

Recommended vaccines received during pregnancy, 2021

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Vaccination during pregnancy has been shown to be an effective measure to protect mothers and babies against infection and negative health outcomes. In Canada, the National Advisory Committee on Immunization recommends that all pregnant women receive the influenza vaccine and the Tdap (tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis) vaccine during each pregnancy. The flu vaccine helps protect the mother and baby from flu-related complications. The Tdap vaccine is given during pregnancy because it has been shown to protect newborns from pertussis (whooping cough) during the first two months of their life when they are most vulnerable to this disease. Although the Tdap vaccine includes tetanus, diphtheria and pertussis, respondents were only asked about vaccination against pertussis and this article will be referring to pertussis only.

The Childhood National Immunization Coverage Survey (CNICS) has been undertaken by Statistics Canada in partnership with the Public Health Agency of Canada every two years since 2011. A second component was added in 2019, on vaccinations received during pregnancy. In 2021, mothers across Canada who gave birth between September 1, 2020 and March 1, 2021 were asked about the vaccinations they received during pregnancy and the survey includes questions on their knowledge and beliefs about prenatal vaccination, to which 3,347 people responded. New questions added in the 2021 cycle look at the impact that the COVID-19 pandemic had on pregnant women's decision to get vaccinated during the pandemic. [Additional insights from the CNICS on vaccination during pregnancy](#) are available from the Public Health Agency of Canada.

Vaccination coverage

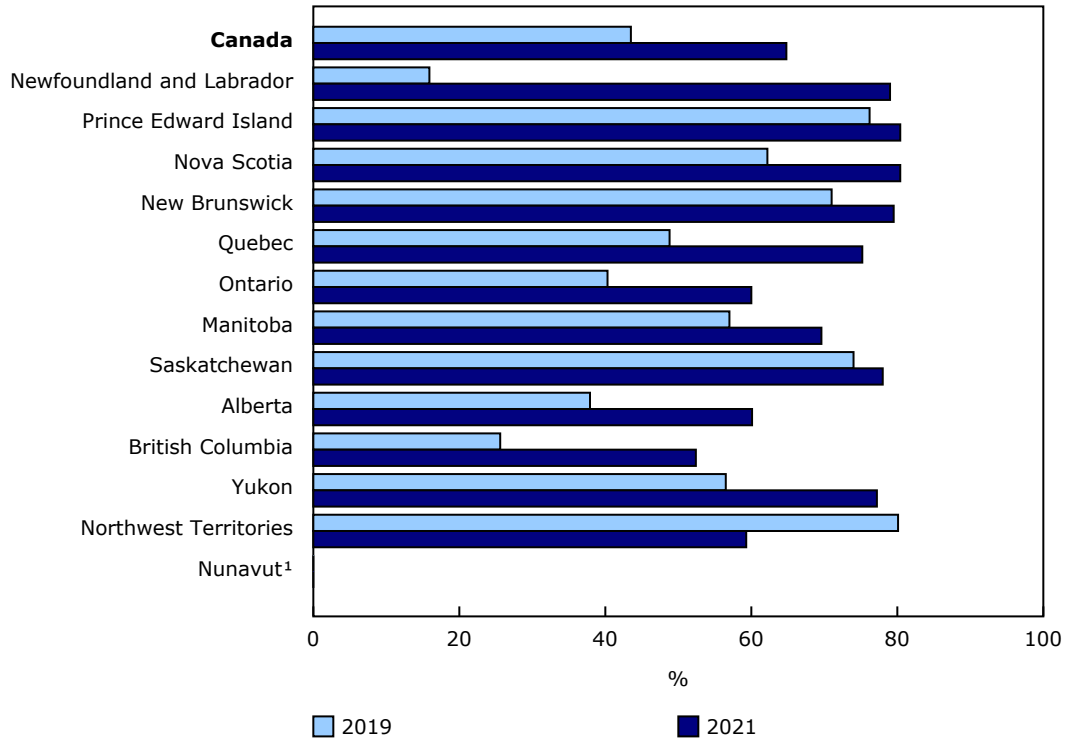
More women in Canada in 2021 received the recommended prenatal vaccines than in 2019

In 2021, 65% of women were vaccinated against pertussis and 53% against the flu, both greater than the results seen in 2019 (44% for pertussis and 45% for flu)—results by province and territory can be seen in Charts 1 and 2. All provinces and territories except the Northwest Territories showed an increase in the percentage of pregnant women who were vaccinated against pertussis compared with 2019, with values across all jurisdictions surpassing the Canada-wide percentage from 2019. Many jurisdictions also showed increases in vaccine coverage against flu in 2021 compared with 2019.



