

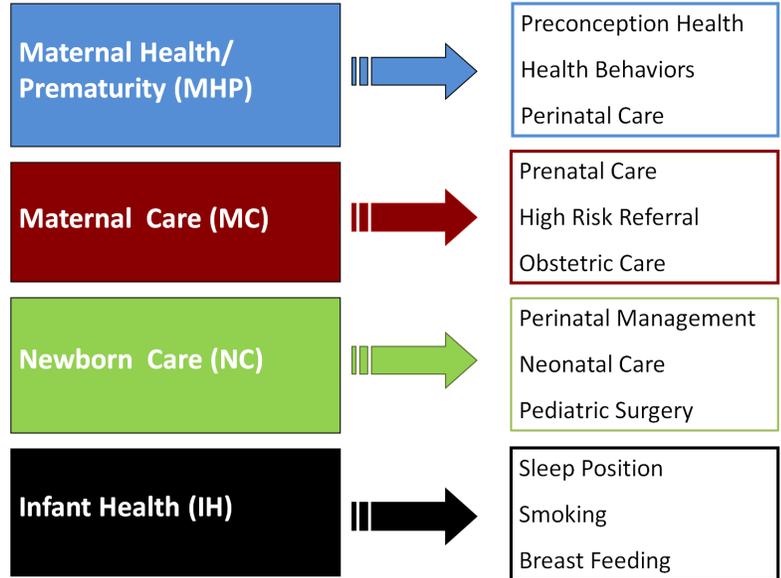


Feto-Infant Mortality in Denton County

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 Denton County

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

- 6.0/1,000 live births for all races
- 6.1 for Hispanics
- 5.8 for Whites

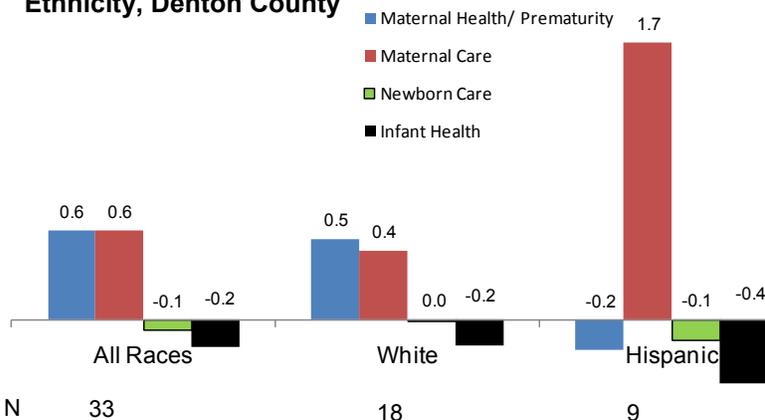
Excess F-IMR is the difference between the exposure group (i.e. Black, White, Hispanic, teen) and the reference group. The excess F-IMR was (Figure 2):

- 0.9 for all races
- 1.0 for Hispanics
- 0.8 for Whites

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

- All excess deaths occurred in the Maternal Care and Maternal Health/Prematurity risk periods. Rates for Maternal Care and Newborn Care risk periods were less than the reference group resulting in negative excess rates for those periods
- The excess F-IMR was 0.9. **Potentially 15% of fetal and infant deaths were preventable**
- The highest excess rate among Hispanics occurred in the Maternal Care risk period with a rate more than 4 times that of Whites
- All of the excess Maternal Health/Prematurity-related deaths occurred among Whites

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



Recommendation

- Target Maternal Care-related interventions to Hispanics
- Target Maternal Health/Prematurity-related interventions to Whites

Area with the Greatest Potential Impact: Maternal Care among Hispanics

* 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 Denton 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, with VLBS contributing to 55.6 percent among Whites (Figure 3)
- Birth weight specific mortality (mortality rate among VLBW babies) among Hispanics also contributed to fetoinfant mortality in the MHP period, representing all of Hispanic MHP-related deaths

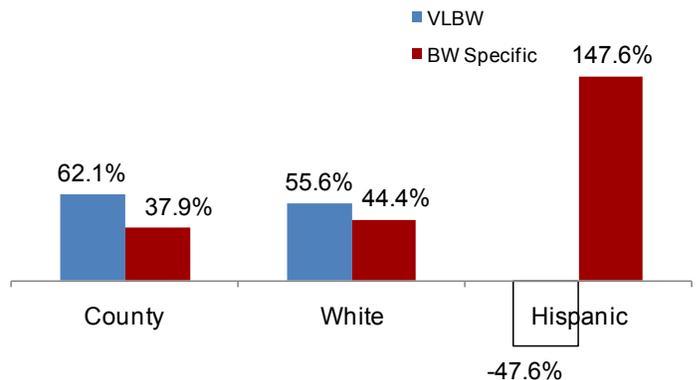
VLBW-Related Modifiable Risk Factors:

- The risk factors contributing most to VLBW were:
 - Weight gain less than 15 lbs. during pregnancy
 - Less than 12 years of education
 - Teen pregnancy
- 14% 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
- Blacks and Hispanics had higher teen pregnancy rates

BW Specific Modifiable Risk Factors for VLBW Births:

- Birth defects contributed to 9% of BW specific deaths
- Hispanics had higher rates of birth defects compared to the reference group

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



Note: The negative number among Hispanics is the result of the VLBW birth rate which is lower than the state reference group. This also increases the BW specific rate to above 100%.

Recommendations:

- Reduce the number of women gaining less than 15 lbs. during pregnancy
- Provide opportunities/incentives for continuing education beyond high school for women of child-bearing ages
- Reduce rates of teen pregnancy
- Target interventions that reduce birth defects among Hispanics

Phase II: Maternal Care (MC)

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

- Among Maternal Care risk factors examined, gaining less than 15 lbs. during pregnancy represented the majority of excess risk for Hispanics, with a rate 1.5 times that of the state reference group
- Blacks were also at increased risk for gaining less than 15 lbs. during pregnancy
- White and teen mothers were more likely to smoke during pregnancy

Recommendations:

- Target interventions to reduce the number of pregnant Hispanic and Black women gaining less than 15 lbs. during pregnancy
- Target interventions that reduce parental smoking among teens and other women of child-bearing ages