

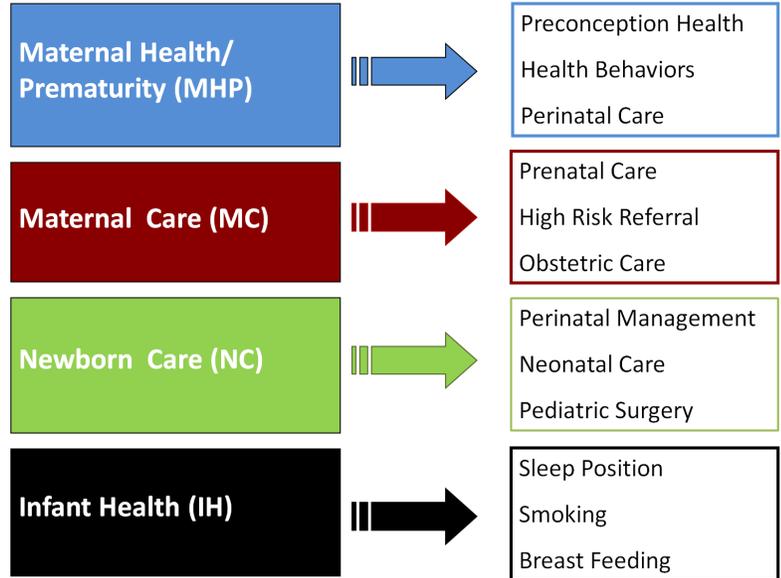


# Feto-Infant Mortality in Jefferson County

## 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 Jefferson County

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

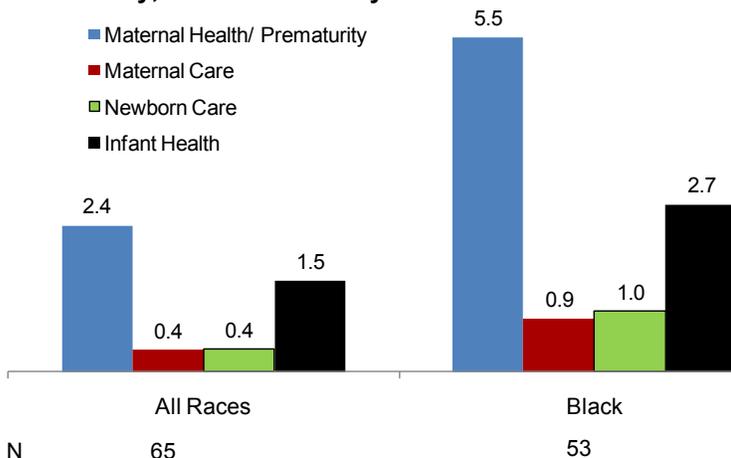
- 9.7/1,000 live births for all races
- 15.1 for Whites

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):

- 4.6 for all races
- 10.1 for Whites

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



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

- Overall, 51.7% of excess deaths occurred in the Maternal Health/Prematurity risk period. The Infant Health period contributed another 32.4% of excess deaths. Maternal Care and Newborn Care periods contributed 7.7% and 8.2% respectively
- The excess F-IMR among Blacks was 10.1. **Potentially 67% of fetal and infant deaths were preventable**
- The highest excess rate among Blacks occurred in the Maternal Health/Prematurity risk period

### Recommendation

1. Target interventions related to Maternal Health/Prematurity and Infant Health to county residents

### Area with the Greatest Potential Impact:

Maternal Health/Prematurity to all county residents

\* 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 Jefferson 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 with 77.5% of deaths at the county level attributed to VLBW (Figure 3)
- Birth weight specific mortality (mortality rate among VLBW babies) also contributed to feto-infant mortality in the MHP period

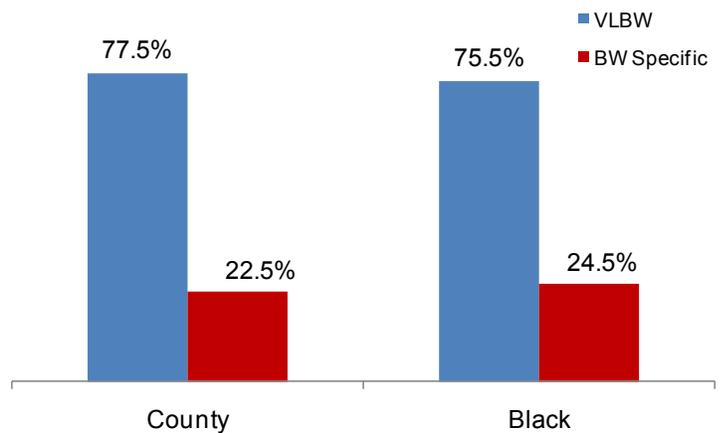
### VLBW-Related Modifiable Risk Factors:

- The risk factors contributing most to VLBW:
  - Weight gain less than 15 lbs.
  - Inadequate prenatal care
  - Less than 13 years of education
- 16% of VLBW births were attributed to weight gain less than 15 lbs
- Blacks, Hispanics, and teens were more likely to have inadequate prenatal care
- Blacks and Hispanics were more likely to gain less than 15 lbs. during pregnancy

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

- Diabetes contributed to 23% of BW specific deaths
- Black mothers were more likely to have diabetes

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



### Recommendations:

- Reduce the number of women gaining less than 15 lbs.
- Improve access to and use of prenatal care
- Stress importance of early entry into care
- Provide opportunities/incentives for continuing education beyond high school for women of child-bearing ages
- Target interventions that reduce/control diabetes among Black mothers

## Phase II: Infant Health (IH)

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

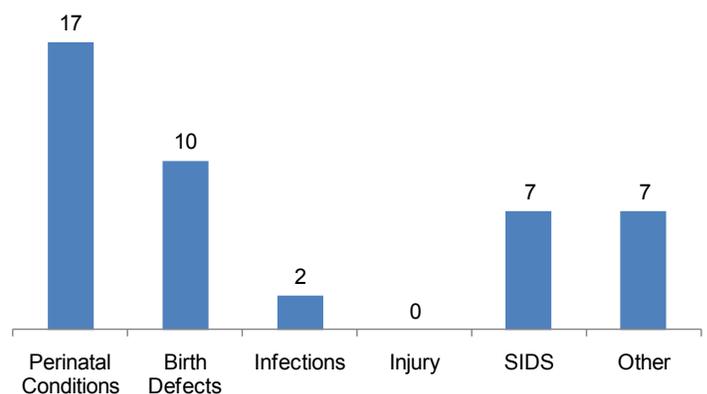
### Causes of Infant Health-related death (Figure 4):

- Of the 43 Infant Health-related deaths, perinatal conditions (primarily disorders related to short gestation and to complications of pregnancy, labor, and delivery) and birth defects were the primary causes representing 40% of infant deaths in this period
- Blacks accounted for 12 of the perinatal conditions-related and 8 of the birth defects-related IH infant deaths
- Teens accounted for 5 of the 17 IH deaths attributed to perinatal conditions
- Inadequate prenatal care and no breast feeding at hospital discharge contributed to 9.3% and 8.6% of IH-related infant deaths, respectively.

### Recommendations:

- Target interventions that reduce prematurity

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



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