Briefing Summary
"Rising Maternal Mortality Rates in the United States"
April 13, 2016

On April 13, Women's Policy, Inc. (WPI) sponsored a briefing, "Rising Maternal Mortality Rates in the United States," in cooperation with Reps. Kristi Noem (R-SD) and Doris Matsui (D-CA), Co-Chairs of the Congressional Caucus for Women's Issues (Women's Caucus), and Reps. Susan Brooks (R-IN) and Lois Frankel (D-FL), Vice-Chairs of the Women's Caucus. This briefing is the ninth in a women's health series sponsored by WPI over several years with support from the Robert Wood Johnson Foundation. Cindy Hall, president of WPI, thanked the Foundation for its support and work to improve the health and health care of all Americans.

Cindy recognized the three panelists: Michael C. Lu, MD, MS, MPH, Associate Administrator, Maternal and Child Health, Health Resources and Services Administration, Department of Health and Human Services; Keisha Callins, MD, MPH, Obstetrics/Gynecology, Albany Area Primary Health Care, Albany, Georgia; and Elliot K. Main, MD, Medical Director, California Maternal Quality Care Collaborative.

Members of the Women's Caucus

A senior member of the Energy and Commerce Health Subcommittee, former Women's Caucus co-chair and longtime Women's Health Task Force co-chair, Rep. Lois Capps (D-CA) has made maternal health one of the top Caucus priorities over many years and has authored legislation to reduce maternal mortality both in the United States and abroad. Rep. Capps noted that the United States is the only developed nation with a rising maternal mortality rate. Yet, half of the maternal deaths in the United States are preventable. The Congresswoman stated that with the passage of the Affordable Care Act, access to health care for women and their families has improved. The inclusion of preventive health services without out-of-pocket costs, including prenatal and maternity care services, are required under the law. Rep. Capps referred to it as a game-changer for women that could reverse the trend of rising maternal mortality rates.

Rep. Susan Brooks (R-IN), Vice-Chair of the Women's Caucus, is a member of the Energy and Commerce Committee and its Health Subcommittee. The Congresswoman has been an advocate for improving access to high quality health care and is a sponsor of a number of health care related bills, including one to prevent prescription opioid abuse. Rep. Brooks noted that the World Health Organization (WHO) has estimated global maternal mortality has decreased 44 percent from 1990. Despite this improvement, there is still one death every two minutes globally related to maternal mortality. She emphasized that although many of us think of maternal mortality as a problem in underdeveloped nations, over 600 women die each year in the United States as a result of pregnancy or child birth complications.

Speakers

Michael C. Lu, MD, MS, MPH

The first panelist was Dr. Michael C. Lu, Associate Administrator for Maternal and Child Health at the Health Resources and Services Administration in the Department of Health and Human Services, where he directs the Maternal and Child Health Bureau, which is responsible for improving the health and well-being for America's mothers, children, and families. Dr. Lu has launched a number of initiatives that have included collaborations with states to improve maternal and child health.

Dr. Lu said that the United States ranks 46th globally in maternal mortality and worst among developed nations, referring to it as a national disgrace. He noted that from 1987-2012 maternal mortality more than doubled from 7.2 to 15.9 deaths per 100,000 live births. Maternal mortality is just the tip of the iceberg, as maternal morbidity rates doubled from 1998-2011.

He indicated that some of the increase in maternal mortality could be explained by improved public health surveillance over time. However, it is also known that the demographics of childbearing are changing in the United States. Many women are having children at an older age and/or enter childbearing with a chronic condition, such as hypertension or obesity. Specifically, cardiovascular diseases and cardiomyopathy are becoming leading causes of maternal mortality in the United States. In 2012, these two diseases accounted for about one-fourth of all maternal deaths.

Additionally, cesarean delivery may also play a role in maternal mortality, as this delivery method increases a woman's chance of complications. Cesarean delivery has been on the rise in the United States, with one out of three births delivered via cesarean section. This figure accounts for more than 1.3 million cesarean deliveries annually.

However, Dr. Lu stated that the most troubling aspect of these statistics were the persistent disparities: racial, ethnic, socioeconomic, and geographic. An African American woman is still three times more likely to die during pregnancy or childbirth than a white woman. This is a gap that Americans have not been able to close for decades.

Since 2012, a coalition of federal and state partners has come together to form the Maternal Health Initiative: Healthy Women, Healthy Mothers, Healthy Babies. This coalition has developed a framework that lists five strategic priorities to reduce maternal mortality in the United States:

- Improve women's health before, during, and after pregnancy
- Improve the quality and safety of maternity care
- Improve systems of maternity care, including clinical, community and public health systems
- Improve public awareness and education
- Improve research and surveillance

In 2013, the Maternal Child Health Bureau supported a coalition of professional organizations in developing safety bundles, which are bundles of best practices designed to improve patient safety and outcomes. These bundles can include simulation drills for labor and delivery staff to manage hemorrhage, or checklists and toolkits to prevent thrombotic pulmonary embolism or blood clotting. Six bundles have been developed that address the most common problems related to maternal mortality, with an additional four bundles currently in the works.

