Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Considerations and Recommendations for Care of Black Pregnant Patients During COVID-19

Jacquelyn McMillian-Bohler, PhD, CNM, CNE*,
Lacrecia M. Bell, MSN, RN

KEYWORDS

- Black maternal morbidity and mortality • COVID-19 and pregnancy
- Health disparities

KEY POINTS

- Black pregnant patients experience increased rates of morbidity, mortality, preterm labor, depression, and hypertensive disorders in pregnancy.
- Disparities in Black maternal perinatal outcomes persist owing to systemic racism and discrimination and bias within the health care system.
- COVID-19 has exacerbated health disparities among marginalized and vulnerable populations, including Black pregnant persons.
- Environmental exposure, multigenerational living status, lack of access to health care, vaccine hesitancy, and inadequate education about SARS-CoV-2 contribute to the increased rates of COVID-19 within the Black community.

INTRODUCTION

On January 9, 2020, the World Health Organization announced suspicions of a flulike virus in Wuhan, China, potentially linked to the coronavirus.[1] As of January 2022, more than 70.2 million Americans have contracted severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), and more than 800,000 Americans have died of COVID-19.[5] Although the pandemic has affected nearly every community in the United States, Black, Latinx, and indigenous people remain overrepresented in positive cases and death rate reports.[5] Health disparities among the minority populations in the United States predate the devastating effects of COVID-19[3]. However, as explained by Volkan Bozkir, former president of the United Nations General Assembly, "this pandemic has laid bare the existing vulnerabilities facing the most marginalized and disadvantaged groups."

Duke University School of Nursing, 307 Trent Drive, Durham, NC 37710, USA
* Corresponding author.
E-mail address: jacquelyn.mcmillianbohler@duke.edu

Nurs Clin N Am 57 (2022) 443–452
https://doi.org/10.1016/j.cnur.2022.04.010
nursing.theclinics.com

Black pregnant patients are a marginalized and disadvantaged population. It is well documented that Black pregnant patients are more likely than patients from other ethnic identities to experience perinatal complications, such as depression, preterm labor, hypertensive disorders, cardiovascular disorders, and postpartum bleeding.[4] The most disturbing statistic is that Black pregnant patients are 3 times more likely to die in childbirth than White patients.[4] Black patients also experience greater incidences of "near-misses," called severe maternal morbidity (SMM).[4] In the case of an SMM, a complication occurs, and the patient nearly dies. One study reported that Black women are 2.1 times more likely to experience an SMM than hite women.[4] These maternal disparities exist regardless of the education and socioeconomic status of the mother. The root of these health disparities is systemic racism, and discrimination and bias within the health care system.[4] Given the disparities in COVID-19-related health outcomes for Black persons and the preexisting health disparities for Black birthing persons, it is essential to explore the impact of COVID-19 on Black pregnant persons.

Education and data about the management of COVID-19 continue to evolve. As a result, information about the impact of COVID-19 on individual populations is also limited. It is, however, possible for health care providers to make changes in their practice that can improve maternal outcomes for Black pregnant patients. The purpose of this article is to describe factors that may contribute to the differences in COVID-19-related health outcomes for Black people and present a list of recommendations for health care providers to integrate into their clinical practice.

THE OVERALL IMPACT OF COVID-19 ON BLACK PEOPLE

Black people make up only 15% of the US population; however, in 2020, they accounted for 25% of the positive COVID-19 tests and 39% of the recorded COVID-19-related deaths.[5,8] As of October 2021, the disparity in death rates for Black people has narrowed to 17% but remains disproportionate to the overall American population. Factors such as vaccine hesitancy, lack of culturally appropriate education about COVID-19, and general medical mistrust have impacted COVID-related health outcomes.[6] In addition, social determinants of health (defined as where one lives, works, plays, and worships) also appear to play a significant role in the increased rates of SARS-CoV-2 exposure and viral transmission.[7]

Increased Risk for Exposure to SARS-CoV-2

Several factors may increase the opportunity for SARS-CoV-2 exposure for Black persons, including occupational exposure and challenges related to protective equipment. First, Black Americans are more likely to work in industries with a high potential for exposure to SARS-CoV-2.[19] These jobs include work within home health care, medical aide services, manufacturing, housekeeping, and retail industries. These jobs are considered essential, yet the workers often report feeling undervalued,[5] and protection against COVID-19 exposure is inconsistent. Once exposed to SARS-CoV-2, workers can unintentionally spread the virus to their families. Minority populations are more likely to live in densely populated settings and multigenerational housing. Therefore, occupational exposure can not only impact an entire family but also impact an entire community.

