

# Preterm Birth & Infant Death

Dane County  
2014-2016



## Infant death is an important marker of the overall health of a community

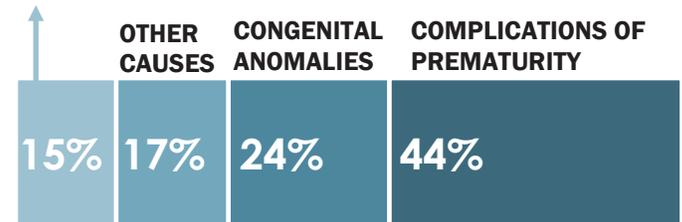
Public Health Madison & Dane County (PHMDC) and partners from the health care and social service sectors work together through the Dane County Fetal Infant Mortality Review (FIMR) to understand the factors contributing to infant and fetal death. FIMR is a process that continually assesses, monitors, and works to improve service systems and resources for women, infants, and families.

## Causes of Infant Death, 2014-2016

In Dane county, **100** infants died from 2014 to 2016. Causes of infant death include complications of prematurity, congenital anomalies, sudden unexpected infant death (SUID) and other causes. *Data*

Source: Dane County FIMR

### SUDDEN UNEXPECTED INFANT DEATH



## Preterm (or premature) births happen before the 37th week of pregnancy.

Some mothers may be more likely to have a preterm baby. Factors associated with preterm birth may include having a prior preterm birth, carrying more than one baby, being a young or older mother, having a medical condition such as diabetes, high blood pressure, or an infection, and using substances such as tobacco, alcohol or drugs during pregnancy.<sup>1</sup>

## Preterm birth is associated with risks and costs to babies and families

- **A baby born early may have more health problems.** Preterm babies are smaller than normal and may have problems with breathing and feeding. These babies are more vulnerable to infections, brain problems, and other serious complications (including death), and may need to stay in the hospital longer than babies born after 37 weeks.
- **Preterm birth takes an emotional toll on a family.**
- **Preterm birth is expensive.** The US spends \$26.2 billion per year on premature birth-related costs, including health care for the baby and mother, early intervention programs for children born with disabilities or developmental delays, special education services, and lost work and pay.

**Premature birth is the leading cause of infant death in Dane County.**  
 Nearly 1 in 2 babies who died within the first year of life were born preterm.

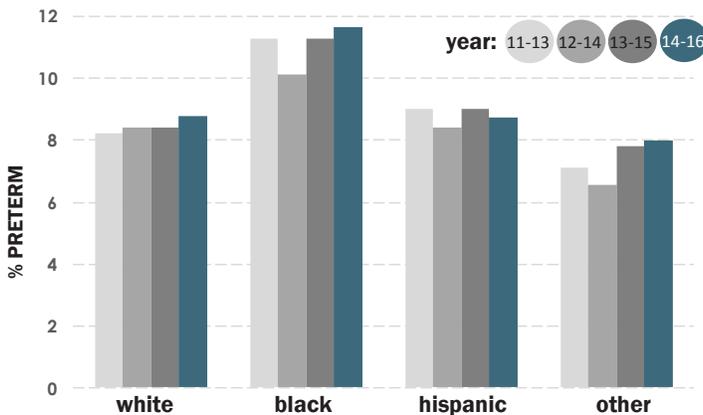
**The preterm birth rate in Dane County is similar to the preterm birth rate in Wisconsin and the United States.**

From 2014-2016, 1,654 babies, or more than 500 per year, were born preterm in Dane County.<sup>2</sup>



**Black babies have a higher preterm birth rate than babies of other races and ethnicities.**

- From 2014-2016, 11.7% of Black babies were preterm compared to 8.8% of White babies.
- Black mothers are more likely than White mothers to face discrimination and racism that lead to social and economic challenges that contribute to poor birth outcomes such as preterm birth. Some of these challenges include low income, low educational attainment, food insecurity, and inadequate housing. Black women may experience these challenges from infancy through adulthood, or through the life-course.<sup>2</sup>
- These experiences lead to high levels of chronic stress for Black mothers, which in turn can lead to problems such as hypertension, preeclampsia, and infections. These conditions may also increase the risk for preterm birth for Black mothers.<sup>1,3</sup>



