

REPORT #5

COVID-19 VACCINATION DURING PREGNANCY IN ONTARIO

December 14, 2020 to May 31, 2022

BACKGROUND:

Pregnant individuals are considered a high-risk population for COVID-19 complications, based on higher rates of COVID-19 hospitalization, intensive care unit (ICU) admission, and death compared with non-pregnant individuals. Since late April 2021, pregnant people in Ontario have been prioritized for COVID-19 vaccination as part of Phase 2 of the COVID-19 vaccine program implementation. The Better Outcomes Registry & Network (BORN) Ontario (www.bornontario.ca) is evaluating COVID-19 vaccination in pregnant individuals in Ontario. **This report presents data on vaccine coverage among individuals who were pregnant at any point between December 14, 2020 and May 31, 2022.**

RESULTS:

FIGURE 1. Estimated percentage of pregnant people who had received at least one COVID-19 vaccine (before or during pregnancy), by calendar month

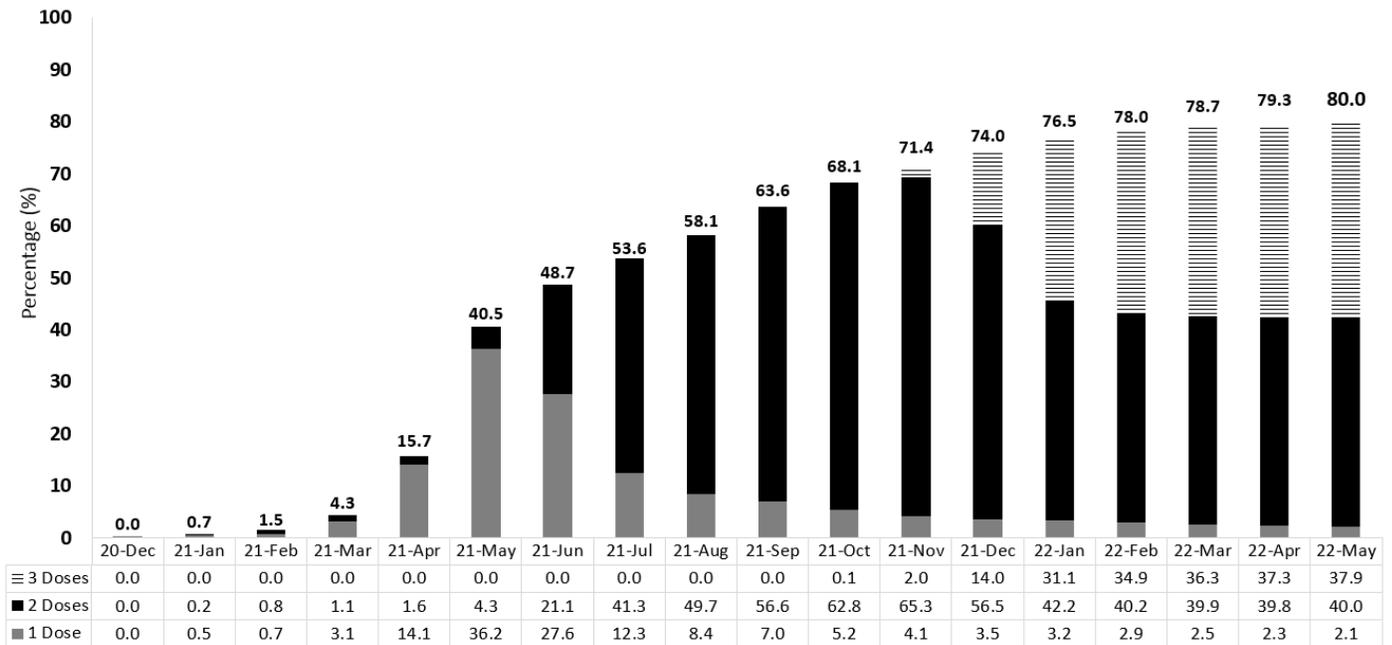


FIGURE 1 shows that among people who were pregnant in May 2022:

- **2.1%** had received only one dose of COVID-19 vaccine before or during pregnancy.
- **40.0%** had received two doses of COVID-19 vaccine before or during pregnancy.
- **37.9%** had received three doses of COVID-19 vaccine before or during pregnancy.
- COVID-19 vaccine coverage in the pregnant population remains lower than in the general female population of reproductive age in Ontario (approximately 91%)^a.

FIGURE 2. COVID-19 vaccine coverage (≥1 dose before or during pregnancy) in the pregnant population by Public Health Region in May 2022