Second, aside from challenges everyone faced obtaining personal protective equipment, using protection against SARS-CoV-2 has not been race-neutral. According to a Pew study taken at the beginning of the pandemic, 42% of Black Americans were concerned about the most basic protection—wearing a mask. In addition, a University of

North Carolina coronavirus project conducted to explore attitudes and behaviors related to the COVID-19 pandemic found that participants viewed Black men wearing a cloth mask as less trustworthy and threatening.[9] With the murder of George Floyd, Ahmaud Arbery, Breonna Taylor, and countless other victims on the minds of many Black Americans, any hesitancy to participate in a recommendation that may lead to an increase in suspicion is justifiable.

A Legacy of Medical Mistrust

Examples of poor treatment of Black people by the medical community are legion. Black patients often report feeling dismissed or unheard by providers.[10] Even during this pandemic, Black people seeking health care for symptoms of COVID-19 reported feeling ignored and were denied testing.[11] There are reports of providers dismissing complaints by Black patients who eventually passed away owing to complications of the disease. For example, a video of Dr Moore, who died of complications of COVID-19 after sharing her story of being mistreated in the hospital, went viral. This type of media further sows seeds of mistrust within a community, whether wholly accurate or not.

There are also historical events that illustrate the research community's longstanding mistreatment of Black people. In the Tuskegee study, which lasted more than 40 years, researchers should not consent the Black men participating in a study. The researchers then withheld treatments for syphilis,[12] resulting in permanent disability or death for some participants. This research study did not end until 1972, within the lifetime of today's Black patient population. In the case of Henrietta Lacks, researchers collected a sample of her cervical cells without her knowledge or consent. Those cells were later used to cultivate a cell bank for research and genetic studies. Neither Henrietta nor her family was ever compensated. Finally, Dr Marion Sims, the "father of gynecology," performed brutal experiments on Black enslaved bodies without anesthesia. He believed that Black people did not experience pain the same as White people.[5] As the stories of the horrific events circulate within the Black community, commingling with present-day experiences of bias and discrimination, feelings of mistrust may persevere.

A 2020 survey by the Kaiser Family Foundation and ESPN called "The Undefeated" found that "seven out of 10 Black adults still believe that race-based discrimination in health care happens somewhat often, and one in five say they have personally experienced it in the past year."[5] Considering the legacy of discriminatory treatment of Black people in the name of science, it is understandable that when the COVID-19 vaccine became available in December 2020, some Black people may have had doubts about the vaccine's safety and were hesitant to sign up for vaccinations.

Vaccine Hesitancy and Access to Testing

The results of a Pew study collected in 2020 before the availability of the COVID-19 vaccine revealed that although 60% of Americans reported that they would get the vaccine, only 42% of Black people surveyed would do so.[13] Reasons for low participation in COVID-19 vaccinations may be general medical mistrust and concerns about the how the vaccine was created.

Unfortunately, racial disparity in clinical trial participants persisted in the Moderna and Pfizer-BioTech studies as the COVID vaccine was developed. For example, although 12.5% of the US population is Black, only 9% of the participants in both studies was Black.[14] Failure to include a representative sample in clinical trials may negatively impact the confidence that Black people and other people have about the safety and efficacy of the vaccine. In addition, some people were concerned

that the vaccine production speed also meant that the vaccine was not well tested, and unanswered questions may have delayed vaccinations. As of May 2022, only 66% of Americans are fully vaccinated.[15,16] Of those vaccinated, it is estimated that only 10% are Black, which is well below the 12% representation in the whole US population.[17] As broad vaccination of the population is a critical factor in ending this pandemic,[13] recognizing and addressing the underlying barriers for vaccine hesitancy are vital.

