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Eight steps for narrowing the maternal health disparity gap:

Step-by-step plan to reduce racial and ethnic disparities in care

DR ELIZABETH A. HOWELL, MD, MPP [director],

The Blavatnik Family Women's Health Research Institute, Mount Sinai Health System vice chair for research and professor in the Department of Obstetrics, Gynecology, and Reproductive Science at Icahn School of Medicine at Mount Sinai, New York.

MS ZAINAB N. AHMED, BA [medical student]

Icahn School of Medicine at Mount Sinai, New York.

Maternal health in the United States is in crisis. There are almost 4 million births every year in this country.¹ Delivery is the most frequent cause of hospitalization,² cesarean deliveries remain the most common surgery performed,³ and the United States spends almost twice as much as other high-income countries on medical care.⁴ Yet, more mothers are dying from pregnancy-related causes in this country than in any other high-income country.⁵ Every year in the United States approximately 700 women die from pregnancy-related causes.⁶

Even more concerning is the fact that maternal death rates in the US have doubled over the last 20 years, albeit partly due to improved ascertainment, while other high-income countries have reduced their rates.⁷ As maternal deaths rise, so, too, do severe complications from childbirth. For every maternal death, over 100 women suffer severe maternal morbidity, resulting in over 50,000 women every year experiencing a life-threatening complication related to childbirth.⁸ Pregnancy and childbirth are often framed as organic stages in a woman's reproductive journey, but these numbers and statistics make it evident that healthy outcomes for mothers are not guaranteed.

Our poor performance in reducing US maternal mortality rates is linked to significant and persistent racial and ethnic disparities in such rates. Black women are three to four times more likely to die from pregnancy-related causes than are white women.⁹ Native Americans, some Asians and some Latinas also experience a higher number of maternal deaths relative to white women.¹⁰ Similarly, significant racial and ethnic disparities exist for severe maternal morbidity rates in the United States, with black and Latina women having elevated rates.¹¹

Despite these alarming trends in maternal mortality and severe maternal morbidity rates and entrenched racial and ethnic disparities in such outcomes, 60% of pregnancy-related deaths and severe maternal morbidities in the United States are thought to be preventable.⁶ A

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recent Centers for Disease Control and Prevention (CDC) review of maternal deaths across nine states found that the deaths were related to clinician, facility and system factors, such as inadequate training, missed or delayed diagnosis of complications, poor communication and lack of coordination between clinicians.^{6,7} These findings and others reinforce the fact that any efforts to reduce maternal mortality must focus on ensuring quality and safety of maternity care for all women. Further, given the entrenched racial and ethnic disparities in these outcomes, these efforts must also be rooted in health equity. The purpose of this article is to frame the maternal mortality crisis and identify ways to narrow the racial/ethnic disparity gap within a quality of care framework.

Definitions

The World Health Organization defines maternal mortality as the death of a woman while pregnant or within 42 days of termination of pregnancy from any cause related to or aggravated by pregnancy or its management but not from incidental or accidental causes and this is the definition utilized for international comparisons.¹³ A pregnancy-related mortality is defined as the death of a woman while pregnant or within 1 year of termination of pregnancy from causes related to the pregnancy and this statistic is monitored by the CDC.¹³

Health disparities are defined as “a particular type of health difference that is closely linked with economic, social or environmental disadvantage.”¹⁴ Many experts have emphasized the importance of clarity about the concepts of health disparities and health equity and stressed the underlying notion of social justice.^{15,16} A useful definition is one by Dr. Paula Braveman: “Health equity and health disparities are intertwined. Health equity means social justice in health (i.e. no one is denied the possibility to be healthy for belonging to a group that has historically been economically/ socially disadvantaged). Health disparities are the metric we use to measure progress toward achieving health equity.”¹⁵

Contributing factors

Developing targeted and actionable interventions requires untangling a complex web of factors that contribute to racial disparities in maternal healthcare. It is useful to conceptualize the components that contribute to maternal death as consisting of a vertical dimension, representing agents involved in the healthcare system from institution to individual, and a horizontal dimension comprising a longitudinal continuum of care, from preconception to maternity and beyond, including the postpartum period and inter-pregnancy intervals. The intersections between the horizontal and vertical elements represent touch points between mother and clinicians that shape and determine the patient’s health outcome.

