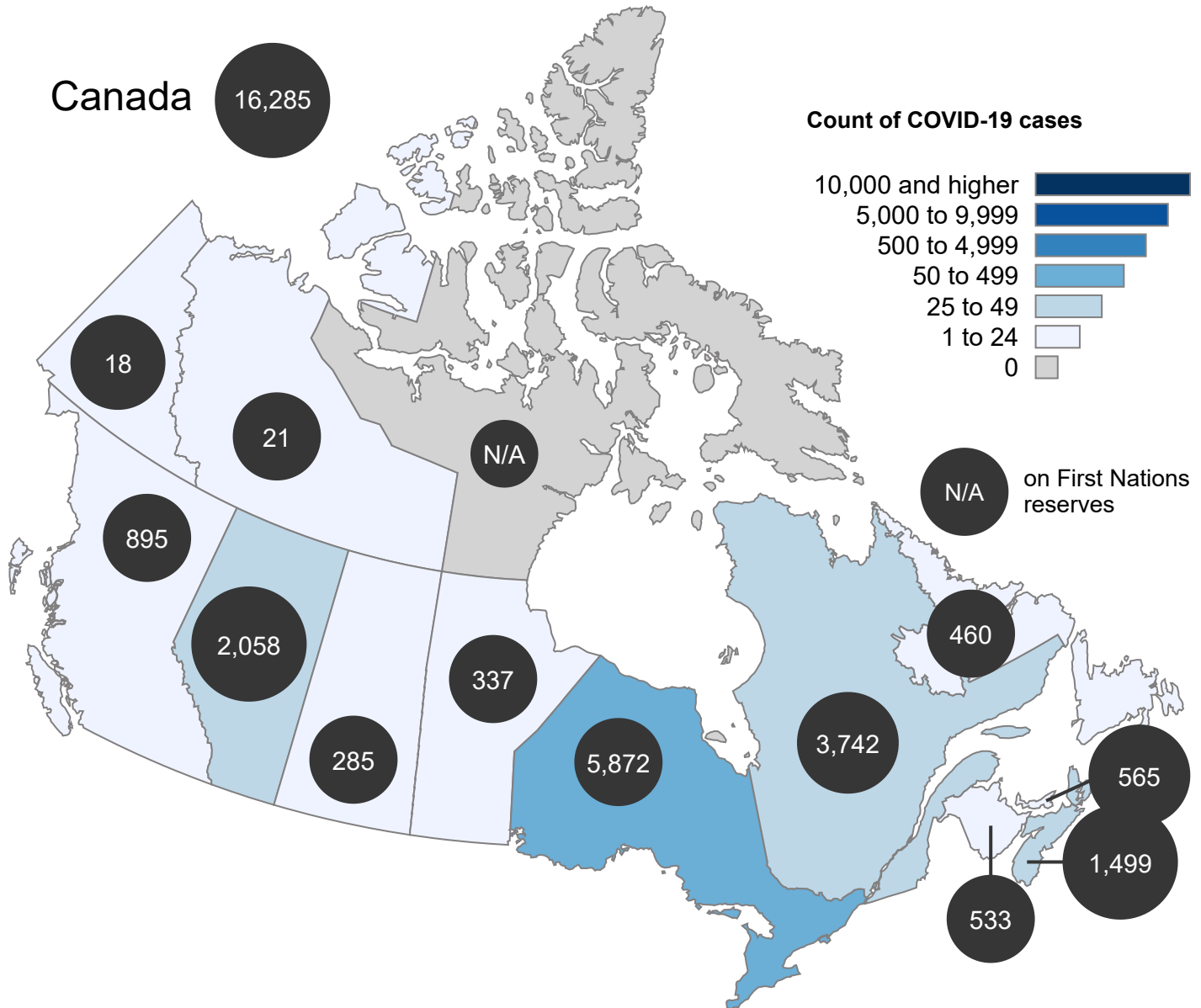
Key COVID-19 updates (Last data update)

Weekly change in cases {Weekly cases}	Total cases {Total cases}	Weekly change in deaths {Weekly deaths}	Total deaths {Total deaths}
Total tests performed {Total tests performed}	Daily percent positive (last 7 days) {Daily percent positive (last 7 days)}%	Daily tests per 100,000 population (last 7 days) {Daily tests per 100,000 population (last 7 days)}	

Current situation

Figure 1a. **Count** of **cases (latest week)** of COVID-19, **province/territory** for the week of May 29 to June 04, 2022

(Last data update June 10, 2022, 7 am EST)



The count of cases of COVID-19 for the week of May 29 to June 04, 2022 in **Canada** was **16,285**.

a. This information is based on data our provincial and territorial partners published on cases, deaths, and testing. The numbers provided reflect cases, deaths and tests up to . 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.

