Placing the spotlight on maternal morbidity and mortality among Black women in New York

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Pregnancy and childbirth are usually considered memorable and fulfilling moments during a woman's lifetime. The death of a woman during or after pregnancy is tragic for her family and society in general. The prevalence of maternal morbidity and mortality affects Black women disproportionately in the United States. Reducing racial and ethnic disparities in maternal mortality must be a priority. This article focuses on disparities in severe maternal morbidity and mortality among Black women in New York State, and especially in New York City, and statewide efforts to improve pregnancy outcomes.

KEY WORDS: **NYC Black maternal mortality, severe maternal morbidity, NYS MMRC, implicit bias, maternal deaths Black women**

In the United States, maternal mortality refers to death that occurs during pregnancy or within 12 months of the end of pregnancy that is causally related to the pregnancy.[1] Causality includes a pregnancy complication, a chain of events initiated by pregnancy, or the aggravation of an unrelated condition by the physiologic effects of pregnancy. For 2011 to 2015, the pregnancy-related mortality ratio (PRMR) was 17.2 deaths per 100,000 live births, a rate that remains higher than that of any other resource-rich country.[1] Black women suffer great inequities in maternal mortality. The most recent data have shown that PRMRs for non-Hispanic Black women were 3.3 times higher than that for non-Hispanic White women. This inequity translates to 42.8 deaths per 100,000 live births for non-Hispanic Black women compared with 13.0 deaths per 100,000 live births for non-Hispanic White women.[1]

Severe maternal morbidity (SMM) is defined as an unintended outcome of the process of laboring and birth that results in significant short-term or long-term consequences to a woman's health.[2] To date, no consensus has been reached among healthcare systems and professional

organizations as to what conditions should represent severe maternal morbidity.[2] The Centers for Disease Control and Prevention (CDC) identifies delivery hospitalizations with SMM by using administrative hospital discharge data and International Classification of Diseases (ICD) diagnosis and procedure codes.[3] As of 2014, the most recent year for which national SMM data were made available, there has been a steady increase in rates affecting more than 50,000 women.[3] Nationally, Black women experience significantly higher rates of SMM than White women.[4]

Health disparity link to structural racism and bias

Racial discrimination, structural racism, and implicit racial bias have had a negative impact on Black women's maternal healthcare and health outcomes.[5] Structural racism encompasses public policies and institutional practices that produce and perpetuate racial inequities.[6,7] It specifically refers to a totality of ways in which society fosters racial discrimination through mutually reinforcing inequitable systems of housing, education, employment, earnings, benefits, credit, media, healthcare, and criminal justice.[8] Racial bias is a fundamental cause of inequities in health, creating barriers that persist even in the absence of interpersonal racism. Implicit biases are unconscious attitudes that can influence affect, behavior, and cognitive processes. Such biases impact patient–healthcare provider interactions, treatment decisions, treatment adherence, and patient outcomes.[6,7]

The causes of inequities in maternal morbidity and mortality are not fully understood and are likely multifactorial. The reality of discrimination, structural racism, and implicit racial bias, however, must not be ignored as major contributors. Multifaceted strategies are needed to address racial inequities and improve maternal healthcare and health outcomes for Black women.

The New York experience

Data and experiences in New York State (NYS), and particularly in New York City (NYC), provide a compelling picture of racial inequities in maternal healthcare and health outcomes for Black women. In NYC, non-Hispanic Black women were 12 times more likely than non-Hispanic White women to die from pregnancy-related causes between 2006 and 2010.[9] Non-Hispanic Black women with a college degree still had higher SMM rates than women of other races or ethnicities who never completed high school.[10] Black women who had a normal prepregnancy body mass index still had higher rates of SMM than obese women of every other race/ethnicity.[10]

