

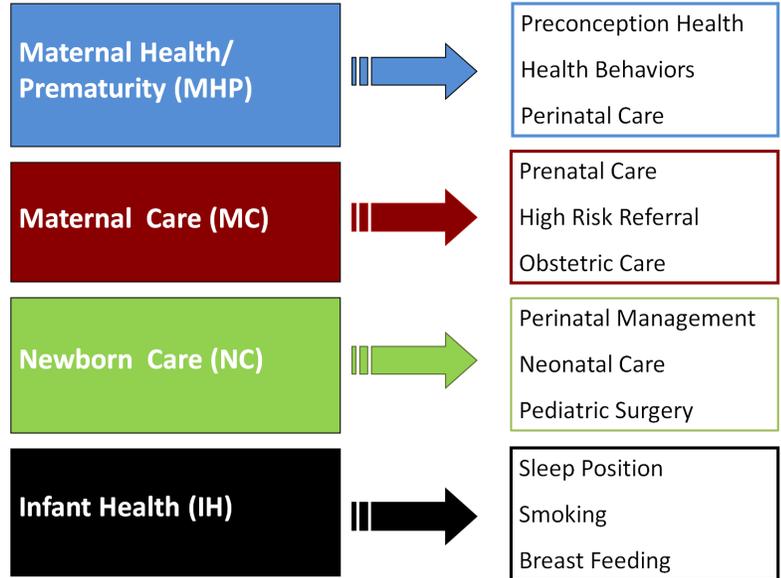


Feto-Infant Mortality in Health Service Region 1

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 1

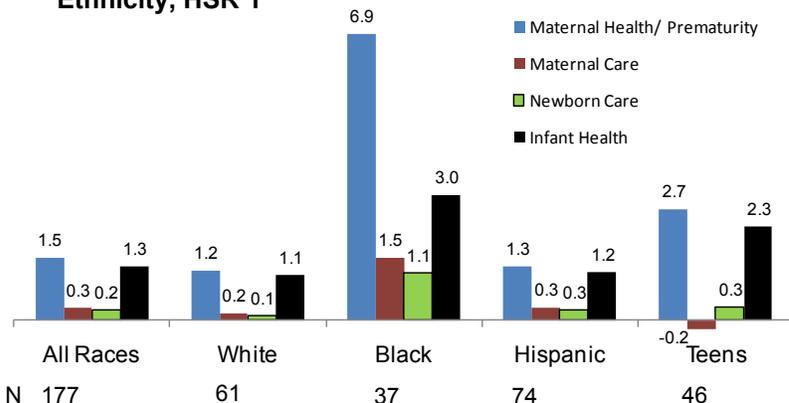
2005-2008 feto-infant mortality rates* (F-IMR) were:

- 17.6/1,000 live births for Blacks
- 8.1 for Hispanics
- 7.6 for Whites
- 10.1 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):

- 12.6 for Blacks
- 2.6 for Whites
- 3.0 for Hispanics
- 5.1 for teens

Figure 2: Excess Feto-infant Mortality Rates by Race/Ethnicity, HSR 1



- Overall, 45.2% of excess deaths occurred in the Maternal Health/Prematurity risk period. The Infant Health period contributed another 38.4% of excess deaths. Maternal Care and Newborn Care periods contributed 9.0% and 7.4% respectively
- Blacks had the highest excess F-IMR for each of the 4 risk periods. **Potentially 72% of Black fetal and infant deaths were preventable**
- For Blacks, 54.8% of the overall excess deaths occurred in the Maternal Health/Prematurity risk period, with an excess rate 6 times that of Whites
- The rate of excess feto-infant mortality among Blacks was nearly 3 times that of Whites in the Infant Health period, and 7.5 times the White rate in the Maternal Care period
- For teens, 53.4% of excess deaths occurred in the Maternal Health/Prematurity period, and 44.6% occurred in the Infant Health risk period

Recommendations

1. Target Maternal Health/Prematurity, Infant Health, and Maternal Care-related interventions for Blacks
2. Target Maternal Health/Prematurity and Infant Health-related interventions for Whites, Hispanics, and teens

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 1: 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 81.7% 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)

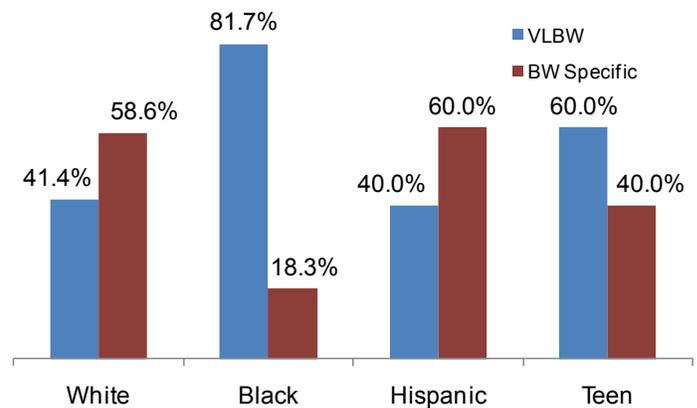
VLBW-Related Modifiable Risk Factors:

- Risk factors contributing most to VLBW:
 - Weight gain less than 15 lbs.
 - No first trimester prenatal care
 - Teen pregnancy
 - Sexually transmitted disease (STD)
- 17% of VLBW births were attributed to weight gain less than 15 lbs
- All race groups and teens:
 - Were more likely than reference group to gain less than 15 lbs. during pregnancy
 - To start prenatal care after the first trimester
 - Were more likely to have an STD
- Blacks and Hispanics had greater proportions of teen mothers

BW Specific Modifiable Risk Factors for VLBW Births:

- Premature rupture of membranes contributed to 9.3% of VLBW fetoinfant deaths

Figure 3: VLBW vs. Birth Weight Specific Mortality, HSR 1



- Teen pregnancy, inadequate prenatal care and birth defects also figured prominently
- Blacks, Hispanics, and teens had the highest rates of inadequate prenatal care
- Teens and Blacks had higher rates of premature rupture of membranes

Recommendations:

- Improve access to and use of prenatal care for all race groups 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 1: infants weighing more than 1,500g at birth and survived to more than 28 days

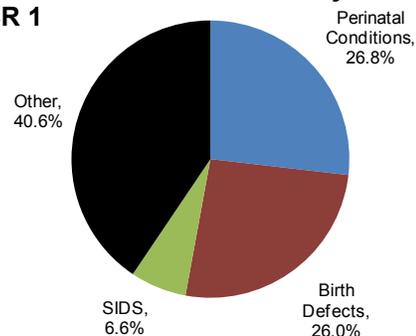
Causes of Infant Health-related death (Figure 4):

- Perinatal conditions (primarily disorders related to short gestation and to complications of pregnancy, labor, and delivery) and birth defects were the primary causes of death in the IH period, representing 26.8% and 26.0% of excess deaths, respectively
- SIDS accounted for 6.6% of IH-related excess deaths
- 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 all race groups and teens
- Reduce birth defects among all race groups and teens

Figure 4: Excess IH-Related Death by Race/Ethnicity and Cause, HSR 1



- 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 1:

fetal deaths greater than or equal to 1,500 grams

- Blacks were 2.3 and Hispanics 1.9 times as likely to have gained less than 15 lbs. compared to the reference group
- Blacks were more likely than the reference group to have smoke during pregnancy

Recommendations:

- Target interventions aimed at Black and Hispanic women to reduce the number of pregnant women gaining less than 15 lbs.
- Target interventions to Black women that reduce parental smoking during pregnancy among