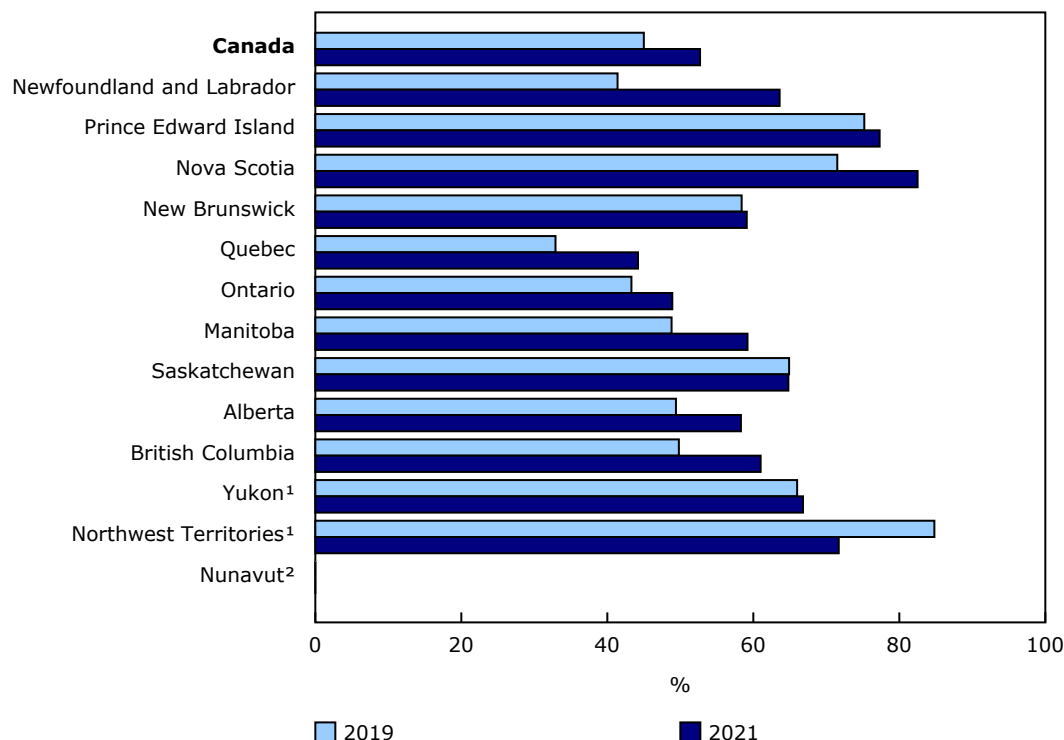
Chart 1

Vaccination coverage for pregnant women in Canada against pertussis (whooping cough), overall and by province/territory, 2019 and 2021



1. Estimates do not meet quality/confidentiality standards—conclusions based on these data will be unreliable, and may be invalid, and have been suppressed.
Source(s): Childhood National Immunization Coverage Survey (5185).

Chart 2
Vaccination coverage for pregnant women in Canada against influenza (flu), overall and by province/territory, 2019 and 2021



1. Estimates and confidence intervals are of marginal quality due to high sampling variability, and should be used with caution.

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Source(s): Childhood National Immunization Coverage Survey (5185).

Increased vaccination partly driven by the advice of maternity care providers

Recommendations from a maternity care provider (e.g., obstetrician-gynecologist, family doctor, midwife, nurse, etc.) are an important factor in vaccination coverage. Similar to findings in 2019, those who received provider recommendations to get vaccinated in 2021 were more likely to have been vaccinated compared with those who did not receive such advice. Among women who were advised to be vaccinated against pertussis, 86% reported being vaccinated against pertussis (compared with 9% coverage among those who had not been advised). A similar impact was seen in those who were advised to get vaccinated against the flu, with 70% coverage among those who were advised to get vaccinated compared with 14% coverage among those who were not advised.