Investigators examined the extent to which Black–White differences in rates of SMM in NYC hospitals could be explained by differences in the hospitals where Black and White women deliver.[11] The data demonstrated that racial differences in the distribution of deliveries could possibly contribute to the Black–White disparity in SMM rates in NYC hospitals.[11] They also concluded that if Black women delivered at the same hospitals as White women, almost 1,000 Black women could avoid an SMM event during their delivery hospitalization annually in NYC.[11] These results suggested that in addition to examining social determinants of health, quality of care is identified as an additional means to reduce racial disparities.[11]

In the documentary film "The Naked Truth: Death by Delivery," Black women shared their personal experiences of enduring racism while giving birth in NYC.[12] Doulas discussed the importance of patient advocacy and making birth a less traumatic experience. A parent survivor explained the details of losing her daughter after a preventable maternal hemorrhage. A human rights lawyer who works with local organizations to bring Black maternal mortality into the national spotlight shared her perspective of the impact of racism on disparate maternal mortality outcomes. She stated that "if the numbers were reversed and White women were dying at the rate Black women are dying, there would be political will to address this problem."[12] Listening to patients' real-life stories about their experiences with bias and racism in healthcare settings allows for providers and politicians to understand the negative impact of this disparity.

Researchers examined the association between county-level structural racism indicators and the odds of SMM in NYS.[13] Data from a retrospective review of birth records over a 2-year time period and county-level data on the structural indicators female educational attainment, employment, and incarceration were merged. Prominent racial inequality existed among the three structural indicators in the nine counties studied. Four of the counties were within NYC. It was further discovered that residing in a county with high racial educational inequality was associated with higher odds of SMM in NYS, even after adjusting for individual and hospital-level characteristics. The authors concluded that studies of maternal disparities should consider multiple dimensions of structural racism as a contributing cause to SMM. This was also the first study to their knowledge to examine the association between structural racism and SMM, which is an additional

Table 1. NYS Taskforce on Maternal Mortality and Disparate Racial Outcomes recommendations[17]

Recommendation	Rationale
Establish a statewide maternal mortality review committee (MMRC) in statute	The MMRC, comprised of a diverse group of experts, will assess the cause of each maternal death in NYS to identify and disseminate strategies to prevent future deaths. The MMRC will work in partnership with stakeholders by creating an advisory council.
Design and implement a comprehensive training and education program for hospitals on implicit racial bias	Implicit racial bias affects the patient–provider relationship and treatment decisions and outcomes. Racial disparities in women's health cannot be improved without addressing racial bias, both implicit and explicit. This project will include curriculum development to be distributed throughout the state and incentives for hospitals to adopt the curriculum for all staff.
Establish a comprehensive data warehouse on perinatal outcomes to improve quality	A robust data infrastructure will provide key data to hospital administrators and healthcare providers so they have timely access to perinatal quality measures stratified by race, ethnicity, and insurance status. The program, modeled after the California Maternal Quality Care Collaborative, is central to improving maternal outcomes and addressing disparities.
Provide equitable reimbursement to midwives	Midwifery care has shown positive outcomes for mothers and infants, particularly those at greatest risk for poor health outcomes due to racial disparities. Given the transition to value–based payments, NYS should ensure midwives be recognized as the primary care provider for women who choose them for their maternity care.
Expand and enhance community health worker (CHW) services	Participants at NYSDOH Commissioner's Listening Sessions expressed the vital role CHWs provide: social support, information, advocacy, and connection to services. Opportunities were identified to expand these activities to address key barriers impacting maternal outcomes.
Create a State University of New York (SUNY) scholarship program for midwives to address needed diversity	Midwives serve large numbers of individuals from communities of color, but a limited number of people of color (14.5%) are in the profession. A SUNY midwifery scholarship program will attract students of color committed to working with vulnerable communities throughout the state after graduating.
Create competency–based curricula for providers as well as medical and nursing schools	A comprehensive set of measurable competencies for undergraduate, graduate, and continuing education in areas of maternal health, social determinants, clinical care, quality improvement, and implicit bias, with standards set by practitioner level, will inform undergraduate and graduate medical/nursing education and continuing medical/nursing education improvements.
Establish an educational loan forgiveness program for providers underrepresented in medicine who intend to practice women's healthcare services	The educational loan forgiveness program under Title 8 of the Education Law will attract healthcare students underrepresented in medicine who commit to working within the maternal health field for at least 3 years.
Convene a statewide expert work group to optimize postpartum care	In partnership with ACOG, a work group including providers, payers, state agencies, and patients can identify strategies to re–envision postpartum care as an ongoing process rather than a single encounter, to foster individualized, woman–centered care and improve maternal health outcomes.
Promote universal birth preparedness and postpartum continuity of care	Increasing capacity of outpatient obstetric practices serving high volumes of Black women to offer universal birth–preparedness classes, including the CenteringPregnancy model, can improve preparation for labor and birth as well as connection to providers and healthcare. Education should focus on postpartum care and recommendations developed by the expert work group to ensure consistent engagement and follow–up.

