

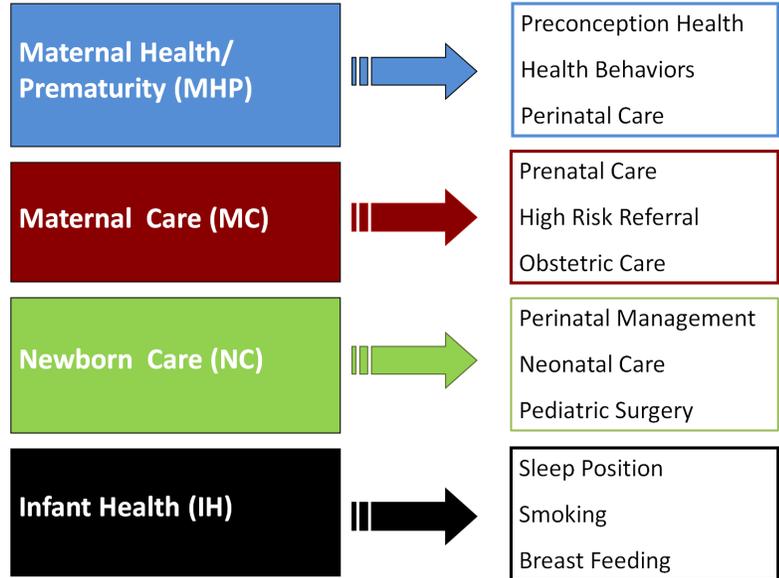


Feto-Infant Mortality in McLennan County

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 McLennan County

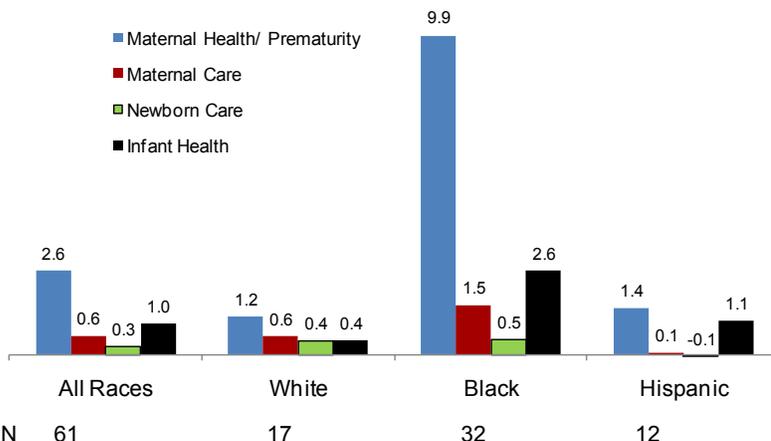
2005-2008 feto-infant mortality rates* (F-IMR) were:

- 19.5/1,000 live births for Blacks
- 7.6 for Hispanics
- 7.6 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):

- 14.4 for Blacks
- 2.5 for Hispanics
- 2.5 for Whites

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



- Among races/ethnicities, Blacks had the highest excess F-IMR for all 4 risk periods. **Potentially 74% of Black fetal and infant deaths were preventable**
- For Blacks, 68% of the overall excess deaths occurred in the Maternal Health/Prematurity risk period, with an excess rate 8 times that of Whites
- Blacks also had high excess rates in the Infant Health and Maternal Care risk periods
- Whites and Hispanics had high excess rates in the Maternal Health/Prematurity risk period
- Hispanics also had a relatively high excess rate in the Infant Health risk period

Recommendations

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

Area with the Greatest Potential Impact:
Black Maternal Health/Prematurity

* 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

Data Source: All data originate from Texas Department of State Health Services, Center for Health Statistics, 2005-2008

Phase II: Maternal Health and Prematurity (MHP)

Maternal Health/Prematurity (MHP) deaths in McLennan 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, Hispanics, and Whites with 87.6% of Black MHP deaths attributed to VLBW (Figure 3)
- Birth weight specific mortality (mortality rate among VLBW babies) among all races also contributed to fetoinfant mortality in the MHP period

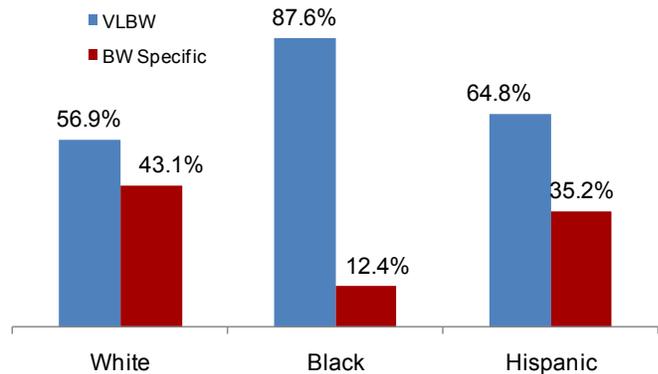
VLBW-Related Modifiable Risk Factors:

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

BW Specific Modifiable Risk Factors for VLBW Births:

- Teen pregnancy contributed to 15% of BW specific-related deaths

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



- Blacks and Hispanics had higher rates of teen pregnancy

Recommendations:

- Reduce the number of women gaining less than 15 lbs.
- Provide opportunities/incentives for continuing education beyond high school for women of child-bearing ages
- Target interventions that reduce rates of teen pregnancy among Blacks and Hispanics

Phase II: Infant Health (IH)

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

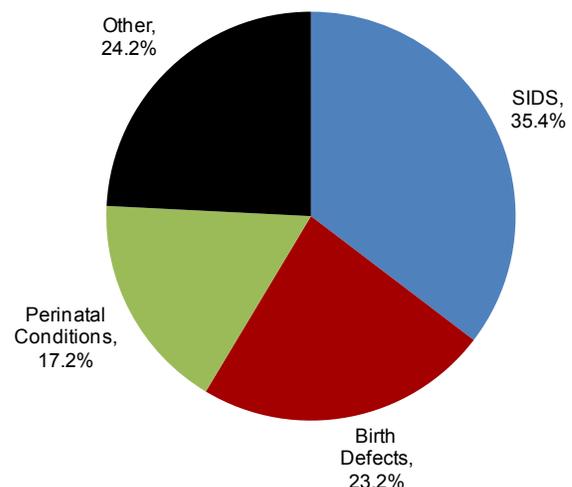
Causes of Infant Health-related death (Figure 4):

- SIDS was the primary cause of excess IH-related death, representing 35.4% of all IH excess deaths
- Birth defects contributed to 23.2% of IH-related excess deaths, and perinatal conditions (primarily disorders related to short gestation and to complications of pregnancy, labor, and delivery) contributed another 17.2%
- No breast feeding at hospital discharge and Inadequate prenatal care were the primary contributing risk factors

Recommendations:

- Target interventions that reduce SIDS, birth defects, and prematurity
- Target interventions that promote breast feeding
- Improve access to and use of prenatal care

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



Phase II: Maternal Care (MC)

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

- Blacks and Hispanics were 2.4 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