

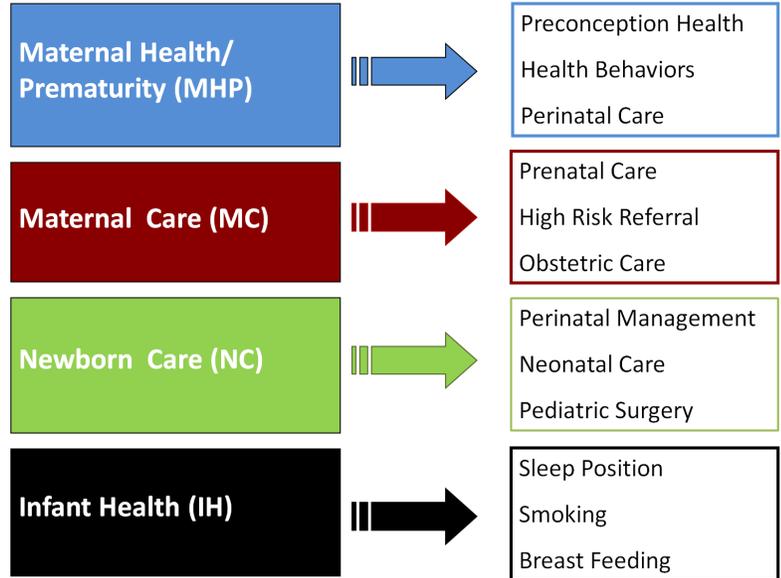


# Feto-Infant Mortality in Tarrant County

## 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 Tarrant County

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

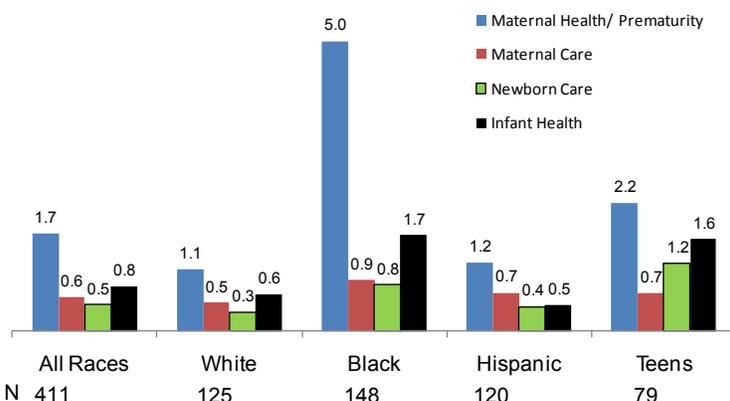
- 13.5/1,000 live births for Blacks
- 7.8 for Hispanics
- 7.6 for Whites
- 10.7 for teens

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):

- 8.4 for Blacks
- 2.8 for Hispanics
- 2.6 for Whites
- 5.6 for teens

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



\* 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

- Overall, 48.1% of excess deaths occurred in the Maternal Health/Prematurity risk period. The Infant Health period contributed another 22.1% of excess deaths. Maternal Care and Newborn Care periods contributed 16.7% and 13.1% respectively
- Overall, Blacks had the highest excess F-IMR (8.4). **Potentially 62% of Black fetal and infant deaths were preventable**
- Blacks had the highest excess rates in the Maternal Health/Prematurity and Infant Health risk periods, with a rate 4.5 times that of the White rate in the Maternal Health/Prematurity period
- Teens also had relatively high excess rates in the Maternal Health/Prematurity and Infant Health risk periods
- Among Hispanics and Whites, the Maternal Health/Prematurity was most problematic

### Recommendation

- Target Maternal Health/Prematurity and Infant Health-related interventions to Blacks and teens
- Target Maternal Health/Prematurity related interventions to Hispanics and Whites

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

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 Tarrant County: fetal and infant deaths weighing 500-1,499 grams**

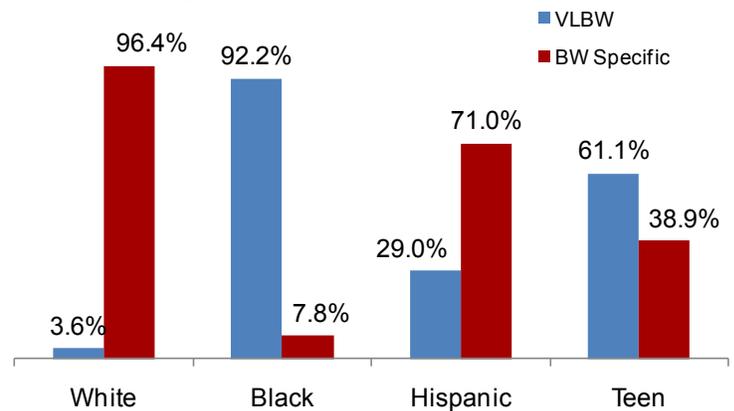
**Very Low Birth Weight (VLBW) vs. Birth weight Specific mortality:**

- A larger percentage of fetoinfant deaths in the MHP period are due to a greater number of VLBW births to Blacks and teens with 92.2% of deaths to Blacks attributed to VLBW (Figure 3)
- White and Hispanic 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
  - Parental smoking
- 16% 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
- Teens were more likely to have inadequate prenatal care
- Blacks and Hispanics had greater proportions of teen mothers

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



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

- Inadequate prenatal care and birth defects contributed most to BW specific mortality

**Recommendations:**

- Reduce the number of women gaining less than 15 lbs.
- Reduce rates of teen pregnancy
- Improve access to and use of prenatal care for all race groups and teens
- Target interventions that reduce parental smoking
- Target interventions that reduce birth defects

## Phase II: Infant Health (IH)

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

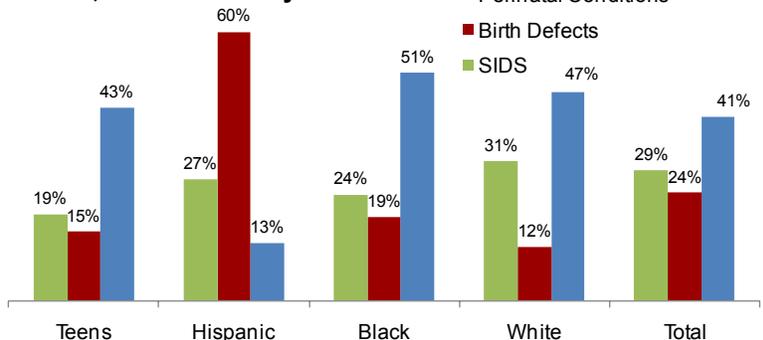
**Causes of Infant Health-related death (Figure 4):**

- Perinatal conditions (primarily disorders related to short gestation and to complications of pregnancy, labor, and delivery) was the primary cause of death in the IH period representing 41% of excess deaths
- SIDS and birth defects accounted for 29% and 24%, respectively
- No breast feeding at hospital discharge, inadequate prenatal care, teen pregnancy and parental smoking were risk factors contributing most to IH-related infant death

**Recommendations:**

- Target interventions that reduce prematurity and birth defects among Blacks and teens

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



- Target interventions that promote breast feeding
- Improve access to and use of prenatal care
- Target interventions that reduce teen pregnancy
- Target interventions that reduce parental smoking

## Phase II: Maternal Care (MC)

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

- Blacks and Hispanics were 1.6 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 to Hispanic women that reduce/control diabetes