

EDITORIAL

Addressing Inequities in Cardiovascular Disease and Maternal Health in Black Women

See Articles by Boakye et al and Bond et al

Black women in the United States bear a disproportionate burden of adverse pregnancy outcomes (eg, preterm birth, small for gestational age birth, still-birth)¹ and are 3× more likely to die from pregnancy complications than other groups.² Accumulating evidence suggests that pregnancy complications are a marker of future health risk, particularly cardiovascular disease (CVD),³ which develops earlier and at higher rates among Black women in the United States.⁴ CVD is the leading cause of death among women and accounts for over 30% of pregnancy-related deaths.² Given that the majority of these deaths are preventable, it is necessary to ask: what underlying factors contribute to these inequities and how do we address them? An emerging body of work is investigating the social, institutional, and structural factors that contribute to inequities in perinatal and maternal health.⁵ This issue of *Circulation: Cardiovascular Quality and Outcomes* includes 2 articles, Boakye et al⁶ and Bond et al,⁷ which highlight critical issues surrounding Black maternal health in the United States.

Boakye et al,⁶ used the Boston Birth Cohort to evaluate associations between maternal nativity and prevalence of preeclampsia among Black women. Preeclampsia—new-onset hypertension with proteinuria—affects 3% to 5% of all pregnancies, with consistently higher rates for Black women compared with White women.⁸ In this cross-sectional analysis, Boakye et al found that 12.4% of US-born Black women had a clinical diagnosis of preeclampsia compared with 8.2% of foreign-born Black women residing in the United States for <10 years and 8.8% of foreign-born Black women residing in the United States for ≥10 years. It is important to highlight that by design the Boston Birth Cohort targeted women with a preterm birth, which may partially account for the higher rates of preeclampsia than nationally reported. However, Boakye et al⁶ also found that US-born Black women reported higher prevalence of obesity, greater maternal stress and were less likely to have a college degree. Even after adjusting for the aforementioned variables, the odds of preeclampsia were significantly lower among foreign-born Black women compared with US-born Black women; however, there was no significant difference in odds of preeclampsia between US-born and foreign-born Black women residing in the United States for ≥10 years. These findings are consistent with earlier studies suggesting that foreign-born status is protective of preterm birth.⁹ An important limitation of Boakye et al⁶ is generalizability of study findings from the Boston Birth Cohort. Additionally, data on immigration status (documented or undocumented), birthplace, income, and health care access were not available. It is also unclear whether foreign-born Black women residing in the United States have similar rates of preeclampsia as Black women residing in the countries where they were born. However, findings from Boakye et al⁶ add to

Yamnia I. Cortés, PhD,
MPH, FNP-BC
Khadijah Breathett^{ID},
MD, MS

The opinions expressed in this article are not necessarily those of the editors or of the American Heart Association.

Key Words: Editorials ■ cardiovascular disease ■ cause of death ■ health equity ■ maternal health ■ preeclampsia

© 2021 American Heart Association, Inc.

<https://www.ahajournals.org/journal/circoutcomes>

the current body of work by posing important questions regarding social and structural factors that may increase risk of preeclampsia with increased duration in the United States.

Though foreign-born Black women in this analysis had higher rates of education, socioeconomic status does not fully explain disparities in Black maternal health. It is possible that immigration is undertaken by healthier subpopulations, accounting for more favorable health outcomes among foreign-born Black women living in the United States for <10 years. However, what happens with increased duration in the United States? The relationship between immigration and maternal health inequalities reported by Boakye et al⁶ may illustrate more than acculturation. Results may reflect structural racism in the United States, which encompass laws, policies, practices, and norms that create a hierarchy of power. Experiences of discrimination may introduce foreign-born Black women to new stressors, including the reality of being regarded as unwanted, or inferior in the receiving US society.¹⁰ In addition, structural racism impacts access to education, employment, housing, health care, food stability, and safety—basic social needs and resources for positive health outcomes. Consequently, the experience of living as a Black woman in the United States (eg, discrimination, structural racism) negatively impacts maternal health for US-born Black women and foreign-born Black women with increased duration in the United States.