Testing is another strategy to contain COVID-19; however, access to COVID testing for some Black people is yet another challenge. In some communities, testing is readily available, or if persons have insurance, they can receive testing at a multitude of settings.[18] In other communities, testing may be free, but the lines for testing may be long. For the client with any symptoms of COVID-19, it may be difficult to find a test location that will take a patient.

COVID-19 AND PREGNANCY

Data about the impact of COVID-19 and pregnancy continue to evolve; however, it appears that the susceptibility rates to SARS-CoV-2 during pregnancy mirror the general population. Because SARS-CoV-2 is overrepresented in the general population, however, it is overrepresented in the Black pregnant population.[17] For pregnant persons who contract COVID-19 during pregnancy, rates of pregnancy complications and unfavorable maternal outcomes are increased.[17] Pregnancy complications may include stillbirth, preterm birth, admission to intensive care unit, and ventilatory support,[20] although this finding is inconsistent between studies.[20] What is consistent in the literature is that pregnant patients, like nonpregnant patients, with comorbidities, such as obesity, diabetes, or hypertensive disorders, are at greater risk for poor outcomes[20] should they contract COVID-19 during pregnancy.

Adverse neonatal effects can be associated with maternal SARS-CoV-2 infection.[20] Although the rates of vertical transmission from the birth person to the fetus are reported to be low, transmission may occur.[21] The inflammatory response caused by SARS-CoV-2 may elicit an inflammatory response on the placenta, decreasing maternal-fetal blood flow. More studies are needed to understand fully COVID-19 on a pregnancy. However, it is noteworthy that the risk of a newborn contracting COVID-19 from the birthing person may be significantly reduced when the birthing person wears a mask and practices hand hygiene.[21]

Black pregnant patients reported a higher rate of mental health diagnoses, including anxiety and stress, than White or Latino people[22] during pregnancy. Reasons for the increased anxiety and stress include exposure to racism and discrimination, concerns about the COVID-19 pandemic, and the potential effects of COVID-19 on the fetus. In addition, a high level of anxiety and stress during pregnancy is associated with higher mortality.[23]

Vaccination is the best defense again the SARS-CoV-2 virus; however, pregnant patients have concerns, and it was reported that pregnant and breastfeeding women were less likely than the general population to accept the COVID-19 vaccine.[22] Concern over the impact of the vaccine was often cited as the reason for the hesitation.

RECOMMENDATIONS FOR HEALTH CARE PROVIDERS

With the knowledge that the effects of COVID-19 will continue within the health care system for years to come, the authors offer recommendations (**Table 1**) that may improve the pregnancy, birth, and postpartum experiences for Black birthing persons. Although the recommendations are based on meeting the needs of Black patients,

Table 1
Recommendations and support for black pregnant persons

Recommendation	Rationale	Considerations
Develop an individualized approach to educating clients about COVID-19 Refer patients to community organizations, faith-based organizations, or Black medical communities providing education about the COVID-19 vaccine[24]	Patients have different individual needs and experiences that should be considered when teaching about COVID-19	Information about COVID-19 is widely available on the Internet but may not be culturally appropriate, accurate, or understood by nonmedical persons
Ask about and *listen* to concerns about COVID-19 and the vaccination[17]	It is essential to provide clear, concise information about COVID-19 and transmission risks for vaccinated and unvaccinated[27]	Black women have frequently reported feeling unseen or unheard as they express concerning symptoms to their providers
Discuss the prenatal visit schedule and offer a flexible schedule[28]Make telehealth visits available for patients when patients need to miss or cancel in-person visits. Ask the client if they have any needed equipment at home, including urine dipstick, a scale, or a blood pressure cuff.[34]	Black women had the lowest completion of prenatal visits compared with Hispanic and White counterparts during COVID-19. When pregnant women do not receive antepartum care, there is a greater risk of poor health outcomes for the birthing person and the fetus	Some birthing Black persons may be working in the service industry, frontline workers, or caring for other family members, including small children.([2]) With the frequent surges of COVID-19, patients may miss appointments owing to at-home care needs related to COVID-19.
Offer the COVID vaccine at each visit, even if the vaccine has been refused in the past[27] Discuss specific concerns about the vaccine if clients are hesitant[25,27]	Given the current low vaccination rates for Black birthing persons, and Black persons living in the United States, it is essential to continue to offer the COVID-19 vaccine[27]	Historical harms to the Black population may have propagated distrust, and patients may be hesitant about the efficacy and safety of the COVID-19 vaccine. The pregnant client may also be concerned about the effect of the vaccine on the fetus[25,27]

