Maternal Child Health Equity Summit
January 12, 2021

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Why America’s Black Mothers and Babies Are in a Life-or-Death Crisis

The answer to the disparity in death rates has everything to do with the lived experience of being a black woman in America.

By LINDA VILLAROSA APRIL 11, 2018
Acknowledgement

- Lessons learned from our discussions today have implications for Black, Brown, and Indigenous Birthing People
- We refer to “women” to describe pregnant individuals. However, we recognize that people of various gender identities, including transgender, nonbinary, and cisgender individuals, give birth and receive maternity care
- There is a long legacy of racism and discrimination that has been experienced by Black women and most of the research to date has been on cisgender women
- We have much work to do to expand our definitions and collect meaningful data on all birthing people
Pregnancy-Related Mortality Ratios by Race-Ethnicity, 2007-2016

Pregnancy-related mortality ratio per 100,000 live births

In New York City, Black women are 8 times more likely to die

Infant Mortality by Race-Ethnicity, 2018

In New York City, Black infants are over 2.5 times more likely to die

Impact of Institutional Racism on Maternal and Child Health

- Unequal access to resources
  - 1935 Social Security Act
- Housing discrimination - redlining
- Mistrust of the healthcare system
- Recent events
Contribution of Quality of Care to Racial and Ethnic Disparities in Health and Healthcare

- Publication of Institute of Medicine’s *Unequal Treatment*
  - Racial/ethnic disparities in care across a range of illnesses, services
  - *People of color receive lower quality care*
  - Provider stereotyping, and bias contribute to disparities

- Quality, Disparities, and Maternal and Infant Health
  - Racial/ethnic disparities in maternal and infant mortality and morbidity
  - Growing evidence that quality of care is an underlying cause
  - Quality of care varies across delivery hospitals and neonatal intensive care units
  - Site of care receiving increasing attention as mechanism for disparities in maternal and infant health

NIH-Funded Research: Mixed Methods Studies to Investigate the Contribution of Hospital Quality to Disparities in Maternal and Infant Health

- Maternal: quantitative and qualitative study to investigate contribution of hospital quality to disparities in severe maternal morbidity in New York City hospitals
- Infant: quantitative and qualitative study to investigate contribution of hospital quality to disparities in very preterm birth (<32 weeks) morbidity-mortality
- TODAY – Dissemination of findings to national audience

Funded by NICHD # R01HD078565 and NIMHD # R01MD007651
Objectives for MCH Equity Summit

- Disseminate research findings on quality of care and disparities to a national audience
- Engage stakeholders, researchers, community organizations in interpreting these findings
- Share best practices of high performing hospitals
- Develop priority actionable items to improve MCH Equity
MCH Equity Summit Planning Committee

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Acknowledgements

- Eunice Kennedy Shriver National Institute of Child Health and Human Development (R01HD078565)
- National Institute on Minority Health and Health Disparities (R01MD007651)
Quality, Disparities, and the Current Maternal Health Care Crisis

*Maternal Child Health Equity Summit*

*January 12, 2021*

National Institute on Minority Health and Health Disparities (R01MD007651)
Black women are 8X more likely to die

Severe Maternal Morbidity Rates in New York City

Patient Factors
- Socio-demographics: age, education, poverty, insurance, marital status, employment, language, literacy, disability
- Knowledge, beliefs, health behaviors
- Psychosocial: stress, weathering, social support

Community/Neighborhood
- Community, social network
- Neighborhood: crime, poverty, built environment, housing

Clinician Factors
- Knowledge, experience, implicit bias, cultural competence, communication

System Factors
- Access to high quality care, transportation, structural racism, policy

Outcomes
Severe Maternal Morbidity & Mortality

Figure 1: Pathways to Racial and Ethnic Disparities in Severe Maternal Morbidity & Mortality

Preconception Care
Antenatal Care
Postpartum Care
Delivery & Hospital Care

Health status: comorbidities (e.g., HTN, DM, obesity, depression); pregnancy complications

Mixed Methods Study to Investigate Contribution of Hospital Quality to Racial and Ethnic Disparities in Severe Maternal Morbidity

‣ Phase 1: Quantitative analyses to examine hospital risk-adjusted SMM and racial/ethnic distribution of deliveries
‣ Phase 2: Qualitative interviews to examine safety culture, quality improvement, and other factors that may explain wide variation in hospital performance
‣ Phase 3: Focus groups to explore patient barriers to receipt of high quality care
‣ Phase 4: Dissemination efforts to increase uptake of best practices

