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Proceedings of the 2018 New York Maternal Mortality Summit

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3 BACKGROUND

3 The Problem

4 New York State's Recent Efforts to Address Maternal Mortality

5 PLENARIES

5 Welcome

5 The Health of Mothers in New York State

6 There's a Person Attached to That Number

7 Systems and Policies Driving Black Maternal Health Inequities

9 Maternal Deaths in the US: Why is it So Hard to Account for Them?

11 New York State and New York City Data Trends

13 **Plenary Panel - Reducing Maternal Mortality in New York: Progress and Continuing Challenges**

13 Community-based and patient-focused service delivery

17 Hospital clinical practice reforms

20 RECOMMENDATIONS FOR ACTION

22 ACKNOWLEDGEMENTS

BACKGROUND

On February 14, 2018, the New York Academy of Medicine (the Academy) held the 2018 New York Maternal Mortality Summit. Produced with funding from Merck and Company, and in collaboration with the New York State Department of Health (NYS DOH), the New York City Department of Health and Mental Hygiene (NYC DOHMH), the American College of Obstetricians and Gynecologists (ACOG), District II, the Greater New York Hospital Association (GNYHA), and the Healthcare Association of New York State (HANYS), the Summit convened stakeholders from New York State to: assess recent statewide progress in addressing maternal mortality, understand the factors in maternal health inequity, and discuss outstanding challenges to reducing maternal mortality, maternal mortality disparities, and strategies to address them.

The all-day Summit drew 457 participants from a multidisciplinary array of health care, advocacy, and public health organizations. An additional 157 people watched the live webcast. Participants listened to presentations and generated recommendations for reducing maternal mortality and maternal mortality disparities in New York State. Please see the [Summit program](#) for a complete listing of speakers and panelists.

The Problem

Throughout the 20th century, the ratio* of maternal deaths per live births in the U.S. dropped before leveling off in the early 1980s. Despite the recent trend of a global decline in maternal deaths, the U.S. maternal mortality ratio increased during the 1990s and 2000s to 17.3 deaths per 100,000 live births in 2013. The United Nations Maternal Mortality Estimation Inter-Agency Group estimates that in 2015, the ratio was 14 deaths per 100,000 live births. Because of different methodologies, these two figures are not comparable.

Although New York State's national ranking in maternal mortality improved from 46th in 2010 to 30th in 2016, its maternal mortality ratio remains unacceptably high at 18.7 deaths per 100,000 live births: more than 1.5 times higher than the Healthy People 2020 objective of 11.4 maternal deaths per 100,000 live births. Moreover, significant racial disparities in maternal deaths persist in both New York City and New York State. Maternal death ratios among black women are three to four times higher than among white women.

** "Ratio" is used instead of "rate" because the numerator (maternal deaths) includes events that are not in the denominator (live births), e.g., maternal deaths associated with stillbirths*

New York State's Recent Efforts to Address Maternal Mortality

In 2014, under the leadership of the Academy's former president and New York State Public Health and Health Planning Council (PHHPC) vice-chairperson, Dr. Jo Ivey Boufford, the PHHPC's Public Health Committee selected maternal mortality as an issue on which it wished to "move the needle." Subsequently, the PHHPC received data reports from NYS DOH and information on the various programs currently addressing the issue. It sponsored a series of public meetings to highlight different aspects of the problem and explore solutions.

The PHHPC's Public Health Committee also promoted collaboration among key stakeholders wishing to address maternal mortality, resulting in the New York State Partnership for Maternal Health. The Partnership, which includes NYS DOH, NYC DOHMH, HANYS, GNYHA, and the District II Chapter of ACOG, has worked to identify opportunities to improve maternal health, and to enhance policies and clinical practices regarding the identification and clinical care management of women at risk.