(*continued on next page*)

Table 1
(continued)

Recommendation	Rationale	Considerations
Screen for postpartum depression[31] When symptoms of anxiety and depression do present, patients should be referred for appropriate psychological services. Once those referrals are made, maternity care providers should follow up with the referral and patient[31]	Given the increased rates of anxiety and depression for Black birthing patients, providers should screen patients for depression early and often and make referrals when needed. Many of the concerns that patients share include worries about the birthing experience, the presence of the designated support person(s), and financial burdens[31]	Before the pandemic, rates of depression in Black birthing persons were increased. The direct and indirect effects of COVID-19 increased Black pregnant patients vulnerable to COVID-19[30]. Often, patients presenting with anxiety and depression fall in the gap of care to obtain psychological services. Black birthing patients need to be frequently screened informally or formally[32]
Perform a comprehensive assessment of risk factors for COVID-19	Preexisting comorbidities, such as diabetes, hypertension, autoimmune disorders, or obesity, increase the risk of severe COVID-19, and Black women are at increased risk for this disease[21]	Patients with preexisting conditions like obesity, diabetes, and hypertension should be counseled about continued health maintenance of preexisting conditions
Offer telehealth and follow-up for missed prenatal visits	Black pregnant clients are at increased risk for poor health outcomes during pregnancy and may need more frequent visits[29]	Consideration should be given for difficulties the client may experience getting to in-person visits. Time away from work, transportation, or lack of childcare may make it challenging to attend visits Internet access may not be reliable; therefore, it is essential to ensure the patient has access before setting up telehealth visits
Actively listen to patients' concerns	Providers must self-educate on the harm that individual patients or families experienced when engaging the health care community. Providers should refrain from shame and bullying and partner with patients to address their concerns and barriers	Black women reported the lowest confidence in their care[21]

(*continued on next page*)

Table 1
(continued)

Recommendation	Rationale	Considerations
Encourage prenatal and postpartum doula services[30]	Continuous labor support has been shown to decrease the rate of cesarean birth and increase birth experience satisfaction[33,30]	Data point to the benefit and positive health outcomes when doulas are present for prenatal support, the birth experience, and postpartum care. Maternity care providers can encourage doulas and liaise with Black doulas to refer their patients[30]
Discuss the use of a support person during labor. Providers may recommend connecting with friends and family over zoom or more frequent phone calls[31]	There may be a limitation to the number of support persons allowed on the unit. Lower levels of social support are associated with higher levels of depression and anxiety during pregnancy[31]	Birth outcomes are improved with continuous labor support. Discussing the options beforehand allows the patient to decide who they want present. In some cases, a doula does not count in the visitor count[30]
Encourage breastfeeding[21]	There is no evidence to support that COVID-19 is spread through breastmilk[21]	If the birthing person delays breastfeeding initiation, there may be difficulties in milk production

universal application of these recommendations would likely benefit all pregnant patients during this pandemic and beyond.

SUMMARY

Black people continue to experience a disproportionate burden of COVID-19. Despite the scientific knowledge that herd immunity may eradicate this deadly virus, the Black population remains significantly undervaccinated. Lack of culturally appropriate education and a history of mistreatment by the health care community may contribute to vaccine hesitancy. Black pregnant women are already considered a vulnerable population because of the increased risk of morbidity and mortality in pregnancy impacted to a greater extent during this pandemic. Preexisting morbidities and mortalities and rates of depression, which were disproportionate before COVID-19, are likely more prevalent now. Special considerations and additional screenings are warranted to ensure that this vulnerable population receives adequate and supportive care. Adopting these recommendations may improve perinatally for Black pregnant patients; however, each recommendation should be adopted for care for all pregnant patients long after this pandemic has passed.

