Kansas Maternal Mortality Review Report Highlights

The issue of maternal morbidity and mortality is complex. Severe maternal morbidity occurs nearly 100 times more frequently than maternal death. The Kansas Department of Health and Environment (KDHE) identifies all pregnancy-associated deaths, or deaths occurring while a woman is pregnant or within a year of pregnancy, to collect data on maternal mortality. KDHE works with the Kansas Maternal Mortality Review Committee (KMMRC) to review cases of pregnancy-associated death. The purposes of the review are to determine the factors contributing to maternal mortality in Kansas and identify public health and clinical interventions to improve systems of care. The aim of the KMMRC is to better understand the causes of maternal mortality and develop statewide recommendations to prevent future maternal deaths, as well as determine whether the deaths were pregnancy-related (occurring due to a pregnancy complication) and whether they were preventable.

Severe Maternal Morbidity

During 2016-2019, of the 132,643 delivery hospitalizations of Kansas residents, 767 deliveries with one or more severe maternal morbidities (SMM) were identified, representing a rate of 57.8 per 10,000 delivery hospitalizations. This implies that about 1 in 173 women who delivered a baby experienced SMM.

- The top five most common indicators of SMM were acute renal failure, disseminated intravascular coagulation, sepsis, hysterectomy, and adult/acute respiratory distress syndrome
- SMM was highest among women aged 40+ years and lowest for those aged 25-29 years
- Despite the downward trend in the SMM rate of non-Hispanic Black women during 2016- 2019, the overall rate of SMM per 10,000 delivery hospitalizations for non-Hispanic Black women was 100.4: 58.3% higher than the rate among Hispanics (63.7), 72.2% higher than the rate among non-Hispanic Asian/Pacific Islanders (58.3), and 87.3% higher than the rate among non-Hispanic White women (53.6). The SMM rate for non-Hispanic Black women was significantly higher than any other race and ethnicity.
- Compared with other deliveries, women who were on Medicaid or resided in ZIP Codes in the lowest quartile of median income were more likely to experience SMM.

Pregnancy-Associated Deaths

Of the 75 identified deaths that occurred in Kansas (regardless of whether the person was a Kansas resident) in 2016-2018, the KMMRC determined that 57 deaths were pregnancy-associated. This translated to a pregnancy-associated mortality ratio (PAMR) of 50 deaths per every 100,000 live births that occurred in Kansas. Of these deaths, the KMMRC subcategorized:

- 13 deaths (22.8%) were pregnancy-related
- 32 deaths (56.1%) were pregnancy-associated, but not-related, and
- 12 deaths (21.1%) were pregnancy-associated but unable to determine pregnancy-relatedness.

Timing of death:

- 17 deaths (29.8%) occurred during pregnancy.

- 13 deaths (22.8%) occurred within 42 days of the end of pregnancy.
- 27 deaths (47.4%) occurred 43 days to one year after the end of pregnancy.

The leading cause of death were motor vehicle crash, followed by homicide, poisoning/overdose, and infection.

The KMMRC determinations on circumstances surrounding the pregnancy-associated deaths were:

- Obesity contributed to about one in six deaths (9 deaths, 15.8%).Substance use disorder contributed to about one in three deaths (17 deaths, 29.8%).

Pregnancy-Related Deaths

During 2016-2018, in Kansas, approximately one in four deaths of women during or within one year of pregnancy were determined to be pregnancy-related (13 deaths, 22.8%). This translated to a pregnancy-related mortality ratio (PRMR) of 11 deaths per every 100,000 live births that occurred in Kansas.

Timing of death:

- 3 deaths (23.1%) occurred during pregnancy.
- 7 deaths (53.8%) occurred within 42 days of the end of pregnancy.
- 3 deaths (23.1%) occurred 43 days to one year after the end of pregnancy

The leading causes of death were cardiovascular and coronary conditions, followed by preeclampsia and eclampsia, embolism, and infection.

Committee determinations on circumstances surrounding the pregnancy-related deaths were:

- Obesity contributed to more than half of the deaths (7 deaths, including 1 additional “probably contributed”, 53.8%).
- Mental health conditions contributed to about one in 13 deaths (1 death, 7.7%).
- Substance use disorder contributed to nearly one in four deaths (3 deaths, 23.1%).

KMMRC Key Recommendations for Action for Pregnancy-Related Deaths

- Screen, provide brief intervention and referrals for:
    - Comorbidities and chronic illness
    - Intimate partner violence
    - Pregnancy intention
    - Mental health conditions (including postpartum anxiety and depression)
    - Substance use disorder
- Increased communication and collaboration between providers, including referrals
- Patient education and empowerment

What We’re Doing About It

- Black maternal health week programming
- Focus groups for non-Hispanic Black mothers to determine barriers to care.
- First Trimester Initiation, including the Postpartum Discharge Transition, a safety bundle pilot
- Well-woman toolkit to address barriers and provider bias.
- Post-birth warning signs campaign and provider training with the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN)
- Kansas Connecting Communities (KCC), including a Provider Consultation Line at 833-765-2004
- Pregnancy intention training (One Key Question) which includes provider bias training