

SURVEILLANCE REPORT

COVID-19 Vaccination Coverage in Ontario by Neighbourhood Diversity and Material Deprivation: December 14, 2020 to October 24, 2021

Purpose

This report explores neighbourhood-level trends in health equity among people aged 12 years and older who have received at least one dose of a COVID-19 vaccine in Ontario and who do not live in a long-term care facility or retirement home. It combines individual vaccine coverage data with neighbourhood-level measures of diversity and material deprivation as measured by the [Ontario Marginalization Index \(ON-Marg\)](#).¹

Neighbourhood diversity is measured using the ‘ethnic concentration’ dimension of ON-Marg, which assesses the proportion of non-white and non-Indigenous residents and/or the proportion of newcomers that arrived in Canada within the past five years. The material deprivation dimension of ON-Marg is closely connected to poverty, and uses Canadian census data on income, quality of housing, educational attainment and family structure characteristics to identify neighbourhoods where people likely experience reduced access to basic material needs.

The report’s findings improve our understanding of how COVID-19 vaccination levels vary across neighborhood-level socio-demographic characteristics in Ontario. COVID-19 has previously been shown to disproportionately affect racially diverse and low socio-economic status neighbourhoods in Ontario.^{2,3} Therefore, information on vaccine coverage for these groups is important and can inform the planning and equitable prioritization of public health and health system resources and interventions. Further details on COVID-19 vaccine uptake in Ontario are provided on Public Health Ontario’s COVID-19 vaccine [web page](#).⁴

Data in this report include the most current information extracted from the Ministry of Health’s (MOH) COVaxON application as of **October 25, 2021** at approximately 7:00 a.m. The report includes COVID-19 vaccinations reported up to **October 24, 2021**.

Background

In Ontario, surveillance data has shown higher incidence of COVID-19 cases and deaths in neighbourhoods with higher proportions of immigrants, racialized populations, and populations with low socio-economic status, related to structural factors such as high-density housing and increased likelihood of employment in an essential business that cannot be done from home.^{2,3} Residents of these neighborhoods may additionally experience marginalization related to racism, discrimination or reduced access to resources. Thus, it is critical to understand vaccine coverage for these groups to address inequities in the burden of COVID-19 and effectively prioritize vaccination efforts.

The COVID-19 vaccination program began in Ontario with a three-phased distribution plan.⁴ Phase 1 began on December 14, 2020 with a limited number of doses for Ontario's most vulnerable populations including residents, staff and essential care givers in long-term care homes (LTCH) and retirement homes (RH), health care workers (HCW), and Indigenous adults in northern remote and higher risk communities (on-reserve and urban). Over time the program has expanded to include additional age groups and priority populations, including individuals living and/or working in designated 'hot spots'.

Highlights

Neighbourhood diversity:

- Coverage for COVID-19 vaccines (partially and fully vaccinated) by neighbourhood have fluctuated since the start of the Ontario COVID-19 vaccination program. Since May 2021, neighbourhoods with the highest levels of diversity have had the highest coverage for receipt of at least one dose of a COVID-19 vaccine (Figure 3). This follows a period when this trend was reversed, with the neighbourhoods with the lowest levels of diversity having the highest coverage.
 - Fully vaccinated coverage has also begun to show a similar trend with residents in the most diverse neighborhoods having higher dose two coverage. This trend appears to be increasing over time.
- For individuals aged 18-29 years, coverage levels for those partially and fully vaccinated were higher in neighbourhoods with higher levels of diversity. However, for individuals 60 years and older, residents of the most diverse neighborhoods had lower coverage than those living in less diverse neighbourhoods (Figure 7).
- Across all quintiles of neighbourhood diversity the most common vaccination locations were mass immunization clinics (Figure 9). Residents of more diverse neighbourhoods were less likely to receive a vaccine at a physician's office and more likely to be vaccinated at a hospital-organized clinic, compared to neighbourhoods with low diversity. In addition, residents of the most diverse neighbourhoods were less likely to be vaccinated at a pharmacy than those residing in the other four quintiles.
- Across all quintiles of neighbourhood diversity, the most commonly received vaccine was Pfizer-BioNTech Comirnaty (Figure 11). Compared to other neighbourhoods, persons residing in neighbourhoods with the highest level of diversity were less likely to receive the AstraZeneca Vaxzevria/COVISHIELD vaccine.

Neighbourhood material deprivation:

- Residents of neighbourhoods with high levels of material deprivation had higher partially and fully vaccinated coverage rates than residents of low material deprivation neighborhoods (Figure 2). This trend appears to be increasing over time (Figure 4) and is present in all age groups (Figure 8).
- Across all quintiles of neighbourhood material deprivation the most common vaccination locations were mass immunization clinics (Figure 10). Residents of neighbourhoods with higher material deprivation were slightly less likely to receive a vaccine at a hospital clinic compared with residents of neighbourhoods with low material deprivation (Figure 10).
- Across all quintiles of neighbourhood material deprivation, the most commonly received vaccine was Pfizer-BioNTech Comirnaty (Figure 12). In neighbourhoods with higher material deprivation, a smaller proportion of residents received AstraZeneca Vaxzevria/COVISHIELD and more received Moderna Spikevax.

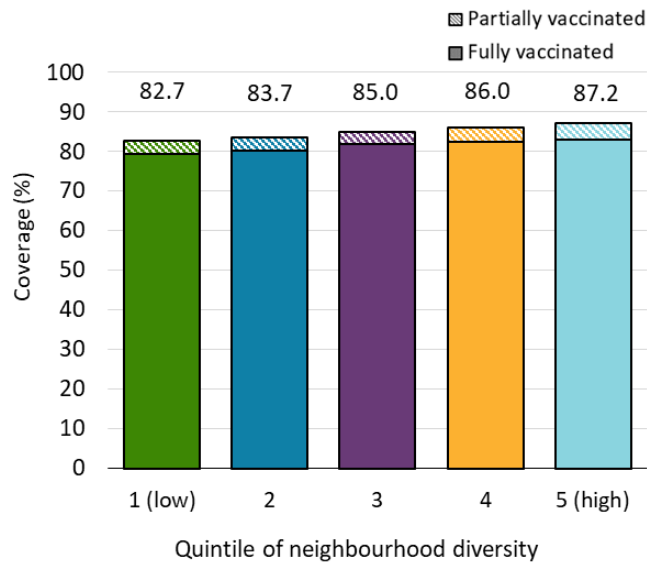
Definition of Terms

- **Vaccine series** refers to the number of vaccine doses within a schedule that has been approved by Health Canada. COVID-19 vaccine products currently available in Ontario have a two-dose (i.e. Moderna Spikevax, Pfizer-BioNTech Comirnaty, AstraZeneca Vaxzevria or COVISHIELD) schedule.
- **Partially vaccinated** refers to individuals that have received only the first dose of a two-dose Health Canada (HC) authorized vaccine, and individuals that have received one or two doses of a non-HC authorized vaccine.
- **Fully vaccinated** refers to individuals that have received one dose of a one-dose HC-authorized vaccine product (i.e. dose one of one), both doses of a two-dose HC-authorized vaccine series (i.e. dose two of two), or three doses of any vaccine product whether it is HC-authorized or not. This includes individuals that have received two doses of a non-HC authorized vaccine, followed by an mRNA vaccine.
- **Coverage estimate (at least one dose)** refers to the proportion of the population that has received at least one dose of a COVID-19 vaccine. Reflects individuals that are partially or fully vaccinated.
- **Coverage estimate (fully vaccinated)** refers to the proportion of the population that is fully vaccinated. **Note:** Coverage for individuals that have received three doses, as per Ontario's eligibility criteria, are not included in the report at this time.