*Funded by NIMDH #R01MD007651
Phase 1 Methods

- Vital Statistics linked with SPARCS for all New York City deliveries (2011-2014)
- CDC algorithm to identify severe morbidity
- Mixed-effects logistic regression to calculate risk-standardized severe maternal morbidity rates (SSMMR) for each hospital
- Ranked hospitals based on SSMMR
- Assessed black-white differences and Latina-white differences in delivery location
Risk-Adjustment Models

‣ Sociodemographic characteristics (self-identified race/ethnicity, age, education, nativity, insurance, parity)
‣ Clinical and obstetric factors (multiple pregnancy, mode of delivery, body mass index, prenatal care)
‣ Maternal comorbidities (e.g. diabetes, hypertension, heart disease)
Hospital Rankings for Severe Maternal Morbidity

Observed rates: 0.6% to 11.5%; Risk standardized rates: 0.8% to 5.7%
Hospital Rankings for Severe Maternal Morbidity

Risk standardized maternal morbidity (%)

Low Morbidity
Medium Morbidity
High Morbidity

Hospitals ranked from lowest to highest morbidity

Observed rates: 0.6% to 11.5%; Risk standardized rates: 0.8% to 5.7%
Distribution of Deliveries by Race / Ethnicity and Hospital Ranking

Hospital Group by RSSMM*

Low | Medium | High
---|---|---
Black | 37 | 39 | 23
White | 18 | 65 | 33
Latinx | 29 | 38 | 33

48% of the Black-White disparity
37% of the Latinx-White disparity

Phase 2: Hospital Factors, Quality, and Disparities

Disparities
Bias
Diversity
Communication
Families

Patient Outcomes
(Mortality and Morbidity)

Structural Characteristics
Personnel, L&D and Neonatal units and Hospital attributes (qualifications, equipment, capacity)

Hospital Selection

- Ranked hospitals by risk-standardized rates into three groups: low, medium, and high SSMMR
- Selected 4 hospitals from the high morbidity group and 4 from the low morbidity group for both studies
- Additional criteria: volume of deliveries, % Black/AA, % Latina, % Medicaid and feasibility
Qualitative Interviews

- Sample
  - 8 New York City Hospitals
  - 50 Interviews
  - September 2017-October 2018
- Semi-structured interview
- Respondents consented, interviews audiotaped and transcribed
- Qualitative research staff blinded to hospital ranking
### Hospital Qualitative Interviews

<table>
<thead>
<tr>
<th>Position</th>
<th>Total</th>
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<tbody>
<tr>
<td>Chair of OB/GYN at 8 sites</td>
<td>8</td>
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<tr>
<td>Physician Director of L&amp;D</td>
<td>7</td>
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<tr>
<td>Physician/Nurse Quality &amp; Safety Lead</td>
<td>6</td>
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<tr>
<td>Nurse Manager of L&amp;D</td>
<td>8</td>
</tr>
<tr>
<td>Front Line L&amp;D Nurse</td>
<td>7</td>
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<tr>
<td>Chief Medical Officer</td>
<td>7</td>
</tr>
<tr>
<td>Other (e.g. Chief Quality Officer)</td>
<td>8</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>50</strong></td>
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Themes in High and Low Performing Hospitals

- Almost everyone believes they provide equally good care to all patients
- Everyone believes staff communication is a critical factor in quality and safety
  - Hospitals vary in what they have done/do to improve communication
- Re rise in maternal morbidity/mortality rates, respondents point ONLY to factors OUTSIDE the hospital
- Nurse staffing issues – shortages, variation in experience
- Wide variation in quality measurement and improvement
- Individual adverse events more likely to lead to quality improvement than monitoring trends

**No one analyzes data to compare performance across race, ethnicity or insurance source**
Phase 3: Focus Groups

- Three focus groups stratified by race/ethnicity (N=20)
- Experienced severe morbidity (e.g. hemorrhage, ICU stay, hysterectomy)
- Explored how women experienced care
Focus Groups: Mothers Who Experienced Severe Maternal Morbidity

▶ Traumatic Experience
  • “Traumatized,” “Scary,” “Never want to have a child again”
  • Complemented with gratitude

▶ Poor Communication
  • “They just rushed me to the OR, and that was it. I was just lying there. I'm cold. I'm shaking. I know I'm not feeling good, but nobody is telling me anything.”