While planning the Summit, the Academy developed a [white paper](#), based on interviews with experts and key stakeholders, to inform Summit attendees and the public health community about the work that has been done and the challenges ahead. Immediately following the Summit, the Academy created a [resource page](#) to support ongoing work by Summit attendees and other stakeholders. The resource page contains links to Summit slide presentations, New York State and New York City maternal mortality and severe maternal morbidity reports, an archived recording of the Summit webcast, and additional resources for patients and health care providers.

PLENARIES

This section provides summaries and highlights prominent themes from the Summit's plenary sessions. Following this section are recommendations for policies and practices to reduce maternal mortality, and promote maternal health equity throughout New York State.

Welcome

Judith A. Salerno, MD, MS, President, The New York Academy of Medicine

To set the stage for the Summit and its goals, Dr. Salerno described recent collaborations across New York State:

We hope that today's event will be an important milestone in unifying and further galvanizing our collective work to make pregnancy and childbirth safer for all women in New York. Today marks an acknowledgement of progress made in recent years in building a fully committed partnership of private organizations, and New York State and New York City governments, to make an impact on maternal mortality. But it also represents a renewed commitment made by even greater numbers, in a larger voice, including all of you who are here with us today, that we hope will help develop and implement strategies to reduce maternal mortality and maternal health disparities in New York. For the Academy, this effort is tied closely to a key tenet of our work: striving for health equity for all New Yorkers.

The Health of Mothers in New York State

Howard Zucker, MD, JD, FAAP, FCCM, FACC, FAHA, Commissioner, New York State Department of Health

Dr. Zucker described recent improvements in many health indicators of New Yorkers, with the glaring exception of maternal mortality. Addressing one of the major issues identified for a workgroup discussion later in the day, Dr. Zucker addressed the lack of policies and practices that prioritize women's health, and the current fragmentation of women's health care. He indicated the types of changes in clinical practice that New York State is encouraging:

Every time women interact with the healthcare community, there is an opportunity to discuss health, pregnancy, and all the issues that potentially can stem from pregnancy. In fact, the [New York Partnership for Maternal Health] wants all the clinicians in the room to ask their female patients of reproductive age one question at every visit: "Would you like to become pregnant within the next year?" And that one question is an opportunity to open a dialogue about health, about healthy lifestyles, about family planning, about pre-existing conditions, about concerns. Before a woman can start a pregnancy that's healthy, she must be healthy herself. It is time to prioritize women's health and make pre-conception care primary care.

Discussing hospital clinical practice reforms, Dr. Zucker highlighted the work of the [New York State Perinatal Quality Collaborative](#), a partnership of the NYS DOH, ACOG District II, HANYS, and birthing hospitals to better address the most prevalent conditions leading to maternal death.

Furthermore, he explained that New York State has convened an expert panel to update hospital perinatal care standards and re-designate the perinatal levels of New York birthing hospitals. The panel's goal is to extend the success that Regional Perinatal Centers have had in reducing infant mortality to reducing maternal mortality and morbidity. He said that New York is working to address the needs of its expectant mothers by ensuring that every woman receives care at a facility that is equipped to provide levels of care that meet the demands of her condition.

To complement the work of ensuring that its healthcare system is organized and prepared to address the range of health issues expectant mothers present at delivery, New York State has appointed an interdisciplinary Maternal Mortality Review Board to comprehensively review every maternal death statewide. In addition to reporting the causes or circumstances surrounding each maternal death, the Board will use its findings to develop recommendations for improved clinical care, Dr. Zucker said.

“There’s a person attached to that number.”

Dr. George Askew, MD, FAAP, New York City Deputy Commissioner of Health

Dr. Askew reminded us that as we discuss causes and solutions to the public health problem of maternal morbidity and mortality, we cannot forget how deeply personal, profound, and far-reaching a tragedy a maternal death is. Although many people are not directly affected, we may still know mothers, family members, and friends who have been directly touched by difficult pregnancies and even loss.