In 2021, nearly all women (99.9%) reported having a primary maternity care provider during their pregnancy. Among pregnant women who received maternity care, 69% stated they were advised to get vaccinated against pertussis and a similar proportion reported they were advised to get vaccinated against the flu (69%). Both numbers represent substantial increases compared with 2019, where 49% received a recommendation to get vaccinated against pertussis and 61% against the flu. These increases in provider recommendations help explain the overall increases in vaccine coverage for pertussis and the flu that were observed in 2021.

The impact of provider recommendations is also reflected in one of the reasons (lack of awareness) for not receiving the recommended vaccines. The top two reasons for not being vaccinated remained the same in 2021 as in 2019 for both vaccinations—lack of awareness that the vaccines were recommended during pregnancy (46% for pertussis and 22% for the flu) and not wanting to receive the recommended prenatal vaccines while pregnant (23% for pertussis and 51% for the flu).

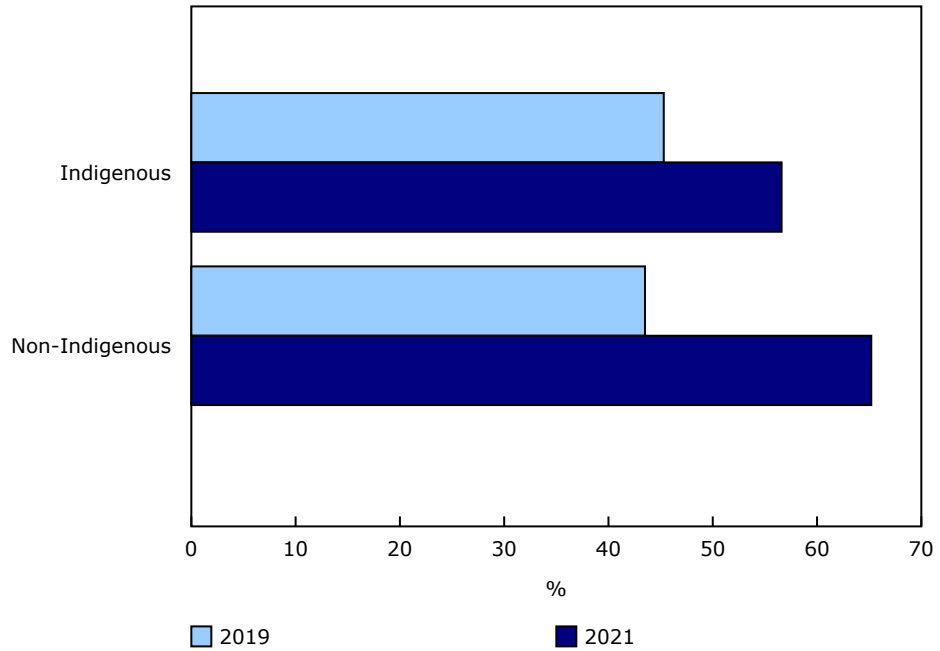
Larger gap in vaccination coverage between Indigenous women and non-Indigenous women in 2021 compared with 2019

Among the Truth and Reconciliation Commission's 94 calls to action is the call to report data that sheds light on progress in closing gaps between Indigenous and non-Indigenous communities across a number of health indicators, including maternal, infant and child health. Continued collection of variables related to self-declared Indigenous identity (First Nations people, Métis and Inuit) of the survey population, which excludes those living on First Nations reserves, allows for comparison between 2019 and 2021. Due to small sample sizes, separate estimates for First Nations people, Métis and Inuit could not be published.

Survey results show that 57% of Indigenous women were vaccinated against pertussis in 2021, compared with 65% of non-Indigenous women. This is a greater gap than in 2019, when the numbers were similar for the two groups (45% for Indigenous women and 44% for non-Indigenous women). In addition, 28% of Indigenous women were vaccinated against the flu in 2021 compared with 54% of non-Indigenous women, a much larger difference than in 2019, where 35% of Indigenous women and 46% of non-Indigenous women were vaccinated against the flu.

