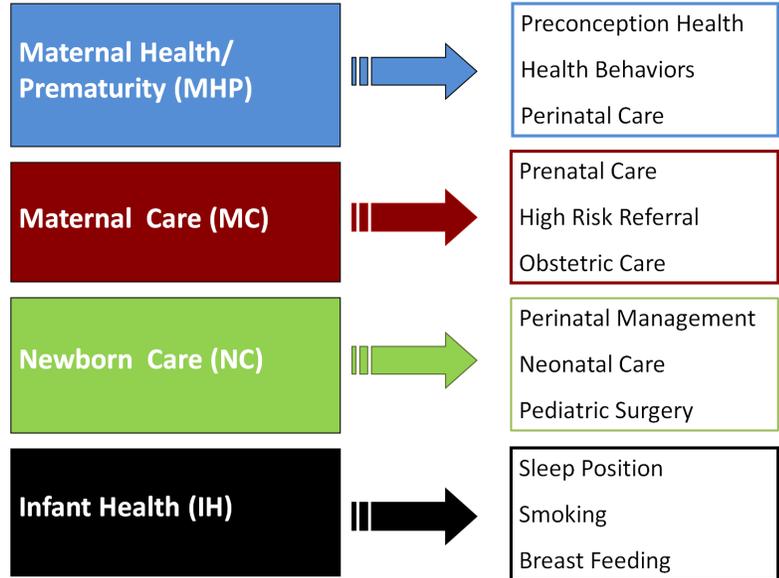


Feto-Infant Mortality in Bell County

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 overall excess mortality, the newborn care risk period is not discussed

Phase I: Perinatal Period Comparison

Excess Feto-Infant Mortality in Bell County

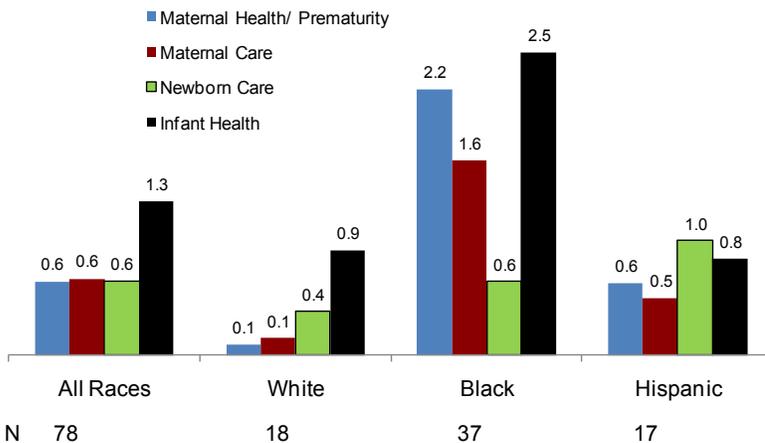
2005-2008 feto-infant mortality rates* (F-IMR) were:

- 12.1/1,000 live births for Blacks
- 7.9 for Hispanics
- 6.6 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):

- 7.0 for Blacks
- 2.9 for Hispanics
- 1.5 for Whites

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



- Among races/ethnicities, Blacks had the highest excess F-IMR for 3 of the 4 risk periods. **Potentially 58% of Black fetal and infant deaths were preventable**
- For Blacks, 36% of the overall excess deaths occurred in the Infant Health risk period, with an excess rate 3 times that of Whites and Hispanics
- Blacks also had high excess rates in the Maternal Health/Prematurity and Maternal Care risk periods
- Whites and Hispanics had high excess rates in the Infant Health risk period
- The Newborn Care period was also relatively high for Hispanics

Recommendations

- Target Infant Health, Maternal Health/Prematurity, and Maternal Care-related interventions for Blacks
- Target Infant Health-related interventions for Whites and Hispanics

Area with the Greatest Potential Impact:
Black Infant Health

* 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

Phase II: Maternal Health and Prematurity (MHP)

