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Swapna Reddy
Nina Patel
Mary Saxon
Nina Amin
Rizwana Biviji

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Innovations in U.S. Health Care Delivery to Reduce Disparities in Maternal Mortality Among African American and American Indian/Alaskan Native Women

Swapna Reddy, DrPH, JD,[1] Nina Patel, MS,[1] Mary Saxon, MS,[1] Nina Amin,[2] Rizwana Biviji, PhD[1]

[1]College of Health Solutions, Arizona State University, Phoenix, AZ; [2]Phoenix Country Day School, Paradise Valley, AZ

Abstract Despite spending more on health care than any other country, the United States has the worst maternal mortality rate among all developed nations. African American and American Indian/Alaskan Native women have the worst outcomes by race, representing a stark health disparity within the country. Contributing factors disproportionately experienced by these minority populations include challenges of access to consistent and high-quality prenatal care, prevalence of underlying conditions, toxic stress due to systemic racism, and unconscious bias in health care. While many of these factors lie upstream in the lives of women, and seemingly beyond the scope of the clinical walls, the downstream health care delivery system can serve as a vital part of the solution via innovative practices, community-based collaborations, and by serving as advocates for the communities served. Such alignments between clinicians, community leaders, policymakers, and patients that extend beyond the health system can serve as the missing piece needed within the clinic to reverse the trajectory of maternal mortality for American women, especially those from traditionally underserved populations. (*J Patient Cent Res Rev.* 2021;8:140-145.)

Keywords health disparities; maternal mortality; African American; American Indian; provider-patient relationship; health equity; patient focus

Maternal mortality is due to a confluence of factors both within and outside of the clinical walls, namely social determinants of health, which result in disparate health outcomes for African American (AA) and American Indian/Alaskan Native (AI/AN) women and their families. These factors include disproportionate rates of preexisting health conditions; limited access to health care, including high-quality prenatal care; and the role of historic, current, and pervasive racism. Far more pernicious social realities point to factors like the role of unconscious biases by providers, lack of trust in health systems by patients of color, and toxic stress due to persistent and systemic racism.[1]

COVID-19 has further pulled back the curtain to lay bare the staggering disparities that we continue to face regarding health outcomes and justice for communities of color in the United States, especially for AA and AI/AN groups.[2] Globally, maternal morbidity and mortality are considered important indicators of a country's overall health care quality. Despite high health care spending, the United States has some of the worst maternal outcomes in the industrialized world.[3,4] Its overall maternal mortality rate (MMR) is the highest among all developed nations at 17.4 per 100,000 live births, while AA women have a MMR of 42.4 and AI/AN women a MMR of 30.[2,5,6] An estimated 60% of U.S. maternal deaths are preventable, revealing missed opportunities for intervention, especially for AA and AI/AN women.[7]

Since issues within health care have historically been part of the problem, the authors contend that the health care delivery system must also be part of the solution. In this topic synopsis, the contributing factors of access to health care and racism that lead to disproportionate rates of maternal mortality among AA and AI/AN women are briefly reviewed, as are several health care delivery recommendations for reducing these disparities.

Underlying Health Conditions

The overall health of a woman prior to pregnancy is critical for both maternal and fetal health outcomes. In addition to experiencing disproportionate rates of maternal mortality, AA and AI/AN populations experience higher rates of underlying health conditions, such as heart disease, obesity, and diabetes, that may lead to poor birth outcomes. In fact, of AA women above the age of 20,

Corresponding author: Swapna Reddy, DrPH, JD, College of Health Solutions, Arizona State University, Phoenix, AZ 85004 (swapna.reddy@asu.edu)

48% have cardiovascular disease (with hypertension by far the most common).[8] Nearly two-thirds of AA women are considered obese according to their body mass index.[9]

AI/AN populations have lower-rated health status compared to their non-AI/AN counterparts, with a life expectancy that is 5.5 years less than the overall U.S. population.[10] Compared to White women, AI/AN women are 1.4 times more likely to be diagnosed with gestational hypertension and preeclampsia and 1.5 to 2 times more likely to be diagnosed with gestational diabetes.[11]

