

Background

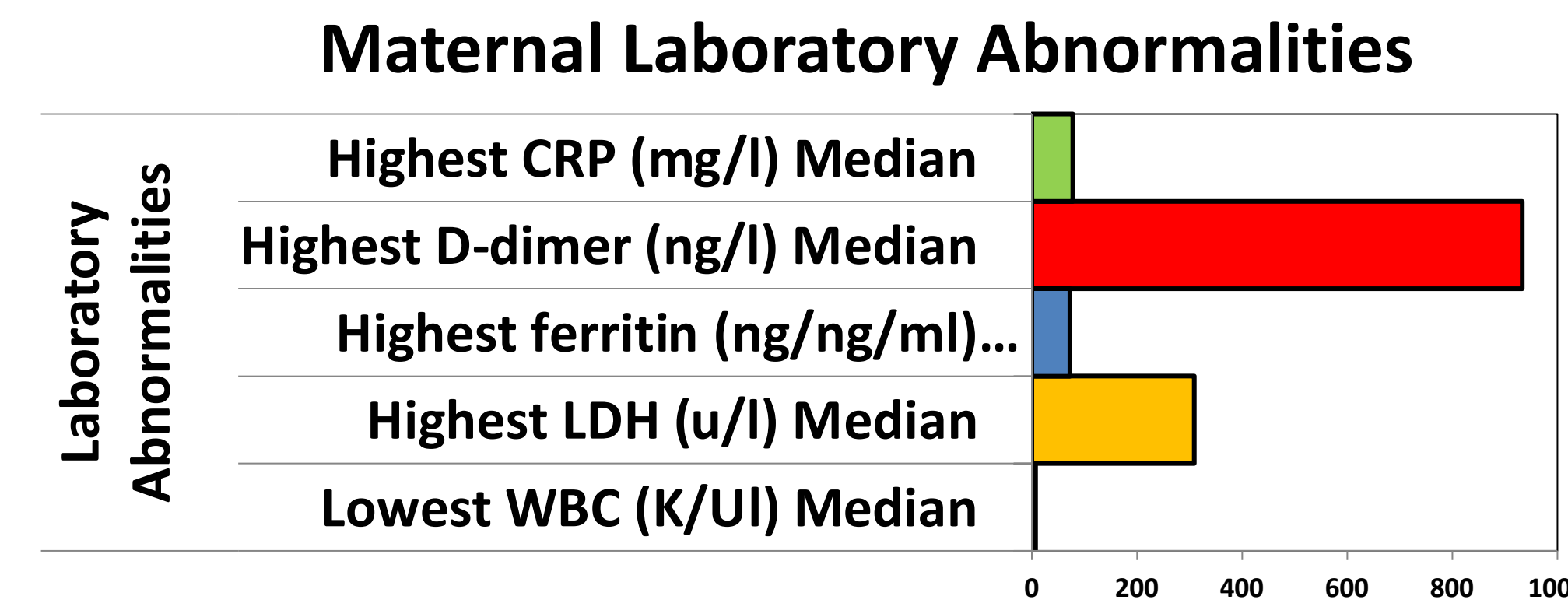
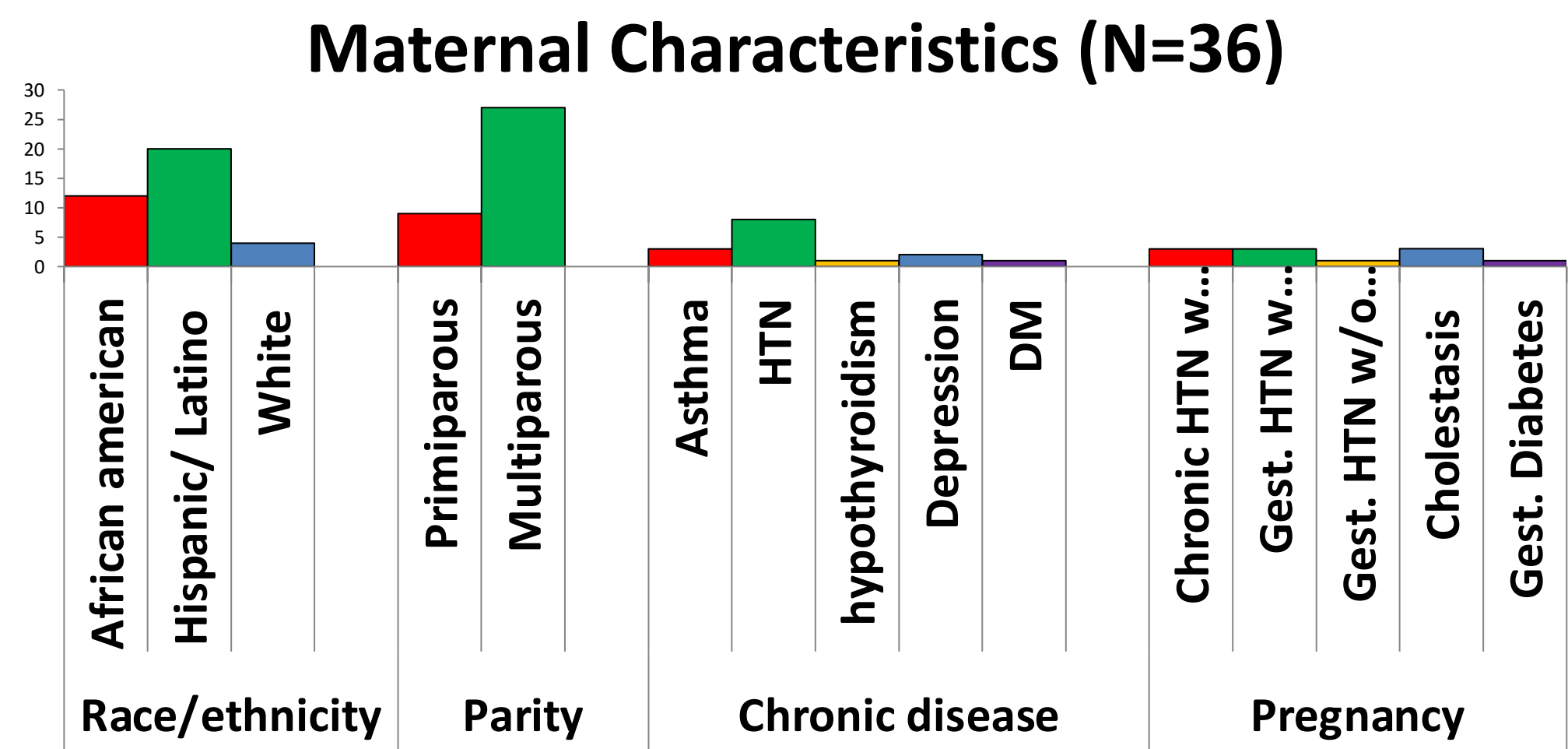
Knowledge regarding transmission of SARS-CoV-2 from mother to infant and neonatal clinical manifestations of COVID-19 is limited. COVID-19 transmission from mother to infant after cesarean section or vaginal delivery with various degrees of maternal contact after birth suggest that vertical and horizontal transmission are possible, but data is still lacking. Neonatal clinical manifestations vary from asymptomatic, mild, and severe in previous reports. Here we describe the demographics, clinical characteristics and outcomes of SARS-CoV-2 positive pregnant women and their newborns at a tertiary care center serving urban & underrepresented minority (URM) population.

