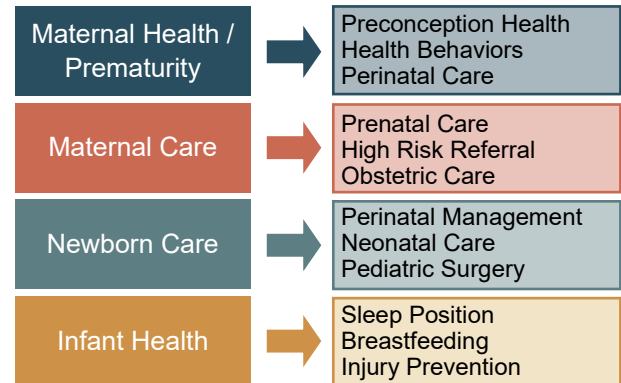


TARRANT COUNTY Perinatal Periods of Risk (PPOR)



- The goal of PPOR analysis is to prioritize and target prevention and intervention efforts in order to improve birth outcomes
- Phase I identifies subpopulations and periods of risk with the largest excess fetal and infant deaths
- Phase II explains why the excess deaths occurred and directs prevention efforts
- Analysis divides fetal and infant deaths into four risk periods within the health care continuum based on birth weight and age of death (Figure 1)
- Tarrant County is compared to an external reference group to determine the rate and number of excess deaths in our community (the recommended reference group noted to generally have better birth outcomes is non-Hispanic White mothers aged 20+ years with some college credit or more)

Figure 1. PPOR risk periods and points of potential intervention



Phase 1: Perinatal Period Comparison

Figure 2. Number of total and excess fetal-infant deaths by race/ethnicity, Tarrant County, 2016-2019[†]

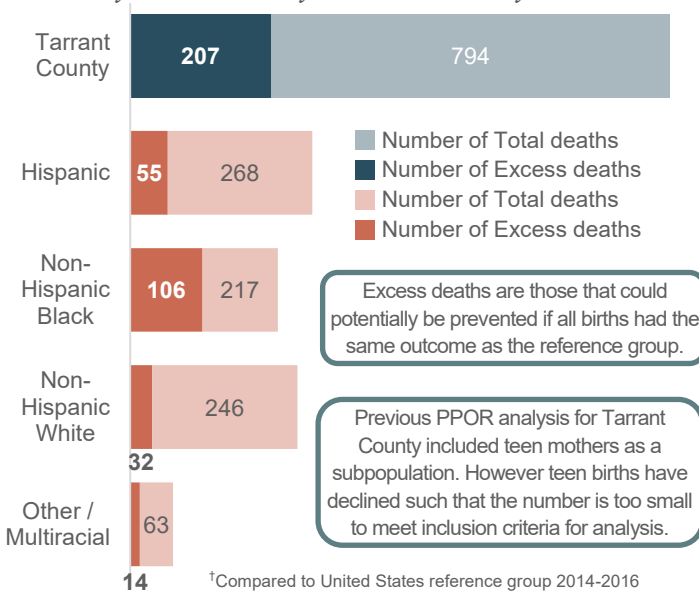
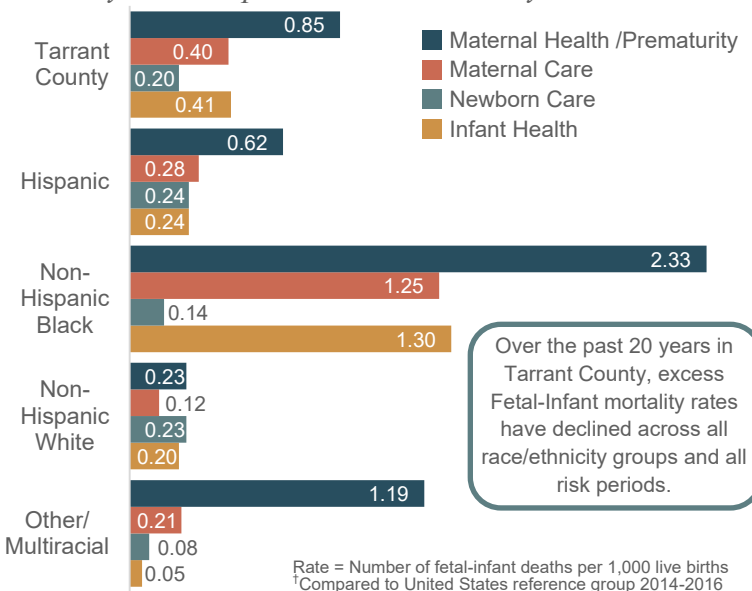


Figure 3. Excess fetal-infant mortality rates by race/ethnicity and risk period, Tarrant County, 2016-2019[†]



Tarrant County 2016-2019 Fetal-Infant Mortality Rates (F-IMR):

- 7.16 Tarrant County Overall
- 6.68 Hispanic
- 10.31 Non-Hispanic Black
- 6.07 Non-Hispanic White
- 6.82 Other/Multiracial

Excess F-IMR is the difference between the exposure group and the reference group.