Access to Quality Prenatal Care

Women who receive no prenatal care are 3 to 4 times more likely to die of pregnancy-related complications as compared to women who receive adequate prenatal care.[12] In 2018, 6% of women reported receiving prenatal care only in the third trimester or receiving no prenatal care.[13] This number increases to 10% for AA and 12% for AI/AN women.[14] Early initiation of prenatal care and adequate monitoring by providers are important to mitigate severe pregnancy-related complications.[5] AA women are less likely to be insured, experience greater financial barriers, and have less access to prenatal care.[15]

Disparities in accessing early and continuous prenatal care also exist among women residing in rural underserved areas, which is particularly harmful to AI/AN women, as 40% live on reservation, rural, or frontier communities that are long distances from care. As such, fewer AI/AN women living in rural communities access prenatal care within the first trimester, compared to White women.[16] While many AI/AN women are entitled to health care via the Indian Health Services, many challenges persist in accessing care due to barriers like transportation and difficulties taking time off work to access these services.[16]

The Pervasive Role of Racism

Racial/ethnic disparities in maternal mortality can be attributed to factors such as racism that exist at multiple levels.[17] This is amplified by high rates of poverty, housing challenges, job discrimination, and social isloation.[17,18] It is important to note that it is not race itself, but the underlying racism that AA and AI/AN women experience on a systemic basis, that contributes to poor pregnancy outcomes and higher MMR.[19-22] The accumulation of chronic stress over a woman's life course, due to racism, can result in poor perinatal health outcomes like preterm births and low-birth-weight infants.[22,23] This is especially true among AA women who disproportionately experience the compounding effects of racism that result in an increased allostatic load (ie, the cumulative effect of chronic stress).[17,24] While educational attainment (an indicator of structural racism) is generally associated with severe maternal morbidity,[19] racial/ethnic disparities in maternal outcomes persist regardless of a woman's socioeconomic or educational status,[17] as college-educated AA mothers are still more likely to suffer severe complications in pregnancy or childbirth than White women who never graduated from high school, reflecting gaps related to racism and bias.[25]

AI/AN communities also have experienced centuries of racism and discrimination in the form of genocide, forced migration, and cultural erasure.[18,21] As a result, AI/AN women are twice as likely as their White counterparts to experience emotional or physiological distress.[18] AI/AN women are at a higher risk of experiencing sexual and interpersonal violence during their lifetime; which has been linked to preterm births, delayed or no prenatal care, and unintentional pregnancy.[11,21] The history of forced sterilization and infant separation policies have additionally resulted in distrust between AI/AN women and their care providers, thereby negatively impacting patient-provider relationships.[11]

Unconscious biases in the form of attitudes and stereotypes held by health care providers may negatively impact their clinical judgment while caring for minority patients.[22,26,27] Examples include the routine dismissal of the intensity of symptoms expressed by AA women by health professionals, leading to delays in treatment or poorer outcomes,[28] and studies finding White medical students incorrectly rating AA patients' pain lower than that of White patients, leading to less accurate treatment recommendations.[29] Similarly, more than one-fourth of AI/AN women have faced discrimination in accessing health care services.[30]

Taking into account these prevalent contributing factors — specifically health care access and the role of racism in health care — a paradigm shift is needed to reimagine the health care delivery team as part of the solution.

Health Care Delivery Models — Addressing Unconscious Biases

To effectively address these contributing factors, systems must be designed with standardized safety protocols to mitigate the impact of human errors and unconscious biases on the delivery of care to AI/AN and AA women. Initiatives working to standardize health care delivery will likely improve care across all types of health venues but in particular lower-performing hospitals that serve disproportionate rates of minority women.[31] The implementation of safety bundles — for example, obstetric and postpartum hemorrhage carts — are critical steps toward improving care to women within a clinical setting.[31] Additionally, protocols, checklists,

triggers (eg, maternal early warning criteria), simulation training, coordinated care practices, clinician training, credentialing, and the promotion of a safety culture have all been recommended in recent reviews to reduce maternal complications and deaths.[32] The following paragraphs highlight some current examples of state and national efforts.

