

“Clinical Manifestations and Perinatal Outcomes in non-Hispanic Blacks Who are Pregnant and Infected with SARS-CoV-2: A systematic review”

Yanique S. Campbell, PA-S, Mohsen Bazargan, PhD, Lucy Kibe, DrPH, MS, MHS, PA-C, Martha Bob-Manuel

Background

- ❑ Several recent studies revealed severe maternal morbidity as a result of COVID-19 and perinatal deaths.
- ❑ While data are available for pregnant patients with coronavirus disease, limited reports have analyzed non-Hispanic Black patients infected with SARS-CoV-2.
- ❑ Racial bias, low socioeconomic status, and comorbidities make Black pregnant women more susceptible to adverse outcomes associated with COVID-19.
- ❑ There are few recommendations for managing this vulnerable group during this ever evolving pandemic, and they should not be excluded in preparedness and response plans.



“Clinical Manifestations and Perinatal Outcomes in non-Hispanic Blacks Who are Pregnant and Infected with SARS-CoV-2: A systematic review”

Yanique S. Campbell, PA-S, Mohsen Bazargan, PhD, Lucy Kibe, DrPH, MS, MHS, PA-C, Martha Bob-Manuel

Methods

- ❑ Google Scholar and PubMed databases for all case reports and series from February to November 2020.
- ❑ The researchers collected the following items from the original manuscripts: author’s name, study design, summary, the amount of study participants, the amount of study participants who met our eligibility criteria, and outcome measures.
- ❑ Maternal outcomes in non-Hispanic Black women that were assessed included incidence of maternal admission, rate of maternal infection, rate of maternal death, cesarean birth, and comorbid medical conditions
- ❑ Neonatal outcomes that were assessed included incidence of infant infection—including neonatal positive COVID-19 test, preterm birth, still birth, and rate of fetal loss.



“Clinical Manifestations and Perinatal Outcomes in non-Hispanic Blacks Who are Pregnant and Infected with SARS-CoV-2: A systematic review”

Yanique S. Campbell, PA-S, Mohsen Bazargan, PhD, Lucy Kibe, DrPH, MS, MHS, PA-C, Martha Bob-Manuel

Results

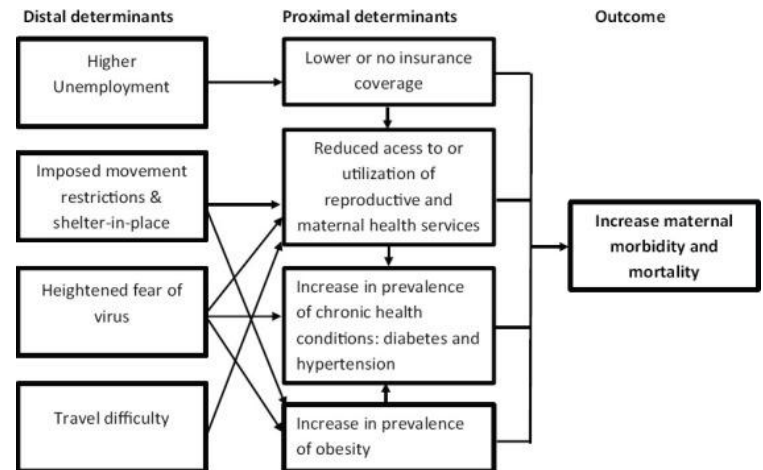
Table 1.

	Black, n = 134		White, n = 535		P Value ^a
	n/N	%	n/N	%	
Age, mean (SD)	30.6 (7.0)		30.3 (6.6)		>.05
Comorbidity or risk factors					
Cardiovascular disease ^b	22/134	16.4	67/535	12.5	>.05
Diabetes ^c	19/134	14.2	57/535	10.6	>.05
Obesity	12/134	8.9	37/535	6.9	>.05
Any comorbidity	45/134	33.6	160/535	29.9	>.05
Symptoms at admission					
Dyspnea	85/124	68.5	260/474	54.8	<.001
Respiratory distress	69/120	57.5	238/463	51.40	>.05
SpO ₂ <95%	56/118	47.5	137/446	30.7	<.001
ICU admission	37/134	27.6	104/535	19.4	<.001
Mechanical ventilation	20/134	14.9	39/535	7.3	<.001
Death ^d	17/100	17.0	38/423	8.9	<.001

Data are from Black and White maternal COVID-19 ARDS cases in Brazil (n = 669).