- b. Due to changes in COVID-19 testing policies in many jurisdictions since December 2021, case counts are under-estimated.
- c. Out of all people tested, 76 were repatriated travellers, of whom 13 tested positive.
- d. Starting April 7, 2022, British Columbia reports all deaths within 30 days of a positive COVID-19 test, regardless of the cause of death. As a result, deaths are now over-estimated for BC and should not be directly compared to other jurisdictions or to earlier data from BC.
- e. As of April 11, 2022, Nunavut 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)		Total tests performed	Moving average daily tests performed (latest week)		Moving average daily percent positivity (latest week)
	Count	Rate*	Count	Rate*	Count	Rate*	Count	Rate*	Count	Rate*	Count	Rate*	Count	Count	Rate*	Percent

- a. This information is based on data our provincial and territorial partners published on cases, deaths, and testing. The numbers provided reflect cases, deaths and tests up to . 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.
- b. Starting April 7, 2022, British Columbia reports all deaths within 30 days of a positive COVID-19 test, regardless of the cause of death. As a result, deaths are now over-estimated for BC and should not be directly compared to other jurisdictions or to earlier data from BC.
- c. As of April 11, 2022, Nunavut no longer publishes regular COVID-19 updates.
- d. Out of all people tested, 76 were repatriated travellers, of whom 13 tested positive.
- e. * Rate per 100,000 population
- f. Out of the total number of people tested, 76 were repatriated travellers, of which 13 were cases.

Figure 1b. of of
COVID-19 in Canada (Last data update June 10, 2022, 7 am EST)

i The figures below show cases over time. The range of dates (January 31st, 2020 - present date) is the same for each figure. This allows you to compare the provinces and territories on the same timescale.

- a. [Downloadable data \(in .csv format\)](#).
- b. Due to changes in COVID-19 testing policies in many jurisdictions starting in late December 2021, case counts will under estimate the total burden of disease.
- c. Out of the total number of people tested, 76 were repatriated travellers, of which 13 were cases.
- d. As of April 11, 2022, Nunavut no longer publishes regular COVID-19 updates.
- e. Starting April 7, 2022, British Columbia reports all deaths within 30 days of a positive COVID-19 test, regardless of the cause of death. As a result, deaths are now over-estimated for BC and should not be directly compared to other jurisdictions or to earlier data from BC.

National overview

There have been **{Num tests}** COVID-19 tests performed in Canada or **1,620,777 tests per 1 million people**.

Table 1. Weekly* change in the number of cases, deaths and tests performed, by province or territory, (Last data update June 10, 2022, 7 am EST)

Location	Cases	Deaths	Tests performed
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- a. * Weekly change in cases, deaths and tests performed reflect the changes in the case and death counts between the end of the latest week and the end of the previous week. Data are updated on an ongoing basis. The current report reflects data most recently received by PHAC at the time of the last update and are subject to change.
- b. N/A means that no update was provided by the province or territory for the latest week.
- c. Due to changes in COVID-19 testing policies in many jurisdictions since December 2021, case counts are under-estimated.
- d. Starting April 7, 2022, British Columbia reports all deaths within 30 days of a positive COVID-19 test, regardless of the cause of death. As a result, deaths are now over-estimated for BC and should not be directly compared to other jurisdictions or to earlier data from BC.

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

There are several variants of interest that have mutations similar to variants of concern, but we don't yet know if they pose a higher risk to public health.

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. Variants of concern now represent a majority of COVID-19 cases in Canada.