Using this conceptual framework, we can start at the individual level. A patient has a set of intrinsic characteristics that determine her health status. Patient factors include non-modifiable items like age and race and are also linked to social determinants of health, including education, literacy, employment and poverty, which ultimately mold a patient’s knowledge, beliefs, and perceptions of health.¹⁷ The external environment also informs a patient’s health status. Women living in poorer communities and neighborhoods often have less access to healthy foods and safe parks, are exposed to more toxins, and are at higher risk

for poor perinatal outcomes.^{18–20} Comorbid illnesses complicate a patient’s medical story even more and women from racial and ethnic minority communities have a higher prevalence of common diseases like hypertension, diabetes, and obesity.²¹

It is important to note the ways in which structural racism have shaped the health and opportunity for women of color. Historical and economic forces, including restrictions on housing options, jobs and education, have entrenched women who belong to racial and ethnic minority groups in cycles of marginalization and inequality.^{22,23} Social determinants are important contributors to racial and ethnic disparities in maternal outcomes, but they do not fully explain the higher rate of maternal death and severe maternal morbidities among racial and ethnic minority women. For example, in New York City, a black woman with a college education is almost three times as likely to suffer severe maternal morbidity as a white woman who has less than a high school education (Figure 1).²⁴

Clinicians, including nurses, midwives and doctors, as well as support persons such as doulas, are partners in a patient’s health throughout the course of her life. A clinician’s knowledge and experience contribute to a patient’s preparedness and comfort with her pregnancy, labor and delivery and the postpartum period. This relationship can be influenced by implicit bias, cultural competence and communication skills.²⁵ Implicit bias refers to behaviors in reaction to a patient’s characteristics like age, race, ethnicity, gender, sexual orientation, physicality, and disability that shape our behavior and actions and informs clinical decisions.²⁶ These biases are deeply rooted and are deployed unconsciously.²⁶

Quality of care for pregnant women is important across the care continuum. Delivery care represents another significant “touch point” between the patient and clinician, where severe maternal morbidity and mortality often occur and where racial and ethnic disparities in maternal outcomes manifest. Data suggest that racial and ethnic disparities in severe maternal morbidity and mortality are due to disparities both within (intra-hospital) and between institutions (interhospital). For example, in the United States, nearly 75% of black women deliver at a quarter of all delivery hospitals while only 18% of white women deliver in those same hospitals. Both black and white women have higher severe maternal morbidity rates at those hospitals regardless of patient risk factors.²⁷

Intra-hospital differences also contribute to racial/ethnic disparities in maternal mortality rates. In a study examining how racial/ethnic minority-serving hospitals performed on 15 birth-related indicators, significant racial/ethnic disparities in delivery-related indicators were reported within each type of hospital (e.g. black-serving, white-serving).²⁸

Delivery care is only one part of the care continuum for pregnant women. Preconception care is critical for optimizing contraceptive counseling, management of chronic illness and addressing the health needs of women. There is substantial evidence that racial/ethnic women have less access to preconception care.²⁹ Antenatal care is crucial to optimizing the health of mom and fetus and we know that access differs across the United States, depending on insurance status and race/ethnicity.³⁰ Postpartum care has been given less emphasis in traditional frameworks of maternal healthcare and yet this period of time presents a window of opportunity to address both physical and emotional needs of mothers from gestational

diabetes to postpartum depression. However, rates of postpartum visits are low: 16% to 36% of women do not attend the 6-week follow-up visit and those who do report inadequate care and guidance at that time.^{31,32}

Eight steps for narrowing gaps

Actionable steps are required if we are to improve maternal healthcare and address the unacceptable racial and ethnic disparities that exist. Many of the recommended steps will improve care for all pregnant women. Additional steps address the unique circumstances that many women of color face when encountering the healthcare system. Although not every initiative has a strong evidence base, the proposed recommendations are rooted in lessons from other areas of medicine, expert opinion, quality improvement science, and the extensive work done by the Council on Patient Safety in Women's Health Care and the Alliance for Innovation in Maternal Health (<https://safehealthcareforeverywoman.org/patient-safety-bundles/reduction-of-peripartum-raciaethnic-disparities>).³³ We present eight recommended steps to narrow disparities within a quality-of-care framework (Table 1).

ENHANCE COMMUNICATION AND IMPLEMENT UNCONSCIOUS BIAS TRAINING.