Materials and Methods

Data collected included maternal demographics, comorbidities, symptoms and treatments for COVID-19 infection, delivery, birth outcomes and newborn care practices from medical records of pregnant women. Descriptive statistics were used to analyze the data. **Pregnant/delivered women:** polymerase chain reaction testing done by nasopharyngeal swabs for SARS-CoV-2 taken 14 days to 72 hours after delivery from March 31, 2020 to June 18, 2020. Maternal testing was done initially based on symptoms consistent with COVID-19 infection and universal testing was instituted later. Serology testing was not performed. **Newborns:** SARS-CoV-2 by RT-PCR NP swab done at 24 hours, 48 hours, and day 5 of life.

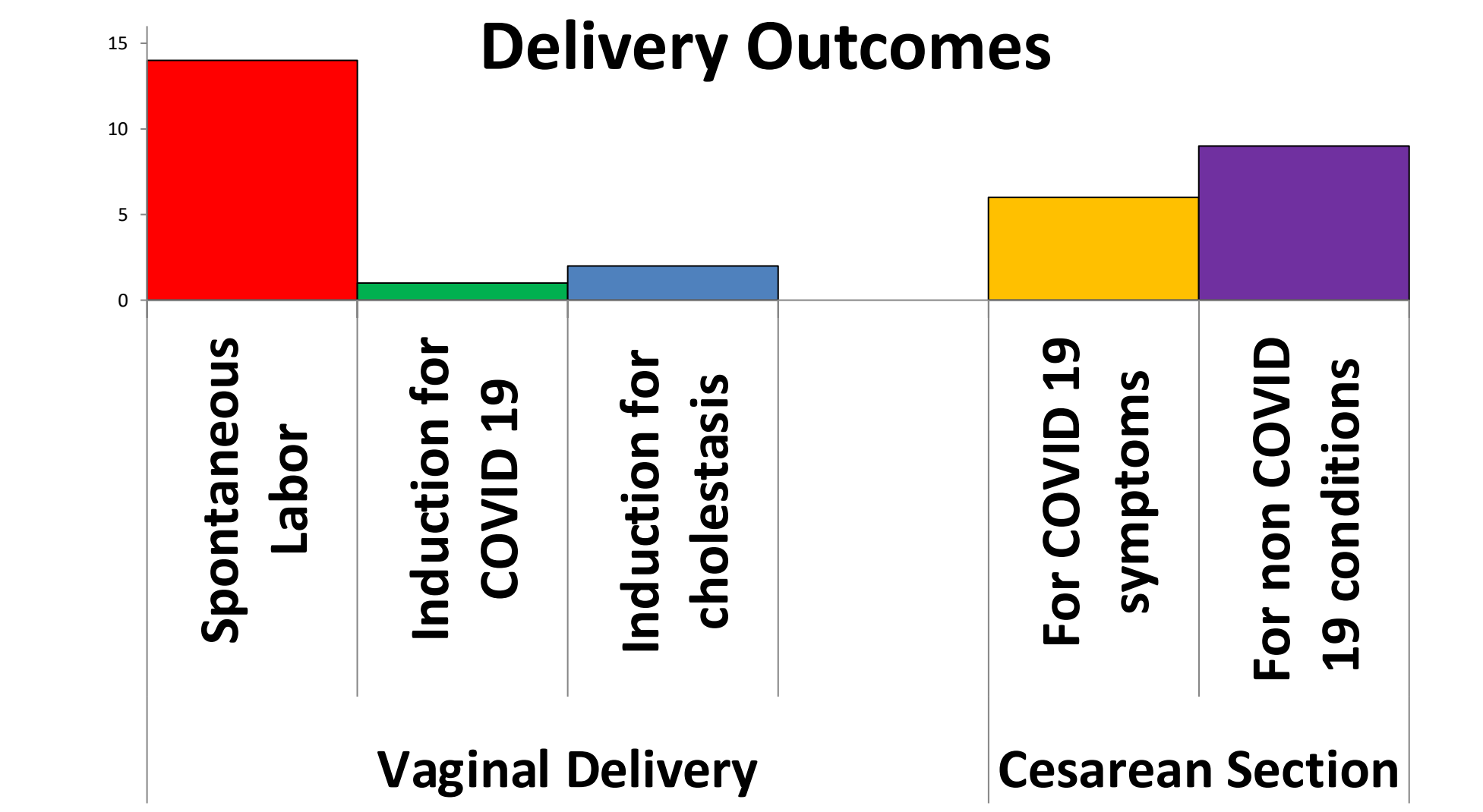
Material and Methods

Newborn care practices: Initially, infants born to SARS-CoV-2 (+) mothers were separated at birth and skin-to-skin practices and breastfeeding (BF) were avoided entirely. All neonates independently of their gestational age were admitted to the NICU in single rooms on enhanced precautions until discharge. Later, a shared decision-making model was integrated, and mothers could room-in with their infants vs. separation; skin-to-skin practices, and BF were allowed

