To: Perinatal and Reproductive Health Standing Committee
From: NQF Staff
RE: Perinatal Off-Cycle Webinar
Date: April 25, 2017

Dial-In & Webinar Information

- **May 10, 2017, 1:00-3:00pm ET**
- Public dial-in #: 877-315-9042
- Web Link: http://nqf.commpartners.com/se/Rd/Mt.aspx?615926

Overview

With funding from the Department of Health and Human Services, the National Quality Forum (NQF) convened a multistakeholder Committee to develop recommendations on how performance measurement and its associated policy levers can be used to eliminate disparities in health and healthcare. The Disparities Standing Committee will develop its recommendations by focusing on selected conditions: cardiovascular disease, cancer, diabetes and chronic kidney disease, infant mortality/low birthweight, and mental illness. Through a series of reports, the Committee is tasked with identifying measures and measure gaps that could be used to assess disparities in these conditions and the extent to which stakeholders are using effective interventions to reduce them.

During this webinar, NQF's Disparities Committee would like to seek the Perinatal Committee's input on measurement that could be used to reduce infant mortality, particularly through disparities-sensitive measures that could address infant mortality and/or low birthweight. In particular, they would like the Committee's thoughts on what outcomes and processes should be included (as well as how they should be stratified for disparities), and what interventions might be effective and how they could be measured. Returning to a topic from the in-person meeting last year, the Perinatal Committee will also discuss how to measure prenatal care for vulnerable populations beyond just the number of visits. This conversation will provide input to the fourth and final report from the Disparities Committee.

The Disparities Committee has conducted a literature review to review the evidence for disparities in the five topic areas (report 1), and to summarize effective interventions available to address their focus issues (report 2). Following this review, staff conducted an environmental scan of measures on the five topic areas (report 3). The final report (report 4) will focus on providing recommendations to reduce disparities via performance measurement.

To prepare for the call, we encourage you to read the Background and Context, Conceptual Framework, and Infant Mortality/Low Birth Weight sections from the first two report. For the first report, summarizing the topic and the evidence, the results focusing on infant mortality and low birth weight are found on pages 21-24. For the literature review of effective interventions, this includes pages 17-20. The highlights of each report are included in Appendix A of this memo.

Discussion Questions

- What are the key outcomes and processes that should be stratified to identify disparities in infant mortality and low birth weight?
- What interventions could be effective in reducing disparities in infant mortality and low birth weight? How could use of the interventions be measured?
- What data is needed to support measurement in this area?
- How could the quality of prenatal care for vulnerable populations be assessed beyond counting the number of visits?
- What policy levers associated with performance measurement could be effective in encouraging the reduction of disparities in infant mortality and low birthweight?

Appendix A

Overview of Disparities in Infant Mortality & Low Birth Weight

The first report, *Disparities in Healthcare and Health Outcomes in Selected Conditions*, includes a roadmap for the elimination of health disparities. The roadmap notes the need to identify disparities by stratifying data and incentivize the reduction of disparities through measurement. Infant mortality is a critical indicator of population health, and the United States has an infant mortality rate of 6.1 per 1,000 live births, higher than that of other developed countries. The leading causes of infant death in the United States are:

- Congenital malformations or chromosome abnormalities – 20 percent
- Low birth weight (BW) or prematurity – 18 percent
- Sudden infant death syndrome (SIDS) – 7 percent
- Neonatal death due to maternal complications – 7 percent
- Unintentional injuries – 5 percent

Two out of three infant deaths occur in the neonatal period (the first 28 days of life). The March of Dimes notes that the most common causes of neonatal death are premature birth, low birth weight, and birth defects. Among term infants, the major causes of neonatal death were asphyxia and infection, and in post neonatal infancy, SIDS. In the United States, preterm birth is the cause of low birth weight in almost two-thirds of infants born weighing less than 5 pounds, 8 ounces. Only 2 percent of infants are born before 32 weeks gestation in the United States; however, they represent one-third to one-half of infant deaths. Preterm birth and low birth weight are also associated with short- and long-term health and developmental complications. The exact causes of low birth weight and preterm birth are not known, but these conditions have been linked to maternal smoking and substance use, chronic conditions, and infections.

Significant disparities exist across the causes of infant mortality, contributing to overall disparities in health. These disparities exist across social risk factors; however, racial and ethnic disparities in infant mortality are particularly large. The Centers for Disease Control and Prevention found significant disparities in infant mortality rates by race and ethnicity. From 2006-2008, the infant mortality rate for the United States was 6.68 per 1,000 live births. The mortality rate for white infants was 5.58, and for Hispanic infants the rate was 5.50, while the rate for African American infants was 13.11.

During the neonatal period, the most common causes of death for white infants are congenital malformations (0.95 per 1,000 livebirths), disorders related to preterm birth and low birth weight (0.76 per 1,000 live births), and newborn affected by maternal complications of pregnancy (0.32 per 1,000 live births). African American infants are more likely to die from all of these causes. For African American infants, the three leading causes of neonatal death are disorders related to preterm birth and low birth weight not otherwise classified (2.99 per 1,000 live births), congenital malformations (1.20 per 1,000 live births), and newborn affected by maternal complications of pregnancy (0.90 per 1,000 live births).

Although the causes of infant mortality do not differ much across racial and ethnic groups, the risk of death is not equal. African American and white infants share the same leading causes of death in the post-neonatal period: SIDS, congenital malformations, and accidents. However, African American infants

are more likely to die from each of these causes. For SIDS, African American infants have a rate of 1.02 per 1,000 live births compared to 0.49 per 1,000 live births for white infants. African American infants have a mortality rate from congenital malformations of 0.60 per 1,000 compared to 0.34 per 1,000 live births for white infants. Similarly, African American infants are more likely to die from accidents than white infants (0.52 per 1,000 vs. 0.21 per 1,000 live births.)