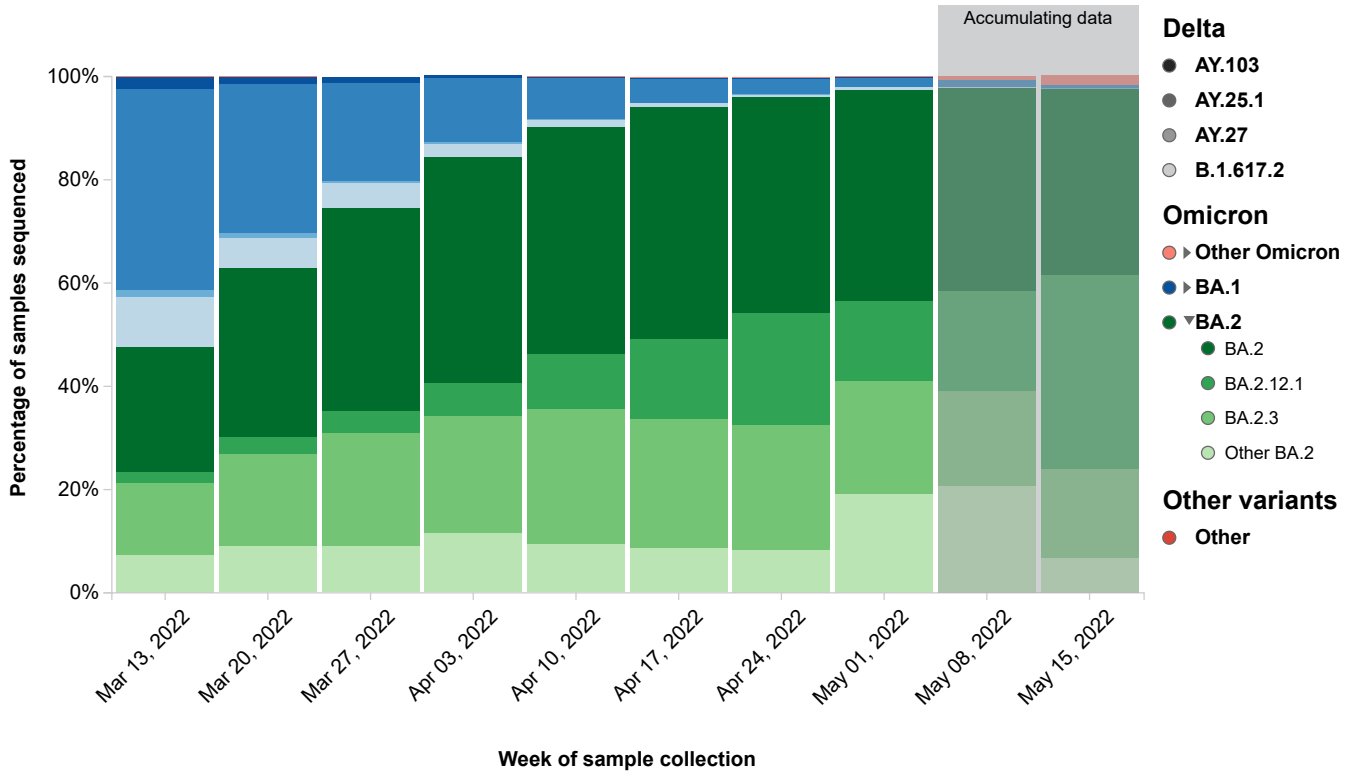
Current variants of concern in Canada include:

- Alpha (B.1.1.7)
- Beta (B.1.351)
- Gamma (P.1)
- Delta (B.1.617.2)
- Omicron (B.1.1.529)

New variants will continue to appear. We must remain vigilant and take all available measures to limit spread.

Figure 2. Weekly variant breakdown Updated: June 03, 2022, 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.

