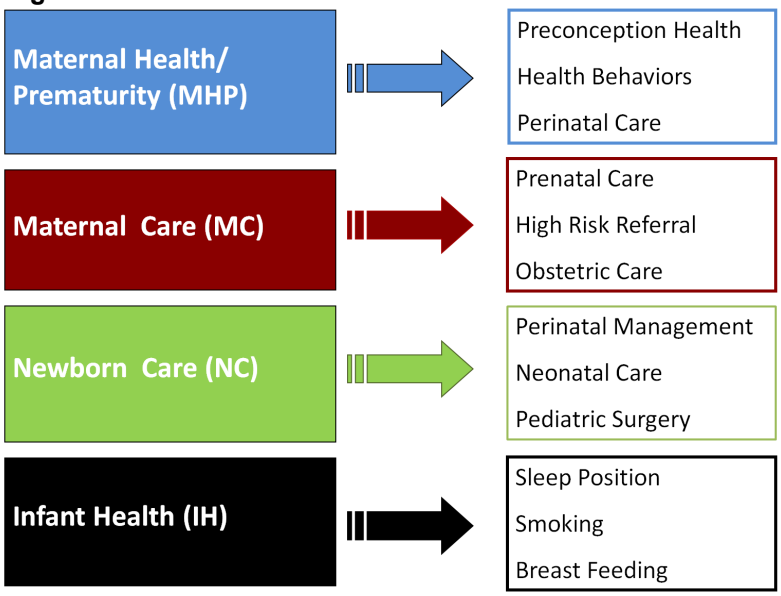
Feto-Infant Mortality in Webb County

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

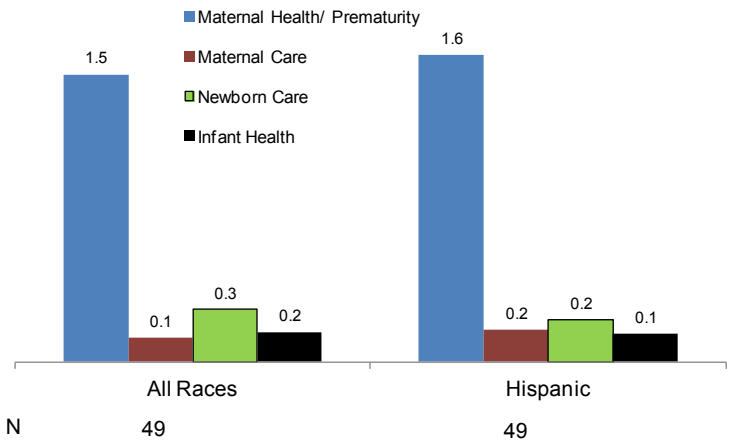
- 7.1/1,000 live births for all races
- 7.2 for Hispanics

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):

- 2.0 for all races
- 2.1 for Hispanics

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

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



- Overall, 72.9% of excess deaths occurred in the Maternal Health/Prematurity risk period. The Newborn Care period contributed another 13.2% of excess deaths. The Infant Health and Maternal Care periods contributed 7.7% and 6.2% respectively
- Overall, the excess F-IMR was 2.0. **Potentially 28% of fetal and infant deaths were preventable**
- The highest excess rates occurred in the Maternal Health/Prematurity risk period, with Hispanics having an excess rate of 1.6
- 98% of all births in Webb County from 2005-2008 were to Hispanic mothers
- 18% of Webb County births were to teens

Recommendation

1. Target Maternal Health/Prematurity

Area with the Greatest Potential Impact:
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) death in Webb County: fetal and infant deaths weighing 500-1,499 grams

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

- A larger percentage of feto-infant deaths in the MHP period are due to higher mortality rates among VLBW babies (Figure 3)
- 26.5% of excess deaths are attributed to a greater number of VLBW births

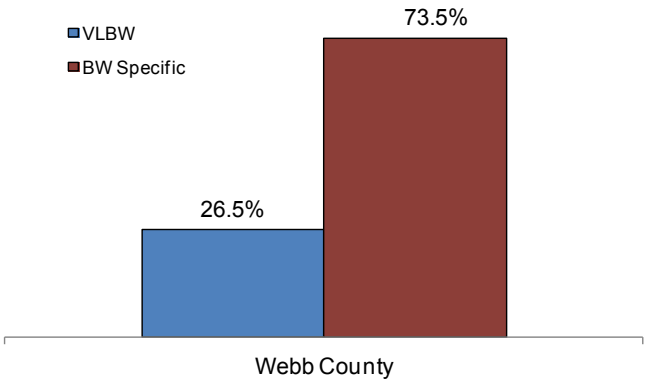
VLBW-Related Modifiable Risk Factors:

- The risk factors contributing most to VLBW were:
  - Weight gain less than 15 lbs.
  - Smoking
  - Teen pregnancy
- 15% of VLBW births were attributed to weight gain less than 15 lbs
- Hispanics were more likely to gain less than 15 lbs. during pregnancy and had higher rates of teen pregnancy

BW Specific Modifiable Risk Factors for VLBW Births:

- Inadequate prenatal care contributed to 20% of BW specific deaths

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



- Hispanics were more likely than the reference group to have inadequate prenatal care

Recommendations:

- Reduce the number of women gaining less than 15 lbs. during pregnancy
- Improve access to and use of prenatal care
- Stress importance of early entry into care
- Target interventions that reduce teen pregnancy
- Target interventions that reduce parental smoking