

## The Effect of COVID-19 on Pregnancies and Their Outcomes

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**Abstract:** Physiologic changes during pregnancy alters ways in which the body responds to infectious and inflammatory insults. In this study, we aimed to describe the symptoms and clinical presentation of pregnant patients diagnosed with COVID-19, a novel virus characterized by respiratory, inflammatory, and vascular complications. Understanding how COVID-19 manifests in high risk black pregnant patients can help inform the medical management of this vulnerable, understudied population. A retrospective, descriptive analysis of COVID-19 positive pregnant patients admitted at an urban tertiary care center in the south side of Chicago was conducted to collect maternal medical information/outcomes. Overall, 56 subjects were included. Common obstetric diagnoses included labor/contractions, ruptured membranes, and bleeding. In majority of these patients, COVID testing was prompted by universal screening. The symptoms experienced by those patients included a cough, fever, diarrhea, shortness of breath, chest pain, a headache, myalgia, malaise, and a loss of smell or ability to taste. A large majority of patients were asymptomatic and diagnosed with COVID-19 by universal screening. Compared to pre-pandemic institutional rates (2015-2019), the preterm delivery rates were similar (<37 weeks (22.0% vs. 19.4%; p=0.66) and <32 weeks (12.0% vs 7.1%, p=0.17)). Infected patients had significantly higher preeclampsia rates (17.9% vs. 7.20%, p=0.01). This investigation suggests that COVID-19 infection during pregnancy is associated with higher rates of preterm labor and preeclampsia. These findings are particularly concerning in a predominantly black population that is already affected by adverse pregnancy outcomes. Continued efforts must be made to protect pregnant black women who contract COVID-19.