Dr. Askew shared his personal story and recounted the pregnancy experiences of his mother, a woman of color living in the city with limited socioeconomic means, whose pregnancy experiences resemble those of women in New York City today who are most at risk for such outcomes. During her first pregnancy, she developed preeclampsia, which later turned into eclampsia with seizures and then, a coma. Dr. Askew's mother survived but soon after her harrowing experience—too soon, according to her doctors—she conceived again. Dr. Askew's baby brother was born premature and survived for only 24 hours.

Dr. Askew hailed the late Dr. Allan Rosenfield, Dean of the Mailman School of Public Health at Columbia University for 22 years and a leading women's health advocate, and Deborah Maine, DrPH, for their seminal 1985 *Lancet* article, "Maternal Mortality – A Neglected Tragedy: Where is the M in MCH?" Referring to the article as "a global call to action," he lauded countries around the world for the remarkable progress they have made but described maternal health status in the U.S. and New York, in particular, as "sobering." Attached to every statistic, he said, there is a person, family, child, or community.

Systems and Policies Driving Black Maternal Health Inequities

Joia Crear-Perry, MD, FACOG, Founder and President, the National Birth Equity Collaborative

Dr. Crear-Perry introduced the National Birth Equity Collaborative (NBEC), whose mission is to reduce black maternal and infant mortality through research, family-centered collaboration, and advocacy. She defined birth equity as, "the assurance of the conditions of optimal births for all people, with a willingness to address racial and social inequalities in a sustained effort." She also emphasized that the core of NBEC's work entails acknowledging that race is not the cause of health inequities:

Blackness is not the risk factor; racism is the risk factor. The system of racism is what is creating these inequities. For the rest of your lives, when you see inequities in health, don't think about individuals, think about systems because systems created the inequities, not people's choices, or their genetics, or God.

According to Dr. Crear-Perry, race is a social construct that has socially categorized people, assigned rules for personal interactions based on those categories and created systems to reinforce these rules. She explained how systems of racism were designed to harm her patients, and keep them segregated, and excluded, in the racial hierarchy. This, she said, is the social space that bodies are “constantly trying to survive and thrive in.” Historically racist policies in government, banking, and housing (such as redlining) have placed race, place, and health inequities hand-in-hand, she said. Neighborhoods that have been and continue to be segregated and underserved face far poorer health outcomes than those that are integrated and well resourced.

Racism, oppression, and discrimination create power and wealth imbalances that impede access to safe affordable housing, a living wage, education, and healthy food at a reasonable cost, she continued. These social determinants lead to chronic stress, which directly affects physical and emotional health and can foster unhealthy behaviors that produce an array of health consequences.

Dr. Crear-Perry said it is critical to use precise and thoughtful language in naming social determinants of health and the modes through which they operate, in order to tailor policy and practice reforms to foster improved outcomes. It is also critical to adopt a racial equity lens and to be actively anti-racist in order to address inequities, she added. A racial equity lens centers place, environment, and social determinants. It also addresses intergenerational and cumulative effects of racism and aggravated risks for specific local challenges.

Dismantling racism requires both hearts and minds, which means being actively anti-racist, understanding the data that supports race as a construct, and changing policy, Dr. Crear-Perry said. She described NBEC’s focus on clinical and social systems of power that overlap and reinforce each other, and she explained how disrupting these systems can benefit people with less power, namely black mothers. She also noted that these

overlapping systems of power highlight the importance of health oriented, community engaged programs like Healthy Start and Nurse–Family Partnership, which connect marginalized families living in vulnerable situations with formal systems of care and advocate for the rights and interests of the people they serve.

Dr. Crear–Perry, who belongs to the steering committee of the Black Mamas Matter Alliance, which works to advocate, drive research, build power, and shift culture to improve the maternal health of black women, concluded by stating that hospital system leaders, families, and providers have the power to operationalize equity, decrease preventable maternal death, and improve the overall quality of health and health care. To achieve these goals, NBEC recommends improving and standardizing data collection by: incorporating data on race, SES, and geography; expanding implementation of the AIM Patient Safety Bundles for racial disparities; conducting better analyses, with community voices, on the stress responses toward racism; accepting Medicaid, without exception, in all area hospitals; training and educating providers in racial and reproductive justice; and, conducting research on pre–disease pathways, and on connections between maternal and infant health.