Results

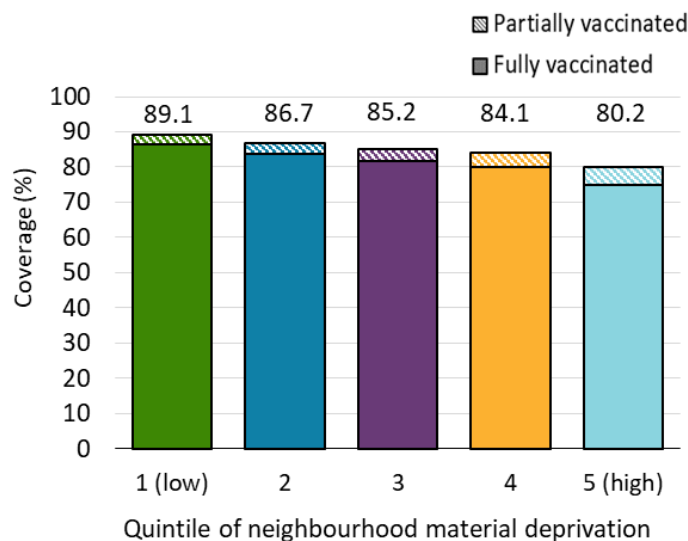
Vaccination coverage by neighbourhood diversity and material deprivation

Figure 1. Vaccination coverage for individuals 12 years and older by quintile of neighbourhood diversity: Ontario, December 14, 2020 to October 24, 2021



Note: Quintile labels indicate proportion of population that has received at least one dose

Figure 2. Vaccination coverage for individuals aged 12 years and older by quintile of neighbourhood material deprivation: Ontario, December 14, 2020 to October 24, 2021



Note: Quintile labels indicate proportion of population that has received at least one dose.

Figure 3. Cumulative vaccination coverage for individuals 12 years and older by week of vaccination and quintile of neighbourhood diversity: Ontario, December 14, 2020 to October 24, 2021

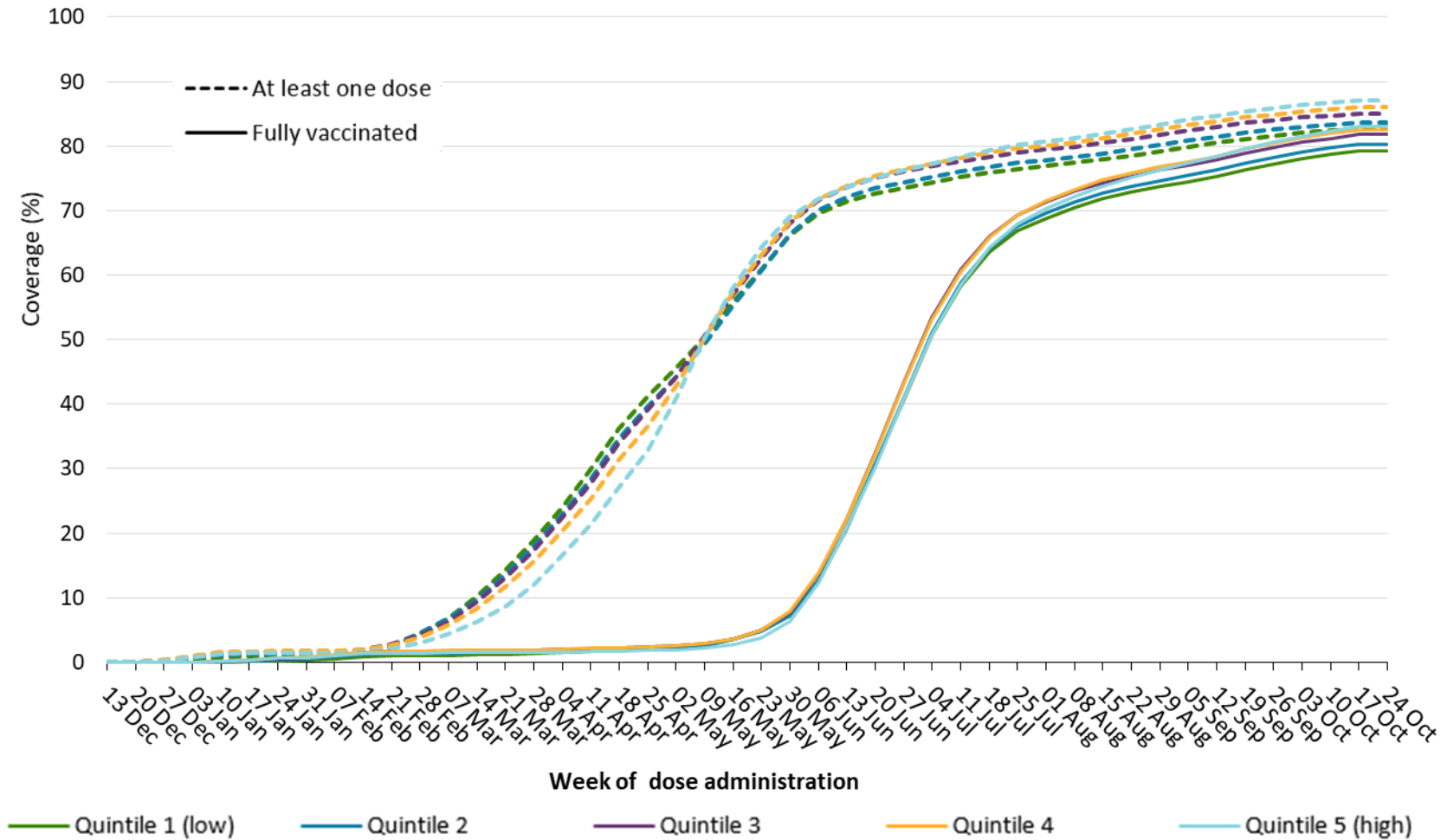


Figure 4. Cumulative vaccination coverage for individuals aged 12 years and older by week of vaccination and quintile of neighbourhood material deprivation: Ontario, December 14, 2020 to October 24, 2021