Excess deaths rates:

- 1.86 Tarrant County Overall
- 1.38 Hispanic
- 5.01 Non-Hispanic Black
- 0.78 Non-Hispanic White
- 1.53 Other/Multiracial

Potentially 26% of fetal-infant deaths in Tarrant County were preventable, with the largest proportion of preventable deaths occurring among non-Hispanic Blacks (49%) (Figure 2).

Overall, 45% of excess deaths in Tarrant County occurred in the Maternal Health/Prematurity risk period.

Non-Hispanic Blacks had the highest excess F-IMR (5.01).

Non-Hispanic Blacks had high excess rates in the Maternal Health/Prematurity (2.33), Maternal Care (1.25), and Infant Health risk periods (1.30).

Intervention Area with Greatest Potential Impact Overall in Tarrant County:
Non-Hispanic Black Maternal Health/Prematurity

Phase 2: Maternal Health and Prematurity (MHP): Fetal and infant deaths weighing 500-1,499 grams

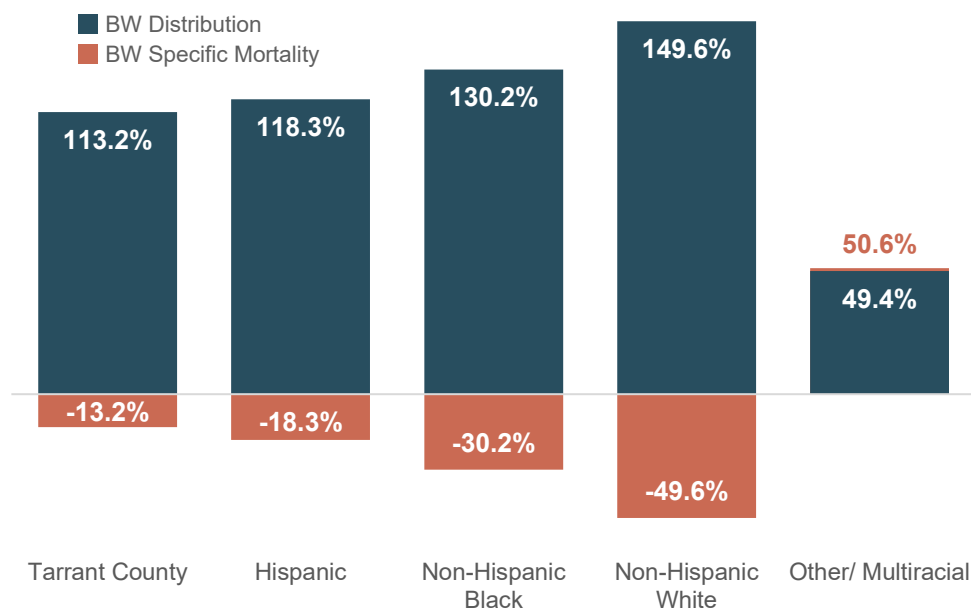
Birthweight Distribution vs. Birthweight Specific Mortality

For MHP rates, the PPOR protocol focuses on whether the excess deaths are due to:

- **Birthweight Distribution** (too many very low birthweight babies) or
- **Birthweight Specific Mortality** (poor survival at each low birthweight category).

This distinction is needed because the factors that generally affect birthweight distribution (health of the mother, risk behaviors like smoking, spacing between pregnancies, socioeconomics, etc.) are different from the factors that affect birthweight specific mortality rates (quality of perinatal care systems in the community).

Figure 4. Birthweight distribution vs. birthweight specific mortality by subpopulation, Tarrant County, 2016-2019[†]



Birthweight distribution contributed the most to excess deaths in Tarrant County overall and among each subpopulation, except Other/Multiracial (Figure 4).

Negative percentages (Figure 4) indicate the contribution is lower than the reference group and in the case of specific mortality rates, indicates better survival in our community among very low birthweight infants than the reference group.

[†]Compared to United States reference group 2014-2016
BW = Birthweight

Modifiable Risk Factors

Overall in Tarrant County from 2016-2019, mothers of very low birthweight infants were more likely to:

- Have inadequate number of prenatal care visits
- Be obese (BMI >30) prior to pregnancy
- Have no prenatal care in the 1st trimester
- Have sexually transmitted infections present and/or treated during pregnancy

Inadequate number of prenatal care visits is the modifiable risk factor identified as having the greatest potential impact on very low birth weight infants across all race/ethnicity groups in Tarrant County[‡]

[‡]Based on Population Attributable Risk

Community Recommendations

Improve access and utilization of prenatal care

Reduce the number of women obese prior to pregnancy

Emphasize the importance of prenatal care in the first trimester

Reduce the number of women with sexually transmitted infections during pregnancy