Variant Grouping	Mar 13, 2022 (n=4,110)	Mar 20, 2022 (n=4,915)	Mar 27, 2022 (n=4,998)	Apr 03, 2022 (n=5,187)	Apr 10, 2022 (n=4,474)	Apr 17, 2022 (n=4,837)	Apr 24, 2022 (n=4,624)	May 01, 2022 (n=3,845)	May 08, 2022 (n=3,221)	May 2022 (n=1,
Delta	-	-	0.0%	-	-	0.0%	0.0%	-	-	-
AY.103	-	-	-	-	-	0.0%	-	-	-	-
AY.25.1	-	-	0.0%	-	-	-	0.0%	-	-	-
AY.27	-	-	-	-	-	-	0.0%	-	-	-
B.1.617.2	-	-	0.0%	-	-	-	-	-	-	-
Omicron	99.9%	100.0%	99.7%	100.0%	100.0%	99.8%	99.8%	100.0%	100.0%	100
Other Omicron	0.1%	0.1%	0.0%	0.0%	0.1%	0.2%	0.2%	0.2%	0.8%	1.7%
BA.3	0.1%	0.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%
BA.3.1	-	-	0.0%	-	-	-	-	-	-	-
BA.4	-	-	-	0.0%	-	0.1%	0.1%	0.1%	0.5%	0.7%
BA.5	-	-	-	-	0.0%	-	0.0%	0.0%	0.2%	0.7%
BA.5.1	-	-	-	-	-	-	-	0.0%	-	0.1%
BA.1	52.3%	37.2%	25.2%	15.7%	9.7%	5.6%	3.6%	2.5%	1.4%	0.8%
BA.1	2.2%	1.4%	1.0%	0.4%	0.3%	0.2%	0.2%	0.1%	0.0%	-
BA.1.1	39.1%	29.0%	19.0%	12.4%	7.9%	4.6%	2.9%	1.8%	1.2%	0.6%
BA.1.17.2	1.2%	0.8%	0.4%	0.3%	0.2%	0.1%	0.1%	0.1%	0.0%	0.1%
Other BA.1	9.8%	6.0%	4.8%	2.6%	1.3%	0.7%	0.4%	0.5%	0.2%	0.1%
BA.2	47.5%	62.7%	74.5%	84.3%	90.2%	94.0%	96.0%	97.3%	97.8%	97.5%
BA.2	24.2%	32.7%	39.3%	43.6%	44.0%	44.8%	41.9%	40.8%	39.4%	36.0%
BA.2.12.1	2.1%	3.2%	4.3%	6.5%	10.6%	15.5%	21.7%	15.5%	19.3%	37.6%
BA.2.3	14.0%	17.8%	22.0%	22.8%	26.2%	25.0%	24.2%	22.0%	18.5%	17.3%
Other BA.2	7.2%	9.0%	8.9%	11.4%	9.4%	8.7%	8.2%	19.0%	20.6%	6.6%
Other variants	-	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	-	-
Other	-	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	-	-

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)
- 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

Detailed case information

The tables and figures below reflect 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.

Updated: June 25, 2021, 9 am EST

Epidemic curve

As of June 25, 2021, 9 am EST, PHAC has received detailed case report data on cases.

The shaded area on the far right of Figure 3 represents a period of accumulating data. This is the period of time (1 to 2 weeks) before the latest cases are reported to PHAC. This delay is a result of the time required to seek health care, get tested and receive results. It also takes time for public health authorities to gather information on cases. We update this information as it becomes available.

Figure 3. COVID-19 cases (n= ¹) in Canada by date ² as of (total cases)

Figure 3. COVID-19 cases (n= 1) in Canada by date 2 as of (by age - 10 year groups)

Figure 3. COVID-19 cases (n= 1) in Canada by date 2 as of (by age - 20 year groups)

Demographics

We have detailed case report data from 99,853 cases. We know the age of patients in 99.78% of cases, and both age and gender in 99.98% of cases.

Of the cases reported in Canada so far, {Percent Gender} were {Gender} and {Percent of Over 60} were between 20 and 39 years old (Figure 4).

Figure 4. distribution of COVID-19 cases (n= ¹) in Canada as of ³

Age by gender ³ distribution of COVID-19 cases (n= ¹) in Canada,

Age group (years)	Number of cases with case reports (percentage)	Number of male cases (percentage)	Number of female cases (percentage)	Number of other cases (percentage)
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Cases following vaccination

Data extracted on June 03, 2022 for cases from December 14, 2020 up until May 22, 2022.

i Changes to update schedule

We're adjusting our update schedule to reflect recent changes in how often this data is reported to us.

- Cases following vaccination (rate ratio indicators) will be updated the week of May 23, 2022, and every 4 weeks after that.
- We'll continue our weekly updates of case counts and distributions of cases following vaccination.

While the COVID-19 vaccines are highly effective at preventing severe outcomes, a percentage of the population who are vaccinated may become infected with COVID-19 if they are exposed to the virus that causes it. This means that even with high vaccine effectiveness, a percentage of people who are vaccinated against COVID-19 will still get sick and some may be hospitalized or die.

It is also possible that a person could be infected just before or just after vaccination and still get sick. It typically takes about two weeks for the body to build protection after vaccination, so a person could get sick if the vaccine has not had enough time to provide protection.