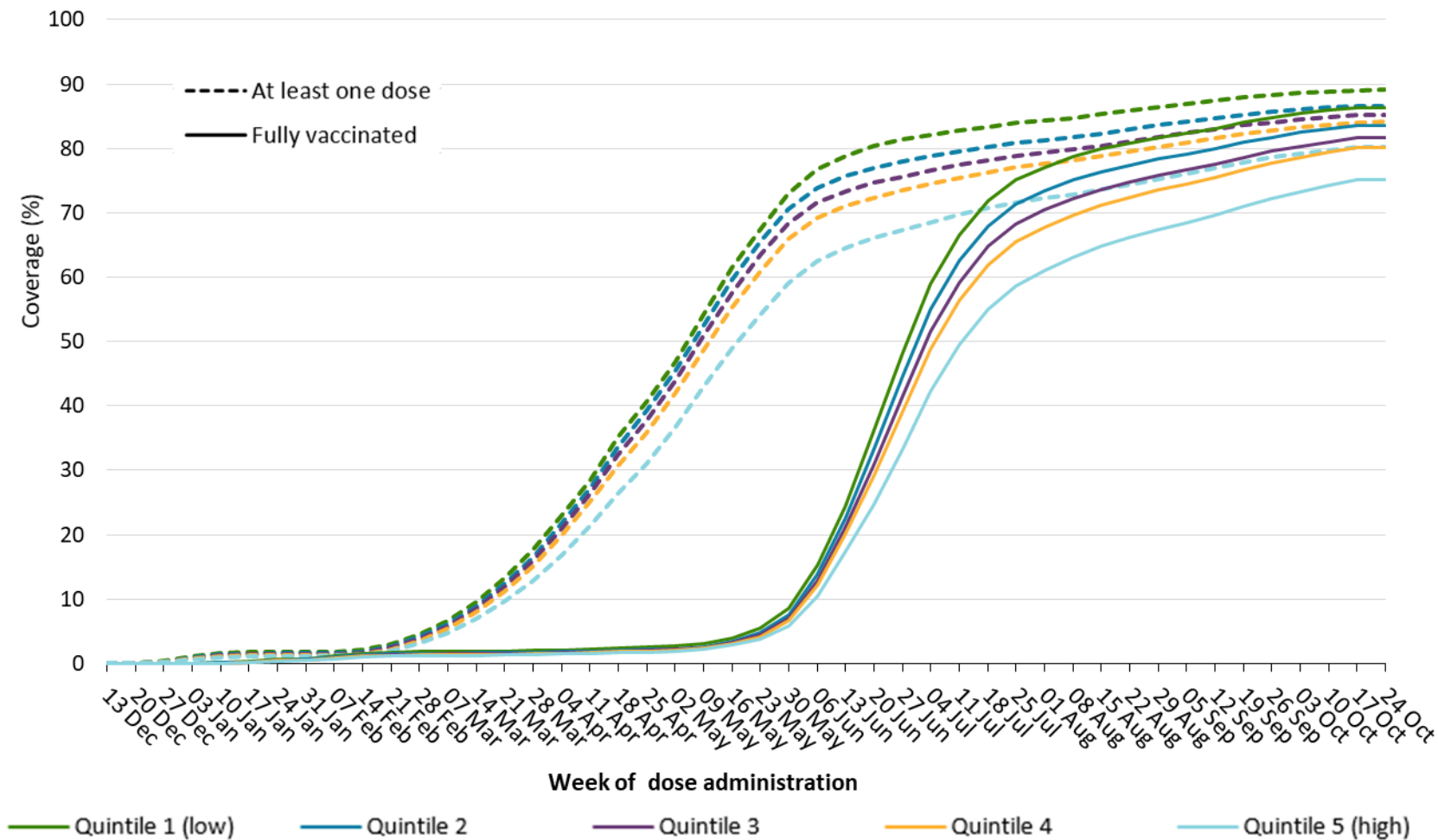


Figure 5. Vaccination coverage for individuals 12 years and older by quintile of neighbourhood diversity and gender: Ontario, December 14, 2020 to October 24, 2021

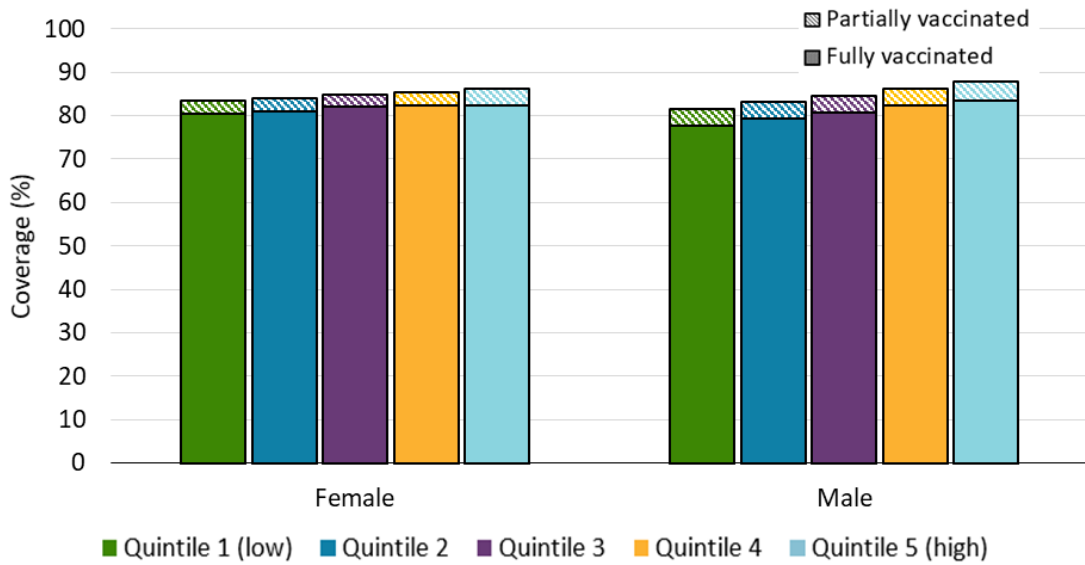


Figure 6. Vaccination coverage for individuals aged 12 years and older by quintile of neighbourhood material deprivation and gender: Ontario, December 14, 2020 to October 24, 2021

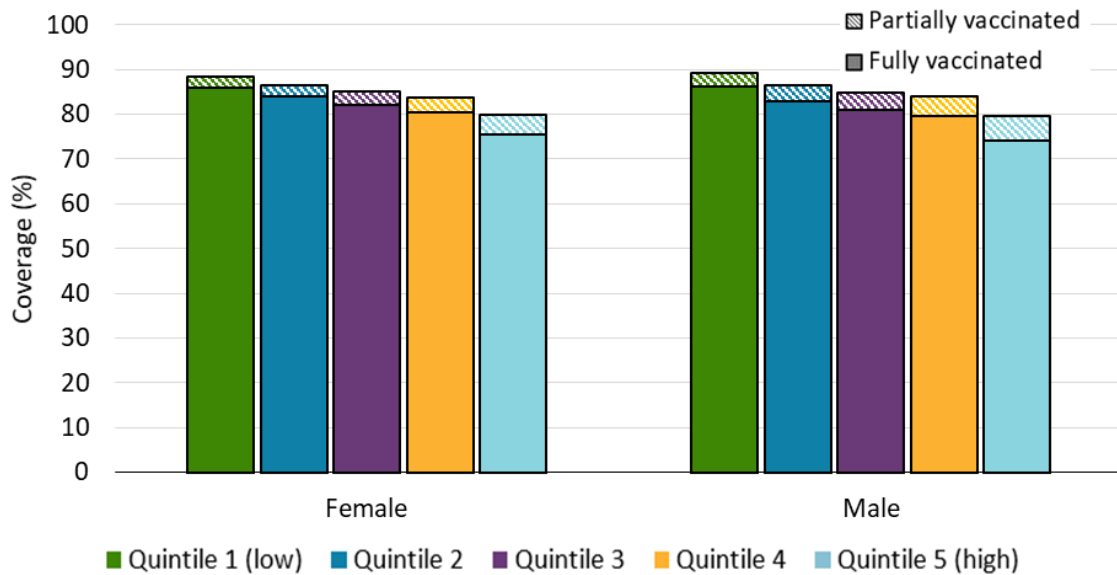
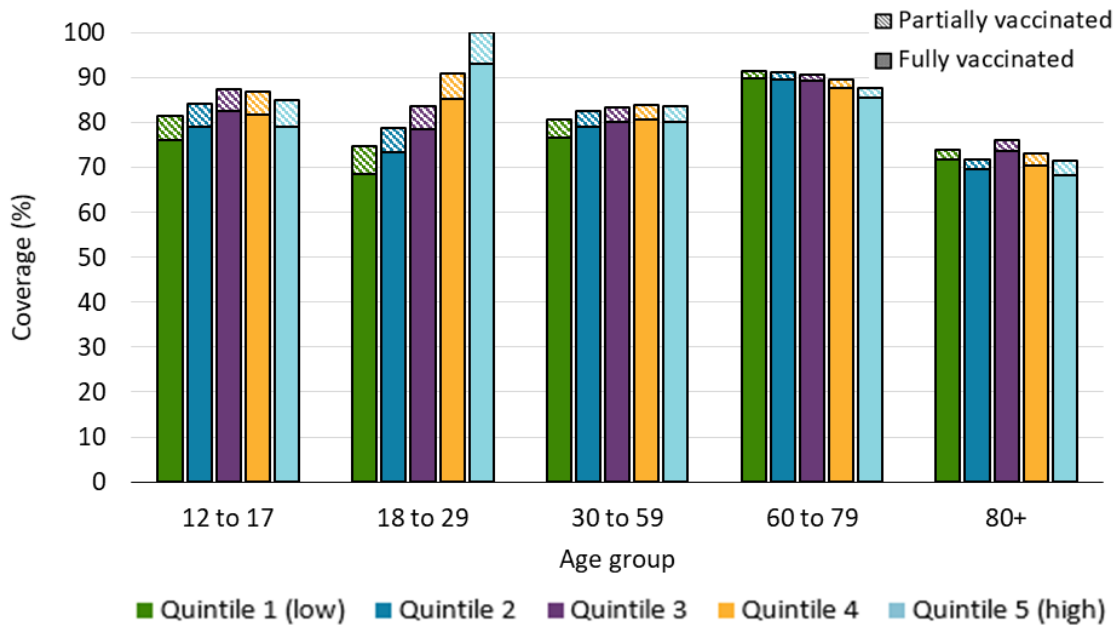


Figure 7. Vaccination coverage for individuals 12 years and older by quintile of neighbourhood diversity and age group: Ontario, December 14, 2020 to October 24, 2021



Note: Coverage estimates over 100% have been capped at 100% (e.g., 18-29 year age group). This scenario can arise when population estimates used for analysis do not completely match the current population or where an individual was living at the time of vaccination.

