

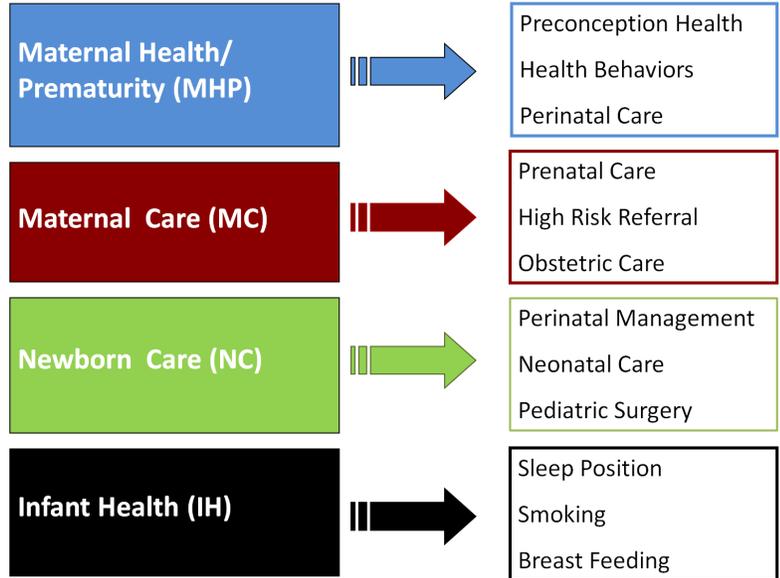


Feto-Infant Mortality in El Paso County

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 El Paso County

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

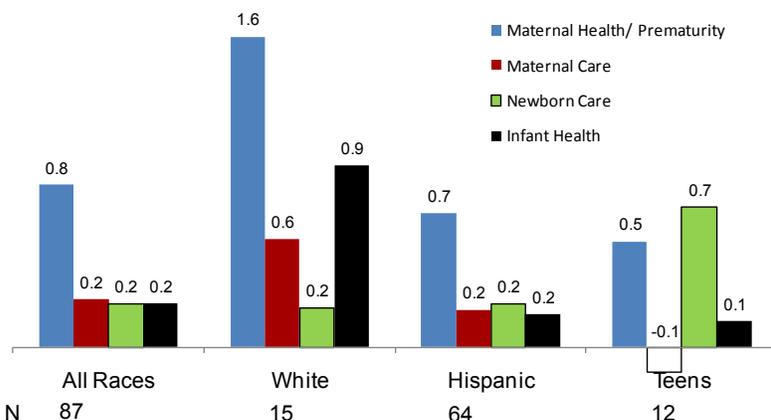
- 6.6/1,000 live births for all races
- 6.3 for Hispanics
- 8.3 for Whites
- 6.3 for teens

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):

- 1.5 for all races
- 1.3 for Hispanics
- 3.3 for Whites
- 1.3 for teens

- Overall, 54.6% of excess deaths occurred in the Maternal Health/Prematurity risk period. The Maternal Care period contributed another 16.1% of excess deaths. Infant Health and Newborn Care periods contributed 14.7% and 14.6% respectively
- Overall, Whites had the highest excess F-IMR (3.3). **Potentially 40% of White fetal and infant deaths were preventable**
- Whites had the highest excess rates in the Maternal Health/Prematurity, Infant Health, and Maternal Care risk periods
- Teens had the highest excess rate in the Newborn Care risk period

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



* 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

Recommendation

1. Target Maternal Health/Prematurity to all race groups and teens
2. Target Infant Health to Whites

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

Phase II: Maternal Health and Prematurity (MHP)

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

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

- A larger percentage of fetio-infant deaths in the MHP period are due to a greater number of VLBW births to teens, Hispanics and Whites with all deaths to teens and Hispanics attributed to VLBW (Figure 3)
- Birth weight specific mortality (mortality rate among VLBW babies) among Whites also contributed (23.2%) to fetio-infant death in the MHP period.

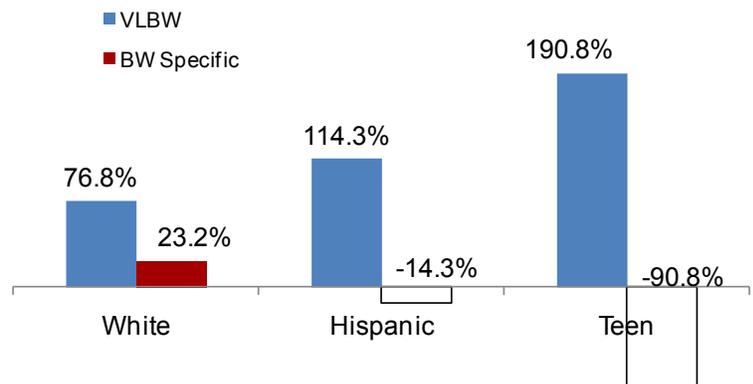
VLBW-Related Modifiable Risk Factors:

- Risk factors contributing most to VLBW:
 - Weight gain less than 15 lbs.
 - High parity (i.e. number of pregnancies) for age
- 20% 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 their ages

BW Specific Modifiable Risk Factors for VLBW Births:

- Inadequate prenatal care contributed to 10% of BW specific deaths
- Birth defects also contributed
- Blacks, Hispanics, and teens were more likely to have inadequate prenatal care

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



Note: Negative numbers are the result of BW specific birth rates which are lower than the state reference group. This also increases the VLBW rates to above 100%.

Recommendations:

- Reduce the number of women gaining less than 15 lbs.
- Target interventions that reduce high parity for age
- 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 El Paso County: infants weighing more than 1,500g at birth and survived to more than 28 days

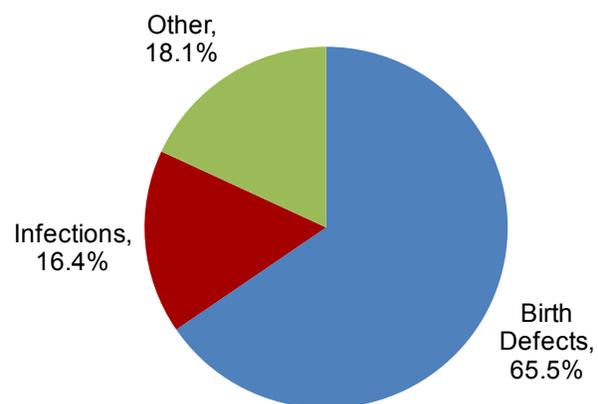
Causes of Infant Health-related death (Figure 4):

- Birth defects were the primary cause of death in the IH period representing 65.5% of excess deaths
- Infections also contributed, accounting for 16.4% of excess deaths
- No breast feeding at hospital discharge, inadequate prenatal care and no first trimester prenatal care were risk factors contributing most to IH-related infant death

Recommendations:

- Target interventions that reduce birth defects
- Target interventions that reduce infections
- Target interventions that promote breast feeding
- Improve access to and use of prenatal care for all race groups and teens

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



- Stress importance of early entry into care

Phase II: Maternal Care (MC)

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

- Blacks and Hispanics were 1.7 times as likely to have gained less than 15 lbs. compared to the reference group

Recommendations:

- Target interventions aimed at Black and Hispanic women to reduce the number of pregnant women gaining less than 15 lbs.