- ❑ Pregnant non-Hispanic Blacks have higher seropositive rates and present with worse conditions (increased dyspnea and decreased O₂ saturation) that require ICU admission and mechanical ventilation.
- ❑ Prenatal and antenatal counseling can help prevent SARS-CoV2 infection and decrease complications related to COVID-19 in non-Hispanic Blacks..
- ❑ Pregnant non-hispanic Blacks with comorbidities including obesity, diabetes, and hypertension are more likely to negative birth outcomes including preterm labor, fetal distress, and maternal deterioration.
- ❑ Pregnancy loss was common in non-Hispanic Blacks who were either symptomatic or asymptomatic --those who are asymptomatic require cautionary approach.

Figure 1.



“Clinical Manifestations and Perinatal Outcomes in non-Hispanic Blacks Who are Pregnant and Infected with SARS-CoV-2: A systematic review”

Yanique S. Campbell, PA-S, Mohsen Bazargan, PhD, Lucy Kibe, DrPH, MS, MHS, PA-C, Martha Bob-Manuel

Discussion

- ❑ Non-Hispanic Black pregnant women have disproportionately higher rates of COVID-19 which is associated hospitalization, compared with those of pregnant women of other races and ethnicities.
- ❑ Implementing early and continuous prenatal and postpartum care, increasing provider education, and increasing patient education may have a positive impact on maternal and fetal prognosis.

References

1. Delahoy MJ, Whitaker M, O'Halloran A, Chai SJ, Kirley PD, Alden N, Kawasaki B, MEEK J, Yousey-Hindes K, Anderson EJ, Openo KP, Monroe ML, Ryan PA, Fox K, Kim S, Lynfield R, Siebman S, Davis SS, Sosin DM, Barney G, Muse A, Bennett NM, Felsen CB, Billing LM, Shiltz J, Sutton M, West N, Schaffner W, Talbot HK, George A, Spencer M, Ellington S, Galang RR, Gilboa SM, Tong VT, Piasecki A, Brammer L, Fry AM, Hall AJ, Wortham JM, Kim L, Garg S; COVID-NET Surveillance Team. Characteristics and Maternal and Birth Outcomes of Hospitalized Pregnant Women with Laboratory Confirmed COVID-19 - COVID-NET, 13 States, March 1 - August 22, 2020. *MMWR Morb Mortal Wkly Rep.* 2020 Sep 25;69(38):1347-1354. doi: 10.15585/mmwr.mm6938e1. PMID: 32970655.
2. Panagiotakopoulos L, Myers TR, Gee J, Lipkind HS, Kharbanda EO, Ryan DS, Williams JTB, Naleway AL, Klein NP, Hambidge SJ, Jacobsen SJ, Glanz JM, Jackson LA, Shimabukuro TT, Weintraub ES. SARS-CoV-2 Infection Among Hospitalized Pregnant Women: Reasons for Admission and Pregnancy Characteristics - Eight U.S. Health Care Centers, March 1- May 30, 2020. *MMWR Morb Mortal Wkly Rep.* 2020 Sep 23;69(38):1355-1359. doi: 10.15585/mmwr.mm6938e2. PMID: 32970660.
3. Santos DS, Menezes MO, Andreucci CB, Nakamura-Pereira M, Knobel R, Katz L, Salgado HO, de Amorim MMR, Takemoto MLS. Disproportionate impact of COVID-19 among pregnant and postpartum Black Women in Brazil through structural racism lens. *Clin Infect Dis.* 2020 Jul 28;ciaa1066. doi: 10.1093/cid/ciaa1066. Epub ahead of print. PMID: 32719866; PMCID: PMC7454418.
4. Yusuf KK, Dongarwar D, Ibrahim S, Ikedionwu C, Maiyegun SO, Salihu HM. Expected Surge in Maternal Mortality and Severe Morbidity among African-Americans in the Era of COVID-19 Pandemic. *Int J MCH AIDS.* 2020;9(3):386-389. doi: 10.21106/ijma.405. Epub 2020 Sep 16. PMID: 33014625; PMCID: PMC7520882.