Some of this gap may be due to differences in provider recommendations. Recollection of healthcare provider recommendations varied between Indigenous women and non-Indigenous women for vaccinations against both pertussis (55% of Indigenous women recalled receiving healthcare provider recommendations and 69% of non-Indigenous women recalled receiving healthcare provider recommendations) and the flu (55% and 69%). Other factors, such as differences in [access to health care providers and barriers and prejudices encountered during accessing health care](#), may also explain differences in vaccination coverage and recommendations. Comparisons of vaccination coverage for the flu and healthcare provider recommendations for vaccination against the flu should be made with caution due to smaller sample sizes for Indigenous women.

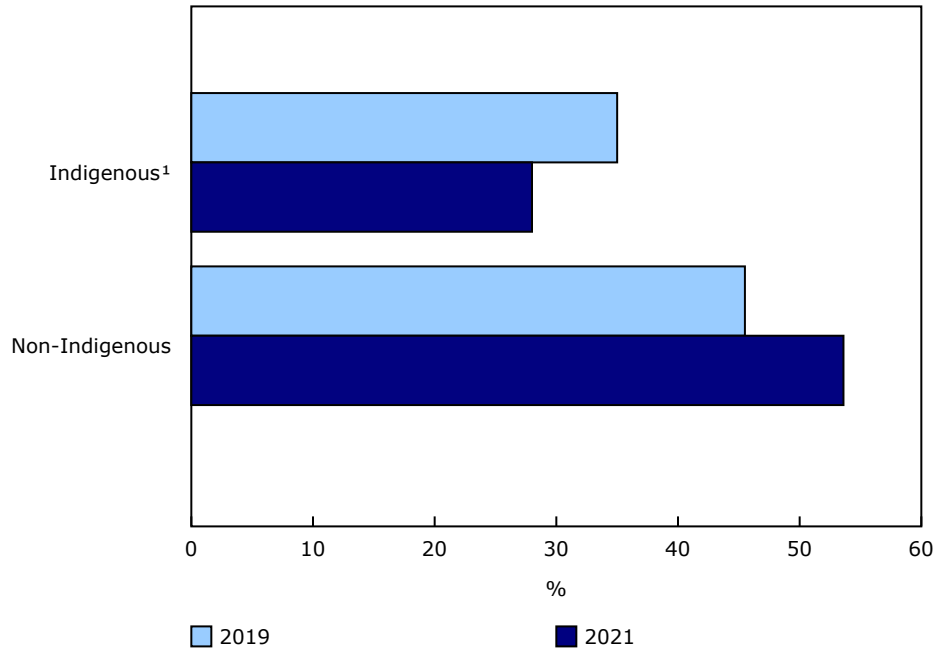
Chart 3
Vaccination coverage for pregnant women in Canada against pertussis, by Indigenous identity and year



Source(s): Childhood National Immunization Coverage Survey (5185).

Chart 4

Vaccination coverage for pregnant women in Canada against the flu, by Indigenous identity and year