Maternal Deaths in the US: Why Is It So Hard to Account for Them?

William Callaghan, MD, MPH, Chief, Maternal and Infant Health Branch, Division of Reproductive Health, at the Centers for Disease Control and Prevention

Dr. Callaghan provided a foundational history and overview of ongoing issues that affect efforts to accurately measure maternal mortality and, consequently, discern population–level trends and develop responsive policies. He began with the standard World Health Organization (WHO) definition of maternal death: the death of the mother during pregnancy or within 42 days of delivery, a timeframe he described as “arbitrary.” He also noted that the definition requires that the maternal death be from any cause that is related or aggravated by pregnancy, but not from other causes, which are accidental or “incidental.”

Dr. Callaghan explained that the term “incidental” is relative and has changed over time, since its meaning and application to maternal death has changed with increasing knowledge about the physiology of pregnancy:

Perhaps, as we continue to change these kinds of definitions and measures, we may have to have that discomfort in knowing that what we used to measure is not what we're measuring now. What we're measuring now may be more inclusive than what we measured in the past. And these trend lines start to get a lot fuzzier.

In 1986, in response to concerns about the reliability of vital statistics, the Centers for Disease Control and Prevention (CDC) and ACOG convened a maternal mortality study group and developed definitions of maternal death that they thought were more clinically relevant than those of the WHO. Dr. Callaghan explained that the term “pregnancy-associated,” which refers to a temporal relationship, denoted all deaths during pregnancy, or within one year of the end of pregnancy. One year was the chosen timeframe because there were women who were dying as a direct result of pregnancy but not included in the 42-day window.

Dr. Callaghan described the work his division does to support, maintain, and improve the maternal mortality surveillance system. The system continues to depend almost totally on vital statistics; however, it asks states to link the death certificates of reproductive-age women to infant birth certificates or fetal death certificates to determine a defined relationship to the pregnancy. The CDC’s clinically-trained medical epidemiologists examine all the information found on linked birth, fetal death, and death certificates to determine cause of death. They use these determinations to sort deaths into distinct categories.

In 2003, a growing body of literature pointing to widespread undercounting of maternal deaths moved states to introduce checkboxes that indicated current or recent pregnancy status on death certificates (some states did not introduce checkboxes until 2014), Dr. Callaghan said. As checkboxes were fully introduced across the country, however, the CDC conducted pilot studies, which found that in some cases, “current or recent pregnancy” status boxes were incorrectly checked. This led to overcounting when checkboxes were the sole source of information used to quantify pregnancy-related deaths.

The challenges to creating a comprehensive national maternal mortality surveillance system that reliably informs health policy and clinical practice are numerous, but progress has been made, and opportunities for further progress are being created,

Dr. Callaghan said. He stressed the need to review all maternal deaths to ensure the quality and accuracy of the data from which they are culled. Comprehensive maternal mortality reviews will inform not only the national picture but also evaluations of state and local quality improvement initiatives, he said.

Finally, Dr. Callaghan discussed the CDC's program to enhance state and local capacities to review, and prevent, maternal deaths. His division has provided support and technical assistance to the New York State Perinatal Quality Collaborative, and to New York City in its launching of the Committee to Review Maternal Deaths and Severe Maternal Morbidity:

I want to emphasize that we are trying to aggregate these one-time events and present a national picture. But at the end of the day, no matter how we slice and dice the numbers, there is really no acceptable rate of maternal mortality.

New York State and New York City Data Trends

Marilyn A. Kacica, MD, MPH, Medical Director, Division of Family Health, New York State Department of Health; and,

Lorraine Boyd, MD, MPH, FAAP, Medical Director, Bureau of Maternal, Infant and Reproductive Health, New York City Department of Health and Mental Hygiene

Drs. Marilyn A. Kacica and Lorraine Boyd made presentations on New York State and New York City data trends. They also noted selected state and city programmatic interventions.