Infant mortality was higher for all causes for American Indian or Alaska Native infants compared to white infants as well. The CDC found that American Indian or Alaska Native infants had a mortality rate of 761 per 100,000 live births compared to a rate of 505.6 per 100,000 live births for white infants. The mortality rate for disorders related to short gestation and low birth weight was 95.7 per 100,000 for American Indian or Alaska Native infants compared to 74.4 per 100,000 for white infants. The rate of SIDS was 78.3 per 100,000 compared to 40.1 for white infants. The rate of fatal accidents was 47.8 per 100,000 compared to 27.4 per 100,000 for white infants.

For Hispanic infants the mortality rate from all causes was 500.2 per 100,000 compared to 505.6 per 100,000 for white infants. For congenital malformations, Hispanic infants had a mortality rate of 129.4 per 100,000 compared to 114.7 per 100,000 for white infants. The mortality rate for disorders related to short gestation and low birth weight was 88.1 compared to 74.4 for white infants. Hispanic infants had lower rates of SIDS and fatal accidents than white infants.

Asian or Pacific Islander infants had the lowest mortality rate of any racial or ethnic group. Rates were lower than white infants for all causes except newborn affected by maternal complications of pregnancy (36.5 per 100,000 compared to 29.8 per 100,000 for white infants).

Infant mortality has also been associated with socioeconomic status (as indicated by mother's age, marital status, and education). In addition, infant mortality rates are highest in small rural areas, as compared to large rural and urban areas, and they are slightly more likely to be low birth weight.

Disparities in healthcare may contribute to these disparities in infant mortality and low birth weight. People with social risk factors may have more limited access to healthcare and effective interventions, may receive lower quality care, and may have behavioral risks that contribute to infant mortality and low birth weight. Access to adequate prenatal care is a key intervention in improving infant mortality rates, as is access to effective interventions and high quality care for low birth weight infants and infants with congenital malformations.

Effective Interventions: Reducing Disparities in Infant Mortality & Low Birth Weight

The second report, *Effective Interventions in Reducing Disparities in Healthcare and Health Outcomes in Selected Conditions*, reviews the evidence of interventions that have been effective in reducing disparities. Interventions to reduce disparities in infant mortality focus on promoting access to prenatal care, promoting healthy behaviors, ensuring infant safety, and promoting culturally competent care. Interventions may need to be tailored to address specific risks prior to conception, during pregnancy, during the neonatal period, and during the post-neonatal period. The health of an infant is tied to the health of its mother, and social risk factors can significantly affect the health of both. Some sources note that often no single factor causes the death of an infant and that interventions must target each of

multiple, interrelated factors. As with the other target conditions, interventions to reduce infant mortality and low birth weight must be tailored to the community and risk factor, and the care delivered must be culturally and linguistically appropriate. Further, although disparities exist across causes of death and social risk factors, many interventions cited in the literature focus on reducing racial and ethnic disparities in pre-term birth. Some interventions also focus on promoting healthy behaviors and infant safety.

At the policy level, studies point to the role of increasing access to appropriate healthcare and nutrition for both the mother and infant. Policy interventions include increasing access to prenatal care, expansion of the Women, Infants, Children program (WIC), and implementing policies that increase the transfer rates of women with high-risk pregnancies to tertiary care facilities that may be best equipped to handle their deliveries.

Community interventions are a critical component to reducing infant mortality. Chao et al. stressed the need to work with local communities to understand drivers of disparities and secure buy-in for implementing interventions. Additionally, the authors found that focusing on infant safety issues may be the most effective community-level intervention. Culturally tailored education could help address disparities in infant mortality for African Americans. Finally, the authors noted that effective community interventions could focus on identifying high-risk families and preventing infant injuries. The authors recommended expanded case management of high-risk women, increased family planning services, better training for nurses, and public health initiatives to increase awareness of infant safety. Culturally appropriate public health programs implemented by racial and ethnic communities, including interventions such as home visits, group and one-to-one education, and media campaigns addressing topics such as safe sleeping habits, prenatal care, and healthy behaviors, have been demonstrated to improve outcomes. Cross-cutting interventions and culturally and linguistically appropriate services implemented throughout the healthcare system are key to reduce racial and ethnic disparities in infant mortality. In addition, healthcare workers can screen for risk factors such as substance use, smoking, stress, social support, intimate partner violence, and depression, all of which are known to increase low birth weight and infant mortality. Congenital malformations can be addressed by improving preventive measures such as folic acid supplementation.

Quality care and access to effective treatment may be linked with respect to ensuring the survival of low birth weight infants. Howell et al. found that African American infants with very low birth weight were more likely to be born in hospitals with higher risk-adjusted neonatal mortality rates than white infants with very low birth weight, suggesting a relationship between quality of care and access to effective interventions.

Studies also stress the need for interventions to increase access to contraception and education, citing a relationship between disparities in infant mortality and unwanted pregnancy. Appropriate preconception and interconception care could help address issues like family planning and maternal health.

Reducing disparities in infant mortality and low birth weight will likely take interventions at all levels of the healthcare system. The literature suggests that improving access to care, educational outreach, care coordination and management of high-risk pregnancy, ensuring culturally competent care, and promoting healthy behaviors may help reduce disparities. Additionally, the healthcare system must

achieve better quality measurement and improve prenatal and pediatric care to make sure mothers and babies with social risk factors get the care they need. Finally, there is a need for additional work to identify and track the causes of infant mortality and to better define adequate prenatal care, particularly for vulnerable populations.