

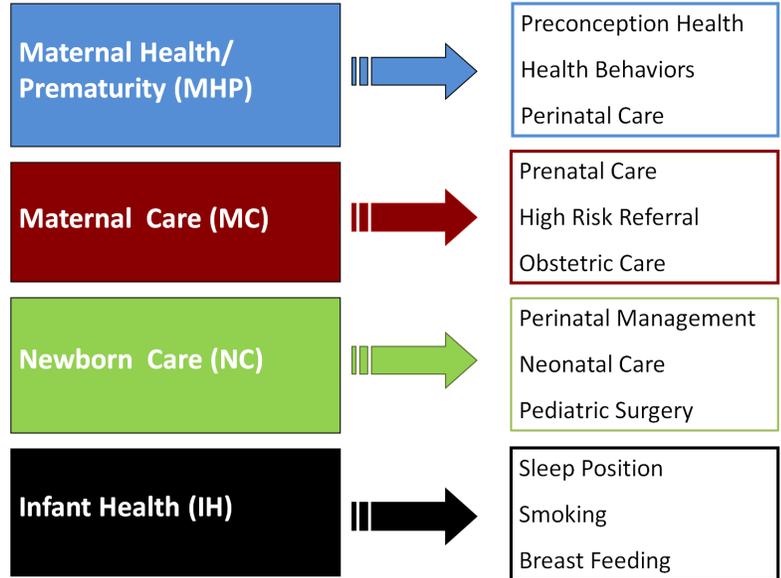


Feto-Infant Mortality in Wichita County

About Perinatal Periods of Risk (PPOR):

- The goal is to prioritize and target prevention and intervention efforts
- Based on birth weight and age of death, the PPOR approach partitions fetal and infant deaths into four areas (Figure 1) corresponding to specific intervention points in the health care continuum. These four components have different risk factors, causes of death, and corresponding interventions
- Texas and sub-populations are compared to a state-level reference group (non-Hispanic White women who are at least 20 years of age and have at 13+ years of education) generally known to have better feto-infant mortality outcomes
- Phase I analysis: Differences between the perinatal periods
- Phase II analysis: Periods and populations with the greatest disparities

Figure 1: PPOR Risk Periods: Points of Intervention



NOTE: Due to relatively small excess mortality, the newborn care and maternal care risk periods are not discussed in phase II analyses

Phase I: Perinatal Period Comparison

Excess Feto-Infant Mortality in Wichita County

2005-2008 feto-infant mortality rates* (F-IMR) were:

- 8.0/1,000 live births for all races
- 7.2 for Whites

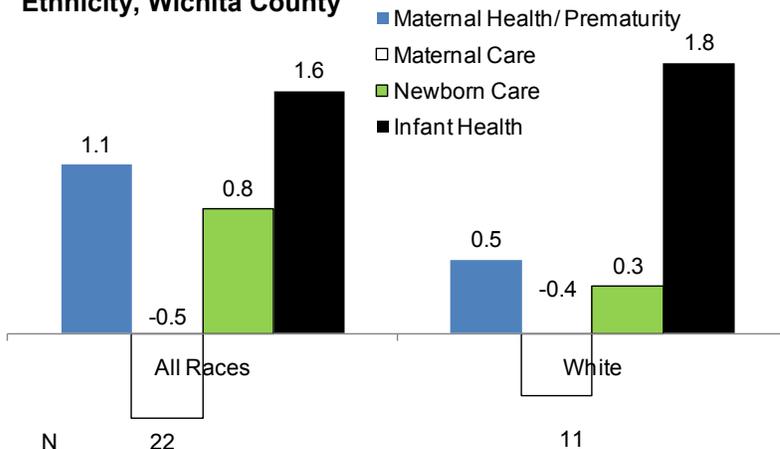
Excess F-IMR is the difference between the exposure group (i.e. Black, White, Hispanic, teen) and the reference group.

The excess F-IMR was (Figure 2):

- 2.9 for all races
- 2.1 for Whites

Due to low numbers of births and infant deaths among Blacks and Hispanics they could not be included in some analyses

Figure 2: Excess Feto-infant Mortality Rates by Race/Ethnicity, Wichita County



* F-IMR = number of fetal and infant deaths >=500 grams and >=24 weeks gestation / number of live births & fetal deaths >=500 grams and >=24 weeks gestation

- Overall, 53.7% of excess deaths occurred in the Infant Health risk period. The Maternal Health/Prematurity and Newborn Care periods contributed 37.2% and 27.7%, respectively. The F-IMR for Maternal Care period was greater than that of the state reference group resulting in a negative excess F-IMR for that period
- Overall, the excess F-IMR was 2.9/1,000 live births. **Potentially 36% of fetal and infant deaths were preventable**
- The highest excess rate among Whites occurred in the Infant Health risk period (1.8/1,000 live births)
- The excess rate in the Maternal Health/Prematurity risk period was more than twice as high for all race groups combined than it was for Whites indicating that the Maternal Health/Prematurity period is more problematic for non-White race/ethnicity groups.