Figure 8. Vaccination coverage for individuals aged 12 years and older by quintile of neighbourhood material deprivation and age group: Ontario, December 14, 2020 to October 24, 2021

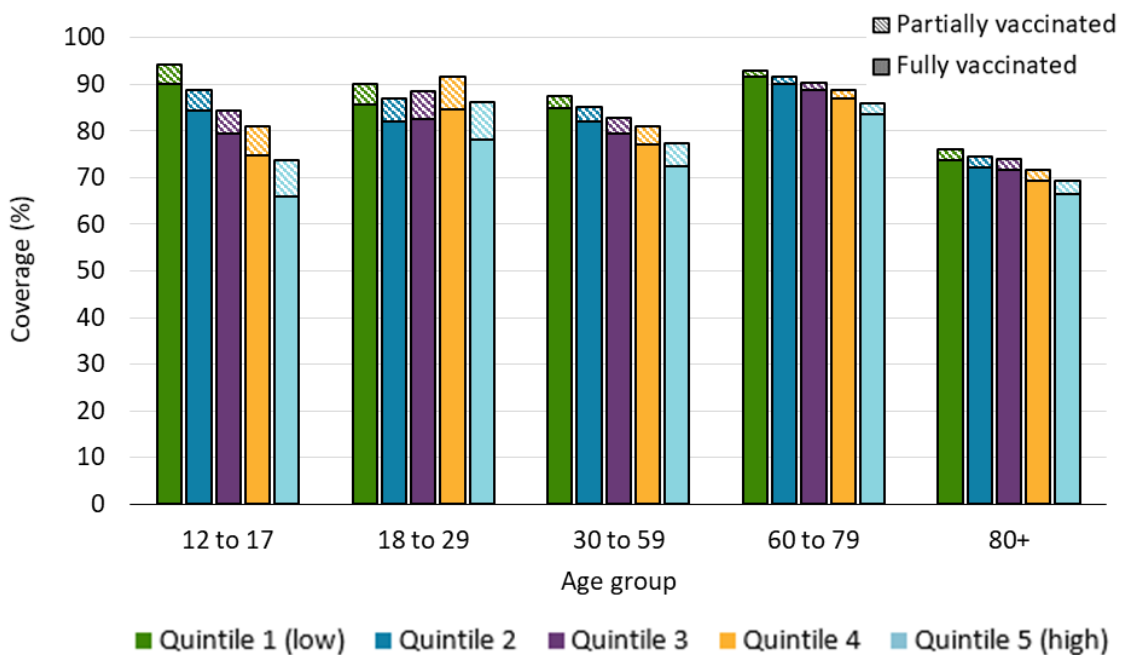
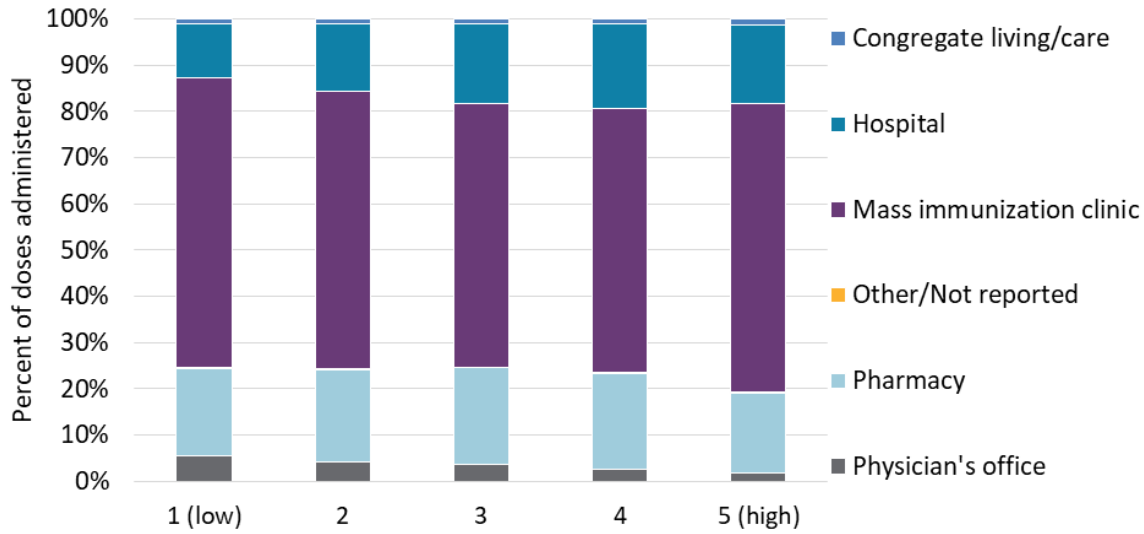
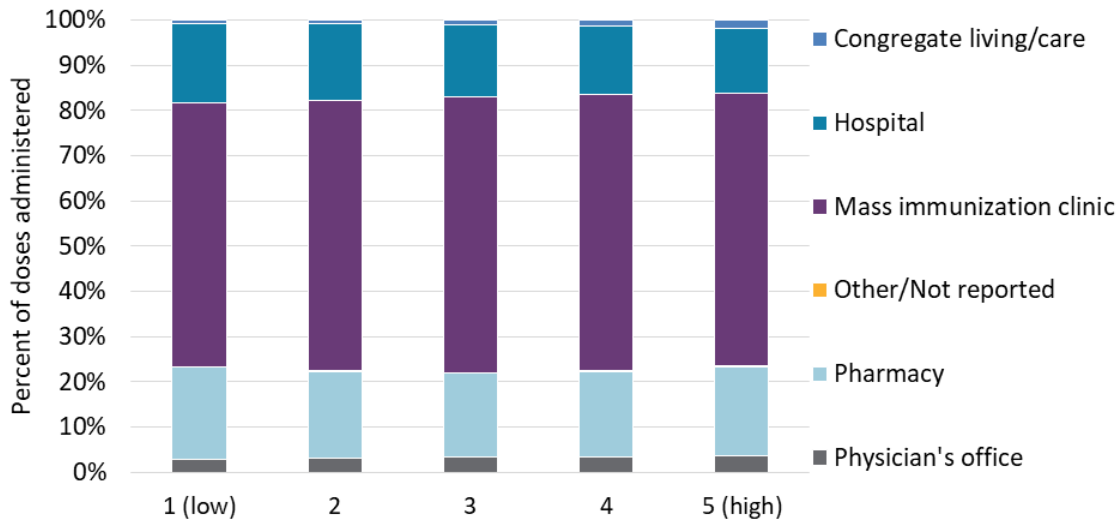


Figure 9. Percent of vaccinations given (first and second doses combined) to those aged 12 years and older by quintile of neighbourhood diversity and location of vaccination: Ontario, December 14, 2020 to October 24, 2021



Note: Congregate living/care includes residents and staff who received their vaccination at this location.

Figure 10. Percent of vaccinations given (first and second doses combined) to those aged 12 years and older by quintile of neighbourhood material deprivation and location of vaccination: Ontario, December 14, 2020 to October 24, 2021



Note: Congregate living/care includes residents and staff who received their vaccination at this location.

