

Covid-19: Evaluation of Prevalence and Outcomes in a Scottish District General Hospital

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Background

While publicly available data describes the impact of SARS-CoV-2 infection among pregnant women at a national and global level, we wanted to interrogate the prevalence of Covid-19 among pregnant women who were booked at NHS Fife (Scotland), as well as the outcomes associated with the infection.

Method

We performed a retrospective cohort study and included all pregnant women who were booked at NHS Fife between October 2020 to December 2021. Data was extracted from electronic maternity records and those who were had a positive Covid-19 test during the pregnancy were included in the study. Those who had positive tests prior to pregnancy were excluded. Vaccination status at the time of positive test were identified through electronic records.

Conclusion

The trend of Covid-19 infection in this population was in keeping with the national data. While the majority of pregnant women who had positive tests were clinically well, those that required hospital admission and were not vaccinated, as well as those who were from deprived backgrounds, had an increased risk of maternal and neonatal morbidity. Further efforts to improve vaccination uptake among pregnant women, particularly those from deprived areas, is critical in reducing maternal and neonatal morbidity and mortality.

Results

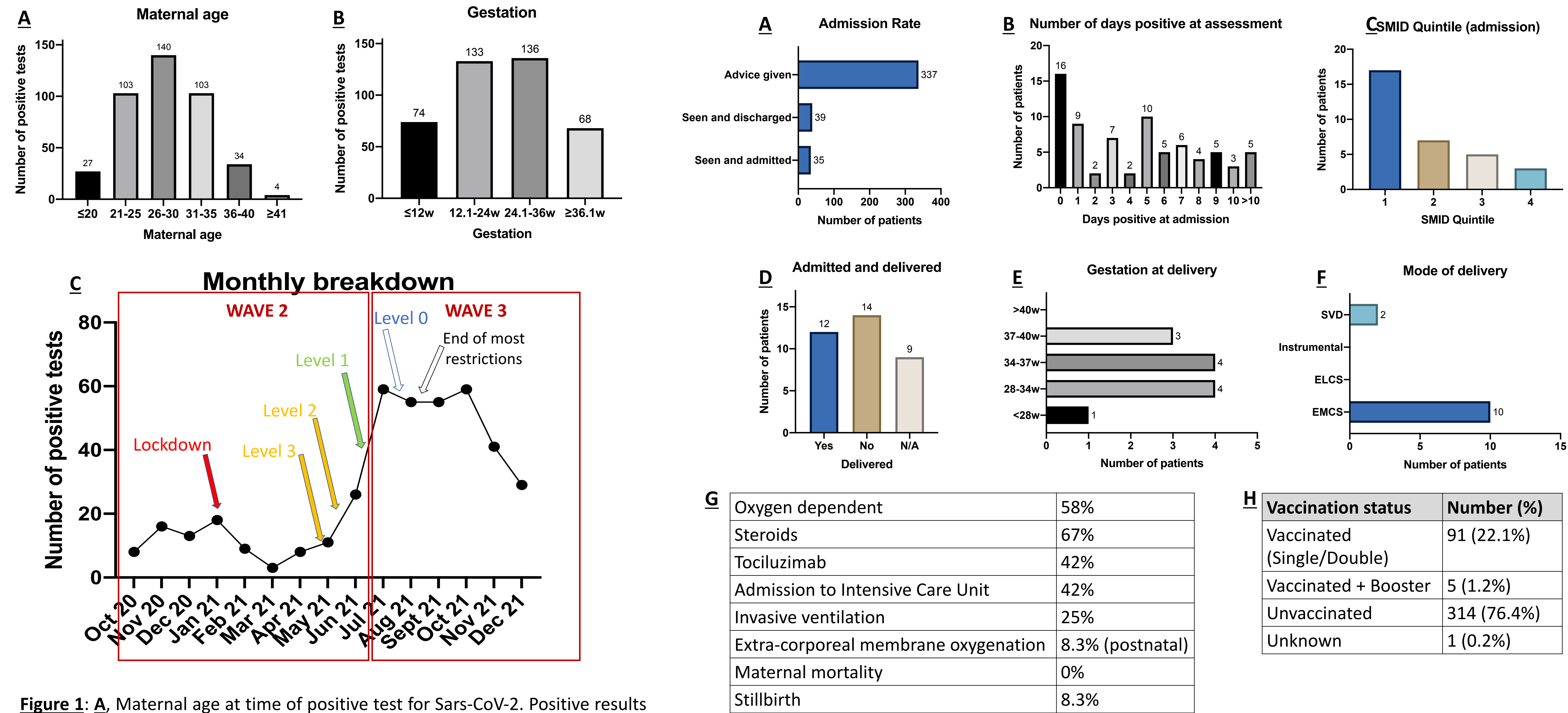


Figure 1: **A**, Maternal age at time of positive test for Sars-CoV-2. Positive results were most prevalent among those aged between 26-30 years old, followed by 21-25 and 31-35 years of age. **B**, Gestational age at time of positive test. Most women tested positive between 24.1-36 weeks gestation. **C**, Number of positive tests between October 2020 to December 2021 with arrows indicating the start of “lockdown” and various levels of restrictions in Scotland, and red boxes demonstrating Wave 2 and 3.

Figure 2: **A**, 35/411 women who were positive for Covid-19 infection were admitted to the hospital during the study period. **B**, Bar graph demonstrating number of days since positive test at the time of admission. **C**, Bar graph demonstrating distribution of women who were admitted due to Covid-19 based on social deprivation (SMID, Scottish Index of Multiple Deprivation. 1=most deprived, 5=least deprived. NB, none of the patients were in 5th quintile). **D**, 12 (34%) women who were admitted were delivered due to deterioration in symptoms. 14 (40%) were delivered due to reasons other than deterioration in Covid-19 infection and 9 women were not delivered. **E**, Gestation (weeks) at time of delivery. **F**, 10 women were delivered by emergency Caesarean Section and 2 had SVDs. **G**, Maternal morbidity and mortality associated with Covid-19 infection during the study period. **H**, Vaccination status of all women who tested positive during the study period