CLINICS CARE POINTS

- Maintain flexibility when describing the prenatal visit schedule. If possible, offer telehealth visits to ensure that patients receive adequate care.[28]

- Ask about and listen to patients' concerns about COVID 19, the vaccine, and the pregnancy.Offer COVID vaccine at each visit even if it has been refused in the past.[20]
- Screen for postpartum depression and follow up with the referral AND the patient.[26]
- Encourage prenatal and postpartum doula services.[31]
- Discuss ongoing support from family and friends during the pregnancy and labor.[32]

DISCLOSURE

The authors have no commercial or funding conflicts to disclose.

REFERENCES

1. WHO statement regarding cluster of pneumonia cases in Wuhan, China. 2020. Available at: https://www.who.int/china/news/detail/09-01-2020-who-statement-regarding-cluster-of-pneumonia-cases-in-wuhan-china. Accessed Febuary 10, 2022.
2. CDC COVID Data Tracker. Centers for Disease Control and Prevention. 2021. Available at: https://covid.cdc.gov/covid-data-tracker/#datatracker-home. Accessed January 4, 2022.
3. Owen WF, Carmona R, Pomeroy C. Failing another national stress test on health disparities. JAMA 2020;323(19):1905.
4. Howell EA, Egorova N, Balbierz A, et al. Black-White differences in severe maternal morbidity and site of care. Am J Obstet Gynecol 2016;214(1):122.e1–7.
5. Artiga S, Hill L, Haldar S. COVID-19 cases and deaths by race/ethnicity: Current data and changes over time. Kaiser Family Foundation; 2022. Available at: https://www.kff.org/racial-equity-and-health-policy/issue-brief/covid-19-cases-and-deaths-by-race-ethnicity-current-data-and-changes-over-time/. [Accessed 1 March 2022].
6. Bunch L. A Tale of Two Crises: Addressing Covid-19 vaccine hesitancy as promoting racial justice. HEC Forum 2021;33(1–2):143–54.
7. Williams DR, Cooper LA. COVID-19 and health equity—a new kind of "herd immunity. JAMA 2020;323(24):2478.
8. Gould E, Wilson V. Black workers face two of the most lethal preexisting conditions for coronavirus—racism and economic inequality. Economic Policy Institute; 2020. Available at: https://files.epi.org/pdf/193246.pdf. [Accessed 4 January 2022].
9. Tyalor B. For Black men, fear that masks will invite racial profiling. New York Times. Available at: https://www.nytimes.com/2020/04/14/us/coronavirus-masks-racism-african-americans.html. Accessed Febuary 10, 2022.
10. Beach MC, Branyon E, Saha S. Diverse patient perspectives on respect in healthcare: a qualitative study. Patient Educ Couns 2017;100(11):2076–80.
11. On behalf of the Harvard Neonatal-Perinatal Fellowship COVID-19 Working Group, Barrero-Castillero A, Beam KS, Bernardini LB, et al. COVID-19: neonatal–perinatal perspectives. J Perinatol 2021;41(5):940–51.
12. Thompson HS, Manning M, Mitchell J, et al. Factors associated with racial/ethnic group–based medical mistrust and perspectives on covid-19 vaccine trial participation and vaccine uptake in the US. JAMA Netw Open 2021;4(5):e2111629.
13. Funk C, Tyyson A. Intent to get a COVID-19 vaccine rise to 60% as confidence in research and development process increases. Pew Research Center; 2020. Available at: https://www.pewresearch.org/science/wp-content/uploads/sites/16/