**Chronic stress impacts Black women throughout the life-course, which increases their risk for poor birth outcomes such as preterm birth.**

**The Dane County Fetal Infant Mortality Review (FIMR) provides valuable information about infant deaths, including complications of prematurity**

- Infant deaths are reviewed by a multidisciplinary team with different perspectives about healthcare, social services, and policies that affect family health. The team examines medical records and maternal interviews to better understand the complexity of each mother’s life and interaction with various systems designed to support mothers and babies.
- The FIMR team has identified strengths and opportunities within Dane County’s existing systems for prevention of preterm birth and infant death due to complications of prematurity.
  - **Strengths** include medical providers’ attention to maternal health and risk factors for preterm birth as well as utilization of, and advocacy for, medical interventions for preterm birth such as progesterone therapy.
  - **Challenges** include barriers to early prenatal care and preconception care, requirements for receiving weekly progesterone injections at a doctor’s office rather than the home, and identifying ways in which the health care system can address chronic stress due to racism and related social and economic issues.

**Health care alone cannot eliminate racial disparities in preterm birth. However, medical interventions that reduce the risk for preterm birth should be easily accessible by all women.**



### **Spotlight on a medical strategy to prevent preterm birth**

Women who have experienced a preterm birth in the past are more likely to experience a future preterm birth. Starting weekly injections of 17-alpha-hydroxyprogesterone caproate (17P) at 16 weeks is an evidence-based strategy to prevent preterm birth in these mothers. 17P is a synthetic form of progesterone, a hormone naturally produced by the body during pregnancy. Treatment with 17P is recommended by The American College of Obstetricians and Gynecologists (ACOG) and the Society for Maternal Fetal Medicine (SMFM).

### **Increasing availability of, and access to, 17P is a key strategy to improve preterm birth rates and reduce the risk of infant death due to complications of prematurity**

Dane County FIMR has observed that women who experience a prior preterm birth would benefit from 17P, but don't always receive it. Both women and health care providers experience personal and policy barriers to using this evidence-based intervention.

### **To promote the appropriate use of 17P and ensure that eligible women receive treatment, Dane County can:**

<b>Recommendation 1:</b> Improve patient and provider education around eligibility for progesterone therapy	<b>Recommendation 2:</b> Reduce barriers to accessing and completing progesterone therapy	<b>Recommendation 3:</b> Identify innovative strategies in other locations to promote the appropriate use of progesterone
Train health care providers on the clinical criteria for eligibility for 17P treatment	Allow for home administration to address barriers related to receiving weekly injections in a medical office	Review <a href="#">promising practices</a> being implemented in Louisiana, North Carolina, Ohio, and South Carolina
Educate women on eligibility for 17P treatment	Support reimbursement models that include all types of progesterone therapy, including vaginal progesterone	Examine other Wisconsin counties for related strategies that could be adapted to Dane County, and identify opportunities for collaboration
	Address the requirement that physicians obtain approval for 17P before prescribing (prior authorization)	
	Address additional barriers to successful treatment, such as transportation and childcare	

#### **REFERENCES**

1. National Institute of Child Health and Human Development. What are the risk factors for preterm labor and birth? Available at: [https://www.nichd.nih.gov/health/topics/preterm/conditioninfo/who\\_risk](https://www.nichd.nih.gov/health/topics/preterm/conditioninfo/who_risk)
2. Wisconsin Interactive Statistics on Health (WISH). Wisconsin Department of Health Services, Division of Public Health, Office of Health Informatics. Available at: <https://www.dhs.wisconsin.gov/wish/index.htm>
3. Lu et al., 2010. Closing the black-white gap in birth outcomes: A life-course approach. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4443479/>
4. March of Dimes. Stress and pregnancy. Available at: <https://www.marchofdimes.org/pregnancy/stress-and-pregnancy.aspx>