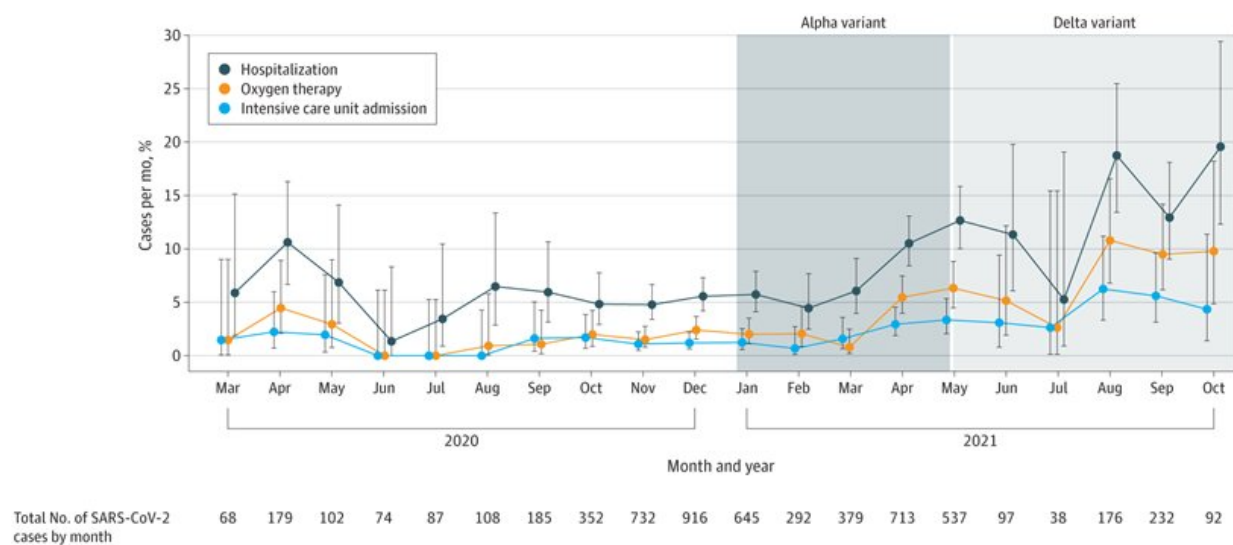


# Catching COVID-19 during pregnancy increases risk of hospitalization, premature birth, study finds

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Adverse Maternal Outcomes Associated With SARS-CoV-2 Diagnosis in Pregnancy From March 1, 2020, to October 31, 2021 (N = 6012). Points are offset a small amount along the x-axis for visualization. Whiskers show 95% CI from binomial tests using a  $\chi^2$  approximation. Eight completed pregnancies with missing dates are not included. Credit: *JAMA* (2022). DOI: 10.1001/jama.2022.5906

As Canada faces a sixth wave of COVID-19 infections, researchers at the UBC faculty of medicine are urging people who are pregnant to remain vigilant based on data from Canada's first national, peer-



reviewed study on COVID-19 in pregnancy.

The findings, published today in *JAMA*, show that pregnant people who catch COVID-19 are at greater risk of being hospitalized, being admitted to intensive care units (ICUs) and experiencing an early birth.

"Despite the easing of many restrictions across Canada, COVID-19 is still with us and people who are unvaccinated and pregnant remain particularly vulnerable to [adverse outcomes](#)," says Dr. Deborah Money (she/her), a professor in UBC's department of obstetrics and gynecology who is leading the national research project.

"It is important that pregnant people consider the increased risk and take appropriate steps to protect themselves and their infant by getting vaccinated, getting boosted and avoiding exposure to COVID-19 where possible."

## **Understanding the impacts of COVID-19 on pregnancy**

In March 2020, Dr. Money launched the CANCOVID-Preg research program in collaboration with researchers across the country and with support from the Public Health Agency of Canada and the Canadian Institutes for Health Research.

Since then, the team has been collecting and analyzing data from six Canadian provinces to understand how COVID-19 impacts [pregnancy](#) and pregnant individuals.

"When we started out there were very limited data on COVID-19 in pregnancy. After all, we were dealing with a new virus," adds Dr. Money. "We knew we needed to get a better understanding of what



happens when someone gets sick with COVID-19 during pregnancy and what the impacts are on the baby and the parent."

As of Oct. 31, 2021, there had been a total of 8,786 recorded cases of COVID-19 in pregnancy in Canada. The researchers analyzed maternal and pregnancy outcomes from 6,012 of these cases, comparing the results with non-pregnant women and with pregnant people who did not contract COVID-19.

"We started accumulating data and it quickly became clear that we were seeing an increase in complications among [pregnant women](#) who contracted COVID-19," Dr. Money says.

## **Increased risk of hospitalization, ICU admission**

Among the 6,012 cases of COVID-19 in pregnancy, 466 (7.75%) required hospitalization and 121 (2.01%) were admitted to an ICU.

"It's concerning when you compare these numbers to the rates among non-pregnant individuals," explains Dr. Elisabeth McClymont (she/her), a UBC postdoctoral fellow and first author of the study. "Overall, people who are pregnant are 2.65 times more likely to require hospitalization and 5.46 times more likely to be admitted to ICU than non-pregnant individuals."

According to the study, this risk increased with age, pre-existing [high blood pressure](#) and if individuals were further along in their pregnancy at the time of diagnosis.

The good news, say the researchers, is that none of the patients who received two vaccine doses experienced any adverse maternal outcomes.

"Vaccination continues to be safe during pregnancy and the most



effective way for people who are pregnant to protect themselves and their baby," adds Dr. McClymont.

## Increased risk of early labor

The researchers also looked at whether or not COVID-19 infections led to an increase in adverse pregnancy outcomes. While the rates of stillbirth did not increase significantly among COVID-19 affected pregnancies, the study did find that women who contracted COVID-19 were more likely to experience preterm birth.

Overall, the rate of [preterm birth](#) (before 37 weeks of pregnancy) was 11.1% among COVID-19-affected pregnancies, compared to only 6.8% among those that were unaffected. This elevated risk was present even for mild cases of COVID-19 that did not require hospitalization.

"Preterm births can result in serious and lifelong impacts on the infant," says Dr. McClymont. "Our results emphasize the importance of preventative measures, such as vaccination, that can help reduce COVID-19 infection among pregnant people."

Going forward, the research team will be looking more closely at infants born to mothers with COVID-19, seeking to understand if there are health impacts over the short and long term.

**More information:** Elisabeth McClymont et al, Association of SARS-CoV-2 Infection During Pregnancy With Maternal and Perinatal Outcomes, *JAMA* (2022). [DOI: 10.1001/jama.2022.5906](https://doi.org/10.1001/jama.2022.5906)

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