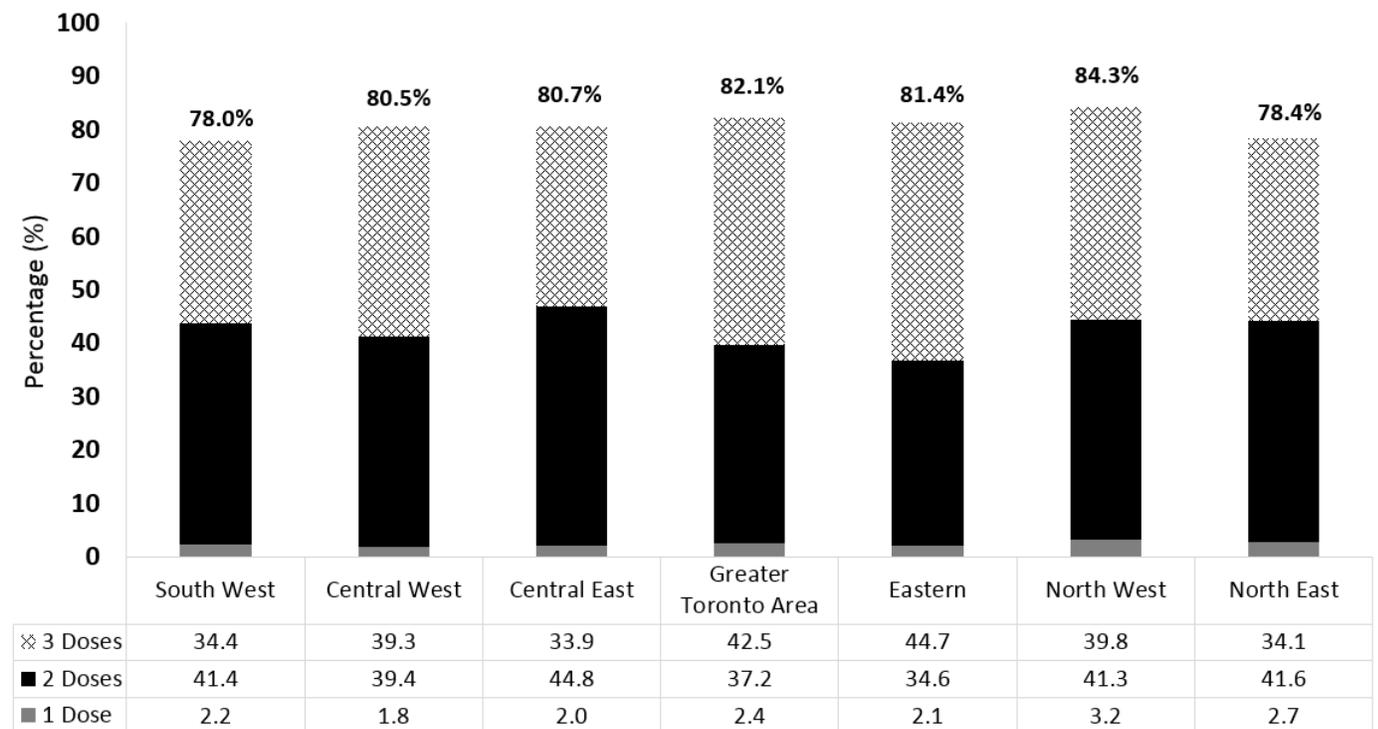


FIGURE 2 shows that among people who were pregnant in March 2022

- COVID-19 vaccine coverage (≥ 1 dose before or during pregnancy) across Public Health Regions ranged from **78.0%** to **84.3%**.
- COVID-19 vaccine coverage with at least 3 doses before or during pregnancy across Public Health Regions ranged from **33.9%** to **44.7%**.

BIRTH OUTCOMES:

Data from the BORN Information System was used in two studies to investigate the association of COVID-19 vaccination in pregnancy with maternal and neonatal outcomes:

1. A study published in the *Journal of the American Medical Association*^b using BORN Information System data explored outcomes for over 97,500 pregnant individuals (23% of whom had received at least one dose of COVID-19 vaccine) who gave birth between December 14, 2020 to September 30, 2021, and their newborns following **COVID-19 vaccination during pregnancy**. Vaccinated individuals had **no increased risk** of postpartum hemorrhage, chorioamnionitis, cesarean delivery, and their babies **did not have** higher rates of admission to neonatal intensive care unit and low newborn 5-minute Apgar score compared with those who were not vaccinated during pregnancy. See infographic at this [link](#).
2. A study published in the *British Medical Journal*^c using BORN Information System data explored the risk of preterm birth, small-for-gestational-age at birth, and stillbirth, following **COVID-19 vaccination during pregnancy**, for over 85,000 pregnant individuals (51% of whom had received at least one dose of COVID-19 vaccine) who gave birth from May 1 to December 31, 2021. Individuals who had been vaccinated **during pregnancy** had **no increased risk** of preterm birth before 37 weeks (overall or spontaneous preterm birth), very preterm birth (<32 weeks), small-for-gestational-age at birth (<10th percentile), or stillbirth (fetal death at ≥20 weeks) compared with those who were not vaccinated during pregnancy. See infographic at this [link](#).

This work is supported by the Public Health Agency of Canada, through the Vaccine Surveillance Reference Group and the COVID-19 Immunity Task Force.

The report is based on data extracted from the Ontario Ministry of Health's COVaxON and from the BORN Information System (BIS).

Disclaimer: the results of this report may differ from other reported estimates due to differences in data sources and data processing lag times.

Contact: covid@bornontario.ca

References:

- a) Public Health Ontario: COVID-19 vaccine uptake in Ontario: December 14, 2020 to June 5, 2022. Toronto, ON
- b) JAMA 2022;327(15):1478-1487. <https://jamanetwork.com/journals/jama/fullarticle/2790607>;
- c) BMJ 2022;378:e071416. <https://www.bmj.com/content/378/bmj-2022-071416>