ACOG, American College of Obstetricians and Gynecologists; HIV, human immunodeficiency virus; NYS, New York State; NYSDOH, New York State Department of Health.

area for potential intervention.[13]

In 2016, NYS had the 30th lowest ranking in the nation for maternal mortality rate, which improved to 23rd in 2019.[14,15] Racial disparities persist, however, with NYC Black women faring significantly worse than White women. Fortunately, New York policy leaders have seen the need for improvement and heeded the call to action with a statewide plan.

Focus on reduction of racial disparities in maternal health outcomes

In April 2018, Governor Andrew M. Cuomo heralded a comprehensive, multipronged plan to review and address maternal mortality and morbidity in NYS.[16] The major focus established was reduction of racial disparities in maternal health outcomes. Over 1 year, a hard-hitting campaign led to achievement of multiple initiatives toward improving maternal health outcomes.[16,17]

The first step in the campaign was to establish a taskforce on maternal mortality and disparate racial outcomes with the charge to provide expert policy advice and develop recommendations for improving maternal outcomes, addressing racial and economic disparities, and reducing the frequency of maternal mortality and morbidity. The taskforce was led by the commissioner of the New York State Department of Health (NYSDOH), the president of the New York Association of Licensed Midwives, the president of the State University of New York Upstate, and the NYC Health and Hospitals department chair of obstetrics and gynecology, with representation from the obstetrician medical community, hospitals, legislature, and appointed state officials as well as other stakeholders and members of the community. In the ensuing year, several initiatives were implemented

or progressed toward implementation. At the conclusion of the year, the taskforce issued recommendations for ongoing work. These recommendations are summarized in *Table 1*.[17]

Two initiatives implemented in 2018 majorly informed the taskforce in making recommendations. The taskforce conducted commissioner listening sessions, and the governor sponsored a statewide symposium on racial disparities and implicit bias in obstetric care.[17] As well, the NYSDOH began work to formalize a state maternal mortality review committee (MMRC). Other initiatives led to forward movement in piloting the expansion of Medicaid coverage for doulas, support for Centering-Pregnancy demonstrations, and expansion of the NYS Perinatal Quality Collaborative to translate evidence-based guidelines to clinical practice to reduce maternal mortality and morbidity. Collaboration of the State Board of Medicine, NYSDOH, medical schools, schools of nursing, American College of Obstetricians and Gynecologists (ACOG), and Association of Women's Health, Obstetric and Neonatal Nurses led to recommendations for undergraduate, graduate, and continuing education regarding issues of maternal health. These education recommendations are listed in the *Box*.[17]

Commissioner listening sessions

During the summer of 2018, seven community listening sessions were conducted across NYS in partnership with the NYSDOH-funded Maternal and Infant Community Health Collaboratives in Albany, Bronx, Brooklyn, Buffalo, Harlem, Queens, and Syracuse. Community participants included recent and currently pregnant women and families, the majority of whom were Black.[17]

