CHRD 2024: Abstract Submission Form

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Presenter Status
PhD Student

Role in the project
Design
Perform Experiments
Write Abstract

Research Category
Community Health / Policy

Title
Preterm birth and stillbirth rates associated with socioeconomic disparities during the COVID-19 pandemic: A population-based study

Background
Conflicting evidence exists on the impact of the COVID-19 pandemic restrictions on preterm birth (PTB) and stillbirth rates.

Objective
We aimed to evaluate changes in PTB and stillbirth rates before and during the pandemic and assess the potential effect modification by socioeconomic status (SES).

Methods
Using the Manitoba linked administrative health databases, we included all pregnant women between pre-pandemic (October 2016- February 2020) and pandemic (March 2020-March 2021) periods. We used generalized linear models to assess the quarterly rates of PTB and stillbirths. We evaluated the PTB and stillbirth rates among lower and higher SES using subgroup analysis and interaction models.

Results
We examined 70,931 pregnancies during the study period. The risk of PTB increased by 7.7% and stillbirths by 33% during the pandemic. Following COVID-19 restrictions, there were immediate increases in the quarterly rates of PTB (β2=1.37; p=0.0247) and stillbirths (β2=0.12; p=0.4434). Among the lower SES groups, the pandemic restrictions resulted in an immediate relative increase in PTB and stillbirths by 20.12% and 27.19%, respectively. However, during the pandemic, the overall PTB rate significantly decreased as a rebound effect by 0.85% per annual quarter (p=0.0004); whereas the overall stillbirth rate did not change (p=0.8296). Quarterly rates during the pandemic among higher SES group decreased by 0.39% (p=0.1296) for PTB while increased by 0.07% (p=0.1565) for stillbirth. We observed an effect modification by SES for PTB (p=0.047).

Conclusion
While the onset of COVID-19 pandemic restrictions was not associated with significant effects on stillbirths, we observed an immediate and rebound effect on PTB rates. The COVID-19 restrictions impact on PTB was dependent on SES, with higher influence on families with lower SES. Our findings provide an additional insight into the potential differential effects of pandemic restrictions on the incidence of PTB and stillbirth.

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No

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