

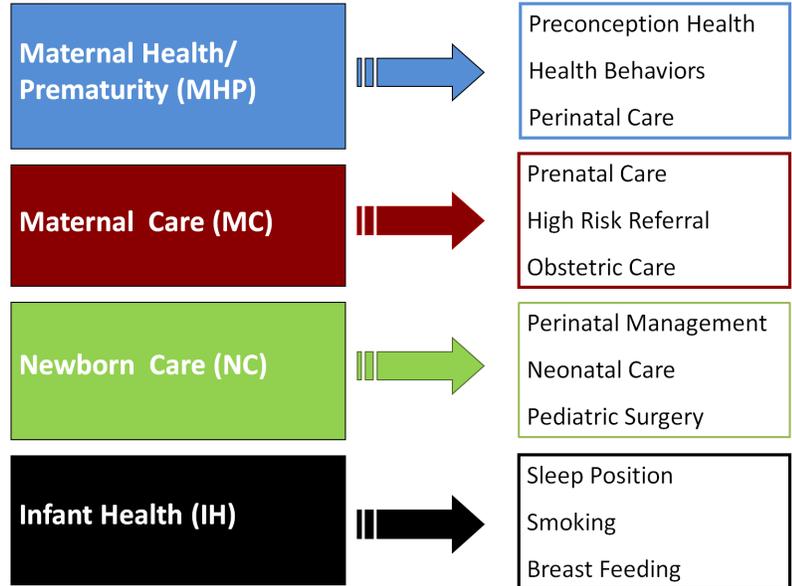


# Feto-Infant Mortality in Health Service Region 2/3

## 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 HSR 2/3

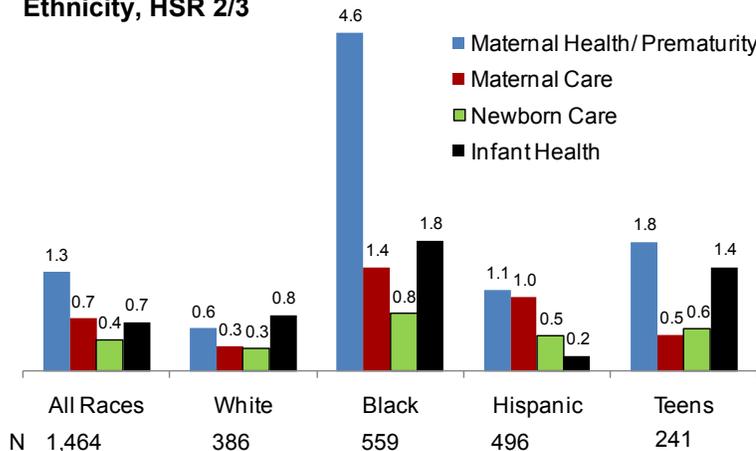
2005-2008 feto-infant mortality rates\* (F-IMR) were:

- 13.7/1,000 live births for Blacks
- 7.9 for Hispanics
- 7.1 for Whites
- 9.3 for teens

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):

- 8.6 for Blacks
- 2.0 for Whites
- 2.8 for Hispanics
- 4.3 for teens

Figure 2: Excess Feto-infant Mortality Rates by Race/Ethnicity, HSR 2/3



- Blacks had the highest excess F-IMR for each of the 4 risk periods. **Potentially 63% of Black fetal and infant deaths were preventable**
- For Blacks, 54% of the overall excess deaths occurred in the Maternal Health/Prematurity risk period, with an excess rate 8 times that of Whites
- For teens, 42% of excess deaths occurred in the Maternal Health/Prematurity, and 33.5% occurred in the Infant Health risk periods
- In the Infant Health risk period, the rate of excess feto-infant mortality among Blacks was 2.3 times that of Whites and 9 times that of Hispanics

### Recommendations

- Target Maternal Health/Prematurity, Infant Health, and Maternal Care-related interventions for Blacks
- Target Maternal Health/Prematurity and Infant Health-related interventions for teens
- Target Maternal Health/Prematurity and Maternal Care-related deaths among Hispanics
- Target Infant Health-related deaths among the White population

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

\* F-IMR = number of fetal and infant deaths  $\geq 500$  grams and  $\geq 24$  weeks gestation / number of live births & fetal deaths  $\geq 500$  grams and  $\geq 24$  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 HSR 2/3: 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 and teens, with 92.5% of deaths among Blacks attributed to VLBW (Figure 3)
- Hispanic and White deaths are primarily due to higher mortality rates at specific birth weight categories (Indicates a higher mortality rate among VLBW babies)