A successful approach to address provider bias has been shown in California — one of the states leading the charge to reduce the increasing national trend — through the California Maternal Quality Care Collaborative (CMQCC). This 2006 initiative established a maternal mortality review committee that uncovered that maternal survival rates could be increased by addressing hemorrhage and preeclampsia.[33] Evidence shows that the majority of maternal deaths from these complications can be prevented through early detection and preparedness with a series of well-researched protocols and checklists to eliminate providers' unconscious bias; see for instance the "hemorrhage cart," which is filled with checklists, intravenous lines, and other equipment needed by the health care team in an emergency.[34] With these health care delivery solutions, California has managed to cut its rate of maternal mortality by more than half within 12 years, with AA maternal mortality on the decline.[35]

Another example of a health care delivery-based solution can be seen in North Carolina, in which a primary health care model called Pregnancy Medical Home allows women to have their medical, behavioral, and social health needs met within a single location.[36] In this group prenatal care model, women are provided with both medical care and expanded social and community support. There is evidence to support that maternal medical home models have been improving outcomes for pregnant women through risk screening, community-based care management, and care pathways — but also by addressing nonmedical issues that can put mother and child at risk, such as addiction, domestic abuse, and lack of secure housing and healthy food.[38]

On a national level, the Council on Patient Safety in Women's Health Care and the Alliance for Innovation in Maternal Health recently published the "Reduction of Peripartum Racial/Ethnic Disparities" patient safety bundle, which provides actionable steps that state-level institutions and clinicians can implement to reduce disparities in maternal mortality and health disparities. The bundle considers steps across the care continuum, including clinician education regarding unconscious biases, systems-level quality improvement techniques, and best practices for building a culture of equity.[39]

Community-Based Solutions — Providing Cultural Sensitivity and Access to Care

Community solutions offer promising results in bridging access to care by bringing culturally sensitive approaches and trusted caregivers into health care. Cultural sensitivity in health care includes awareness about the cultural customs and norms an individual may possess regarding their health and treatment.[40] By including community caregivers like doulas and midwives on the health care team, care becomes higher quality and the needs of the mother are more likely to be met because these caregivers provide cultural sensitivity along with earlier, continuous, and affordable care.[37] While the doula and midwife serve different purposes in the community and have different educational backgrounds, both act as vital tools to either provide care beyond the hospital setting or a culturally sensitive approach to care within clinic walls.

Medical School Training and Education. Other initiatives have focused on addressing conscious and unconscious bias at the medical school level. The University of Texas Dell Medical School (Austin, TX) is notable for its requirement that all second-year medical students must participate in training on unconscious biases, beginning with a conversation about conscious and unconscious bias and ending with an online test to help students pinpoint their own implicit biases and facilitate class discussion on strategies to address them in practice.[26] Additionally, at Mayo Clinic Alix School of Medicine (Rochester, MN), medical students participate in an unconscious bias session in the first 2 weeks of the first year.[41] This content is part of a required 4-year science of health care delivery curriculum that includes education on cultural humility, health care disparities, local community resources to help reduce disparities and increase health equity, racism and mistrust in health care, cross-cultural communication, and equitable care.[41] While training in of itself does not necessarily eliminate bias, research has shown that it is an important step toward better understanding, communication, and relationship-building between patients and providers.[32]