Participants across all seven listening sessions asked for elimination of barriers that prevent women from getting quality healthcare services and increases in the support needed to help women have healthy pregnancies. They stressed the need for better understanding of the reasons Black women have higher maternal mortality rates. Participants asked for acknowledgment of the impact of race and racism on disparities in maternal mortality and action to address how healthcare systems and practices perpetuate continued racial inequities. *Table 2* lists barriers and suggestions for addressing the racial disparities in maternal mortality from participants in the listening sessions.[17]

Table 2. Common barriers expressed during listening sessions and suggestions for addressing racial disparities[17]

Common barriers
- Lack of access to healthcare (limited facility choice, quality of provider and facility)
- Poor communication with healthcare providers (especially feeling providers were not listening, not being given enough time with providers, and few providers reflected their lived experience)
- Lack of information and education from providers
- Racism and its impact on the quality of care received
- Disrespect from healthcare providers, including support and administrative staff
- Lack of social supports

Suggestions for addressing racial disparities
- Recruit more Black and Hispanic healthcare professionals, reflective of the community
- Increase healthcare professionals' awareness of racial disparities in health outcomes
- Train healthcare professionals on the impact of implicit bias on healthcare outcomes
- Increase provider support during the postpartum period
- Increase availability of social support such as birthing classes, group prenatal care pregnancy, doulas, midwives, community health workers, and parenting classes
- Increase availability of community services and resources, eg, community health worker services and home visiting service

Statewide symposium

The Symposium on Racial Disparities and Implicit Bias in Obstetrical Care convened in November 2018 with 50 multidisciplinary healthcare providers and stakeholders from across NYS in attendance. The goal for the symposium was to identify concrete strategies to reduce racial disparities and their negative health impacts, with an emphasis on the hospital setting.[17]

Participants recognized that a combination of strategies was necessary to serve people from all racial and ethnic backgrounds with compassionate, equitable obstetric care. Three key recommendations brought forward by the symposium participants were deployment of a pilot project by the NYSDOH for hospitals to conduct implicit racial bias training, implementation of enhanced communication and cultural competency education for clinical staff in training, and application of system-wide efforts to support enhanced team-based care that would optimize postpartum care.[17]

Maternal mortality review committee

In August 2019, the NYSDOH formally established through statute a state MMRC comprised of health professionals who serve and/or are representative of the diversity of women and mothers across the state. Collaborating with ACOG district II and the City of New York, the MMRC reviews

maternal deaths in NYS.[17] The MMRC is tasked to analyze maternal deaths for preventability, factors that contributed to the deaths, and identify strategies to address contributing factors. Recommendations are provided to the NYSDOH to reduce maternal mortality and morbidity that specifically address racial and economic disparities.[17]

Next steps

On October 30, 2019, NYS was one of 24 states awarded a grant from the CDC to support ongoing work to reduce maternal mortality rates and address racial disparities.[18] The award totals $450,000 to the NYSDOH to work in partnership with the New York City Department of Health and Mental Hygiene. The funding from the CDC is intended to help sustain the work of the NYS MMRC in facilitating an understanding of the drivers of maternal mortality and complications of pregnancy, as well as racial disparities in maternal mortality rates.[19] The MMRC will recommend to the commissioner clinical and community interventions to improve outcomes for families and communities.[18] One highlight of the NYS 2020 budget included an $8 million investment over 2 years to fund initiatives to combat maternal mortality, including a comprehensive education and training program to reduce implicit racial bias in healthcare institutions statewide; expansion of community health worker programs in key communities across the state; an innovative data warehouse to provide near real-time information on maternal mortality and morbidity; and a board of experts within the Department of Health to conduct a multidisciplinary analysis to review each and every maternal death in NYS and develop actionable recommendations to improve care and management.[19]

It had been hoped to provide an update on these 2020 plans and data prior to publication of this article. However, the Covid-19 pandemic has caused a pause in access to this information.

