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# Prevalence of Symptomatic and Asymptomatic COVID-19 Infection in Pregnant Women and Their Infants in an Urban Hospital

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## Introduction

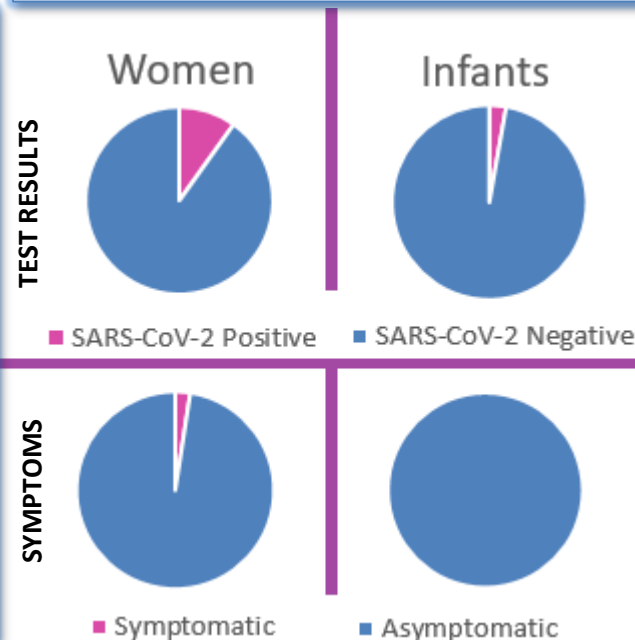
In spring of 2020, New York City was one of the epicenters of the COVID-19 global pandemic. As with many patient populations, its effect on pregnant women and their infants was unclear. There was great concern that it would affect them severely, as influenza does. Additionally, little was known about the possibility of infants being infected at birth.

## Methods

In March 2020, all pregnant women presenting for active labor, scheduled C-section, or induction of labor, were tested with a SARS-CoV-2 RT-PCR qualitative test (Roche Cobas® 6800). All infants of SARS-CoV-2 positive birth mothers were tested at birth, unless the parent did not consent. We conducted a retrospective review of all COVID-19 results for pregnant women and their infants, from March 23 through May 31, 2020, using our infection control surveillance system (VigiLanz®). We then reviewed our electronic medical record (EPIC®) for documentation of any symptoms consistent with COVID-19 infection, either prior to hospitalization or during the hospital stay.

## Results

A total of 415 women and 72 infants were tested for SARS-CoV-2, of those 41 (9.9%) women and 2 (2.8%) infants were positive. The positive infants were concordant with their birth parent. Only 1 (2.4%) of the women who tested positive was symptomatic. The remaining 40 (97.6%) SARS-CoV-2 positive women were asymptomatic. Both of the SARS-CoV-2 infants who tested positive were asymptomatic. Of the 41 women who were positive, 5 did not consent to have their infant tested. The single symptomatic SARS-CoV-2 positive woman's infant was tested, and was negative for SARS-CoV-2 by PCR.



## Infection Prevention Measures

All patients who presented to labor and delivery were treated as PUI (persons under investigation). Birth partners were required to wear surgical masks. Personal protective equipment consisting of a gown, gloves, face shield or goggles and N95 respirator were worn during patient encounters.

## Conclusion

During the first wave of the COVID-19 pandemic in New York City, 9.9% (41/415) of pregnant women presenting for birth or in labor at our institution tested positive for SARS-CoV-2. Of those, all but 1 were asymptomatic. Only 2 newborn infants tested positive, and both were asymptomatic. Our data suggests that pregnant women may be less likely to transmit the disease to their infants during labor. Additionally, pregnant women are less likely to be symptomatic at the time of their presentation for labor, despite testing positive for SARS-CoV-2. There are now additional studies from several institutions which have demonstrated more severe COVID-19 outcomes in women of color, and those with hypertension, pre-existing diabetes and high body mass index. Further data on this topic will be paramount in our understanding of how this disease affects birth mothers and their newborns.

## References

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2. Allotey J, Stallings E, Bonet M, et al. Clinical manifestations, risk factors, and maternal and perinatal outcomes of coronavirus disease 2019 in pregnancy: living systematic review and meta-analysis. *BMJ* 2020;370:m3320.