Improving communication between patient and provider can avoid mismanagement, delays or failure in diagnosis and poor patient advocacy. Shared decision-making is a practice rooted in patient-centered care. It entails a process of weighing patient's goals, decisions and expectations against clinical guidelines and best practices in an open and honest conversation between patients and clinicians.³⁴ Shared decision-making is necessary to develop and deliver treatment plans that address differences and narrow disparities. Relaying clinical information effectively may require the use of aids and teach-back methods to appropriately convey risk and benefits, given cultural and language barriers.³⁵ Assessing non-English language proficiency and educating staff on the availability and need for interpreter services are important for creating a culture of equity as it relates to patient empowerment and access to knowledge.³⁶ Addressing implicit bias is less concrete but nevertheless needed. Tactics include individuation, or rather "intentionally focusing on individual patients' information apart from their social group"³⁷ Implicit bias/unconscious bias trainings are now being offered at some healthcare institutions. Two additional tactics include incorporating cultural competency as part of training curriculums and ensuring diversity in clinicians and staff, both of which will improve the quality of communication skills.³⁸

IMPLEMENT DISPARITIES DASHBOARD AND PERFORM ENHANCED MATERNAL MORTALITY AND SEVERE MATERNAL MORBIDITY REVIEWS.

To implement a disparities dashboard, a few steps are needed. First, self-identified race and ethnicity as well as language and place of birth should be captured in the medical record. There is evidence on how to train staff to ask these questions and how to best explain to patients why it is important to collect this information.^{39,40} The next step is to review quality metrics stratified by race and ethnicity to ensure hospitals are aware of their performance for different racial and ethnic groups. Results from the disparities dashboard should be regularly shared with leadership and staff.⁴¹ Next, quality improvement tools should be used to

address the disparities identified. Ultimately, by putting hospital system performance under review, quality improvement tools can be deployed to narrow the disparity gap. Learning from every death and severe complication is a very important step to preventing future events. As recommended in the recent Alliance for Innovation on Maternal Health (AIM) bundle, multidisciplinary case reviews are an essential part of the process and should consider the role of race, ethnicity, language, poverty, literacy and racism.³³

STANDARDIZE CARE AND BUILD A CULTURE OF EQUITY.

While quality improvement tools are often designed to focus on human error and accordingly, prompt system redesign, they can also address gaping disparities. Given that the majority of maternal deaths and severe complications related to childbirth and deliveries in the United States are preventable, we need to ensure equal standards of care for patients of all racial and ethnic groups. Standardization of care with use of the AIM bundles, such as those directed at hypertension, hemorrhage, and venous thrombotic disease, is a first step in the right direction.³² Utilization of quality improvement tools such as triggers, protocols, drills, evidence-based practices, policies and procedures, checklists, simulation training, and other items is crucial not only for quality improvement initiatives but also for ensuring equal standards across hospitals.^{17,41,42} Team training is also recommended by various oversight committees, including the Institute for Healthcare Improvement.¹⁷

We must promote a culture of equity in our institutions by employing many of the tools we have used to emphasize a culture of safety, in addition to acknowledging, discussing, measuring, monitoring, and utilizing continuous quality improvement efforts to address disparities.³² Reports of inequity, miscommunication, and disrespect warrant careful review to identify system-level opportunities to better meet the needs of racial and ethnic minority population.³³

DEVELOP NEW MODELS OF CARE ACROSS THE CONTINUUM.

New models that promote women's health across the life course need to be developed to address our fragmented healthcare system. Preconception care should include development of a reproductive plan and judgment-free and noncoercive contraceptive counseling²⁵ and address questions and concerns regarding family planning. Counseling at this stage allows for early intervention for health conditions and behaviors such as obesity, hypertension, and tobacco use and can ultimately improve patient health status before pregnancy.

Preconception care can also extend to inter-pregnancy intervals with emphasis on childbirth spacing. While prenatal care is known to be crucial for ensuring healthy perinatal outcomes, timing and receipt of prenatal care can be low among low-income women of color.²¹ Structuring care differently might yield better outcomes versus traditional models. Group prenatal care models such as CenteringPregnancy provide prenatal care in group settings according to due date and have demonstrated some promising results, though the impact of reducing maternal deaths or severe complications through these initiatives has yet to be studied.^{21,43} They do, however, offer alternative models for health empowerment for mothers through their pregnancies. Similarly, case management and patient navigation programs can assist in coordinating postpartum care, an important touchpoint for women

following pregnancy.⁴⁴ The importance of comprehensive care in the postpartum period has recently been emphasized by the American College of Obstetricians and Gynecologists (ACOG).⁴⁵

ENGAGE KEY STAKEHOLDERS.