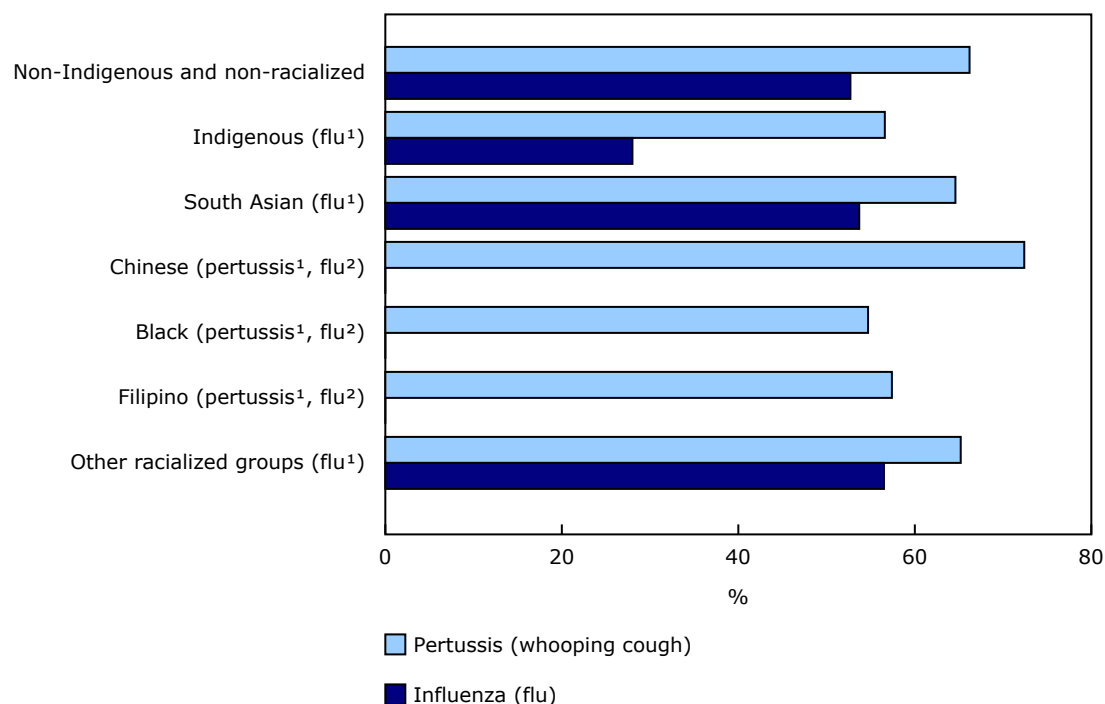
1. Estimates and confidence intervals are of marginal quality due to high sampling variability, and should be used with caution.
Source(s): Childhood National Immunization Coverage Survey (5185).

Newly collected data show varying vaccination uptake among different population groups

With the new disaggregated data collected in 2021, comparison can be made amongst non-Indigenous and non-racialized people and other population groups where sample sizes meet confidentiality and quality guidelines, as seen in Chart 5. Vaccination against pertussis varied from 55% among Black Canadians to 72% among Chinese Canadians. Recollection of healthcare provider recommendations for vaccination against pertussis also varied, ranging from 61% among South Asian Canadians to 72% among non-Indigenous and non-racialized women.

Chart 5

Vaccination coverage for pregnant women in Canada against pertussis (whooping cough) and influenza (flu) by population group, 2021



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2. Estimates do not meet quality/confidentiality standards—conclusions based on these data will be unreliable, and may be invalid, and have been suppressed.

Source(s): Childhood National Immunization Coverage Survey (5185).

Higher income groups had higher vaccination against pertussis (whooping cough) and influenza (flu)