Figure 11. Percent of vaccinations given (first and second doses combined) to those aged 12 years and older by quintile of neighbourhood diversity and vaccine product: Ontario, December 14, 2020 to October 24, 2021

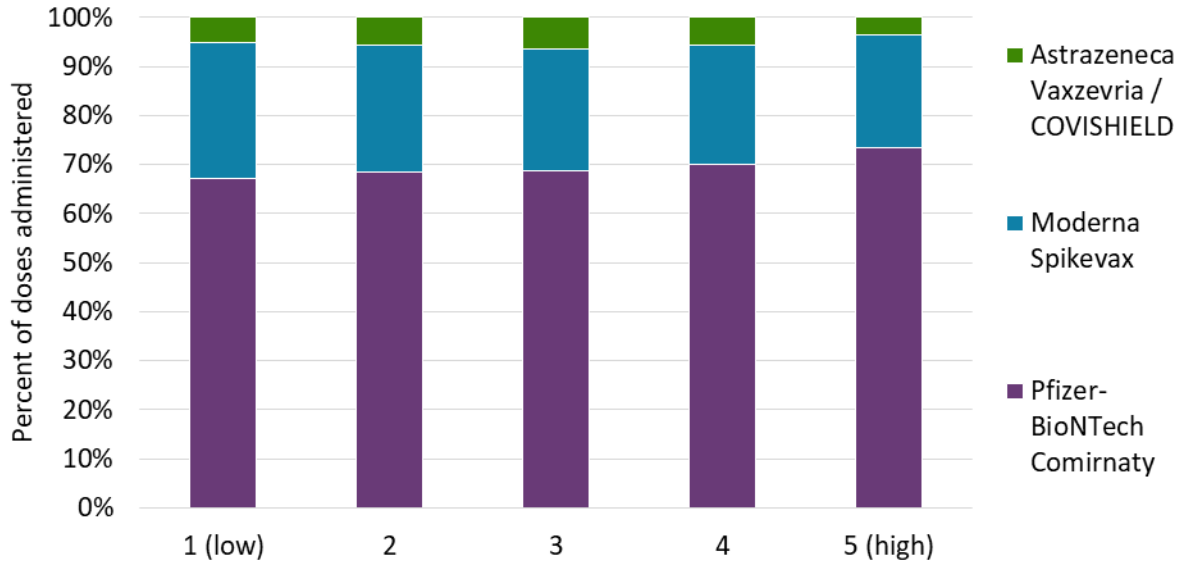
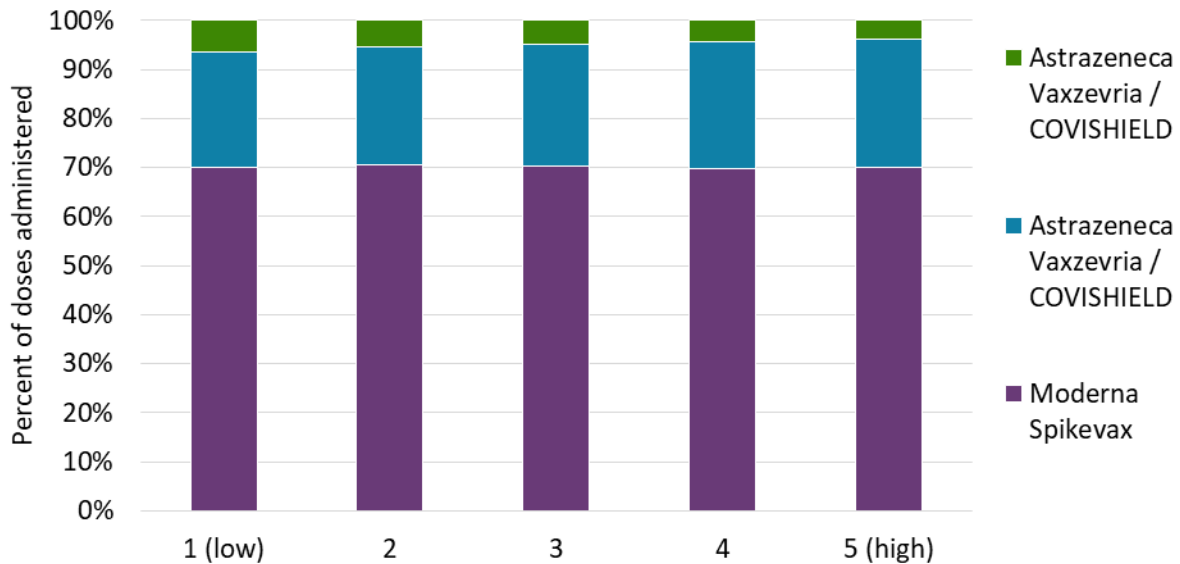


Figure 12. Percent of vaccinations given (first and second doses combined) to those aged 12 and older by quintile of neighbourhood material deprivation and vaccine product: Ontario, December 14, 2020 to October 24, 2021



Technical Notes

Data Sources

- COVID-19 vaccination data were based on information successfully extracted from the Ontario Ministry of Health’s COVaxON application as of **October 25, 2021 at approximately 7 a.m.**
- The denominators used to derive coverage estimates for ON-Marg quintiles were extracted from the Ontario Health Insurance Plan (OHIP) Registered Person Database (RPDB) Cohort Fiscal Year 2019/20 (extracted October 2020). The OHIP RPDB includes all individuals with a valid Ontario health insurance number. Denominator data were provided by Health Analytics and Insights Branch, Capacity Planning and Analytics Division, Ministry of Health.
- Statistics Canada Postal Code Conversion File Plus (PCCF +) version 7D.
- The health equity (neighbourhood-level diversity and material deprivation) analyses use data from the 2016 Ontario Marginalization Index:¹
 - Matheson FI; van Ingen T. 2016 Ontario marginalization index [Internet]. Toronto, ON: St. Michael’s Hospital; 2018 [cited 2021 Apr 29]. Joint publication with Public Health Ontario. Available from: <https://www.publichealthontario.ca/-/media/data-files/index-on-marg.xls?la=en>

Data Caveats

- COVaxON is a dynamic reporting system, which allow ongoing updates to data previously entered. As a result, data extracted from COVaxON represent a snapshot at the time of extraction and may differ from previous or subsequent reports.
- The data represent vaccinations reported and recorded in COVaxON. As a result, all counts may be subject to varying degrees of underreporting due to a variety of factors.
- Counts for the number of doses administered in Ontario (Figures 9-12) exclude doses administered out of province and from non-Ontario stock. However, individuals that received a vaccination out of province or from non-Ontario stock are included in coverage estimates (Figures 1-8), as these individuals are residents of Ontario. As a result, the counts reported for doses administered will not align with the number of individuals immunized.
- This report uses the Statistics Canada dissemination area (DA) as a measure of neighbourhood. As the smallest level of geography for which census data is made publically available, individuals are assigned to a level of ON-Marg using DA to minimize potential misclassification of socio-demographic characteristics using area-level data. As a result, the findings from this report may not align with studies which use other levels of geography (e.g. neighbourhoods based on postal code), including those evaluating coverage in provincially designated “hot spots”.
- People who reside in long-term settings are not represented in Canadian census data from which ON-Marg is calculated. Therefore, individuals with reason for vaccination as residents of long-term care or retirement home settings were excluded from this report, representing 142,332 (1.1%) vaccinated individuals. Additionally 432,632 (3.4%) of vaccinated individuals had invalid or missing postal codes, or live in neighbourhoods where an ON-Marg quintile could not be derived, and were also excluded from this report.

- ON-Marg is an area-based index which assigns a measure based on neighbourhood characteristics, not individual characteristics. Not all individuals in a given area will reflect the broader demographic trends of the area they live in. This means, for example, that not every individual who lives in an area of high neighbourhood material deprivation experiences material deprivation themselves. Heterogeneity of demographic characteristics can vary substantially, especially across large rural geographies.
- Due to data suppression for some census indicators on First Nation reserves in Ontario, residents of reserves could not be included in ON-Marg and therefore people who have been vaccinated against COVID-19 and are living in these communities could not be assigned to a quintile of marginalization. While Indigenous individuals living off reserves are included in this analysis, Indigeneity data is not currently collected or captured in dimensions of ON-Marg.

