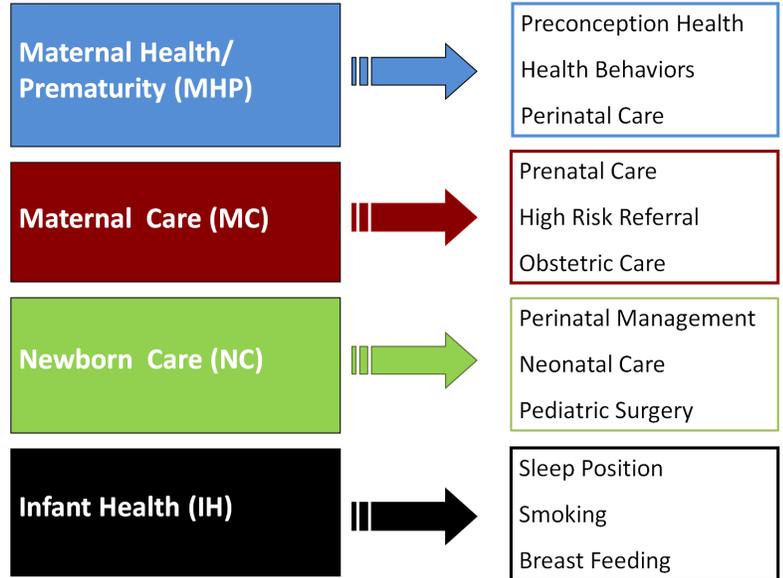


Feto-Infant Mortality in Bexar County

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 Bexar County

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

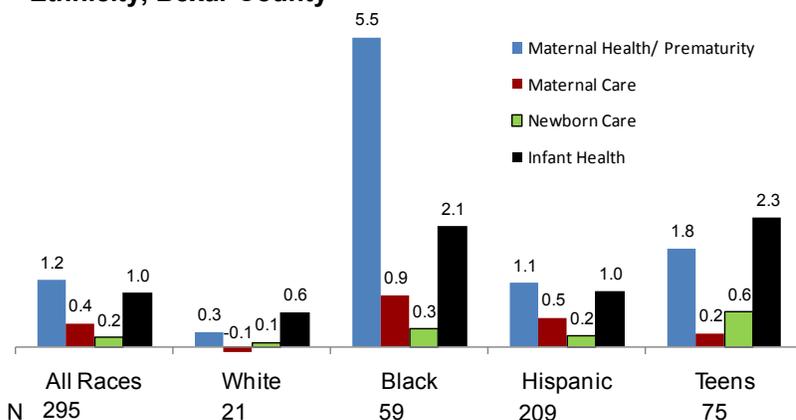
- 14.0/1,000 live births for Blacks
- 7.9 for Hispanics
- 5.9 for Whites
- 10.0 for teens

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):

- 8.9 for Blacks
- 2.8 for Hispanics
- 0.9 for Whites
- 4.9 for teens

- Overall, 43.6% of excess deaths occurred in the Maternal Health/Prematurity risk period. The Infant Health period contributed another 35.0% of excess deaths. Maternal Care and Newborn Care periods contributed 15.4% and 6.0% respectively
- Overall, Blacks had the highest excess F-IMR (8.9). **Potentially 64% of Black fetal and infant deaths were preventable**
- Blacks had the highest excess rate in the Maternal Health/Prematurity risk period; 18 times that of the White rate
- Teens had the highest excess rate in the Infant Health risk period with a rate 4 times that of the White rate

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

Recommendation

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

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

Phase II: Maternal Health and Prematurity (MHP)

Maternal Health/Prematurity (MHP) death in Bexar County: fetal and infant deaths weighing 500-1,499 grams

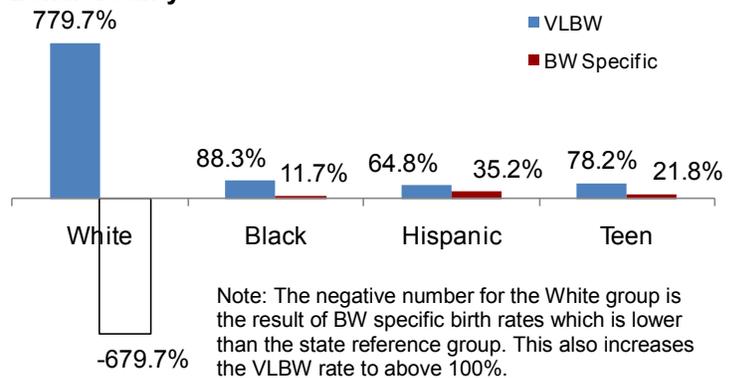
Very Low Birth Weight (VLBW) vs. perinatal mortality:

- A larger percentage of fetoinfant deaths in the MHP period are due to a greater number of VLBW births to Whites, Blacks and teens with all deaths to Whites attributed to VLBW (Figure 3)
- Birth weight specific mortality (mortality rate among VLBW babies) among Hispanics, Blacks, and teens also contributed to fetoinfant mortality in the MHP period

VLBW-Related Modifiable Risk Factors:

- Risk factors contributing most to VLBW:
 - Weight gain less than 15 lbs.
 - High parity (i.e. number of pregnancies) for age
 - Teen pregnancy
 - Inadequate prenatal care
 - Parental smoking
- 17% of VLBW births were attributed to weight gain less than 15 lbs
- Blacks, Hispanics, and teens were more likely to:
 - Gain less than 15 lbs. during pregnancy
 - To have high parity for age
 - To have inadequate prenatal care
- Blacks and Hispanics had greater proportions of teen mothers

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



BW Specific Modifiable Risk Factors for VLBW Births:

- Birth defects contributed to 10% of BW specific deaths

Recommendations:

- Reduce the number of women gaining less than 15 lbs.
- Target interventions that reduce high parity for age
- Reduce rates of teen pregnancy
- Improve access to and use of prenatal care for all race groups and teens
- Stress importance of early entry into care
- Target interventions that reduce birth defects

Phase II: Infant Health (IH)

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

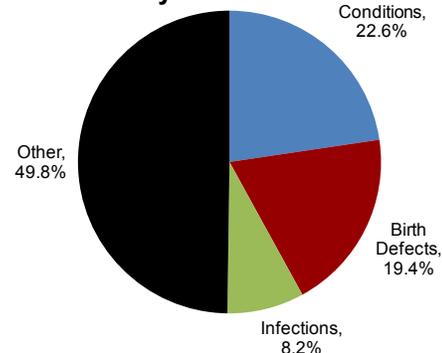
Causes of Infant Health-related death (Figure 4):

- 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 22.6% of excess deaths
- Birth defects also contributed, accounting for 19.4% of excess deaths
- 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
- Target interventions that reduce birth defects

Figure 4: Excess IH-Related Death by Race/Ethnicity and Cause, Bexar 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 Bexar County: fetal deaths greater than or equal to 1,500 grams

- Blacks and Hispanics were 1.9 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