

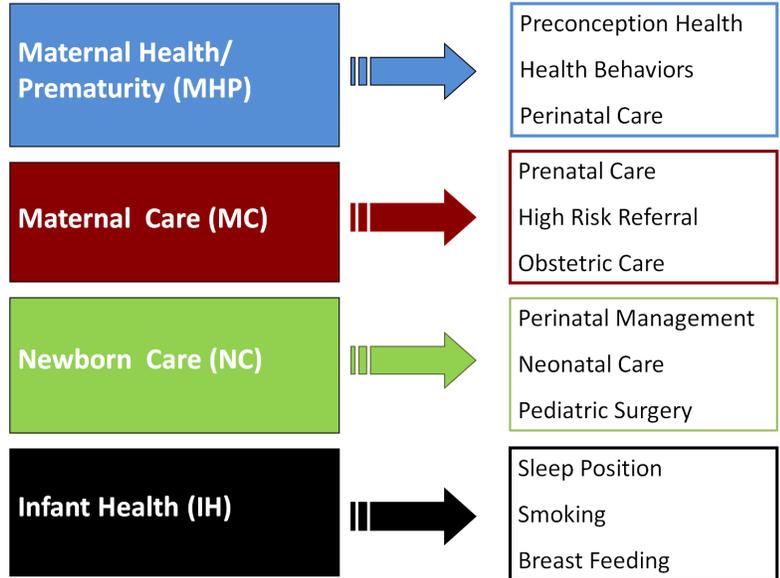


Feto-Infant Mortality in Lubbock County

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 risk period is not discussed

Phase I: Perinatal Period Comparison

Excess Feto-Infant Mortality in Lubbock County

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

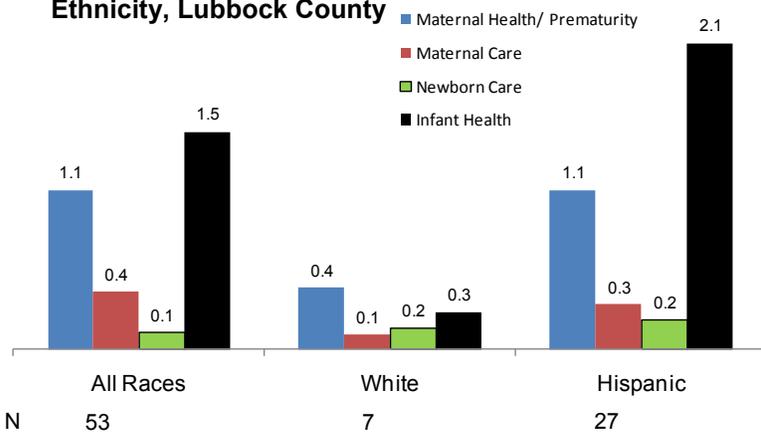
- 8.2/1,000 live births for all races
- 8.8 for Hispanics
- 6.0 for Whites

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):

- 3.1 for all races
- 3.7 for Hispanics
- 0.9 for Whites

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

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



- Overall, 48.2% of excess deaths occurred in the Infant Health period. The Maternal Health/Prematurity risk period contributed another 35.3% of excess deaths. Maternal Care and Newborn Care periods contributed 12.8% and 3.7% respectively
- Overall, Hispanics had the highest excess F-IMR (3.7). **Potentially 42% of Hispanic fetal and infant deaths were preventable**
- Hispanics had the highest excess rate in the Infant Health period; 7 times that of the White rate for Lubbock county
- Hispanics also had the highest excess rate in the Maternal Health/Prematurity risk period (1.1); nearly 3 times as high as the White excess rate

Recommendation

1. Target Maternal Health/Prematurity and Infant Health-related interventions to Hispanics

Areas with the Greatest Potential Impact:

Infant Health and Maternal Health/Prematurity among Hispanics

* 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) death in Lubbock 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 to Whites and Hispanics, with all deaths to Whites attributed to VLBW (Figure 3)
- Birth weight specific mortality (mortality rate among VLBW babies) among Hispanics also contributed (27.8%) to fetoinfant mortality in the MHP period

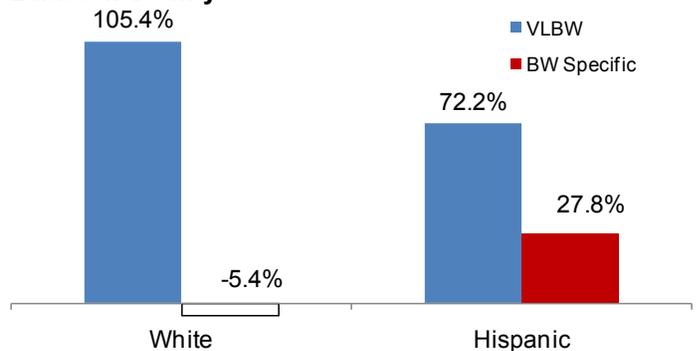
VLBW-Related Modifiable Risk Factors:

- Risk factors contributing most to VLBW:
 - Weight gain less than 15 lbs.
 - Teen pregnancy
 - High parity (i.e. number of pregnancies) for age
- 14% 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
 - To have high parity for their ages
- Blacks and Hispanics had greater proportions of teen mothers

BW Specific Modifiable Risk Factors for VLBW Births:

- Birth defects and inadequate prenatal care may have contributed to death among VLBW babies

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



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

- Blacks, Hispanics, and teens were more likely than the reference group to have inadequate prenatal care and premature rupture of membranes

Recommendations:

- Reduce the number of women gaining less than 15 lbs.
- Target interventions that reduce high parity for age
- Reduce rates of teen pregnancy
- Improve access to and use of prenatal care for all race groups and teens
- Stress importance of early entry into care
- Target interventions that reduce birth defects

Phase II: Infant Health (IH)

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

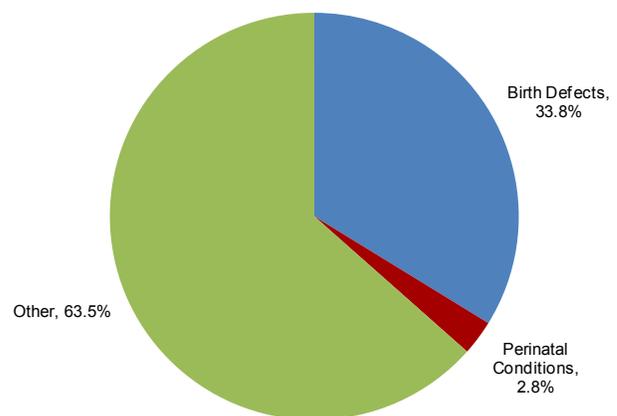
Causes of Infant Health-related death (Figure 4):

- Birth defects were the primary cause of death in the IH period accounting for 33.8% of excess deaths
- Perinatal conditions (primarily disorders related to short gestation and to complications of pregnancy, labor, and delivery) represented 2.8% of excess deaths
- Teen pregnancy and parental smoking were risk factors contributing most to IH-related infant death

Recommendations:

- Target interventions that reduce birth defects
- Target interventions that reduce teen pregnancy
- Target interventions that reduce parental smoking

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



Phase II: Maternal Care (MC)

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

- Hispanics and Blacks were 1.7 times as likely to have gained less than 15 lbs. compared to the reference group
- Black and teen mothers were more likely than the reference group to smoke during their pregnancy

Recommendations:

- Target interventions aimed at Hispanic and Black 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