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Racial Disparities in Risk for COVID-19 In Pregnancy: Results from the Michigan Statewide Collaborative

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Title: Racial Disparities in Risk for COVID-19 In Pregnancy: Results from the Michigan Statewide Collaborative

Objective:

Though previous studies have looked at both COVID-19 outcomes in pregnancy and racial disparities among patients with COVID-19, few have specifically studied racial disparities among pregnant patients with COVID-19. Our goal in this study is to analyze the relationship, if any, between race and disparate COVID-19 risk in pregnancy.

Study Design:

A retrospective cohort analysis was performed on data collected as part of the COVID-19 in Pregnancy and The Newborn: State of Michigan Collaborative, an established database of pregnant patients admitted to 14 institutions in South Michigan. Cases were defined as patients with a positive SARS-CoV-2 test result. Controls, those who had no suspicion of COVID-19 prior to universal screening or a negative PCR test, were matched to cases on the same unit within 30 days of each case. For this analysis, the independent variable was race; potential covariates were age, body mass index (BMI), chronic hypertension, diabetes, asthma, substance use, and smoking; the dependent variable was COVID/non -COVID in a robust Poisson regression model. In addition, eighteen symptoms and disease severity (mild/moderate/severe) were compared between AA's and Whites using the same statistical method.

Results:

Of 1,131 gravids, 42.9% (n=485) were AA. These patients were at two-fold greater risk for COVID-19 compared with their White counterparts [35.9% vs. 18.3%, RR=1.96(1.6-2.4)]. After adjusting for the risk factors mentioned, only obesity and diabetes independently contributed, in addition to race (aRR 2.46 [1.87-3.24]). There was no difference between AA and white with COVID-19 in either symptomatology and severity of disease presentation.

Conclusions:

There is disparity in risk for getting COVID-19 during pregnancy in AA patients. This is not explained by a range of covariate risk factors. Thus, other kinds of determinants such as SDoH, will need to be examined to understand this disparity. In addition to increased susceptibility to infection, further examination of disparities in treatment and outcome will be examined in our sample.