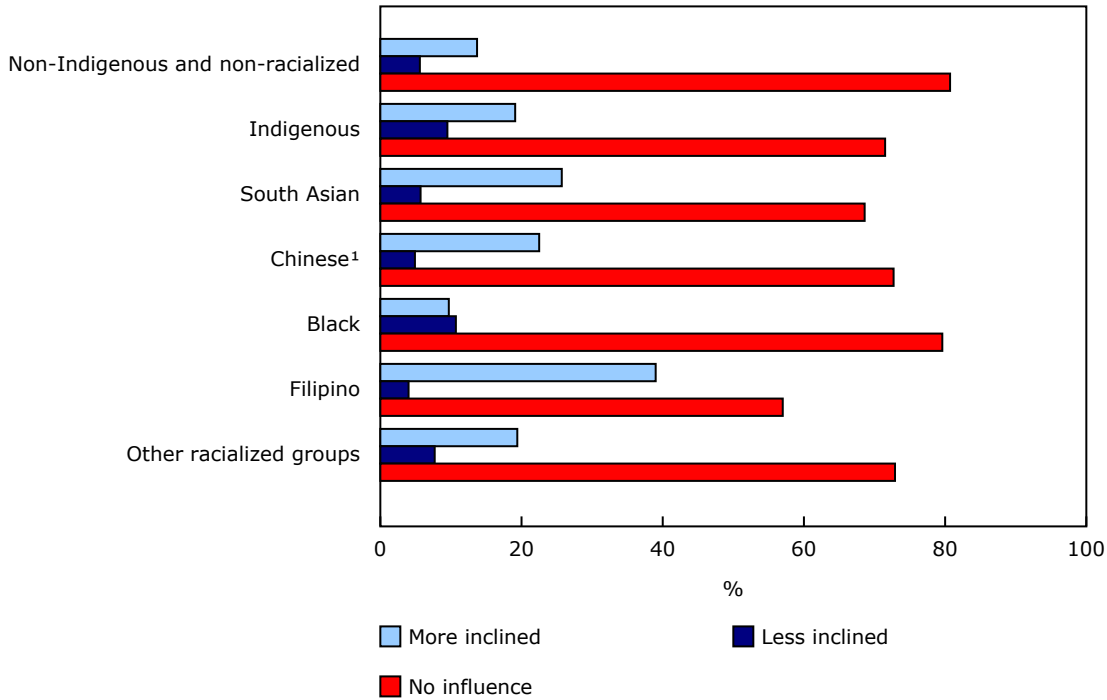
Those in the lower income groups (household income under \$80,000) had lower vaccination coverages against pertussis and the flu, relative to those in the highest household income group. The differences in vaccination against pertussis may be in part due to provider recommendations. A larger proportion of pregnant women in the highest income group (77%) stated they received a provider recommendation to get vaccinated against pertussis compared with pregnant women in the lowest income group (62%). This connection with provider recommendations was not as pronounced for vaccination against the flu.

Impact of the pandemic

Just over three-quarters of pregnant women reported that the pandemic did not influence their decision to get vaccinated

Notably, the proportion of pregnant women who were more inclined to get vaccinated as a result of the pandemic varied across provinces and territories, from a low of 9% (Quebec) to a high of 32% (Yukon). Survey results show that for several racialized groups, the pandemic had more of an impact on their decision to get vaccinated compared with non-Indigenous and non-racialized pregnant women. Among racialized groups, a significantly higher proportion of Filipino Canadians (39%) and South Asian Canadians (26%) were more inclined to get vaccinated as a result of the pandemic relative to non-Indigenous and non-racialized people (14%), as seen in Chart 6.

Chart 6
Influence of the COVID-19 pandemic on the decision of pregnant women in Canada to get vaccinated, by population group



1. Estimates and confidence intervals are of marginal quality due to high sampling variability, and should be used with caution.
 Source(s): Childhood National Immunization Coverage Survey (5185).

About 1 in 10 women faced obstacles and/or delays of 30 days or more in getting vaccinated against pertussis and/or the flu due to the pandemic

During the pandemic Canadians faced many changes to their daily lives. Public health measures were put in place to prevent infection and limit the spread of the COVID-19 virus. Overall, 11% of pregnant Canadian women faced obstacles and/or delays of 30 days or more in getting vaccinated against pertussis and/or the flu due to the pandemic.

Looking ahead

This first component of the CNICS focused on vaccinations received during pregnancy. The other component focuses on childhood vaccines given to children younger than 18, in four age groups—2, 7, 14 and 17 years. The results for this second component will be released in the spring of 2023.

