Project Title:

A New Approach to Care After Birth: Development of a Group Model of Postpartum Care in the United States

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Background

Most maternal deaths occur during the postpartum period (Davis et al., 2019), defined as one hour after delivery of the placenta to 42 days after delivery of a baby (World Health Organization [WHO], 2022). Maternal mortality that occurs 43 days to one year after birth are considered late maternal deaths (Kassebaum et al., 2016). In Indiana in 2020, 89% of pregnancy-related deaths (death while pregnant or within one year from direct causes of pregnancy) and 83% of pregnancy-associated deaths (death while pregnant or within one year regardless of cause) occurred in the postpartum period (Indiana Department of Health [IDOH], 2022). While 56% of pregnancy-related deaths occurred within six weeks after birth, about 60% of pregnancy associated deaths occurred after six weeks (IDOH, 2022). Thus, the risk of mortality extends beyond six weeks, and interventions are needed during this extended period of risk, up till one year after birth.

Obstetric complications are the leading causes of maternal deaths during the postpartum period. In the US, and Indiana in particular, cardiovascular conditions, hemorrhage, infection, embolism, cardiomyopathy, preeclampsia / eclampsia, and mental health conditions are the primary causes of maternal mortality (Davis et al., 2019; IDOH, 2022; Kuriya et al., 2016; Peterson et al., 2019; Somer et al., 2017). Life-threatening complications that occur after childbirth are often unpredictable and require rapid response (WHO & UNICEF, 2010); therefore, timely emergency obstetric care (EOC) is critical. Once a woman leaves the hospital, the burden is on her (and her family) to recognize when something is wrong and seek appropriate care. A major contributing factor to the high maternal death rates is delays in seeking and receiving emergency care for complications (Killewo et al., 2006; Pacagnella et al., 2012). An important step to decreasing maternal deaths is the timely identification and management of complications.

According to the Indiana Maternal Mortality Review Committee (MMRC), substance use disorder (SUD) contributed to 51% of pregnancy associated deaths in 2020 in Indiana (IDOH, 2022). Accidental overdose was the leading cause of death, accounting for more than 30% of all pregnancy-associated deaths. Mental health conditions other than SUD, such as depression, contributed to 30% of pregnancy-associated deaths from 2018-2020 (IDOH, 2022). About 63% of women who died from SUD also had a comorbid mental health condition (IDOH, 2022). While the Maternal Mortality Review Committee (MMRC) outlines substance use and mental health as key contributors to maternal mortality, there is a lack of focus on interventions to increase access to mental health and provide evidence-based interventions for those most likely to experience SUD and mental health issues.

The Indiana MMRC determined that the vast majority of maternal deaths are preventable, including 79% of pregnancy-associated and 78% of pregnancy-related deaths (IDOH, 2022). Thus, in order to reduce risk of maternal death, perinatal women require comprehensive care and education, support, and accountability.

Community Need

This proposal involves collaboration with Beacon Health System across three counties in Northern Indiana (Elkhart, St. Joseph, and Marshall Counties). The community served by Beacon Health System consists of a largely lower-income, rural population, with a large proportion of women experiencing significant barriers to accessing health care. By working with community-based partners to build innovative solutions, Beacon has expressed the strong need for comprehensive maternal healthcare, reporting the goal of improving outcomes for high-risk mothers in St. Joseph and Elkhart County in 2023 (Prescott-Wieneke, 2023). Women residing in rural areas and women of lower socioeconomic status are at a significantly heightened risk of maternal mortality (Davis et al., 2019). Analyses of maternal outcome trends in the United States indicate that interventions targeting women in high-risk sociodemographic groups have the highest potential for reduction of morbidity and mortality (Davis, 2019; Kuriya et al., 2016). Therefore, addressing economic and geographic

disparities is fundamental to improving the maternal health of vulnerable populations and ultimately decreasing mortality rates. Among vulnerable populations in high-income countries, the following barriers to accessing care have been identified: communication barriers, perceived quality of care, broken trust, lack of transportation, distance, complicated bureaucracy, delays in referral, miscommunication between providers, and lack of clinical guidelines (Binder et al., 2012; Esscher et al., 2014; Leppälä et al., 2020).

Our Birth Equity & Justice St. Joseph County Workgroup, of which Dr. Adams and Kimberly Green Reeves, and other key personnel are part of, conducted birth equity health cafes with women in our county on their pregnancy, birth, and postpartum experiences (Unpublished data). During the postpartum period, women mentioned lack of sufficient postpartum care (only care received was 6-week follow-up), time gap between giving birth and first follow-up (6 weeks later), lack of information about postpartum health issues (did not know what to look out for), lack of awareness of existing resources, and feelings of being overwhelmed as challenges. Women recommended enhanced postpartum care that is initiated sooner and is more frequent, and more educational programs. Women also recommended postpartum mental health check-in, connections to existing resources, and support groups:

*"[I] I **learned more about postpartum care on TikTok** than I did from my doctor."*

*"... **Mom just kind of gets forgotten about** because now there's this whole baby, **but mom has to be whole for baby to be taken care of."***

*"If you don't know about those programs and if people aren't giving you those resources, how are you supposed to know? And so, I guess my thing is **nobody's offering you those resources.**"*