Box. Medical and nursing education recommendations[17]

- Identify comprehensive set of key knowledge, skills, and attitudes (ie, competencies) for medicine and nursing in maternal health, social determinants, clinical care, quality improvement and implicit bias
- Set expectations for competency achievement by level: undergraduate, graduate, and continuing education
- Create tools and conduct curricula reviews of medical and nursing programs to ensure competencies sufficiently addressed and achieved
- Enhance authentic learning opportunities with multidisciplinary teams, eg, simulation, to improve skills and communication with pre and post assessment to determine outcomes

Diminishing racial inequality in Black maternal outcomes

Black women are 3 times more likely in the United States and 12 times more likely in NYC to die from a pregnancy-related death than are their White counterparts.[1,9,11] Structural racism has a prevalent role in shaping persistent health inequities in Black maternal morbidity and mortality.[5–8,11–13] Concerted, statewide efforts, however, are actively in place to help significantly reduce poor maternal outcomes in NYS.[16–19] As women health nurse practitioners, we should identify causes and contributing factors of SMM and mortality to implement preventive strategies and reduce healthcare inequities in maternal outcomes. ●

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References

1. Petersen EE, Davis NL, Goodman D, et al. Vital signs: pregnancy-related deaths, United States, 2011-2015, and strategies for prevention, 13 states, 2013-2017. *MMWR Morb Mortal Wkly Rep*. 2019;68(18):423-429.
2. Kilpatrick SK, Ecker JL. Severe maternal morbidity: screening and review. *Am J Obstet Gynecol*. 2016;215(3):B17-B22.
3. Centers for Disease Control and Prevention. Severe maternal morbidity in the United States. January 2020. https://www.cdc.gov/reproductivehealth/maternalinfanthealth/severematernalmorbidity.html.
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.e1-122.e1227.
5. Gee GC, Ford CL. Structural racism and health inequities: old issues, new directions. *Du Bois Rev*. 2011;8(1):115-132.
6. Hall WJ, Chapman MV, Lee KM, et al. Implicit racial/ethnic bias among health care professionals and its influences on health care outcomes: a systematic review. *Am J Public Health*. 2015;105(12):e60-e76.
7. Maina IW, Belton TD, Ginzberg S, et al. A decade of studying implicit racial/ethnic bias in healthcare providers using the implicit association test. *Soc Sci Med*. 2018;199:219-229.
8. Bailey ZD, Krieger N, Agenor M, et al. Structural racism and health inequalities in the USA: evidence and interventions. *Lancet*. 2017;389:1453-1463.

(continued on page 43)

Contraception update: intrauterine devices. *FP Essent*. 2017;462:20-24.

13. American College of Obstetrician and Gynecologists. ACOG committee opinion no. 755: Well-woman visit. *Obstet Gynecol*. 2018;132(4):e181-e186.
14. Adeyemi-Fowode OA, Bercaw-Pratt JL. Intrauterine devices: effective contraception with non-contraceptive benefits for adolescents. *J Pediatr Adolesc Gynecol*. 2019;32(5S):S2-S6.
15. Curtis KM, Tepper NK, Jatlaoui TC, et al. U.S. Medical Eligibility Criteria for contraceptive use, 2016. *MMWR Recomm Rep*. 2016;65(3):1-103.
16. Dehlendorf C. Contraception: counseling and selection. UpToDate. February 28, 2020. https://www.uptodate.com/contents/contraceptive-counseling-and-selection-for-women.
17. Bahamondes L, Brache V, Meirik O, et al; WHO Study Group on Contraceptive Implants for Women. A 3-year multicentre randomized controlled trial of etonogestrel- and levonorgestrel-releasing contraceptive implants, with non-randomized matched copper-intrauterine device controls. *Hum Reprod*. 2015;30(11):2527-2538.
18. Bateson D, Harvey C, Trinh L, et al. User characteristics, experiences and continuation rates of copper intrauterine device use in a cohort of Australian women. *Aust N Z J Obstet Gynaecol*. 2016;56(6):655-661.
19. Cario HA, Secor RM. *Advanced Health Assessment of Women: Clinical Skills and Procedures*. 4th ed. New York, NY: Springer Publishing Company; 2018.
20. American College of Obstetricians and Gynecologists. 2020. Long-Acting Reversible Contraception (LARC) Quick Coding Guide. https://www.acog.org/education-and-events/publications/larc-quick-coding-guide/basic-iud.
21. Nakajima AK, Posner GD. *Human Simulation for Women's Health*. New York, NY: Springer; 2012.