RECOMMENDATIONS AND A CALL TO ACTION

Bond et al⁷ present the Association of Black Cardiologists' (ABC) working agenda to address the Black maternal health crisis. The ABC was founded over 40 years ago to address inequities in CVD burden and access to cardiovascular care in populations of color. On June 13, 2020, ABC convened the Black Maternal Heart Health Roundtable, a collaborative task force of stakeholders (eg, community partners, state agencies, researchers, clinicians), to identify strategies to improve Black women's maternal health. ABC is a stakeholder organization in the Black Maternal Health Caucus and has endorsed the Black Maternal Health Momnibus,¹¹ which calls for investment in: (1) social determinants of health; (2) community-based organizations; (3) women veterans; (4) diversifying the perinatal workforce; (5) data collection and quality measures; (6) maternal mental health care; (7) digital tools to improve maternal health; (8) maternal health of incarcerated women; and (9) innovative payment models supporting quality care and health insurance coverage from pregnancy to one year postpartum. With Black women being disproportionately affected by CVD and the maternal health crisis,

"ABC is proud to be the cardiovascular society at the forefront in addressing the disparate maternal morbidity and mortality."

The ABC has developed several recommendations to improve Black maternal heart health, many of which address the downstream impact of structural racism. ABC calls for collaborative efforts between community partners, the media, health care workers, educators, researchers, government agencies, and the private sector. An overview of some of these recommendations follows:

- Developing community partnerships: Health care systems and organizations can work with community members to understand and address issues most pertinent to the cardiovascular health of the community. Cardiovascular health has been successfully promoted through outreach programs partnered with churches, faith-based organizations, and local businesses. Dissemination of similar programs can encourage conversations, offer health care services, engage community members to share their experiences, and establish trustworthy relationships.
- Using media to enhance public education: Bond et al⁷ point to the use of media outlets to raise awareness and highlight the stories of influential Black women who can share their experiences. In addition to diversifying the stories that are published, there is a call to include more women of color in the media workforce.
- Using multidisciplinary care teams: Access to multidisciplinary care teams is needed across the care continuum from preconception to postpartum care with inclusion of obstetricians, perinatologists, cardiologists, primary care clinicians, emergency medicine professionals, nurses, midwives, and doulas. Moreover, Bond et al⁷ underscores the need to diversify the maternal health care team and incorporate education on racism and bias during their training.
- Increasing access to maternal health care: Insurance coverage is needed beyond the immediate postpartum period. Postpartum care is important for monitoring the health of women and preventing complications, particularly among women with chronic conditions. Expanding access to doulas and coverage for doula services is also highlighted. Bond et al⁷ stress investment in maternal health care for veterans, rural communities, low-income communities, and incarcerated women.
- Innovative technologies and telehealth: The use of innovative technologies, particularly during the COVID-19 pandemic, is one strategy to improve access to maternal health care that allows women to interact with specialists' who are not local. Tools that support telecommunication and remote

diagnosis can provide patients more immediate access to care and enhance efficiency of care. However, Bond et al⁷ caution that the lack of in-person interactions may contribute to patient-provider distrust.

- Research: There is a need to address critical gaps in knowledge in the identification and care of Black women at elevated risk for CVD during the care continuum. Recommendations from ABC include standardizing the management of patients with heart disease in pregnancy and the development and use of interdisciplinary care registries such as the Heart Outcomes in Pregnancy: Expectations Registry. Availability of evidence-based information and data sets, including the Office of Research on Women's Health Maternal Morbidity and Mortality web portal and Centers for Disease Control and Prevention Pregnancy Mortality Surveillance System, is necessary to adequately track and measure inequities in maternal morbidity and mortality.

The current position article from the ABC is the first comprehensive statement from a cardiovascular society addressing the Black maternal health crisis. While we present a summary of key recommendations from the Black Maternal Heart Health Roundtable, Bond et al⁷ provide a working agenda and detailed strategies to reduce Black women's maternal morbidity and mortality through education, research, advocacy, and collaborative efforts.

Current work by Boakye et al⁶ and Bond et al⁷ provide an important opportunity for a paradigm shift from models of maternal health that focus on individual behaviors and socioeconomic status, to a more comprehensive approach that addresses the social and structural factors underlying maternal health inequities. As the impact of structural racism on Black maternal health is increasingly documented, the time has come to focus on upstream structural solutions. Only then can we improve existing policies and health care practices to tackle the Black maternal health crisis in the United States.

ARTICLE INFORMATION

Correspondence

Correspondence to: Yamnia I. Cortés, PhD, MPH, FNP-BC, University of North Carolina—Chapel Hill School of Nursing, Carrington Hall, Campus Box 7460, Chapel Hill, NC 27599-7460. Email yicortes@email.unc.edu

Affiliations

School of Nursing, University of North Carolina—Chapel Hill, Chapel Hill, NC (Y.I.C.). Division of Cardiovascular Medicine, Sarver Heart Center, University of Arizona, Tucson, AZ (K.B.).