In 2015, another initiative was launched, the Alliance for Innovation on Maternal Health (AIM), with a goal to prevent 100,000 U.S. maternal deaths and severe morbidity in five years. The strategies put forth to achieve this goal include:

- Improve women's health before and between pregnancies
- Reduce low-risk (NTSV) cesarean deliveries
- Disseminate and integrate patient safety bundles into every birthing hospital in the U.S.

Dr. Lu is confident that these initiatives will improve maternal mortality rates in the United States, because he has seen improvement firsthand in California. A network of healthcare and public health professionals visited hospitals across the state and engaged hospital staff and CEOs with best practice information. In 2006, California's maternal mortality rates were trending with the rest of the nation at 16.9 percent. In 2012, the rates decreased 64 percent to 6.2 percent. African American women's maternal mortality rates went from a high of 51 percent in 2006 to 26 percent in 2012 – nearly a 50 percent reduction in six years. If the nation can replicate the successes in California, the U.S. can drop to the top ten globally in maternal mortality rates.

Keisha Callins, MD, MPH

The next speaker was Dr. Keisha Callins, a women's health professional at the Mirian Worthy Women's Health Center and Assistant Medical Director for Albany Area Primary Health Care (AAPHC). Dr. Callins authors a monthly women's health segment in the "Health Beat" insert of the *Albany Herald*. She is a junior fellow of the American Congress of Obstetricians and Gynecologists and a member of several health associations.

Dr. Callins discussed the history of Albany Area Primary Health Care, which was founded in 1979 and now operates the largest federally qualified community health care network in Southwest Georgia. AAPHC has an umbrella of services that includes dentistry, family medicine, internal medicine, obstetrics and gynecology, pediatrics, podiatry, psychiatry, and school based clinics. They provide services in six surrounding counties and work in tandem with the Phoebe Putney Memorial Hospital. AAPHC serves people receiving Medicaid, Medicare, Supplemental Security Income, private insurance, and those who fall in between these categories with a sliding fee scale.

In 2011, Georgia had one of the worst maternal mortality rates in the United States. Additionally, Albany has been reported in recent years to be the second poorest congressional district in the nation. Because of these disparities and the unique role OB/GYN's play as a hybrid of primary care and surgical doctor, Dr. Callins said she wanted to share her experience working on the front lines in these communities and focus on three areas: systemic and personal challenges toward progress, secrets of success, and suggestions for creative solutions.

- Systemic challenges and personal challenges toward progress
    - Access: The collapse of hospital systems and reduced services in rural areas, coupled with the lack of transportation to utilize services in a timely fashion, negatively impact the health of women.
    - Provider Shortage: This is an issue for all health care professionals, midwives, physician assistants, and nurse practitioners. In Dr. Callins' clinic, one provider retired and one provider moved, which left Dr. Callins and her partner as the only two providers in their facility for six months. This challenge highlights the difficulty of being able to recruit and retain physicians in a rural setting.
    - Social Determinants of Health: These determinants can include lack of jobs, lack of education, unsafe neighborhoods, lack of quality food, minimum wage, inherited stressors, and cultural beliefs.
    - Reproductive Responsibility: Awareness of the risk prior health conditions can have during pregnancy. Having the means to utilize health care services prior to delivery and know the benefits of adequate spacing between pregnancies.

    - Health Status: The ability of the woman to know about pre-existing medical conditions and how those conditions affect her and the baby during pregnancy. Understanding the importance of preventive health care services and educating women that they are eligible to receive care.
    - Patient-Centered Medical Home: The ability for women to access and utilize care from pre-conception through intra-partum care.

- Secrets of success
    - Transportation: bus tokens, buddy appointments, Medicaid van services, etc.
    - Childbirth Classes
    - Referrals to primary care providers that work closely with the local emergency room and hospital in the community
    - Long-acting Reversible Contraception (LARC)
    - County calls that link patients to other providers within different counties
    - Active and targeted recruitment of health professionals
    - Velcro philosophy (tracking patients continuously)
    - Centering pregnancy program – pregnancy education for women
    - Federally Qualified Health Centers (FQHCs)/Community Health Centers (CHCs) – Dr. Callins expressed her gratitude for the congressional members who secure funding for these centers. FQHCs and CHCs are the major providers for subsidized patients and high-risk patients.

- Suggestions for creative solutions
    - Increase of FQHCs and CHCs and offer OB/GYN services in each of these centers
    - Increase in primary care doctors, physician assistants, nurses, and nurse practitioners who will work in rural communities
    - Telemedicine expansion
    - Promotion of services already available—LARC, HIV clinics, Planning for Healthy Babies (P4HB)
    - Mobile health units and home visits
    - Doctors who foster relationships with their patients and set realistic "wellness" goals with their patients
    - Continuing education for health care providers
    - Support for local hospitals
    - Economic development, education development, corporate collaboration

In closing, Dr. Callins shared the personal experiences of two patients who were close to maternal death. She and her team were able to save both mothers. She compares her work in the community to being like the medical military – trying to prevent disease, fighting disease, and protecting patients. She acknowledged that the progress being made in rural areas like Albany is credited to the providers, staff, and health networks who work tirelessly and selflessly on the front line to take care of women.