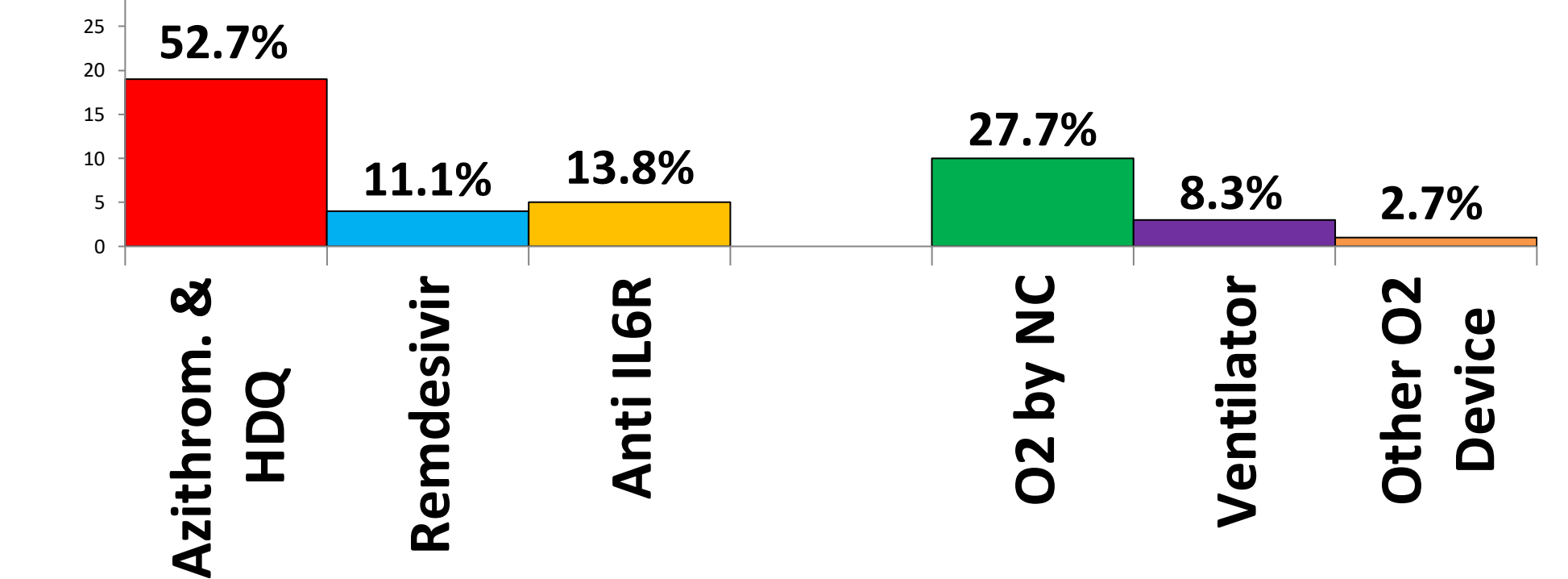


Results

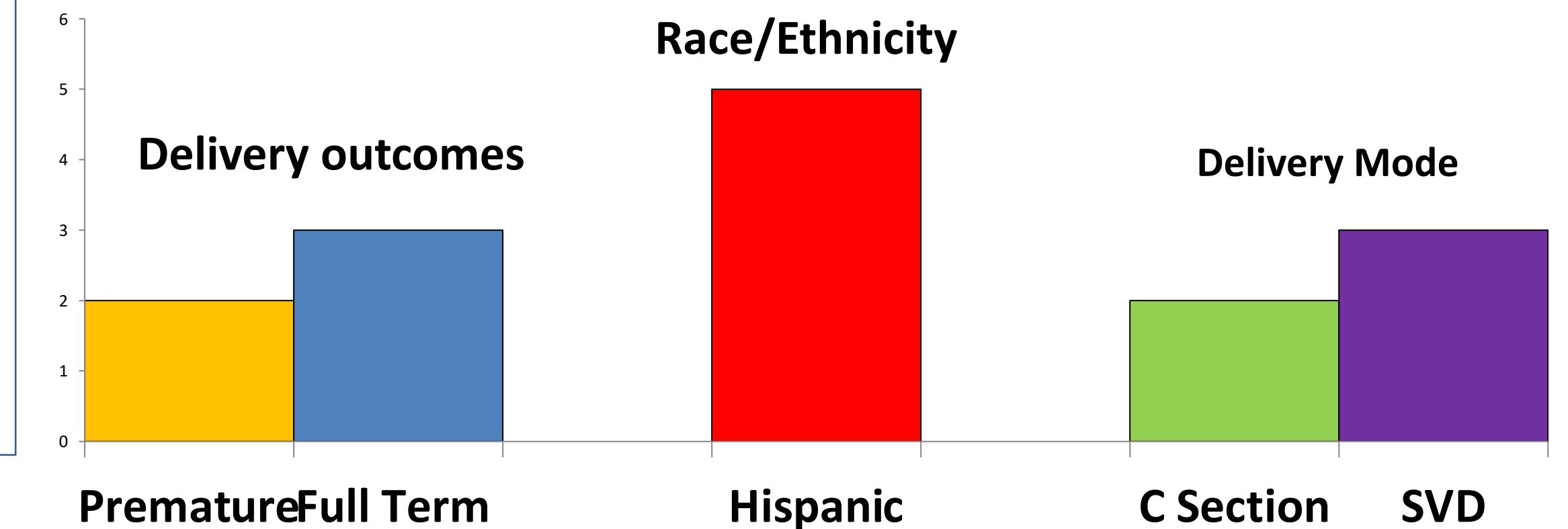
- Thirty-six mothers with positive SARS-CoV-2 testing delivered from 3/31/20- 06/18 /20.
- 20/36 (55.5%) were Hispanic; 8 /36 (23%) had hypertension.
- 17/36 (47%) had symptoms of fever, cough, and 13/36 (36%) had shortness of breath.
- Of the 32 deliveries, 17 (53%) delivered vaginally and 15 (47%) via C-section.
- 6/15 C-section (40%) were due to COVID-19 complications.
- 14/36 (38%) women developed hypoxia and required oxygen, 3/14 (21%) required intubation.
- 5/36 (14%) had positive SARS-CoV-2 PCR, and all were born to Hispanic mothers with symptomatic disease around the time of birth.
- One of 36 infants (3%) presented to an emergency department within 30 days post-discharge.



COVID 19 Interventions



PCR (+) Newborns & PCR (+) Mothers N=5 (14%)



Conclusions

- Infants with positive SARS-CoV-2 tests occurred in the context of complete separation and some maternal contact, suggesting that both vertical and horizontal transmission of SARS-CoV-2 are possible.
- Five infants (14%) had a positive SARS-CoV-2 PCR test in the first week of life.
- Infant clinical courses were as expected for gestational age.

Contact

Vishakha Sabharwal, MD
 Pediatric Infectious Disease Department Boston Medical Center, Boston University School of Medicine
 Email: vishakha.sabharwal@bmc.org
 Website: <https://www.bmc.org/pediatrics-infectious-diseases/team>

References

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