▶ Not Feeling Heard
  • “…I essentially diagnosed my own pulmonary embolism, because nobody was listening to me. It’s very scary to me how much I really had to advocate [for myself].”

▶ Subtle Discrimination
  • Access limited by insurance
  • Less time spent on education

Wang. Womens Health Issues. 2021 Jan-Feb;31(1):75-81
Within-Hospital Disparities

Original Research

Race and Ethnicity, Medical Insurance, and Within-Hospital Severe Maternal Morbidity Disparities

Elizabeth A. Howell, MD, MPP, Natalia N. Egorova, PhD, MPH, Teresa Janovic, PhD, MPH, Michael Brodman, MD, Amy Balbierz, MPH, Jennifer Zeitlin, DSc, MA, and Paul L. Hebert, PhD

OBJECTIVE: To examine within-hospital racial and ethnic disparities in severe maternal morbidity rates and determine whether they are associated with differences in types of medical insurance.

RESULTS: Severe maternal morbidity was higher among black and Latina women than white women (4.2% and...
Within-Hospital Comparison of Risk-Adjusted SMM for Black versus White Women

Statistically significant difference between Black and White mothers within-hospitals

Similar difference for Latina vs. White mothers, p<.001

Levers to Reduce Racial and Ethnic Disparities in Severe Maternal Morbidity & Mortality

Lifecourse

Preconception Care

Promote contraception
Optimize preconception health

Postpartum Care

New models – Patient navigators
Case management

Antenatal Care

QI, standardization, bundles,
team training, simulations,
reviews, protocols, disparities
dashboard

Delivery & Hospital Care

New models – Centering,
Medical Homes, enhanced
models for high risk women

Outcomes Maternal &
Infant Morbidity &
Mortality

New models –
Optimal
Sequenti
Al
Care

Penn Medicine
ProPublica and NPR story - Nothing Protects Black Women From Dying in Pregnancy and Childbirth

“In the more than 200 stories of African-American mothers that ProPublica and NPR have collected over the past year, the feeling of being devalued and disrespected by medical providers was a constant theme….

Over and over, black women told of medical providers who equated being African American with being poor, uneducated, noncompliant and unworthy. “Sometimes you just know in your bones when someone feels contempt for you based on your race,” said one Brooklyn woman who took to bringing her white husband or in-laws to every prenatal visit.”
Levers to Reduce Racial and Ethnic Disparities in Severe Maternal Morbidity & Mortality

Outcomes
Maternal &
Infant
Morbidity &
Mortality

Preconception
Care

Antenatal
Care

Delivery &
Hospital Care

Postpartum
Care

Eliminate Bias
New models –
Patient navigators
Case management

Enhance Communication
Promote contraception
Optimize preconception health

Engage Community
New models – Centering,
Medical Homes, enhanced
models for high risk women

QI, standardization, bundles,
team training, simulations,
reviews, protocols, disparities
dashboard
Steps to Address Healthcare Crisis for Moms of Color

- Collect self-identified race/ethnicity/language data
- Implement disparities dashboard; utilize QI tools to address identified gaps in care
- Provide education on cultural humility, shared decision-making, implicit bias training
- Provide education on racial and ethnic disparities in maternal outcomes
- Include community members in quality committees
- Utilize enhanced severe maternal morbidity and mortality reviews
- Promote a culture of equity
CDC-MMRIA Bias Working Group

- Response to Maternal Mortality Review Committees reporting the role of bias in maternal death, but no distinct category for bias on MMRIA*
- Aim to design a consistent approach for documenting racism and discrimination as contributing factors to pregnancy-related deaths
- Provide recommendations on how to prevent pregnancy-related deaths when bias is a contributing factor

*Maternal Mortality Review Information Application (MMRIA) is a comprehensive database that provides for standardized documentation of committee decisions.
## Contributing Factors