Methods

VACCINATION DATA

- Methods for processing COVaxON vaccine uptake data are described in the Technical Notes of the COVID-19 Vaccine Uptake and Program Impact in Ontario.⁵

ON-MARG

- Neighbourhood diversity is defined using the ethnic concentration dimension of ON-Marg, which measures populations who may experience marginalization related to racism and discrimination. It is based on the proportion of non-white and non-Indigenous residents and/or the proportion of immigrants that arrived in Canada within the past five years.
- Neighbourhood material deprivation is defined using the material deprivation dimension of ON-Marg, which is closely connected to poverty. It refers to the inability of individuals and communities to access and attain basic material needs. The indicators included in this dimension measure income, quality of housing, educational attainment and family structure characteristics.
- “Neighbourhoods” are considered to be Statistic Canada dissemination areas (DA). Vaccinated individuals were probabilistically matched to a DA using Statistics Canada PCCF+ version 7B. The quintiles for the ethnic concentration and the material deprivation dimensions are ordered from quintiles 1 to 5, with quintile 1 having the lowest level of marginalization (i.e., least diverse or least material deprivation) and quintile 5 having the highest level of marginalization (i.e., most diverse or most material deprivation).
- As a neighbourhood-level measure of marginalization, diversity and material deprivation describe the general characteristics of a given area and are used as a proxy for individual-level data when these data are unavailable. Therefore, trends highlighted in this report apply only to the neighbourhoods from which they arise and cannot be used to characterize individual members of a given area. In order to gain a better understanding of the complex relationship between COVID-19 vaccination and ethno-cultural characteristics at the individual level, further data collection and analysis are needed.
- The demographic characteristics of the populations of the quintile of neighbourhood material deprivation are described in the appendices of the COVID-19 in Ontario – A Focus on Material Deprivation report.⁴ The demographic characteristics of the populations of the quintile of neighbourhood diversity are described in the appendices of the COVID-19 in Ontario – A Focus on Diversity report.²

References

1. Matheson FI, van Ingen T. 2016 Ontario marginalization index [Internet]. Toronto, ON: St. Michael's Hospital; 2018 [cited 2021 Apr 29]. Joint publication with Public Health Ontario. Available from: <https://www.publichealthontario.ca/-/media/data-files/index-on-marg.xls?la=en>
2. Ontario Agency for Health Protection and Promotion (Public Health Ontario). COVID-19 in Ontario – a focus on diversity [Internet]. Toronto, ON: Queen's Printer for Ontario; 2020 [cited 2021 Apr 29]. Available from: <https://www.publichealthontario.ca/-/media/documents/ncov/epi/2020/06/covid-19-epi-diversity.pdf?la=en>
3. Ontario Agency for Health Protection and Promotion (Public Health Ontario). COVID-19 in Ontario – a focus on material deprivation [Internet]. Toronto, ON: Queen's Printer for Ontario; 2020 [cited 2021 Apr 29]. Available from: <https://www.publichealthontario.ca/-/media/documents/ncov/epi/2020/06/covid-19-epi-material-deprivation.pdf?la=en>
4. Ontario Agency for Health Protection and Promotion (Public Health Ontario). COVID-19 vaccines [Internet]. Toronto, ON: Queen's Printer for Ontario; 2021 [cited 2021 May 20]. Available from: <https://www.publichealthontario.ca/en/diseases-and-conditions/infectious-diseases/respiratory-diseases/novel-coronavirus/vaccines>
5. Ontario Agency for Health Protection and Promotion (Public Health Ontario). COVID-19 vaccine uptake and program impact in Ontario: December 14, 2020 to August 7, 2021 [Internet]. Toronto, ON: Queen's Printer for Ontario; 2021 [cited 2021 Aug 8]. Available from: <https://www.publichealthontario.ca/-/media/documents/ncov/epi/covid-19-vaccine-uptake-ontario-epi-summary.pdf?la=en>

Appendix – Data tables

Table A1. Cumulative vaccination coverage for individuals 12 years and older by week of vaccination and quintile of neighbourhood diversity: Ontario, December 14, 2020 to October 24, 2021

Week of	At least 1 dose – Quintile 1 (low)	At least 1 dose – Quintile 2	At least 1 dose – Quintile 3	At least 1 dose – Quintile 4	At least 1 dose – Quintile 5 (high)	Fully vaccinated – Quintile 1 (low)	Fully vaccinated – Quintile 2	Fully vaccinated – Quintile 3	Fully vaccinated – Quintile 4	Fully vaccinated – Quintile 5 (high)
Dec 13, 2020	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dec 20, 2020	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Dec 27, 2020	0.2	0.3	0.3	0.4	0.3	0.0	0.0	0.0	0.0	0.0
Jan 03, 2021	0.5	0.7	0.9	1.0	0.8	0.0	0.0	0.0	0.0	0.0
Jan 10, 2021	0.8	1.2	1.4	1.6	1.3	0.0	0.1	0.1	0.1	0.1
Jan 17, 2021	0.9	1.3	1.6	1.7	1.4	0.1	0.2	0.3	0.3	0.3
Jan 24, 2021	1.0	1.4	1.6	1.7	1.4	0.2	0.4	0.5	0.7	0.6
Jan 31, 2021	1.0	1.4	1.7	1.8	1.5	0.3	0.5	0.6	0.8	0.7
Feb 07, 2021	1.1	1.5	1.7	1.8	1.5	0.6	0.8	1.1	1.2	0.9
Feb 14, 2021	1.4	1.7	1.9	2.0	1.6	0.8	1.2	1.5	1.6	1.3
Feb 21, 2021	2.4	2.6	2.8	2.7	2.1	1.0	1.3	1.7	1.7	1.4
Feb 28, 2021	4.5	4.5	4.2	3.9	3.1	1.0	1.4	1.7	1.8	1.4
Mar 07, 2021	6.8	6.7	6.3	5.8	4.4	1.1	1.4	1.7	1.8	1.5
Mar 14, 2021	10.2	9.7	9.3	8.4	6.3	1.2	1.5	1.8	1.8	1.5
Mar 21, 2021	14.3	13.7	13.1	11.8	8.7	1.2	1.5	1.8	1.9	1.5
Mar 28, 2021	18.8	17.9	17.3	15.5	11.9	1.4	1.6	1.9	2.0	1.5
Apr 04, 2021	23.9	22.9	22.4	20.4	16.5	1.5	1.7	2.0	2.0	1.6
Apr 11, 2021	29.9	28.5	27.8	25.4	21.4	1.7	1.9	2.1	2.1	1.7
Apr 18, 2021	36.1	34.7	34.0	31.4	27.1	1.9	2.0	2.2	2.3	1.7
Apr 25, 2021	41.1	39.6	39.0	36.6	32.7	2.0	2.1	2.4	2.4	1.8
May 02, 2021	45.7	44.3	44.4	42.9	41.0	2.2	2.3	2.5	2.6	1.9
May 09, 2021	50.4	49.2	50.4	50.1	50.0	2.6	2.6	2.8	2.9	2.2
May 16, 2021	55.8	55.2	57.0	57.3	58.0	3.7	3.5	3.7	3.6	2.8
May 23, 2021	60.9	60.8	62.7	63.1	64.4	4.9	4.7	5.0	4.9	3.8

Week of	At least 1 dose – Quintile 1 (low)	At least 1 dose – Quintile 2	At least 1 dose – Quintile 3	At least 1 dose – Quintile 4	At least 1 dose – Quintile 5 (high)	Fully vaccinated – Quintile 1 (low)	Fully vaccinated – Quintile 2	Fully vaccinated – Quintile 3	Fully vaccinated – Quintile 4	Fully vaccinated – Quintile 5 (high)
May 30, 2021	66.1	66.3	68.0	68.2	69.0	7.4	7.3	7.7	7.8	6.4
Jun 06, 2021	69.6	70.1	71.7	71.7	71.8	12.8	12.7	13.8	14.0	12.4
Jun 13, 2021	71.4	72.2	73.7	73.8	73.7	20.8	20.7	22.1	22.2	20.9
Jun 20, 2021	72.6	73.5	75.1	75.3	75.0	30.7	30.7	32.5	32.3	30.2
Jun 27, 2021	73.5	74.4	76.0	76.4	76.2	40.8	41.0	43.5	43.4	40.9
Jul 04, 2021	74.4	75.3	76.9	77.3	77.3	50.8	51.1	53.5	53.2	50.8
Jul 11, 2021	75.2	76.1	77.7	78.2	78.4	58.3	58.8	60.8	60.5	58.4
Jul 18, 2021	75.9	76.8	78.4	79.0	79.3	63.6	64.1	65.9	65.9	64.3
July 25, 2021	76.5	77.4	79.0	79.6	80.1	66.9	67.5	69.2	69.3	68.0
Aug 01, 2021	76.9	77.9	79.4	80.1	80.7	68.8	69.6	71.3	71.5	70.3
Aug 08, 2021	77.4	78.3	79.9	80.6	81.3	70.5	71.3	73.0	73.3	72.3
Aug 15, 2021	77.9	78.9	80.5	81.2	82.0	71.8	72.7	74.3	74.7	73.8
Aug 22, 2021	78.5	79.5	81.1	81.9	82.6	72.8	73.8	75.4	75.8	75.2
Aug 29, 2021	79.2	80.2	81.8	82.6	83.4	73.7	74.6	76.3	76.8	76.4
Sep 05, 2021	79.8	80.9	82.4	83.3	84.1	74.5	75.4	77.1	77.6	77.4
Sep 12, 2021	80.5	81.5	83.0	83.8	84.7	75.3	76.3	77.9	78.5	78.4
Sep 19, 2021	81.1	82.1	83.6	84.4	85.4	76.3	77.4	79.0	79.6	79.6
Sep 26, 2021	81.6	82.6	84.0	84.9	85.9	77.2	78.3	79.8	80.5	80.7
Oct 03, 2021	82.0	83.0	84.4	85.3	86.4	78.0	79.1	80.6	81.3	81.6
Oct 10, 2021	82.4	83.3	84.7	85.7	86.8	78.7	79.7	81.2	81.9	82.3
Oct 17, 2021	82.7	83.6	85.0	86.0	87.1	79.3	80.4	81.8	82.6	83.1
Oct 24, 2021	82.7	83.7	85.0	86.0	87.2	79.3	80.4	81.8	82.6	83.1

