

# Medical Management and Hospitalization Rates for COVID-19 in Pregnancy according to Vaccination Status: A Retrospective Cohort Study of Women in Northeast Melbourne

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## INTRODUCTION

- COVID-19 during pregnancy is associated with higher risk of severe disease.
- Northeast Melbourne was a 'hotspot' of COVID-19 cases in 2020-2021
- To cope with the high number of COVID-19 cases, Northern Health used innovative models of care including Medical Obstetrics@ Home, the Virtual ED and the "Sotrovimab Tent" to provide out-of-hospital care for patients with COVID-19

## AIM

To compare rates of medical therapy and admissions for COVID-19 among vaccinated and unvaccinated pregnant women in northeast Melbourne.

## METHODS

- Data on clinical management and pregnancy outcomes of women with confirmed COVID-19 infections who birthed at The Northern Hospital between 1 Sept 2020 and 31 January 2022 were collected from the medical records.
- Rates of medical therapy and hospitalizations for COVID-19 were compared between vaccinated and unvaccinated women using the chi-squared statistic,  $P < 0.05$  being significant.

## RESULTS

- 78 women were included; 43 (55%) were vaccinated and 35 (45%) were not.
- Compared to unvaccinated women, vaccinated women had lower rates of medical therapy for COVID-19 (28% vs 46%,  $p = 0.16$ ) and fewer hospital admissions for COVID-19 (25% vs 40.0%,  $p = 0.18$ ), though our cohort was too small to determine statistical significance.
- The most common medications used to treat COVID-19 were anticoagulants ( $n=23$ ), inhaled budesonide ( $n=12$ ), systemic glucocorticoids ( $n=7$ ) and antibiotics ( $n=7$ ).
- Eight women received novel therapies for COVID-19 including remdesivir ( $n=3$ ), tocilizumab ( $n=3$ ) and sotrovimab ( $n=2$ ).
- Two women required tertiary hospital transfer due to medical acuity, and six women with stable COVID-19 were transferred to give birth under the state streaming model.
- There were no maternal or perinatal deaths.

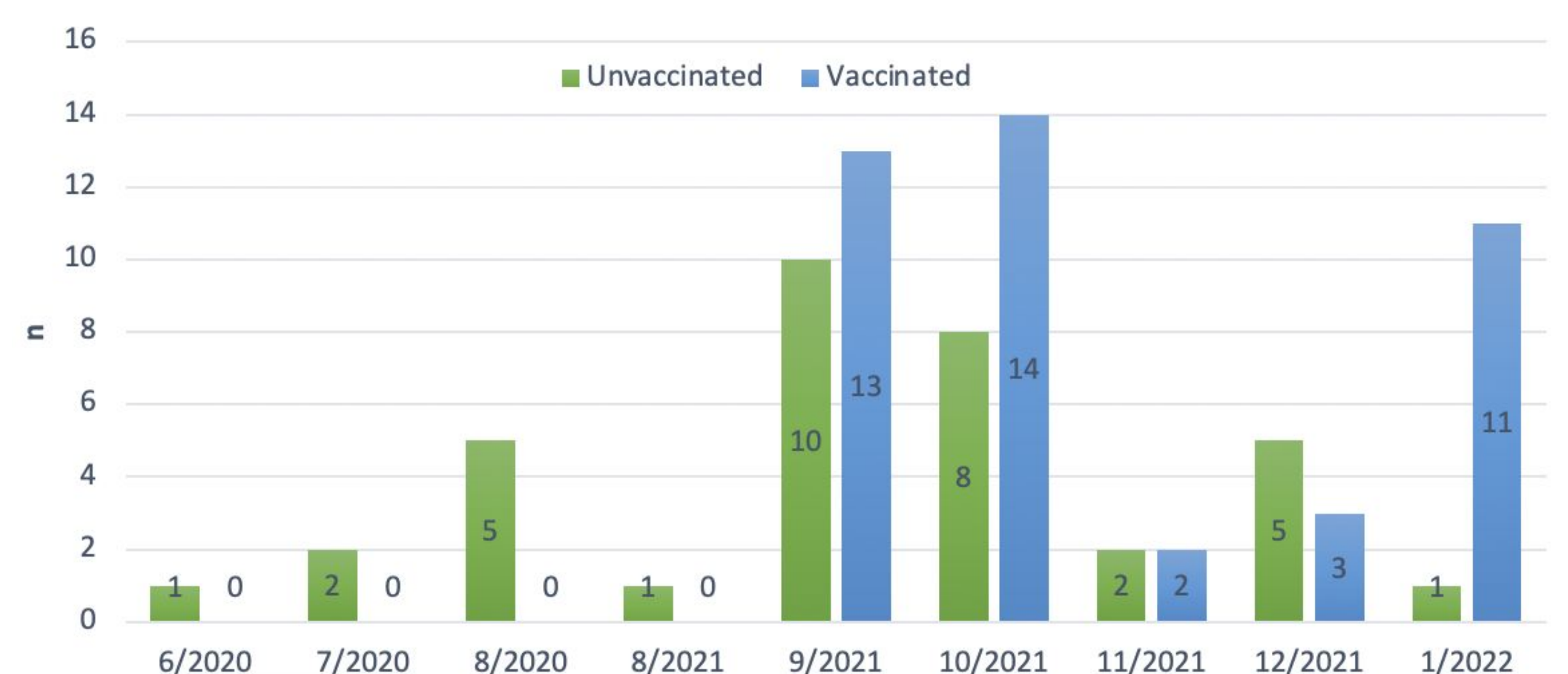


Figure 1. COVID-19 infection among pregnant women at Northern Health by month and vaccination status (who birthed during the study period)

## DISCUSSION

In this single centre Melbourne cohort, vaccinated women had a trend to less medical treatment and admissions for COVID-19 in pregnancy than unvaccinated women. Many cases of the omicron wave at the end of 2021 were not included as they had not birthed by the end of study period. Ongoing monitoring of pregnancy outcomes is vital as this pandemic evolves.

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