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

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

- A larger percentage of fetoinfant deaths in the MHP period are due to a greater number of VLBW births among Blacks, with 93.5% of Black MHP deaths attributed to VLBW (Figure 3)
- Birth weight specific mortality (mortality rate among VLBW babies) among Hispanics also contributed to fetoinfant mortality in the MHP period

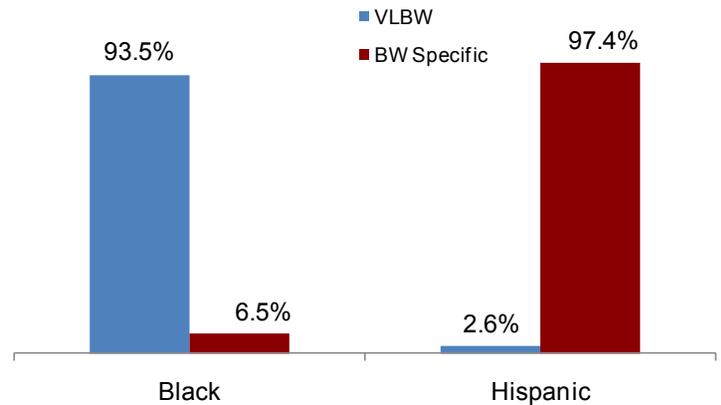
VLBW-Related Modifiable Risk Factors:

- Risk factors contributing most to VLBW:
 - Weight gain less than 15 lbs.
 - Less than 13 years of education
 - Teen pregnancy
- 16% of VLBW births were attributed to weight gain less than 15 lbs
- Blacks and Hispanics were more likely to gain less than 15 lbs. during pregnancy
- Blacks and Hispanics had greater proportions of teen mothers

BW Specific Modifiable Risk Factors for VLBW Births:

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

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



Recommendations:

- Reduce the number of women gaining less than 15 lbs.
- Reduce rates of teen pregnancy
- Provide opportunities/incentives for continuing education beyond high school for women of child-bearing ages
- Improve access to and use of prenatal care
- Stress importance of early entry into care

Phase II: Infant Health (IH)

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

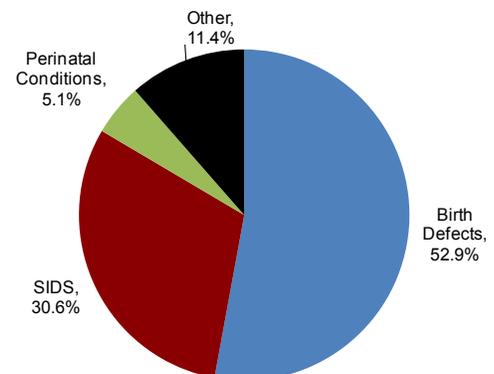
Causes of Infant Health-related death (Figure 4):

- Birth defects were the primary cause of IH-related death, representing 52.9% of all IH-related excess deaths
- SIDS also contributed to 30.6% of IH-related excess deaths
- Nearly half (9 of 19) of deaths due to birth defects occurred among Black infants
- Seven of the nine SIDS deaths occurred among Black and White infants (1 among Hispanic infants)
- No breast feeding at hospital discharge contributed to 15% of IH-related death

Recommendations:

- Target interventions that reduce birth defects

Figure 4: Excess IH-Related Death by Race/Ethnicity and Cause, Bell County



- Target interventions that reduce SIDS
- Target interventions that promote breast feeding

Phase II: Maternal Care (MC)

Maternal Care risk period deaths in Bell County: fetal deaths greater than or equal to 1,500 grams

- Blacks and Hispanics were 1.3 times as likely to have gained less than 15 lbs. compared to the reference group
- Blacks and teens were more likely than the reference group to smoke during pregnancy

Recommendations:

- Target interventions aimed at Black and Hispanic women to reduce the number of pregnant women gaining less than 15 lbs.
- Target interventions that reduce parental smoking among women of child-bearing ages