Dr. Kacica emphasized the point that Dr. Callaghan made, that relying solely on vital statistics is not the most accurate way to quantify maternal deaths. For example, when the state Maternal Mortality Review Board compared vital statistics data to its own case identification and review data, it found lower rates from its multi-sourced process than from vital statistics alone.

She presented [slides showing New York State data trends](#) for maternal deaths, severe maternal morbidity, and the racial/ethnic disparities for both during 2013–2015. When looking at causes of death over time, reductions in hemorrhage are found,

possibly resulting from improved clinical care, an area in which NYS DOH, ACOG, and HANYS have concentrated much effort. On the other hand, she noted increases in hypertension, embolism, and cardiovascular problems.

In addition, she described New York State's use of quality improvement science, in partnership with hospitals, community-based organizations, and federally qualified health centers, to target healthcare quality improvement issues identified through maternal mortality reviews, and to improve these issues across the state.

Dr. Boyd focused her presentation on maternal mortality and severe maternal morbidity surveillance in New York City, and on how NYC DOHMH has changed the direction of its surveillance and review work to focus on social determinants of health and known drivers of women's health disparities, including health conditions before pregnancy and toxic stress and trauma:

We know that while we've made great improvements since 2001, it actually is not a solid picture for all New Yorkers.

Women over 40 have a much higher pregnancy-related mortality than younger women, with the lowest rates in women aged 20 to 24. The Bronx has the highest rate, with Brooklyn following behind, and the lowest rates in Manhattan. The pregnancy-related mortality for U.S.-born women, oddly enough, is very similar to that of women who are born in other countries. For a long time, we thought for many of our disparities, that being born outside the U.S. was actually protective. However, in the case of maternal mortality, that doesn't appear to be so.

Overall, 16% of women died before delivery, and more than 30% died within 24 hours of delivery, Dr. Boyd said.

She noted that New York City has initiated the nation's first citywide Severe Maternal Morbidity (SMM) surveillance system, with technical support from Dr. Callaghan and the CDC, and financial support from Merck for Mothers. Dr. Boyd [highlighted data that illustrate disparities in severe maternal morbidity](#) and resemble what is found in maternal mortality. Because there are approximately 100 cases defined as SMM for

each case of maternal mortality, the SMM data provide additional opportunities for analysis, she said.

Dr. Boyd concluded with an overview of New York City's Birth Equity Initiative, which can be found in [Dr. Boyd's slide presentation](#). This initiative reflects and is responding to the issues that community voices have raised as it reviews circumstances surrounding maternal mortality and morbidity.

Plenary Panel – Reducing Maternal Mortality in New York: Progress and Continuing Challenges

Moderated by **Jo Ivey Boufford**, MD, Vice-Chair, New York State Public Health and Health Planning Council

Dr. Boufford provided background on the New York State Public Health and Health Planning Council's work to raise the visibility of maternal mortality in New York State, and foster a coordinated collaborative approach among stakeholders through the work of the Council's Public Health Committee. The Public Health Committee uses its platform to engage with primary and specialty care providers, focus on the importance of preconception health and the prevention of unplanned pregnancies, and strategize how to better integrate all aspects of women's health care. The committee has also discussed how to embed women's health concerns and quality perinatal health care into all elements of the state's transformational health care reform, including financing.

The aim of the plenary panel was to allow the audience to hear directly from some of the organizations that are deeply involved in advancing work on maternal mortality. Dr. Boufford asked presenters to focus on key success stories by posing two questions: What's worked in their experience? What are some of the elements of success from their points of view?

Community-based and patient-focused service delivery

The following three panelists discussed the work of their organizations, which have been advancing maternal health in New York by working directly with individuals and families in their communities, and in healthcare settings.