Cultural Sensitivity. The practice of AI/AN doulas is a beneficial approach to address racism in health care by integrating cultural practices in birthing experiences and improving AI/AN maternal child health outcomes.[42] A 2007 study identified that 49.6% of AI/AN women wanted their cultural practices integrated into their birthing experience, and 44.1% felt their prenatal provider was not culturally sensitive.[42] AI/AN doula practice includes cultural components, such as ceremonial singing and prayer, which makes their care a likely source of cultural sensitivity for AI/AN women during their prenatal and birthing experience.[43] The inclusion of cultural practices

by doulas from similar communities helps to bridge larger concerns related to trust in the health system for AI/AN women.[43] Additionally, AA midwives are important in mitigating racial bias in the health system by advocating for AA mothers in prenatal, delivery, and postnatal care.[44] Specifically, the midwife is able to provide full antenatal care, including parenting classes, clinical examinations, screenings, and advocating for one's prediscussed choices in labor and delivery.[37]

Access to Care and Support. There is a well-demonstrated demand for health professionals who understand the needs of individuals of color.[44] When AA or AI/AN patients are cared for by health professionals of their own race, ethnicity, or cultural background, otherwise known as concordance, patient experience and outcomes tend to improve as patients often perceive that they are better heard/understood and have a shared experience.[44,45] In the absence of racial and ethnic concordance between health professionals and AA or AI/AN mothers, it is critical for providers to be better informed of the social determinants of health and systemic barriers faced by their patients that can impact maternal mortality outcomes. Midwives and doulas within the health care team can play an important role in bridging the gap by fostering more shared understanding, trust, access, and cultural practices, which can contribute to improved maternal fetal health outcomes and reduced health care costs.[37,46]

Policy Efforts

Expanding and Enhancing Access to Care. Policy implementation at local, state, and federal levels can serve as key solutions to bridge systemic inequities in maternal health at population levels. Medicaid is the insurer for 45% of all births nationally, with the program covering 66% of all births to AA women. Most Medicaid-financed births take place in hospitals nationally; in 23 states, more than 10% are overseen by a certified nurse midwife.[47,48] Strengthening the Medicaid program to expand the program in all states — including more holistic coverage during pregnancy, extending postpartum coverage, enhancing benefits for home visits, midwives, and doulas, and developing value-based payments rewarding positive outcomes — is critical to closing gaps in maternal outcomes and increasing equity in vulnerable communities.[49,50]

Reducing Unconscious Bias. Policies aimed at reducing unconscious bias among providers and health systems also can play an important role in improving outcomes in health care delivery. An example is California Dignity in Pregnancy and Childbirth Act Senate Bill 464, which provides comprehensive clinical training to reduce unconscious bias among providers and focuses on improving data collection during pre- and postnatal care.[51] This bill works in conjunction with other state initiatives like the CMQCC to build shared understanding and bridge health inequities through clinician training. Similar enacted legislation at the federal level (eg, Social Determinants for Moms Act, Kira Johnson Act, Protecting Moms Who Served Act, Perinatal Workforce Act, Data to Save Moms Act, Moms MATTER Act, Justice for Incarcerated Moms Act, Tech to Save Moms Act, IMPACT to Save Moms Act) can serve as vital tools in reducing the role of racism and bias in maternal health and childbirth within the clinical walls.[52]

Summary

The integrated efforts of many frontline health care professionals, community leaders, and policymakers showcase promising steps toward bridging the continuum of health disparities and building on shared understanding to improve maternal outcomes in the United States. To move the needle forward on maternal outcomes, especially for the African American and American Indian/Alaskan Native communities disproportionately and continuously experiencing poor health outcomes, all stakeholders need to think, partner, and act beyond the clinical walls to forge a more equitable and effective health care delivery system within those walls.

Patient-Friendly Recap

- The United States has unacceptably high maternal mortality rates, especially for African American and American Indian mothers.
- Authors reviewed several factors — including prevalence of underlying conditions, racism-induced stress, unconscious bias in health care, and lack of quality prenatal care — that contribute to this health disparity.
- Strategies for improving maternal health in minority populations include fostering health care/community collaborations, embracing the contributions of culturally sensitive midwives or doulas, and expanding proven legislative programs.

Conflicts of Interest

None.

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