As the majority of Canadians are now vaccinated, counts will inherently be higher within this population, compared to the unvaccinated population. However, risk among this population may be lower, despite higher case counts.

Due to the rapid increase in cases starting December 2021, delays in data entry, and changes in COVID-19 testing policies in many jurisdictions, case counts will under estimate the total burden of disease, and may over-represent people at risk of severe disease. Data should be interpreted with caution.

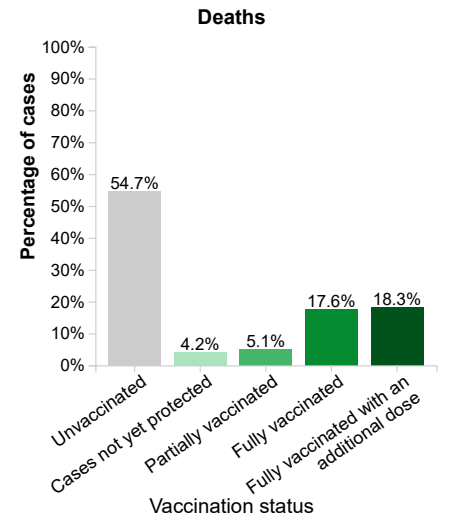
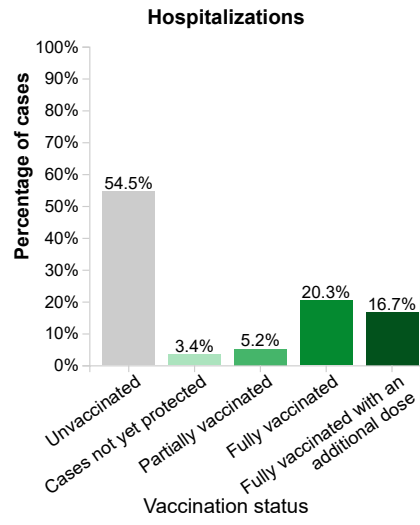
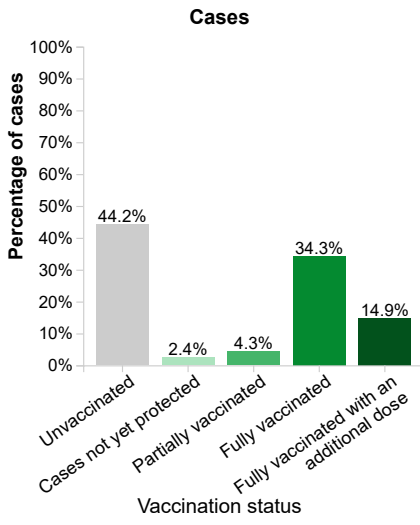
Cases reported since the start of the vaccination campaign, as of May 22, 2022

Since the start of the vaccination campaign on December 14, 2020, PHAC received case-level vaccine history data for 72.4% (n=2,187,949) of COVID-19 cases aged 5 years or older.

Of these cases:

- 966,280 (44.2%) were unvaccinated at the time of their episode date
- 51,748 (2.4%) were not yet protected by the vaccine
- 94,253 (4.3%) were only partially vaccinated
- 749,524 (34.3%) were fully vaccinated
- 326,144 (14.9%) were fully vaccinated with an additional dose

Figure 5. **Distribution** of confirmed COVID-19 cases reported to PHAC by vaccination status as of May 22, 2022



Characteristics and severe outcomes associated unvaccinated, partially vaccinated and fully vaccinated confirmed cases reported to PHAC, as of May 22, 2022

Status	Cases	Hospitalizations	Deaths
Unvaccinated	44.2%	54.5%	54.7%
Cases not yet protected	2.4%	3.4%	4.2%
Partially vaccinated	4.3%	5.2%	5.1%
Fully vaccinated	34.3%	20.3%	17.6%
Fully vaccinated with an additional dose	14.9%	16.7%	18.3%

Among the twelve jurisdictions that have reported case-level vaccine history data to PHAC, a total of 25.1 million people have received at least one dose of the COVID-19 vaccine as of May 22, 2022.