Dr. Elliott K. Main

The final panelist was Dr. Elliott K. Main, Medical Director of the California Maternal Quality Care Collaborative (CMQCC), who has led multiple state and national quality improvement projects. Dr. Main also is the chair of the California Pregnancy-Associated Mortality Review Committee, a position he has held since its inception in 2004. He is a clinical professor of Obstetrics and Gynecology at the University of California, San Francisco, and Stanford University.

Dr. Main said that his presentation would be the culmination of what Dr. Lu and Dr. Callins discussed: the collaboration of policy, public health, and clinical medicine, which he believes is the only way to make any progress on the issues the health care system is facing. California has 500,000 births each year, which is one-eighth of the births in the U.S. Given this large percentage of births within one state, California is in the unique position of serving as a template in best practices for the nation.

In the Maternal Mortality Review Meeting, members focus on 15 mortality cases in depth. It is very emotional to review the medical reports, but providers start to see patterns and opportunities to change the system. That is the way Dr. Main wanted to lead the CMQCC, as an opportunity to change and improve quality of care. Through CMQCC mortality review meetings, Dr. Main immediately saw that many maternal deaths are preventable. Hemorrhage and preeclampsia account for the majority of ICU admissions and severe morbidity cases in California.

In 2009, CMQCC created the Hemorrhage Taskforce and created a Hemorrhage QI Toolkit, which were implemented in a multi-hospital collaborative and implemented statewide in 2013-2014. The Preeclampsia Taskforce and Cardiovascular Toolkit were released in 2013 and 2016 respectively. Dr. Main stated that because hemorrhage is the most common complication, team work is the most important factor for success in dealing with this issue. If health systems can handle hemorrhage well, they should be able to handle preeclampsia and cardiovascular issues well.

The outcomes in California are now being replicated through the AIM program nationwide, in cooperation with the Council on Patient Safety in Women's Health Care and the Maternal and Child Health Bureau through the American Congress of Obstetricians and Gynecologists and the Health Resources and Services Administration. Critically, this program is not just developed by professional organizations, but includes public health organizations, hospital associations, and federal agencies.

Dr. Main noted that the development and support of State Maternal Mortality Review Committees (which faded away in the 1950s and 1960s) are not only critical for the numbers, but the stories. California did not have a Maternal Mortality Review Committee until the state realized that maternal mortality numbers were climbing.

The patient safety bundles put forth by AIM are a collection of 10-13 best practices for improving safety in maternity care that have been vetted in a large quality improvement collaborative with the goal of moving established guidelines into practice. The bundles are not national protocols or new science, but can be tailored to fit different institutions. The quality improvement toolkits are designed to provide details and examples for each of the patient safety bundle elements with a goal to serve as a guide for bundle implementation. AIM has now created five patient safety bundles that include:

- Obstetric hemorrhage
- Severe hypertension in pregnancy

- Maternal VTE prevention
- Patient, family and staff support
- Safe reduction of primary cesarean births

Two more bundles are under development: Reducing disparities in maternity care and postpartum visit/inter-conception care, which are set to be released later this year.

Dr. Main stated that bundles and protocols are very helpful, but if the practice and culture does not change, then the bundles just sit on a shelf. An example of success is the Reducing Early Elective Delivery (EED) collaborative improvement project. The project involved eight multidisciplinary entities that reduced EED by 70-80 percent nationally. Additionally, the impact of toolkits, safety bundles, and collaborative(s) are the cumulative impact they have. As of April 2016, 16 states are part of the AIM system, which account for 2.4 million annual births in the U.S.

Discussion

Attendees were invited to ask questions of the panelists or offer brief observations. The first comment highlighted the need to focus care not just on the physical challenges that are present when discussing maternal mortality, but the mental health component and high suicide rate of mothers as a result of postpartum depression. A question was raised about whether or not any collaborative has engaged the medical liability carriers in a discussion of the importance of decreasing maternal mortality in view of the lawsuits that occur when a mother dies or experiences maternal morbidity. Dr. Main said that carriers have been useful in instituting drills and safety protocols within hospitals and are a natural partner.

Some discussion focused on health disparities and the disparate rate of caesarean deliveries between African American women and white women. African American women have 3-4 times higher maternal mortality rates. Dr. Callins said that our health systems have not yet evolved to take into account individualized care for each patient. Dr. Lu stated that social determinants are drivers of health disparities and we need to look at those factors too when providing care. Dr. Main ended by saying that many of the programs mentioned throughout the briefing operate on a shoe-string budget and more funding allocated to these programs will be critical in tackling those issues.

In conclusion, Dr. Lu noted that tracking maternal mortality rates is tricky. Two methods are utilized in the U.S. to track the maternal mortality rates in the U.S. There is a concerted effort led by the Centers for Disease Control and Prevention to improve the surveillance effort.

The webcast of the briefing can be viewed by clicking here.