Rallying key stakeholders allows for wide implementation of multidisciplinary initiatives to tackle maternal mortality. Stakeholders can include state agencies, organizations like ACOG or the American College of Nurse-Midwives, health care systems, patient advocacy groups, local communities and patients.⁴³ California has created a model of organizing public-private partnerships through coordinated efforts of the California Department of Public Health and the California Maternal Quality Care Collaborative (CMQCC). In that state, rates of maternal death have been reduced by one-half (from 13.1 to 7.2 for every 100,000 live births).⁴⁶

The approach included four distinct parts, as outlined by the CMQCC:

1. using public health data to develop quality improvement measures on causes of death and pregnancy-related complication;
2. engaging public and private stakeholders;
3. establishing a data system to track and monitor quality improvement efforts; and
4. affecting change through larger interventions by coordinating between clinical providers and public health services.

Mobilizing the California Department of Public Health, CMQCC, consisting of various stakeholders and the California Pregnancy-Associated Mortality Review committee, created a larger network of ideas, resources, and funding streams. While health equity was not a primary goal of the initiative, California displayed an overall reduction in maternal mortality for all racial and ethnic groups from 1999 to 2001 through 2011 to 2013, although the mortality disparity ratio, the gap between black and white women, remained the same.⁴³

Conclusion

Addressing racial and ethnic disparities within the larger maternal mortality crisis requires targeted efforts towards modifiable factors, grounded in healthy equity and quality improvement. Promoting a culture of equity involves addressing implicit bias and individual and systemic racism, while also utilizing quality improvement tools and transforming culture. Enhanced communication, reduced bias, careful monitoring, and improvement of performance for all of our populations and engagement of key stakeholders can begin to narrow the maternal mortality and severe maternal morbidity disparity gaps. Ultimately, these actions will elevate the quality of care received by all mothers, including those who belong to racial/ethnic communities. ■

Biography

DR HOWELL



MS AHMED



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QUICK TAKES

- Maternal morbidity and mortality rates in the US are linked to significant and persistent racial and ethnic disparities.
- Recommendations are based on lessons from other areas of medicine as well as expert opinions, quality improvement science, and extensive work by patient safety and womens health care organizations.

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Given the entrenched racial and ethnic disparities in these outcomes, these efforts must also be rooted in health equity.

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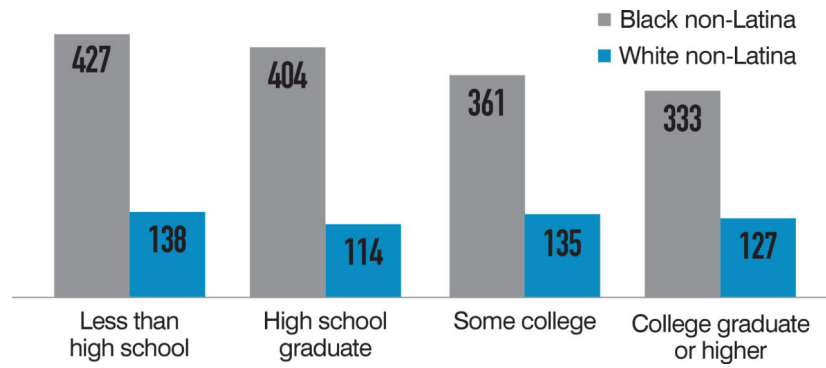


FIGURE 1. Severe maternal morbidity by education attainment, New York City
 Source: New York City Department of Health and Mental Hygiene (2016). Severe Maternal Morbidity in New York City 2008–2012. New York, NY.

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TABLE 1

Eight steps to narrow disparities across the care

- Enhance communications
 - Address implicit bias
 - Implement a disparities dashboard
 - Perform enhanced maternal mortality and severe maternal morbidity reviews
 - Standardize care on labor and delivery
 - Promote a culture of equity
 - Develop new models of care across the care continuum
 - Engage key stakeholders
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