Of these people:

- 25.1 million achieved partial vaccination status, of which 94,253 (0.38%) were diagnosed with COVID-19 while partially vaccinated
- 24.0 million achieved full vaccination status, of which 749,524 (3.12%) were diagnosed with COVID-19 while fully vaccinated
- 14.0 million achieved full vaccination with an additional dose status, of which 326,144 (2.34%) were diagnosed with COVID-19 while fully vaccinated with an additional dose

Based on detailed case information reported to PHAC from provinces and territories, cases following vaccination were reported more frequently among females (Table 2). This may be the result of higher vaccination coverage in Canada among females due to the prioritization of healthcare workers as part of the vaccine rollout.

Table 2. Characteristics and severe outcomes among unvaccinated, partially vaccinated, fully vaccinated, and fully vaccinated with additional dose confirmed cases reported to PHAC, as of May 22, 2022

		Unvaccinated (n=966,280)	Cases not yet protected (n=51,748)	Partially vaccinated (n=94,253)	Fully vaccinated (n=749,524)	Fully vaccinated with an additional dose (n=326,144)	Total cases (n=2,187,949)
Gender*	Male	491,215 (48.5%)	25,344 (2.5%)	45,996 (4.5%)	331,202 (32.7%)	119,992 (11.8%)	1,013,749 (100%)

		Unvaccinated (n=966,280)	Cases not yet protected (n=51,748)	Partially vaccinated (n=94,253)	Fully vaccinated (n=749,524)	Fully vaccinated with an additional dose (n=326,144)	Total cases (n=2,187,949)
	Female	471,085 (40.4%)	26,328 (2.3%)	48,060 (4.1%)	416,230 (35.7%)	205,259 (17.6%)	1,166,962 (100%)
Hospitalizations		52,774 (54.5%)	3,270 (3.4%)	4,992 (5.2%)	19,680 (20.3%)	16,176 (16.7%)	96,892 (100%)
Deaths		10,284 (54.7%)	798 (4.2%)	955 (5.1%)	3,312 (17.6%)	3,438 (18.3%)	18,787 (100%)

Source: Detailed case information received by PHAC from provinces and territories, since December 14, 2020

Note:

- Twelve of thirteen provinces and territories have reported case-level vaccine history data to PHAC as part of the national COVID-19 dataset.
 - Eight of these provinces and territories have reported data on cases fully vaccinated with an additional dose. In provinces and territories that have not yet reported additional dose data, cases are classified as fully vaccinated if they are fully vaccinated or fully vaccinated with an additional dose.
- A data cut-off of May 22, 2022 was used to account for routine reporting delays associated with vaccine history information.
- Data on cases fully vaccinated with an additional dose are limited to the eligible population aged 12 years or older.
- Beginning February 6, 2022, cases following vaccination analyses are updated with data up to and including the previous Sunday to align with changes in vaccination coverage reporting. To account for this change in reporting, data for the week ending January 30, 2022 contains an extra day of case-level vaccine history data for most provinces and territories. This change will not be implemented retroactively.
- *Where available, gender data was used; when gender data was unavailable, sex data was used. Cases with missing gender and sex data were excluded from the gender analysis. Reliable data on gender diverse respondents are unavailable due to small counts.

Individuals fully vaccinated and fully vaccinated with an additional dose who were diagnosed with COVID-19 were significantly protected from severe outcomes. From April 11, 2022 to May 08, 2022, compared to fully vaccinated cases, unvaccinated cases were 3 times more likely to be hospitalized and 5 times more likely to die as a result of their illness. Compared to cases fully vaccinated with an additional dose, unvaccinated cases were 5 times more likely to be hospitalized and 7 times more likely to die as a result of their illness, during this same 4-week period (Table 3).

Table 3. Risk of severe outcomes among unvaccinated cases, compared to fully vaccinated cases and cases fully vaccinated with an additional dose, April 11, 2022 to May 08, 2022

Severe Outcome	4-week age standardized* rate ratio, unvaccinated compared to fully vaccinated	4-week age standardized* rate ratio, unvaccinated compared to fully vaccinated with an additional dose
Hospitalizations	3	5
Deaths	5	7

*Age-standardized using July 2021 Canadian population estimates

Source: Detailed case information received by PHAC from provinces and territories

Note:

- Rate ratio calculations were based on data from 8 provinces and territories that have reported complete case-level vaccine history data to PHAC during the 4-week period of analysis.