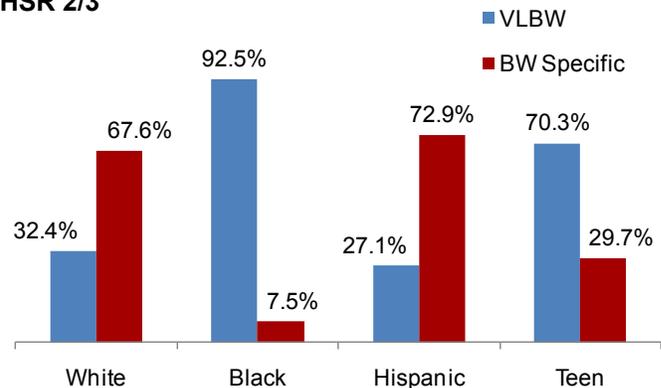
**VLBW-Related Modifiable Risk Factors:**

- Risk factors contributing most to VLBW:
  - Weight gain less than 15 lbs.
  - Inadequate prenatal care
  - Teen pregnancy
- 15% 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
  - To have inadequate prenatal care and start prenatal care after the first trimester
  - Had greater proportions of teen mothers

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

- Inadequate prenatal care contributed to 6.9% of VLBW fetoinfant deaths

**Figure 3: VLBW vs. Birth Weight Specific Mortality, HSR 2/3**



- Premature rupture of membranes, less than 13 years of education and birth defects also figured prominently
- Blacks, Hispanics, and teens had higher rates of inadequate prenatal care
- Blacks, Hispanics, and teens had higher rates of premature rupture of membranes

**Recommendations:**

- Improve access to and use of prenatal care for Blacks, Hispanics, and teens
- Stress importance of early entry into care
- Reduce the number of women gaining less than 15 lbs.
- Reduce rates of teen pregnancy
- Reduce rates of premature rupture of membranes

## Phase II: Infant Health (IH)

**Infant Health deaths in HSR 2/3: infants weighing more than 1,500g at birth and survived to more than 28 days**

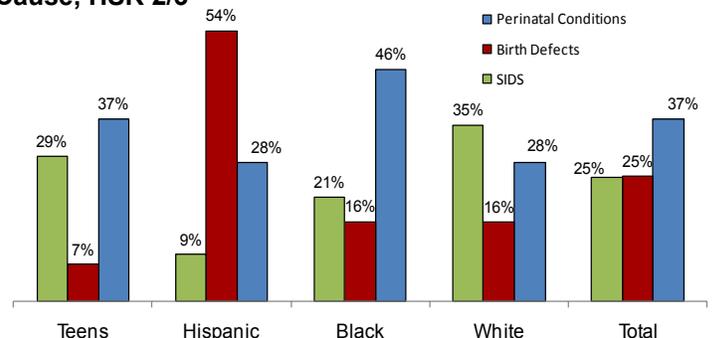
**Causes of Infant Health-related death (Figure 4):**

- Perinatal conditions (primarily disorders related to short gestation and to complications of pregnancy, labor, and delivery) were the primary cause of death in the IH period accounting for 37% of excess deaths; 46% of excess deaths among Blacks and 37% among teens
- SIDS accounted for 35% among Whites
- Birth defects accounted for 54% among Hispanics
- No breast feeding at hospital discharge, Inadequate prenatal care and parental smoking were risk factors contributing most to IH-related infant death

**Recommendations:**

- Reduce prematurity among Blacks and teens
- Reduce birth defects among all race groups and teens

**Figure 4: Excess IH-Related Death by Race/Ethnicity and Cause, HSR 2/3**



- Target interventions that increase breast feeding
- Reduce SIDS among all race groups and teens
- Improve access to and use of prenatal care
- Target interventions that reduce parental smoking

## Phase II: Maternal Care (MC)

**Maternal Care risk period deaths in HSR 2/3:**

**fetal deaths greater than or equal to 1,500 grams**

- Blacks were 1.6 and Hispanics 1.2 times as likely to have gained less than 15 lbs. compared to the reference group
- Hispanics were more likely than the reference group to have diabetes

**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/control diabetes among Hispanic women