Northern Manhattan Perinatal Partnership

Claudia Boykins, MPS, MPA, Engagement and Policy Director

The Northern Manhattan Perinatal Partnership is a Harlem-based organization that serves residents through programs that support maternal, infant, and child health in Northern Manhattan and the Bronx. Programs include Healthy Start, Healthy Families, and Head Start. The Maternal Intentions Program, funded by Merck for Mothers, is dedicated to improving the health of high-risk women before, during, and after childbirth. More than 300 women at risk of severe maternal morbidity and mortality have been enrolled. Primary risk factors are pre-existing health conditions, including high blood pressure, diabetes, and obesity. Some women battle all three conditions. Other risk factors include multiple pregnancies and repeat cesarean sections.

The Maternal Intentions Program employs a community health worker model to empower women to take advantage of resources that support birth and parenting. The program provides home visitation, doula care, and social support group activities. It offers classes such as Childbirth Education, Club Mom, French Women's Group, Music in Movement, and many more.

A critical factor in the program's success is its staff, whose members' identity, culture, and language reflect those of the women they serve. Staff allow clients to feel heard and supported. The program has been hugely successful in providing hope and changing the lives of those affected by racism, poverty, and toxic stress. More than 200 women have remained in the Maternal Intentions Program for six to nine months and have measurably reduced their risk for maternal mortality, and severe maternal morbidity.

In addition to providing direct service, the Maternal Intentions Program convenes concerned stakeholders, clinical providers, non-clinical support providers, and clients through the Maternal Intentions Consortium to raise awareness, share practices, and promote systems and policy change. The Maternal Intentions Consortium meets quarterly.

Preeclampsia Foundation

Eleni Z. Tsigas, Chief Executive Officer

The Preeclampsia Foundation is a patient advocacy organization that examines preeclampsia through the lens of women who have or will suffer from it, or from other hypertensive disorders of pregnancy.

Ms. Tsigas recalled the story of a New York family:

Christy was a young mom who lived with her family in upstate New York. She was in the third trimester of her fourth pregnancy when she experienced swelling in her fingers, her ankles and legs, but most notably in her face. She didn't think anything of it, preferring to spend time with her three children instead. After experiencing severe pain in her side, which she valiantly tried to ignore, she was eventually rushed to the hospital where it became quickly apparent that she and her baby were not doing well.

Christy was taken to the OR for an emergency C-section, and baby Elle was born a short time later weighing one pound, 12 ounces. She was rushed by helicopter to a specialty medical center. Christy fared much worse. During the C-section, it was discovered that she had a ruptured liver followed by uncontrollable bleeding including, to the horror of her family, blood that was pouring out of her eyes, nose, ears, and mouth. One of her lungs collapsed, and she went into cardiac arrest. Eventually her heart failed.

Christy lost her battle with preeclampsia. I tell this story four years later because a mother's death has enormous impact on her family and community. Christy's oldest child, Alexis, is 12 now and lives with her dad. Christy's two boys and baby Elle live with their paternal grandparents, as Dad does not have the ability to care for all of them alone. The adults in these children's lives dread the day that the children ask, "Why did this happen?" Or in the case of baby Elle, "Did I cause my mother's death?" There are enormous, long-lasting psychological consequences in addition to the immediate consequence—a mother's death.

Ms. Tsigas emphasized that the chances of preventing pregnancy complications, like preeclampsia or venous thromboembolism (VTE), increase when women recognize and report symptoms proactively, and without delay. The Preeclampsia Foundation has produced their own patient education tools, such as a clinical poster, a tear pad, and a seven symptoms explainer video. The Foundation also supports the development and implementation of the maternal bundles that ACOG and birthing hospitals have worked to implement in New York.

Education and the repeated delivery of key messages through multiple formats are critical, Ms. Tsigas said. The Preeclampsia Foundation has found that most women want information, to be active participants in their birth, and to be heard and respected. However, the Foundation's Preeclampsia Registry indicates that one of the most common communication failures occurs when women try to report something to their doctor, nurse, or midwife but are dismissed, or not taken seriously, she noted.

