

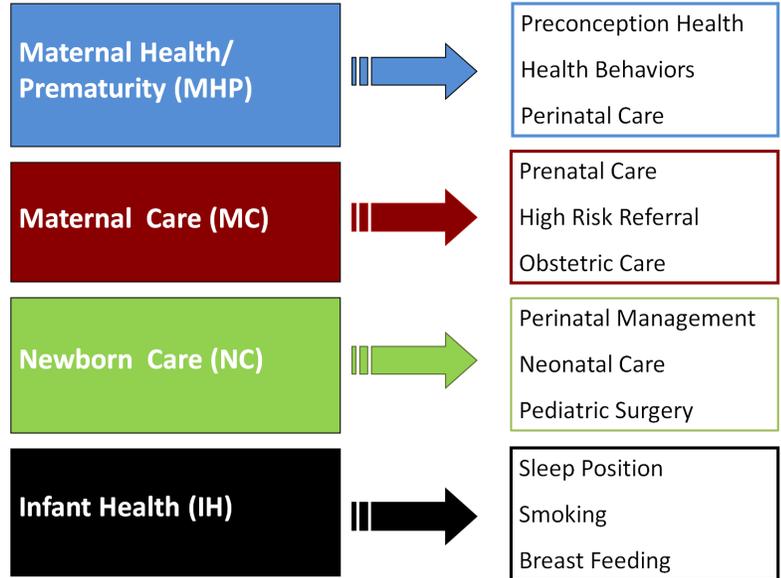


# Feto-Infant Mortality in Nueces County

## 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 Nueces County

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

- 7.9/1,000 live births for all races
- 7.6 for Hispanics

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

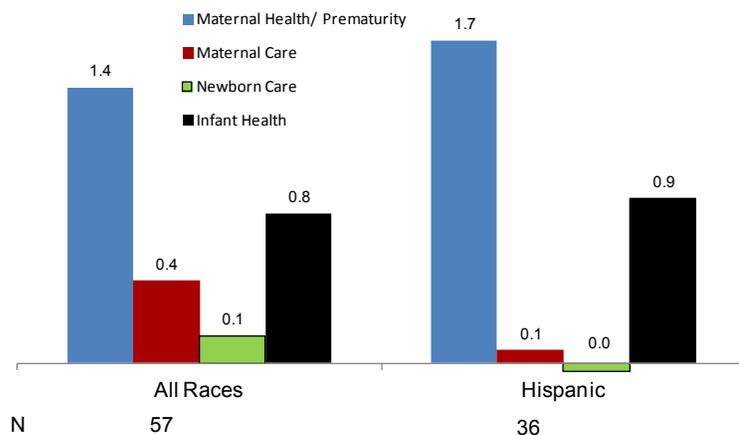
The excess F-IMR was (Figure 2):

- 2.8 for all races
- 2.6 for Hispanics

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

- Overall, 51.4% of excess deaths occurred in the Maternal Health/Prematurity risk period. The Infant Health period contributed another 28.0% of excess deaths. The Maternal Care and Newborn Care periods contributed 15.4% and 5.2% respectively
- Overall, the excess F-IMR was 2.8. **Potentially 35% 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 1.7
- 68% of all births in Nueces County from 2005-2008 were to Hispanic mothers

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



### Recommendation

1. Target Maternal Health/Prematurity
2. Target Infant Health to Hispanics

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 Nueces 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 a greater number of VLBW births to Nueces County mothers (Figure 3)
- Birth weight specific mortality (mortality rate among VLBW babies) also contributed (33.9%) to feto-infant death in the MHP period

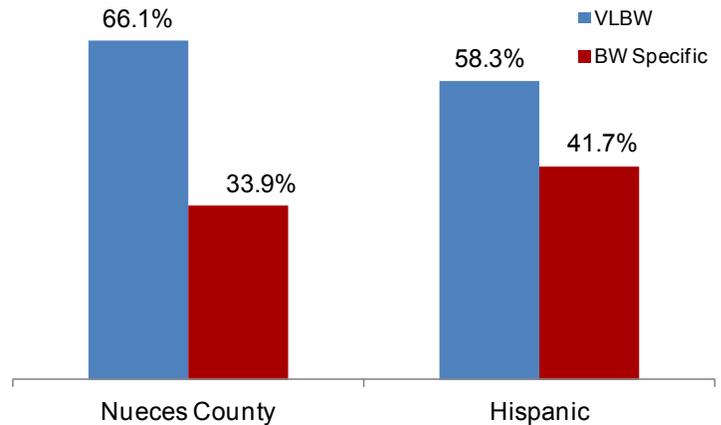
**VLBW-Related Modifiable Risk Factors:**

- The risk factors contributing most to VLBW were:
  - Weight gain less than 15 lbs.
  - Smoking
- 19% of VLBW births were attributed to weight gain less than 15 lbs
- Hispanics were more likely to gain less than 15 lbs. during pregnancy

**BW Specific Modifiable Risk Factors for VLBW Births:**

- Inadequate prenatal care contributed to 20% of BW specific deaths
- Premature rupture of membranes also contributed
- Hispanics were more likely than the reference group to have inadequate prenatal care and premature rupture of membranes

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



**Recommendations:**

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

## Phase II: Infant Health (IH)

**Infant Health death in Nueces 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 Infant Health-related deaths, birth defects and perinatal conditions (primarily disorders related to short gestation and to complications of pregnancy, labor, and delivery ) were the primary causes, representing 46.9% of infant deaths in this period
- Infections (3.8%) also contributed
- Inadequate prenatal care was the risk factor contributing most to IH-related death

**The following recommendations should be targeted towards teens in Nueces County:**

- Target interventions that reduce birth defects
- Target interventions that Reduce prematurity
- Improve access to and use of prenatal care
- Stress importance of early entry into care

**Figure 4: IH-Related Death by Cause, Nueces County**