2020/12/PS_2020.12.03_covid19-vaccine-intent_REPORT.pdf. [Accessed 4 January 2022].
14. Vaccines and related biological products advisory committee meeting December 10, 2020 FDA briefing document Pfizer-BioNTech COVID-19 vaccine. Pfizer and BioNTech. 2020. Available at: https://www.fda.gov/media/144245/download.
15. Center for Disease Control. Health equity considerations and racial and ethnic minority groups. Center for Diease Control; 2022. Available at: https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/race-ethnicity.html. [Accessed 10 February 2022].
16. US Coronavirus Vaccine Tracker. USA FACTS; January 27th. Available at: https://usafacts.org/visualizations/covid-vaccine-tracker-states/. Accessed June 27, 2022.
17. Ndugga, et al. Latest Data on COVID-19 Vaccinations by race/ethnicity. 2022. Available at: https://www.kff.org/coronavirus-covid-19/issue-brief/latest-data-on-covid-19-vaccinations-by-race-ethnicity/. Accessed January 27, 2022.
18. Khubchandani J, Macias Y. COVID-19 vaccination hesitancy in Hispanics and African-Americans: a review and recommendations for practice. Brain Behav Immun - Health 2021;15:100277.
19. Ellington S, Strid P, Tong VT, et al. Characteristics of women of reproductive age with laboratory-confirmed SARS-CoV-2 Infection by pregnancy status — United States, January 22–June 7, 2020. MMWR Morb Mortal Wkly Rep 2020;69(25):769–75.
20. Mullins E, Hudak ML, Banerjee J, et al. Pregnancy and neonatal outcomes of COVID-19: coreporting of common outcomes from PAN-COVID and AAP-SONPM registries. Ultrasound Obstet Gynecol 2021;57(4):573–81.
21. Adhikari EH, Moreno W, Zofkie AC, et al. Pregnancy outcomes among women with and without severe acute respiratory syndrome coronavirus 2 infection. JAMA Netw Open 2020;3(11):e2029256.
22. MacDorman MF. Race and ethnic disparities in fetal mortality, preterm birth, and infant mortality in the United States: an overview. Semin Perinatol 2011;35(4):200–8.
23. Holness NA, Barfield L, Burns VL, et al. Pregnancy and postpartum challenges during COVID-19 for African-African women. J Natl Black Nurses Assoc 2020;31(2):15–24.
24. Sutton D, D'Alton M, Zhang Y, et al. COVID-19 vaccine acceptance among pregnant, breastfeeding, and nonpregnant reproductive-aged women. Am J Obstet Gynecol MFM 2021;3(5):100403.
25. Leonard SA, Main EK, Scott KA, et al. Racial and ethnic disparities in severe maternal morbidity prevalence and trends. Ann Epidemiol 2019;33:30–6.
26. Colen CG, Ramey DM, Cooksey EC, et al. Racial disparities in health among nonpoor African Americans and Hispanics: The role of acute and chronic discrimination. Soc Sci Med 2018;199:167–80.
27. Green TL, Zapata JY, Brown HW, et al. Rethinking bias to achieve maternal health equity: changing organizations, not just individuals. Obstet Gynecol 2021;137(5):935–40.
28. Reisinger-Kindle K, Qasba N, Cayton C, et al. Evaluation of rapid telehealth implementation for prenatal and postpartum care visits during the COVID-19 pandemic in an academic clinic in Springfield, Massachusetts, United States of America. Health Sci Rep 2021;4(4):e455.
29. Hamel L, Lopes L, Munana C, Artiga S, Brodie M, KFF. Race, health, and COVID 19: The views and experiences of Black Americans., . Key findings from the KFF/

Undefeated survey on race and health. Kaiser Family Foundation; 2020. https://files.kff.org/attachment/Report-Race-Health-and-COVID-19-The-Views-and-Experiences-of-Black-Americans.pdf.
30. Wheeler JM, Misra DP, Giurgescu C. Stress and coping among pregnant Black women during the COVID-19 pandemic. Public Health Nurs 2021;38(4):596–602.
31. Desist C, et al. Risk for stillbirth among women with and without COVID-19 at delivery hospitalization — United States, March 2020–September 2021.; 202AD. Available at: https://www.cdc.gov/mmwr/volumes/70/wr/mm7047e1.htm#:~:text=Pregnant%20women%20are%20at%20increased,1%E2%80%933. Accessed Febuary 10, 2022.
32. Giurgescu C, Wong AC, Rengers B, et al. Loneliness and depressive symptoms among pregnant Black women during the COVID-19 pandemic. West J Nurs Res 2022;44(1):23–30.
33. Bohren MA, Hofmeyr GJ, Sakala C, et al. Continuous support for women during childbirth. Cochrane Database Syst Rev 2017;7:CD003766.
34. Gur RE, White LK, Waller R, et al. The disproportionate burden of the COVID-19 pandemic among pregnant Black women. Psychiatry Res 2020;293:113475.