Table 1
Prenatal vaccination coverage, 2021

	Vaccinated against pertussis (whooping cough)		
	Estimate	Lower confidence interval	Upper confidence interval
	%		
By jurisdiction			
Canada¹	64.8	62.1	67.4
Newfoundland and Labrador	79.0 ²	73.3	83.8
Prince Edward Island	80.4 ²	73.9	85.6
Nova Scotia	80.4 ²	74.8	85.1
New Brunswick	79.5 ²	74.1	84.1
Quebec	75.2 ²	70.1	79.7
Ontario	60.0	54.2	65.6
Manitoba	69.6	64.1	74.7
Saskatchewan	78.0 ²	73.0	82.4
Alberta	60.1	53.9	65.9
British Columbia	52.4 ²	46.8	57.9
Yukon	77.2 ²	66.8	85.1
Northwest Territories	59.3	45.3	71.9
Nunavut	F	F	F
By Indigenous identity			
Indigenous	56.6	43.1	69.2
Non-Indigenous ¹	65.2	62.4	67.8
By population group			
Indigenous	56.6	43.1	69.2
South Asian	64.6	55.3	72.9
Chinese	72.4 ^E	60.5 ^E	81.8 ^E
Black	54.7 ^E	43.3 ^E	65.6 ^E
Filipino	57.4 ^E	44.5 ^E	69.4 ^E
Other racialized groups	65.2	56.0	73.5
Non-Indigenous and non-racialized ¹	66.2	62.9	69.3
By household income (2020) group			
Less than \$40,000	56.4 ²	46.5	65.9
\$40,000 - \$79,999	58.9 ²	53.2	64.5
\$80,000 - \$99,999	64.0 ²	57.1	70.3
\$100,000 - \$119,999	68.5	61.1	75.1
\$120,000 - \$139,999	64.1 ²	56.5	71.0
\$140,000 - \$159,999	71.1	62.3	78.6
\$160,000 or more ¹	74.3	68.9	79.1
Vaccinated against influenza (flu)			
	Estimate	Lower confidence interval	Upper confidence interval
%			
By jurisdiction			
Canada¹	52.7	48.8	56.6
Newfoundland and Labrador	63.6 ²	55.2	71.2
Prince Edward Island	77.3 ²	68.0	84.5
Nova Scotia	82.5 ²	75.0	88.1
New Brunswick	59.1	50.2	67.4

	Vaccinated against influenza (flu)		
	Estimate	Lower confidence interval	Upper confidence interval
Quebec	44.2	36.4	52.3
Ontario	48.9	41.2	56.7
Manitoba	59.2	50.1	67.6
Saskatchewan	64.8 ²	57.1	71.7
Alberta	58.3	50.3	65.9
British Columbia	61.0	52.1	69.1
Yukon	66.8 ^{E2}	51.3 ^E	79.3 ^E
Northwest Territories	71.7 ^{E2}	55.7 ^E	83.6 ^E
Nunavut	F	F	F
By Indigenous identity			
Indigenous	28.0 ^{E2}	16.5 ^E	43.4 ^E
Non-Indigenous ¹	53.6	49.6	57.6
By population group			
Indigenous	28.0 ^{E2}	16.5 ^E	43.4 ^E
South Asian	53.7 ^E	40.4 ^E	66.5 ^E
Chinese	F	F	F
Black	F	F	F
Filipino	F	F	F
Other racialized groups	56.5 ^E	43.5 ^E	68.6 ^E
Non-Indigenous and non-racialized ¹	52.7	47.6	57.6
By household income (2020) group			
Less than \$40,000	41.7 ²	28.4	56.2
\$40,000 - \$79,999	46.4 ²	38.7	54.2
\$80,000 - \$99,999	47.0 ²	37.7	56.4
\$100,000 - \$119,999	44.7 ²	35.0	54.9
\$120,000 - \$139,999	60.0	48.2	70.7
\$140,000 - \$159,999	61.9	48.1	74.0
\$160,000 or more ¹	68.4	60.3	75.6

^E use with caution

^F too unreliable to be published

1. Reference category.

2. Significantly different from reference category.

Source(s): Childhood National Immunization Coverage Survey (5185).

Table 2
Influence of the COVID-19 pandemic on the decision of pregnant women to get vaccinated, 2021