Data for this analysis is extracted from the COVID-19 national data set, which contains detailed case-level information received by PHAC from all provinces and territories. Note that a data cut-off of May 22, 2022 was used to account for any reporting delays associated with vaccine history information. There are currently twelve jurisdictions reporting case-level vaccine history data to PHAC as part of the national COVID-19 dataset.

PHAC monitors cases following vaccination using the following categories:

Unvaccinated cases: include those who were unvaccinated at the time of their episode date.

Cases not yet protected from vaccination include those whose episode date occurred less than 14 days after their first dose of the vaccine.

Partially vaccinated cases include those whose episode date occurred 14 days or more after their first vaccine dose or less than 14 days after their second dose of the vaccine.

Fully vaccinated cases include those whose episode date occurred 14 days or more after receipt of a second dose in a two-dose series or 14 days or more after receipt of one dose of a one-dose vaccine series, and, if an additional (i.e., third or booster) dose was received, 0 to <14 days after receipt of the additional dose.

Fully vaccinated cases with an additional dose include those whose episode date occurred 14 days or more following the receipt of at least one additional dose (e.g., third or booster) of a COVID-19 vaccine product, after being fully vaccinated.

Note: A COVID-19 vaccine product includes vaccines authorized by Health Canada and vaccines accepted by the Government of Canada for the purpose of travel to and within Canada.

When symptom onset date is unavailable or the case is asymptomatic, episode date uses the following dates as a proxy for classification: laboratory specimen collection date, or laboratory testing date.

For more information on cases following vaccination, please see the Weekly epidemiology report (PDF) available on the Government of Canada's [COVID-19 data trends](#) page.

Severe illness and outcomes

Hospital use

Figure 6. Daily number of hospital beds and ICU beds occupied by COVID-19 patients as of

Between October 10 and Oct 17:

- the total number of **hospital beds** occupied by COVID-19 patients **increased** from to beds.
- the number of **non-ICU beds** occupied by COVID-19 patients **increased** from to beds.
- the number of **ICU beds** occupied by COVID-19 patients **increased** from to beds.
- the number of **COVID-19 patients who were mechanically vented increased** from to .

Hospitalizations and deaths to date

We have detailed case report data on 99,853 cases, and hospitalization status for 65,597 (xx%) of them:

- **{Num Hospitalized}** cases (**{Percent Hospitalized}**%) were hospitalized, of whom:
 - **{Num Intensive Care}** (**{Percent Intensive Care}**%) were admitted to the ICU

The provinces and territories provided detailed case report forms for **{Num Deaths}** deaths related to COVID-19.

Figure 7a. Age and gender ³ distribution of COVID-19 cases hospitalized in Canada as of (n= ₁)

Figure 7b. Age and gender ³ distribution of COVID-19 cases admitted to ICU in Canada as of (n= ₁)

Figure 7c. Age and gender ³ distribution of COVID-19 cases deceased in Canada as of (n= 1)

Data note: Figure 7 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 in Figure 7.

Age and gender ⁴ distribution of COVID-19 cases hospitalized in Canada as of (n= 1)

Age group (years)	Number of cases with case reports (percentage)	Number of male cases (percentage)	Number of female cases (percentage)	Number of other cases (percentage)
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Age and gender ⁴ distribution of COVID-19 cases admitted to ICU in Canada as of (n= 1)

Age group (years)	Number of cases with case reports (percentage)	Number of male cases (percentage)	Number of female cases (percentage)	Number of other cases (percentage)
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Age and gender ⁴ distribution of COVID-19 cases deceased in Canada as of (n= 1)

Age group (years)	Number of cases with case reports (percentage)	Number of male cases (percentage)	Number of female cases (percentage)	Number of other cases (percentage)
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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](#)
- [World Health Organization](#)
- [Centers for Disease Control and Prevention](#)
- [European Centre for Disease Control and Prevention](#)

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- 1 This figure is based on cases for which a case report form was received by the Public Health Agency of Canada from provincial or territorial partners.
 - 2 The shaded area represents a period of accumulating data where it is expected that cases have occurred but have not yet been reported nationally. The earliest of the following dates were used as an estimate: Onset date, Specimen Collection Date, Laboratory Testing Date, Date Reported to Province or Territory, or Date Reported to PHAC.
 - 3 Where available, gender data was used; when gender data was unavailable, sex data was used. Reliable data on gender diverse respondents are unavailable due to small counts.
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Date modified:

2021-05-28