<table>
<thead>
<tr>
<th>Key Factor</th>
<th>Descriptions on Page 4</th>
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<tbody>
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<td>Access/financial</td>
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<td>Adherence</td>
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<td>Assessment</td>
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<td>Childhood abuse/trauma</td>
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<td>Chronic disease</td>
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<td>Clinical skill/quality of care</td>
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<td>Communication</td>
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<td>Continuity of care/care coordination</td>
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<td>Cultural/religious</td>
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<td>Delay</td>
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<td>Discrimination</td>
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<td>Environmental</td>
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<td>Equipment/technology</td>
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<td>Interpersonal racism</td>
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<td>Knowledge</td>
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<td>Law Enforcement</td>
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<td>Legal</td>
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<td>Mental health conditions</td>
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<td>Outreach</td>
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<td>Policies/procedures</td>
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<td>Referral</td>
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<td>Social support/isolation</td>
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<td>Structural racism</td>
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<td>Substance use disorder - alcohol, illicit/prescription drugs</td>
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<td>Tobacco use</td>
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<td>Unstable housing</td>
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<td>Violence</td>
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<td>Other</td>
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THANK YOU

Research Team

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Shoshanna Sofaer DrPH

Funding

National Institute on Minority Health and Health Disparities (R01MD007651)

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**CONTRIBUTING FACTOR DESCRIPTIONS**

<table>
<thead>
<tr>
<th>LACK OF ACCESS/FINANCIAL RESOURCES</th>
<th>DELAY</th>
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<tr>
<td>System issues, e.g., lack of access to healthcare, or monetary barriers, such as insufficient health insurance or other financial assistance, as opposed to women's non-compliance. The woman's inability to access care for herself (e.g., did not seek services because unable to miss work or afford postnatal visits after insurance expired). Other barriers to accessing care include non-availability, provider shortage in women's geographical area, and lack of public transportation.</td>
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<th>ADHESION TO MEDICATION RECOMMENDATIONS</th>
<th>LACK OF STANDARDIZED POLICIES/PROCEDURES</th>
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<td>This provider or patient did not follow a medication or failed to comply with standard procedures (i.e., non-adherence to prescribed medications).</td>
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| FAILURE TO SCREEN/INADEQUATE AGREEEMENT OF RISK | 
| Factors placing the woman at risk for a poor obstetric outcome recognized, and the woman was not transferred/transferred to a provider able to give a higher level of care. |

| CHILLOD ABUSE/TRAUMA | 
| The patient experienced sexual, emotional, or physical trauma during childhood.
| 
| CHRONIC DISEASE | 
| Occurrence of one or more significant pre-existing medical conditions (e.g., obesity, cardiovascular disease, or diabetes). |

| CLINICAL SKILL/QUALITY OF CARE (PROVIDER OR FACILITY PERSPECTIVE) | 
| Individual was not appropriately skilled for the situation or did not exercise clinical judgment consistent with current standards of care (i.e., error in the preparation or administration of medication or unavailability of translation services). |

| POOR COMMUNICATION/LACK OF CARE COORDINATION OR MANAGEMENT | 
| Care was fragmented (i.e., uncoordinated or not comprehensive) affecting a woman's ability to receive care or use services (e.g., records not available between the patient and provider or among units within the hospital). |

| LACK OF CONTINUITY OF CARE (PROVIDER OR FACILITY PERSPECTIVE) | 
| Care providers did not have access to a woman's complete medical records or could not communicate with the patient's status sufficiently. Lack of continuity can be between prenatal, labor and delivery, and postpartum.

| CULTURAL/RELIGIOUS OR LANGUAGE FACTORS | 
| Demonstration that any of these factors were a barrier to care due to lack of understanding or led to refusal of therapy due to beliefs (or belief systems). |

**Structural Racism:** the systems of power based on historical injustices and contemporary social factors that systematically disadvantage people of color and advantage white people through inequities in housing, education, employment, earnings, benefits, credit, media, health care, criminal justice, etc.

Adapted from Bailey ZD. Lancet. 2017; 389(10077):1453-1463.
Interpersonal Racism: discriminatory interactions between individuals resulting in differential assumptions about the abilities, motives, and intentions of others and differential actions toward others based on their race. It can be conscious as well as unconscious, and it includes acts of commission and acts of omission. It manifests as lack of respect, suspicion, devaluation, scapegoating, and dehumanization.

Adapted from Jones CP. Am J Public Health. 2000; 90(8): 1212–1215.
Discrimination: treating someone more or less favorably based on the group, class or category they belong to resulting from biases, prejudices, and stereotyping. It can manifest as differences in care, clinical communication and shared decision-making.

Adapted from Smedley BD. National Academies Press (US); 2003.