Patients are an untapped resource when it comes to quality improvement. The Preeclampsia Foundation supports the integration of patient input, particularly through narrative form, in quality improvement efforts, simulation training debriefs, and case reviews. The stories of survivors, their family members, or of women who have died can be especially useful.

Ancient Song Doula Services

Chanel L. Porchia Albert, Founder and Executive Director

Ms. Porchia-Albert highlighted the critical role of midwives and doulas in directly addressing health inequities. Ancient Song Doula Services is committed to the work of community-based doulas, and to their facilitation of respectful care and birthing.

Patients often experience a lack of concern and bedside manner in hospital facilities, Ms. Porchia-Albert said. She recalled her own pregnancy experience, as a woman of color, when she received a diagnosis of preeclampsia and spent three weeks in the hospital postpartum. Thereafter, she was determined to have warm, safe, and healthy births at home. And she did, with the help of home birth midwives who understood the culture of care.

Ms. Porchia–Albert explained that Ancient Song Doula Services promotes a midwifery model of care that “sees the patient as a whole person and not just the bits and parts; and understands that racism and housing, and all the various different social determinants play a huge role” in pregnancy and birth outcomes. It is commonly forgotten that people in such supportive roles are often living through their own forms of trauma, even when assisting others, she said.

A holistic approach to maternal health and the health of women of color requires institutional transformation and health care providers’ understanding of structural oppression, implicit bias, and birth equity. Institutions and providers must adopt cultural humility. As Ms. Porchia–Albert explained:

[With cultural humility, a] provider approaches care from a humble viewpoint of not making blanket assumptions on race, class, etc., about a particular group or its cultural identity...To really implement respectful care at birth, we have to have genuine community engagement. We need to address systematic and structural oppressions, and we need to incorporate a collaborative care framework that incorporates marginalized communities as active stakeholders in their care.

To these ends, Ancient Song Doula Services hosts a Birth Conference that focuses on the experiences and perspectives of people of color as it addresses the lack of equitable services in communities of color. The conference seeks to find solution–based models, developed by community members, which address race and intersectionality. It draws a diverse array of health care professionals.

Hospital clinical practice reforms

The following speakers discussed their organizations, which have been working collaboratively to advance maternal health in New York by improving the quality of hospital clinical care.

American College of Obstetricians and Gynecologists

Mary D’Alton, MD, Co–Chair, ACOG District II Safe Motherhood Initiative; Chair, Department of Obstetrics & Gynecology, New York–Presbyterian/Columbia University Medical Center

Dr. D'Alton recounted when a group of obstetrician–gynecologists gathered in 2013, under the umbrella of ACOG District II, and committed themselves to drive down maternal mortality. Because 75% of maternal deaths occur in hospitals, these ob–gyns decided that they would focus in the hospitals where they work. Dr. D'Alton described the creation of maternity care “bundles” or standardized clinical care toolkits to address specific causes of maternal death, along with the three principles for developing and disseminating the bundles: they had to be evidence–based, and if data changed, recommendations would change; they had to be simple enough to increase the likelihood of successful implementation; and, they had to be standardized because evidence demonstrates that standardization improves outcomes and safety.

According to Dr. D'Alton, implementing these bundles in 117 of the 126 birthing hospitals in New York State provided lessons in gaining support to operationalize clinical care protocols. Support of administrative, physician, and nurse leadership was key, she said. Initial implementation was followed up with site visits to 45 hospitals across the state; there, in response to implementation difficulties, experts listened, advised, and pointed hospitals in the right direction. Another critical feature of implementation were quarterly meetings where all those involved in the Safe Motherhood Initiative gathered and shared stories:

We shared the stories of the near misses where we could have done better. But we also, most importantly, shared our success stories. Nurses and midwives and physicians shared the stories of how they had used the bundles to improve patient care. I think you've heard a theme throughout this morning that data only goes so far, but it's the personal stories and the narratives that really can drive changes in outcomes.

Dr. D'Alton reported that significant improvements in the treatment of hypertension and prevention of venous thromboembolism have been implemented in many hospitals. She said that she expects to see these improvements reflected in future maternal mortality reviews.

