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COVID-19 infection in pregnant women and women of childbearing age in Northern Ireland

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Objective

To describe the patterns of COVID-19 infection in pregnant women and women of childbearing age (WCBA) in Northern Ireland (NI).

Methods

A population-based cross-sectional study was undertaken using linked administrative health datasets. All pregnancies to resident mothers (aged 15-49 years) recorded in the NI Maternity System database (NIMATS) were linked to hospital and community COVID-19 tests performed from 1-3-2020 to 31-12-2022. COVID-19 tests for WCBA (aged 15-49 years) were also identified. The proportion of pregnancies (all and by trimester) and WCBA each month with a positive COVID-19 test was determined.

Results

There were 74,111 pregnancies to 65,008 women of whom 9,261 had positive COVID-19 tests recorded during pregnancy with 9,079 (12.3%) pregnancies affected - 2,751 (30.3%) in the first trimester, 3,403 (37.5%) in the second trimester and 3,107 (34.2%) in the third trimester. There were 421,888 WCBA of whom 192,772 (45.7%) had 218,038 infections recorded. The higher proportion of WCBA with infections is an artefact of the data as these women were in the database for longer than pregnant women. Rates of infection followed the same pattern over time in pregnancy and WCBA, with both peaking in January 2022 at 96.2 and 87.1 per 1,000 pregnancies/ WCBA per month, respectively.

Conclusion

Monthly rates of infection were similar in both groups. The next step will be to examine the sociodemographic determinants of COVID-19 infection. The extent to which pregnant women and WCBA were affected by COVID-19 infection will

be useful to inform future public health pandemic planning and response.

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