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Title

Covid-19 and Tdap vaccination among pregnant persons in Ontario, Canada: A population-based retrospective cohort study

Priority 1 (Research Category)

COVID-19

Presenters

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Abstract

Context: Canadians have historically low rates of vaccination in pregnancy. Although Covid-19 vaccines were recommended for all pregnant persons in Canada, and Ontario prioritized pregnant people for vaccine access in late April 2021, fertility-related misinformation may have compounded the challenge of vaccinating this high-risk population. Objective: To examine Covid-19 and pertussis (Tdap) vaccine receipt by pregnant persons during the initial Covid-19 vaccination year. Study Design and Analysis: Population-based retrospective cohort study in Ontario, Canada. We used propensity score matching to compare Covid-19 vaccination among pregnant and non-pregnant persons. We examined Tdap across three groups who gave birth in 2019, 2021, and 2022. We developed multivariable linear regression models to control for sociodemographic and clinical factors. Setting or Dataset: We linked multiple datasets at ICES, a central administrative data repository, including MOMBABY, Ontario Health Insurance Plan (OHIP), Registered Persons Database (RPDB), COvid-19 vaccine data (COVaxON), and Canadian Index of Multiple Deprivation (CIMD). Population Studied: Persons who had a live, in-hospital birth between January 1 to March 31 in 2019, 2021 or 2022. Non-pregnant comparators were females aged 18 to 44 matched 2:1 for parity, geographic area, and age. Intervention/Instrument: 2019, 2021, and 2022 births represent giving birth before the pandemic, during COVID-19 but before widespread vaccine availability, and after widespread vaccination. Outcome Measures: Covid-19 vaccination records obtained from COVaxON and Tdap status ascertained from physician fee codes in OHIP. Results: We identified nearly 30,000 birthing persons in each group. 80.7% of pregnant people who gave birth in early 2022 received Covid-19 dose 1, with 42.4% vaccinated during pregnancy (dose 2: 77.3%; 65.7% during pregnancy). Pregnant persons were significantly less likely to receive Covid-19 vaccines than non-pregnant persons. Tdap vaccination was significantly higher for 2021 and 2022 births compared to 2019. Our multivariable analysis is underway to examine the effects of maternal age, rurality, parity, prenatal care provider type, residential instability, economic dependency, and ethnocultural composition and will

be complete in time to share at NAPCRG. Conclusions: It appears there was some Covid-19 vaccine hesitancy (refusal or delay) among pregnant people, possibly due to fertility-related misinformation.