Table A2. Vaccination coverage for individuals 12 years and older by quintile of neighbourhood diversity and gender: Ontario, December 14, 2020 to October 24, 2021

Gender	At least 1 dose – Quintile 1 (low)	At least 1 dose – Quintile 2	At least 1 dose – Quintile 3	At least 1 dose – Quintile 4	At least 1 dose – Quintile 5 (high)	Fully vaccinated – Quintile 1 (low)	Fully vaccinated – Quintile 2	Fully vaccinated – Quintile 3	Fully vaccinated – Quintile 4	Fully vaccinated – Quintile 5 (high)
Female	83.5	83.9	84.9	85.5	86.3	80.6	81.1	82.0	82.4	82.5
Male	81.7	83.1	84.5	86.2	87.9	77.8	79.3	80.9	82.2	83.4

Note: At least one dose includes individuals who received dose 1 only or dose 1 and dose 2. Partially vaccinated coverage is equal to the number of those with at least one dose minus those fully vaccinated. Individuals who received the Janssen vaccine are included in at least one dose and fully vaccinated coverage estimates only.

Table A3. Vaccination coverage for individuals 12 years and older by quintile of neighbourhood diversity and age group: Ontario, December 14, 2020 to October 24, 2021

Age group	At least 1 dose – Quintile 1 (low)	At least 1 dose – Quintile 2	At least 1 dose – Quintile 3	At least 1 dose – Quintile 4	At least 1 dose – Quintile 5 (high)	Fully vaccinated – Quintile 1 (low)	Fully vaccinated – Quintile 2	Fully vaccinated – Quintile 3	Fully vaccinated – Quintile 4	Fully vaccinated – Quintile 5 (high)
12 to 17 years old	81.6	84.2	87.5	86.9	84.9	76.2	79.1	82.6	81.9	79.1
18 to 29 years old	74.7	78.9	83.8	90.9	100.0	68.6	73.3	78.5	85.3	93.2
30 to 59 years old	80.6	82.6	83.3	83.9	83.8	76.8	79.0	80.1	80.6	80.2
60 to 79 years old	91.5	91.2	90.8	89.6	87.8	90.0	89.7	89.2	87.7	85.7
80 years and older	73.9	71.7	76.2	73.1	71.5	71.9	69.7	73.8	70.6	68.3

Note: At least one dose includes individuals who received dose 1 only or dose 1 and dose 2. Partially vaccinated coverage is equal to the number of those with at least one dose minus those fully vaccinated. Individuals who received the Janssen vaccine are included in at least one dose and fully vaccinated coverage estimates only.

Table A4. Percentage of doses (dose 1 and dose 2 combined) administered for ages 12 years and older by quintile of neighbourhood diversity and location* of vaccination: Ontario, December 14, 2020 to October 24, 2021

Location	Quintile 1 (low)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (high)
Congregate living/care	1.1	1.0	1.0	1.0	1.2
Hospital	11.6	14.8	17.3	18.3	17.1
Mass immunization clinic	62.5	59.9	57.1	57.3	62.5
Other/Not reported	0.3	0.2	0.2	0.2	0.2
Pharmacy	19.0	20.0	21.0	20.7	17.3
Physician's office	5.3	4.1	3.5	2.6	1.7

*Congregate living/care includes residents and staff who received their vaccination at this location.

Note: At least one dose includes individuals who received dose 1 only or dose 1 and dose 2. Partially vaccinated coverage is equal to the number of those with at least one dose minus those fully vaccinated. Individuals who received the Janssen vaccine are included in at least one dose and fully vaccinated coverage estimates only.

Table A5. Percentage of doses (dose 1 and dose 2 combined) administered for ages 12 years and older by quintile of neighbourhood diversity and vaccine product: Ontario, December 14, 2020 to October 24, 2021

Brand	Quintile 1 (low)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (high)
AstraZeneca Vaxzevria / COVISHIELD	5.1	5.6	6.4	5.7	3.4
Moderna Spikevax	27.7	26.0	24.9	24.2	23.2
Pfizer-BioNTech Comirnaty	67.2	68.4	68.6	70.1	73.4

Note: At least one dose includes individuals who received dose 1 only or dose 1 and dose 2. Partially vaccinated coverage is equal to the number of those with at least one dose minus those fully vaccinated. Individuals who received the Janssen vaccine are included in at least one dose and fully vaccinated coverage estimates only.

Table A6. Cumulative vaccination coverage for individuals 12 years and older by week of vaccination and quintile of neighbourhood material deprivation: Ontario, December 14, 2020 to October 24, 2021

Week of	At least 1 dose – Quintile 1 (low)	At least 1 dose – Quintile 2	At least 1 dose – Quintile 3	At least 1 dose – Quintile 4	At least 1 dose – Quintile 5 (high)	Fully vaccinated – Quintile 1 (low)	Fully vaccinated – Quintile 2	Fully vaccinated – Quintile 3	Fully vaccinated – Quintile 4	Fully vaccinated – Quintile 5 (high)
Dec 13, 2020	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dec 20, 2020	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Dec 27, 2020	0.3	0.3	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0
Jan 03, 2021	1.1	0.9	0.8	0.7	0.6	0.0	0.0	0.0	0.0	0.0
Jan 10, 2021	1.6	1.4	1.2	1.1	1.0	0.1	0.1	0.1	0.1	0.1
Jan 17, 2021	1.7	1.5	1.4	1.3	1.1	0.3	0.2	0.2	0.2	0.2
Jan 24, 2021	1.8	1.6	1.4	1.3	1.1	0.6	0.6	0.5	0.4	0.4
Jan 31, 2021	1.8	1.6	1.4	1.3	1.1	0.7	0.6	0.6	0.5	0.5
Feb 07, 2021	1.9	1.6	1.5	1.4	1.2	1.2	1.0	0.9	0.8	0.7
Feb 14, 2021	2.1	1.8	1.7	1.5	1.4	1.6	1.4	1.2	1.1	1.0
Feb 21, 2021	3.0	2.6	2.4	2.2	2.0	1.8	1.5	1.4	1.3	1.1
Feb 28, 2021	4.5	4.2	3.9	3.6	3.2	1.8	1.6	1.4	1.3	1.1
Mar 07, 2021	6.6	6.1	5.8	5.4	4.8	1.9	1.6	1.5	1.3	1.2
Mar 14, 2021	9.5	8.9	8.5	8.0	7.0	1.9	1.6	1.5	1.4	1.2
Mar 21, 2021	13.4	12.4	11.9	11.3	9.7	2.0	1.7	1.5	1.4	1.3
Mar 28, 2021	17.6	16.5	15.9	15.1	12.8	2.0	1.8	1.6	1.5	1.4
Apr 04, 2021	23.0	21.7	20.9	19.9	16.8	2.1	1.8	1.7	1.6	1.5
Apr 11, 2021	28.5	27.2	26.4	25.1	21.3	2.3	1.9	1.8	1.7	1.6
Apr 18, 2021	35.2	33.7	32.4	30.8	26.3	2.4	2.0	1.9	1.8	1.7
Apr 25, 2021	40.7	39.2	37.7	35.8	31.0	2.5	2.2	2.0	1.9	1.8
May 02, 2021	46.9	45.5	44.0	42.0	36.7	2.7	2.3	2.2	2.1	1.9
May 09, 2021	54.1	52.4	50.8	48.6	42.8	3.1	2.6	2.5	2.4	2.2
May 16, 2021	61.5	59.5	57.6	55.3	48.9	4.0	3.5	3.3	3.1	2.9
May 23, 2021	67.6	65.5	63.5	61.0	54.2	5.5	4.8	4.4	4.2	3.8
May 30, 2021	72.9	70.6	68.4	65.9	59.1	8.5	7.6	7.1	6.6	5.8
Jun 06, 2021	76.7	73.9	71.6	69.2	62.5	15.2	13.8	12.9	12.2	10.4
Jun 13, 2021	78.9	75.7	73.4	71.0	64.6	24.5	22.5	21.2	20.1	17.3