ACOG's Safe Motherhood Initiative has more recently focused on making the information in the bundles easily available to the physician, midwife, or nurse at the bedside and has developed an iPhone app toward this end.

Greater New York Hospital Association

Lorraine Ryan, BSN, MPA, Senior Vice President, Legal, Regulatory and Professional Affairs

Ms. Ryan provided examples of how GNYHA supports effective implementation of clinical care bundles:

Once the research has been demonstrated and the bundle has been built, it's the care provider being able to deliver on that bundle for each and every patient, each and every time. And it's very challenging. We do our most important work with the hospitals that have the least, the safety net providers, the communities where you're seeing the very high rates. Those are the hospitals where we have project manager support available daily.

Ms. Ryan also noted that although aggregate data is important, individual case reviews are critical to learning from errors and failures of the system, and to adequately supporting the clinical care team as it focuses on breakdowns in such system processes.

Healthcare Association of New York State

Loretta Willis, RN, BS, Vice President, Quality Advocacy, Research, and Innovation

Ms. Willis provided a perspective on similarly supportive work that HANYS conducts across the state in collaboration with ACOG. HANYS is a statewide association and uses its position to address regional variation and distinct regional needs. As Ms. Willis related:

It's fascinating to me, listening to experts from these different regions. As much as they are different, there are also many things that they have in common. And having academic medical centers sit across the table from a rural hospital and talking about things that resonate just as strongly with both of them, and getting tips from each other, is really a wonderful thing.

RECOMMENDATIONS FOR ACTION

Summit attendees gathered in three workgroups to develop policy and practice recommendations to reduce maternal mortality and maternal health disparities, based on participant insights and discussions of best practices.

In the Quality Improvement in Hospital Practice workgroup, the discussion centered on improving hospital quality of care by:

- continuing and expanding current hospital-based quality improvement activities;
- addressing inter-hospital systemwide inequities that contribute to maternal health inequities; and,
- incorporating patient voices and patient advocacy into the manner in which care is delivered.

The Women's Wellness, Preconception Care, and Other Unfinished Business workgroup focused on ways to reduce fragmentation in women's health care through:

- promoting and facilitating greater cross-disciplinary engagement among healthcare providers, particularly reproductive health services and other clinical care providers; and,
- expanding the reach of community-based home-visiting programs and doulas (particularly for low-income women) in facilitating care integration, social support, and advocacy on behalf of the mother.

The Community-Based Interventions workgroup explored ways in which community context (social determinants) and community-based services need to be integrated into women's maternity care through:

- expanding the focus of current models of home-visiting programs for pregnant women to include the prevention of maternal morbidity and mortality;
- expanding the service capacity of home-visiting programs to serve more women at risk for poor outcomes; and,
- recognizing and addressing chronic stressors and stressors related to pregnancy as integral to the care of women.

Significant strides in addressing maternal mortality in New York have been made recently. Public discourse on the state of maternal mortality has grown with increased media attention, characterized by thoughtful and provocative reporting. Key stakeholders in maternal health have had opportunities to share their experiences and expertise widely. Systems of surveillance and of reviewing maternal deaths have been made significantly more robust and responsive. Clinical practice reforms and training initiatives are producing real change in how medical teams work together and respond to urgent conditions that threaten the lives of mothers. However, significant deficits and inequities remain.

As the Summit has made clear, the next phase of work must be rooted in the lived experiences and viewpoints of black women and other women of color, in order to effectively address the disparities they confront in their health care experience and during their life course. This will require a commitment from all stakeholders to an anti-racism lens; among healthcare providers to solicit and listen to patient voices; among policymakers to sophisticated data collection, data integration, and analysis of socioeconomic and systemic factors contributing to maternal health outcomes; and, by all to a holistic approach to service delivery that begins during pre-conception and continues post-delivery in patients' homes and communities. New York has launched numerous policy and practice reforms to improve maternal health. The state and city now have the potential to be leaders in achieving birth equity.

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