Web resources

A. acog.org/programs/long-acting-reversible-contraception-larc/video-series/counseling-scenarios/initiation-of-a-shared-decision-making-process
B. acog.org/practice-management/coding/coding-library/new-hcpcs-codes-established-for-coding-the-levonorgestrelreleasing-intrauterine-contraceptive-system-52-mg-intrauterine-device-iud
C. liletta.com
D. hcp.kyleena-us.com
E. hcp.mirena-us.com
F. hcp.skyla-us.com
G. hcp.paragard.com/
H. acog.org/programs/long-acting-reversible-contraception-larc/video-series/insertion/paragard
I. acog.org/programs/long-acting-reversible-contraception-larc/video-series/insertion/kyleena
J. lilettahcp.com/iud-product-features#insertion-video
K. acog.org/programs/long-acting-reversible-contraception-larc/video-series/removal

(continued from page 22)

9. New York City Department of Health and Mental Hygiene. *Pregnancy-Associated Mortality New York City, 2006-2010*. New York, NY: NYC Health. https://www1.nyc.gov/assets/doh/downloads/pdf/ms/pregnancy-associated-mortality-report.pdf.
10. New York City Department of Health and Mental Hygiene. *Severe Maternal Morbidity in New York City, 2008–2012*. New York, NY: NYC Health; 2016. https://www1.nyc.gov/assets/doh/downloads/pdf/data/maternal-morbidity-report-08-12.pdf.
11. Howell EA, Egorova NN, Balbierz A, et al. Site of delivery contribution to black-white severe maternal morbidity disparity. *Am J Obstet Gynecol*. 2016;215(2):143-152.
12. The Naked Truth: Death by Delivery. YouTube. https://youtube/S5CMkloNZQY. February 24, 2018.
13. Liu SY, Fiorentini C, Bailey Z, et al. Structural racism and severe maternal morbidity in New York State. *Clinical Medicine Insights: Women's Health*. 2019;12:1-8.
14. America's Health Rankings. United Health Foundation. *Health of Women and Children Report 2019*. Minnetonka, MN: United Health Foundation; September 2019. https://assets.americashealthrankings.org/app/uploads/health-of-women-and-children2019-report.pdf.
15. America's Health Rankings. *Health of Women and Children Report* 2016. Minnetonka, MN: United Health Foundation; 2016.
16. Governor Cuomo announces comprehensive initiative to target maternal mortality and reduce racial disparities in outcomes. April 23, 2018. https://www.governor.ny.gov/news/governor-cuomo-announces-comprehensive-initiative-target-maternal-mortality-and-reduce-racial.
17. New York State Taskforce on Maternal Mortality and Disparate Racial Outcomes. March 2019. https://www.governor.ny.gov/sites/governor.ny.gov/files/atoms/files/maternal_mortality_Mar12.pdf.
18. Governor Cuomo announces federal grant to support ongoing work to reduce maternal mortality rates. October 30, 2019. https://www.governor.ny.gov/news/governor-cuomo-announces-federal-grant-support-ongoing-work-reduce-maternal-mortality-rates.
19. Governor Cuomo announces highlights of FY 2020 Budget. April 1, 2019. https://www.governor.ny.gov/news/governor-cuomo-announces-highlights-fy-2020-budget.