Disclosures

Dr Breathett has research funding from the National Heart, Lung, and Blood Institute (NHLBI) K01HL142848, R25HL126146 subaward 11692sc, and L30HL148881; University of Arizona Health Sciences, Strategic Priorities Faculty Initiative Grant; and University of Arizona, Sarver Heart Center, Novel Research Project Award in the Area of Cardiovascular Disease and Medicine, Anthony and Mary Zoia Research Award. Disclosures provided by Dr Breathett in compliance with American Heart Association's annual Journal Editor Disclosure Questionnaire are available at https://www.ahajournals.org/pb-assets/policies/COI_09_2020-1600719273583.pdf. Dr Cortés has research funding from the National Institute on Minority Health and Health Disparities K23MD014767 and NHLBI R25HL105444.

REFERENCES

1. Martin JA, Hamilton BE, Osterman MJ. Births in the United States, 2018. *NCHS Data Brief*. 2019;346:1–8.
2. Petersen EE, Davis NL, Goodman D, Cox S, Syverson C, Seed K, Shapiro-Mendoza C, Callaghan WM, Barfield W. Racial/Ethnic disparities in pregnancy-related deaths - United States, 2007–2016. *MMWR Morb Mortal Wkly Rep*. 2019;68:762–765. doi: 10.15585/mmwr.mm6835a3
3. Cortés YI, Catov JM, Brooks M, El Khoudary SR, Thurston RC, Matthews KA, Isasi CR, Jackson EA, Barinas-Mitchell E. Pregnancy-related events associated with subclinical cardiovascular disease burden in late midlife: SWAN. *Atherosclerosis*. 2019;289:27–35. doi: 10.1016/j.atherosclerosis.2019.07.012
4. Virani SS, Alonso A, Benjamin EJ, Bittencourt MS, Callaway CC, Carson AP, Chamberlain AM, Chang AR, Cheng S, Delling FN, et al; American Heart Association Council on Epidemiology and Prevention Statistics Committee and Stroke Statistics Subcommittee. Heart disease and stroke statistics-2020 update: a report from the American Heart Association. *Circulation*. 2020;141:e139–e596. doi: 10.1161/CIR.0000000000000757
5. Mendez DD, Sanders SA, Lai YH, Wallace ML, Rathbun SL, Gary-Webb TL, Davis EM, Burke LE. Ecological momentary assessment of stress, racism and other forms of discrimination during pregnancy using smartphone technology. *Paediatr Perinat Epidemiol*. 2020;34:522–531. doi: 10.1111/ppe.12619
6. Boakye E, Sharma G, Ogunwole SM, Zakaria S, Vaught AJ, Kwapong YA, Hong X, Ji Y, Mehta L, Creanga AA, et al. Relationship of preeclampsia with maternal place of birth and duration of residence among non-Hispanic Black women in the United States. *Circ Cardiovasc Qual Outcomes*. 2021;14:e007546. doi: 10.1161/CIRCOUTCOMES.120.007546
7. Bond RM, Gaither K, Nasser SA, Albert MA, Ferdinand KC, Njoroge JN, Parapid B, Hayes SN, Pegus C, Sogade B, et al. working agenda for black mothers: a position paper from the Association of black cardiologists on solutions to improving black maternal health. *Circ Cardiovasc Qual Outcomes*. 2021;14:e007643. doi: 10.1161/CIRCOUTCOMES.120.007643
8. Breathett K, Muhlestein D, Foraker R, Gulati M. Differences in preeclampsia rates between African American and Caucasian women: trends from the National Hospital Discharge Survey. *J Womens Health (Larchmt)*. 2014;23:886–893. doi: 10.1089/jwh.2014.4749
9. Scott KA, Chambers BD, Baer RJ, Ryckman KK, McLemore MR, Jelliffe-Pawlowski LL. Preterm birth and nativity among Black women with gestational diabetes in California, 2013–2017: a population-based retrospective cohort study. *BMC Pregnancy Childbirth*. 2020;20:593. doi: 10.1186/s12884-020-03290-3
10. Schwartz SJ, Unger JB, Zamboanga BL, Szapocznik J. Rethinking the concept of acculturation: implications for theory and research. *Am Psychol*. 2010;65:237–251. doi: 10.1037/a0019330
11. Black Maternal Health Caucus. Rep Underwood [DL-I-14]. Summary of H.R.6142 - 116th Congress (2019–2020): Black Maternal Health Momnibus Act of 2020. <https://blackmaternalhealthcaucus-underwood.house.gov/Momnibus>. Accessed December 28, 2020.