Recommendation

- Target Infant Health to Whites
- Target Maternal Health/Prematurity to Blacks and Hispanics

Areas with the Greatest Potential Impact:

White Infant Health
Black and Hispanic Maternal Health/Prematurity

Phase II: Maternal Health and Prematurity (MHP)

Maternal Health/Prematurity (MHP) death in Wichita County: fetal and infant deaths weighing 500-1,499 grams

Very Low Birth Weight (VLBW) vs. Birth Weight Specific mortality:

- A larger percentage of fetio-infant deaths in the MHP period are due to a greater number of VLBW births with all deaths among Whites attributed to VLBW (Figure 3)
- Birth weight specific mortality (mortality rate among VLBW babies) among non-White groups also contributed to fetio-infant mortality in the MHP period

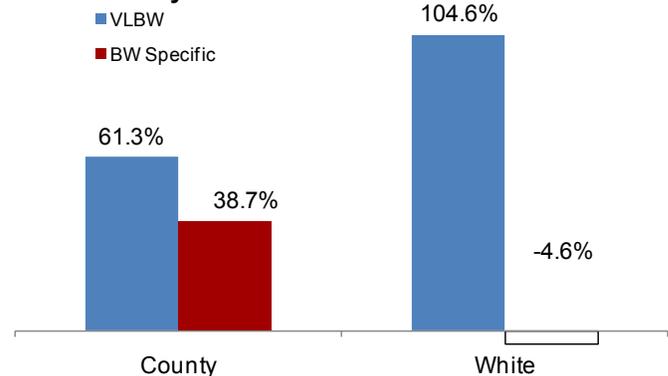
VLBW-Related Modifiable Risk Factors:

- Risk factors contributing most to VLBW:
 - Weight gain less than 15 lbs.
 - Inadequate prenatal care
- 28% of VLBW births were attributed to weight gain less than 15 lbs and inadequate prenatal care (14% each)
- Blacks, Hispanics, and teens were more likely to:
 - Gain less than 15 lbs. during pregnancy
 - To have inadequate prenatal care

BW Specific Modifiable Risk Factors for VLBW Births:

- The primary risk factor contributing to BW specific death was Inadequate prenatal care

Figure 3: VLBW vs. Birth Weight Specific Mortality, Wichita County



Note: The negative number for Hispanics are the result of BW specific birth rates which are lower than the state reference group. This also increases the VLBW rate to above 100%.

- Hispanics and teens were more likely to have inadequate prenatal care

Recommendations:

- Reduce the number of women gaining less than 15 lbs.
- Improve access to and use of prenatal care for all race groups and teens

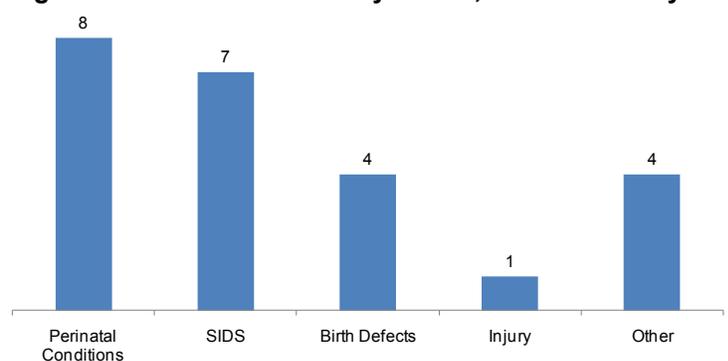
Phase II: Infant Health (IH)

Infant Health death in Wichita County: infants weighing more than 1,500g at birth and survived to more than 28 days

Causes of Infant Health-related death (Figure 4):

- Of the 24 Infant Health-related deaths, perinatal conditions (primarily disorders related to short gestation and to complications of pregnancy, labor, and delivery) and SIDS were the primary causes representing 62.5% of infant deaths in this period
- Birth defects contributed another 4 deaths
- White infants accounted for 16 IH-related infant deaths; 5 from perinatal conditions and 5 from SIDS
- Black infants accounted for the other 2 SIDS-related deaths
- No breast feeding at hospital discharge, inadequate prenatal care, and smoking were the primary risk factors contributing to IH-related infant death
- 17% if IH-related death was attributed to no breast feeding at hospital discharge

Figure 4: IH-Related Death by Cause, Wichita County



Recommendations:

- Target interventions that promote breast feeding
- Improve access to and use of prenatal care
- Stress importance of early entry into care
- Target interventions that reduce parental smoking among women of child-bearing ages