	COVID-19 influence: more inclined			COVID-19 influence: less inclined			COVID-19 influence: no influence		
	Estimate	Lower confidence interval	Upper confidence interval	Estimate	Lower confidence interval	Upper confidence interval	Estimate	Lower confidence interval	Upper confidence interval
	%								
By jurisdiction									
Canada¹	16.7	14.9	18.7	6.2	5.0	7.7	77.0	74.7	79.2
Newfoundland and Labrador	17.2	12.9	22.5	3.0	1.5	6.1	79.7	74.1	84.4
Prince Edward Island	19.1	14.2	25.3	3.7	1.8	7.5	77.2	70.7	82.6
Nova Scotia	15.5	12.0	19.9	2.8 ²	1.4	5.4	81.7	76.9	85.6
New Brunswick	12.4 ²	9.0	16.7	2.7 ²	1.4	5.2	84.9 ²	80.3	88.6
Quebec	8.7 ²	6.2	12.2	6.2	4.1	9.4	85.0 ²	80.8	88.4
Ontario	20.7	16.8	25.3	6.1	3.9	9.5	73.2	68.2	77.6
Manitoba	20.9	16.8	25.7	7.8	5.1	11.8	71.3 ²	66.0	76.1
Saskatchewan	16.5	12.7	21.1	4.5	2.7	7.4	79.0	74.0	83.2
Alberta	15.7	11.8	20.6	7.7	5.1	11.5	76.5	71.0	81.3
British Columbia	20.4	16.4	25.1	6.4	4.1	9.9	73.2	68.0	77.8
Yukon	31.7	17.1	51.0	7.2	3.3	14.8	61.2	44.4	75.7
Northwest Territories	F	F	F	F	F	F	F	F	F
Nunavut	F	F	F	F	F	F	F	F	F
By population group									
Indigenous	19.1	10.4	32.4	9.5	4.5	19.0	71.5	58.3	81.8
South Asian	25.7 ²	18.9	33.9	5.7	2.7	11.4	68.6 ²	60.0	76.2
Chinese	22.5 ^E	14.6 ^E	32.9 ^E	4.9 ^E	1.7 ^E	13.4 ^E	72.7 ^E	61.7 ^E	81.5 ^E
Black	9.7	4.7	18.9	10.7	5.5	19.8	79.6	68.9	87.3
Filipino	39.0 ²	28.1	51.2	4.0	1.7	9.4	57.0 ²	45.0	68.2
Other racialized groups	19.4	13.4	27.2	7.7	4.1	14.0	72.9	64.4	80.0
Non-Indigenous and non-racialized ¹	13.7	11.5	16.3	5.6	4.2	7.5	80.7	77.8	83.3

E use with caution

F too unreliable to be published

1. Reference category.

2. Significantly different from reference category.

Source(s): Childhood National Immunization Coverage Survey (5185).

Note to readers

The Childhood National Immunization Coverage Survey (CNICS) is sponsored by the Public Health Agency of Canada and has been conducted by Statistics Canada every two years since 2011. The 2021 CNICS component on vaccines received during pregnancy asked biological mothers questions about vaccines they were offered and received during their recent pregnancy, in addition to questions about their knowledge and beliefs regarding immunization. Although respondents were asked about vaccination against pertussis only, this vaccine is given as part of a combination with diphtheria and tetanus—referred to as Tdap. For vaccination against influenza (flu), the analysis only looked at the time period when the flu vaccine was offered (i.e., during flu season)—December 1, 2020 to March 1, 2021. This component of the survey was conducted via a self-response electronic questionnaire or a telephone interview between January 10, 2022 and April 14, 2022. The target population for this second component of the survey was women who gave birth between September 1, 2020 and March 1, 2021, living in the 10 provinces and 3 territories, not residing on First Nations reserves and not institutionalized.

Due to differences in methodology, estimates of vaccine coverage from CNICS results may not fully align with coverage estimates produced from other sources of immunization information, such as provincial and territorial vaccine registry data.

CNICS provincial and territorial estimates are produced using a consistent methodology. This allows for cross-comparison of provincial and territorial estimates and permits Statistics Canada to produce national-level estimates.

Indigenous people included in this study are those who self-identified as First Nations people, Inuit or Métis. Further information on the [Indigenous group of person](#) concept is available. The term "racialized" (or visible minority) is derived from a question regarding population groups and similarly, more information on the [Population group of person](#) concept can be found on Statistics Canada's website.

For more information on recommended vaccines during pregnancy, please see the National Advisory Committee on Immunization statements on [immunization against pertussis](#) and [immunization against influenza](#).

Definitions, data sources and methods: survey number [5185](#).

For more information about the survey, contact the Public Health Agency of Canada's General Enquiries (1-844-280-5020).

For more information, or to enquire about the concepts, methods or data quality of this release, contact us (toll-free 1-800-263-1136; 514-283-8300; infostats@statcan.gc.ca) or Media Relations (statcan.mediahotline-ligneinfomedias.statcan@statcan.gc.ca).