Week of	At least 1 dose – Quintile 1 (low)	At least 1 dose – Quintile 2	At least 1 dose – Quintile 3	At least 1 dose – Quintile 4	At least 1 dose – Quintile 5 (high)	Fully vaccinated – Quintile 1 (low)	Fully vaccinated – Quintile 2	Fully vaccinated – Quintile 3	Fully vaccinated – Quintile 4	Fully vaccinated – Quintile 5 (high)
Jun 20, 2021	80.4	77.0	74.6	72.4	66.0	36.2	33.3	31.0	29.1	24.8
Jun 27, 2021	81.3	77.9	75.6	73.4	67.3	48.4	44.7	41.7	39.1	33.4
Jul 05, 2021	82.1	78.8	76.5	74.5	68.5	59.0	55.0	51.7	48.8	42.3
Jul 11, 2021	82.8	79.5	77.4	75.5	69.7	66.6	62.5	59.2	56.4	49.6
Jul 18, 2021	83.4	80.2	78.2	76.3	70.7	71.9	68.0	64.8	61.9	55.1
Jul 25, 2021	84.0	80.9	78.9	77.1	71.6	75.1	71.3	68.3	65.5	58.7
Aug 01, 2021	84.4	81.3	79.3	77.6	72.2	77.1	73.4	70.5	67.7	61.0
Aug 08, 2021	84.8	81.8	79.8	78.2	72.9	78.7	75.1	72.2	69.6	63.1
Aug 15, 2021	85.3	82.4	80.4	78.8	73.6	79.9	76.4	73.6	71.2	64.8
Aug 22, 2021	85.8	82.9	81.0	79.4	74.4	80.9	77.4	74.8	72.4	66.2
Aug 29, 2021	86.5	83.6	81.7	80.2	75.3	81.7	78.3	75.8	73.5	67.4
Sep 05, 2021	87.0	84.2	82.4	80.9	76.1	82.4	79.1	76.6	74.5	68.5
Sep 12, 2021	87.4	84.7	83.0	81.6	77.0	83.1	79.9	77.5	75.4	69.6
Sep 19, 2021	87.9	85.3	83.6	82.3	77.9	84.0	80.9	78.6	76.7	71.0
Sep 26, 2021	88.3	85.7	84.1	82.9	78.6	84.8	81.8	79.6	77.7	72.2
Oct 03, 2021	88.6	86.1	84.5	83.3	79.2	85.4	82.5	80.4	78.6	73.3
Oct 10, 2021	88.8	86.4	84.8	83.7	79.7	85.9	83.1	81.1	79.4	74.2
Oct 17, 2021	89.1	86.6	85.1	84.1	80.1	86.4	83.6	81.7	80.1	75.1
Oct 24, 2021	89.1	86.7	85.2	84.1	80.2	86.4	83.6	81.7	80.1	75.1

Table A7. Vaccination coverage for individuals 12 years and older by quintile of neighbourhood material deprivation and gender: Ontario, December 14, 2020 to October 24, 2021

Gender	At least 1 dose – Quintile 1 (low)	At least 1 dose – Quintile 2	At least 1 dose – Quintile 3	At least 1 dose – Quintile 4	At least 1 dose – Quintile 5 (high)	Fully vaccinated – Quintile 1 (low)	Fully vaccinated – Quintile 2	Fully vaccinated – Quintile 3	Fully vaccinated – Quintile 4	Fully vaccinated – Quintile 5 (high)
Female	88.5	86.6	85.1	83.8	80.0	86.0	83.9	82.1	80.4	75.4
Male	89.3	86.4	84.9	84.0	79.7	86.3	83.0	81.0	79.5	74.1

Note: At least one dose includes individuals who received dose 1 only or dose 1 and dose 2. Partially vaccinated coverage is equal to the number of those with at least one dose minus those fully vaccinated. Individuals who received the Janssen vaccine are included in at least one dose and fully vaccinated coverage estimates only.

Table A8. Vaccination coverage for individuals 12 years and older by quintile of neighbourhood material deprivation and age group: Ontario, December 14, 2020 to October 24, 2021

Age group	At least 1 dose – Quintile 1 (low)	At least 1 dose – Quintile 2	At least 1 dose – Quintile 3	At least 1 dose – Quintile 4	At least 1 dose – Quintile 5 (high)	Fully vaccinated – Quintile 1 (low)	Fully vaccinated – Quintile 2	Fully vaccinated – Quintile 3	Fully vaccinated – Quintile 4	Fully vaccinated – Quintile 5 (high)
12 to 17 years old	94.1	88.9	84.5	80.9	73.7	90.1	84.4	79.3	74.8	66.0
18 to 29 years old	90.1	87.1	88.6	91.5	86.2	85.7	82.1	82.6	84.7	78.2
30 to 59 years old	87.5	85.1	82.9	81.1	77.3	84.9	82.1	79.4	77.1	72.3
60 to 79 years old	93.0	91.6	90.2	88.8	85.9	91.6	90.1	88.6	86.9	83.6
80 years and older	76.1	74.6	74.0	71.6	69.4	73.8	72.3	71.6	69.2	66.6

Note: At least one dose includes individuals who received dose 1 only or dose 1 and dose 2. Partially vaccinated coverage is equal to the number of those with at least one dose minus those fully vaccinated. Individuals who received the Janssen vaccine are included in at least one dose and fully vaccinated coverage estimates only.

Table A9. Percentage of doses (dose 1 and dose 2 combined) administered for ages 12 years and older by quintile of neighbourhood material deprivation and location* of vaccination: Ontario, December 14, 2020 to October 24, 2021

Location	Quintile 1 (low)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (high)
Congregate living/care	0.7	0.8	1.0	1.2	1.7
Hospital	17.5	17.0	16.0	15.3	14.3
Mass immunization clinic	58.4	59.8	61.0	61.1	60.4
Other/Not reported	0.1	0.1	0.2	0.3	0.3
Pharmacy	20.4	19.2	18.6	18.8	19.7
Physician's office	2.8	3.1	3.2	3.3	3.5

* Congregate living/care includes residents and staff who received their vaccination at this location.

Note: At least one dose includes individuals who received dose 1 only or dose 1 and dose 2. Partially vaccinated coverage is equal to the number of those with at least one dose minus those fully vaccinated. Individuals who received the Janssen vaccine are included in at least one dose and fully vaccinated coverage estimates only.

Table A10. Percentage of doses (dose 1 and dose 2 combined) administered for ages 12 years and older by quintile of neighbourhood material deprivation and vaccine product: Ontario, December 14, 2020 to October 24, 2021

Brand	Quintile 1 (low)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (high)
AstraZeneca Vaxzevria / COVISHIELD	6.4	5.5	4.8	4.3	3.9
Moderna Spikevax	23.7	23.9	25.0	26.1	26.1
Pfizer-BioNTech Comirnaty	69.9	70.6	70.2	69.6	70.0

Note: At least one dose includes individuals who received dose 1 only or dose 1 and dose 2. Partially vaccinated coverage is equal to the number of those with at least one dose minus those fully vaccinated. Individuals who received the Janssen vaccine are included in at least one dose and fully vaccinated coverage estimates only.

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