

# M&CH on the Border: Epidemiologic analyses from the Texas/Mexico Border

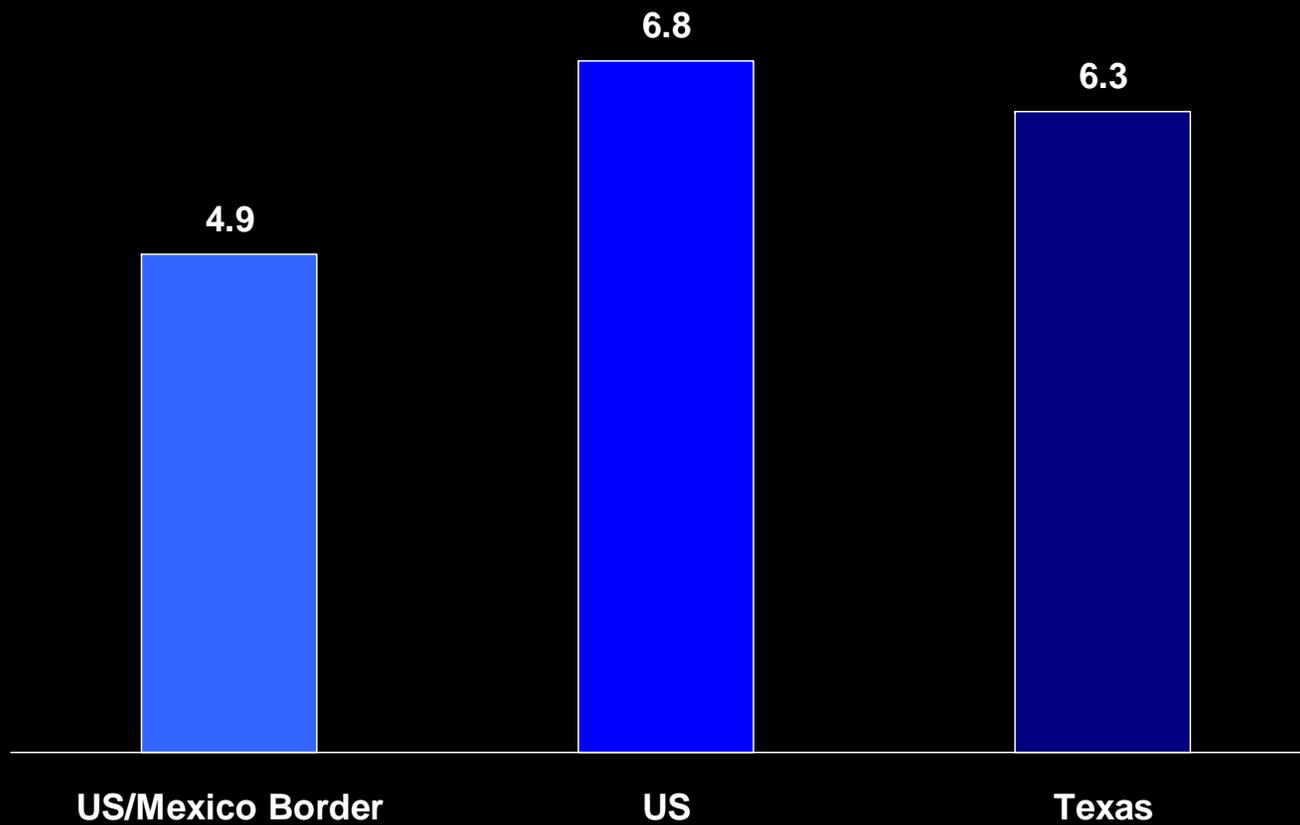
Brian C. Castrucci, MA

Office of Title V and Family Health

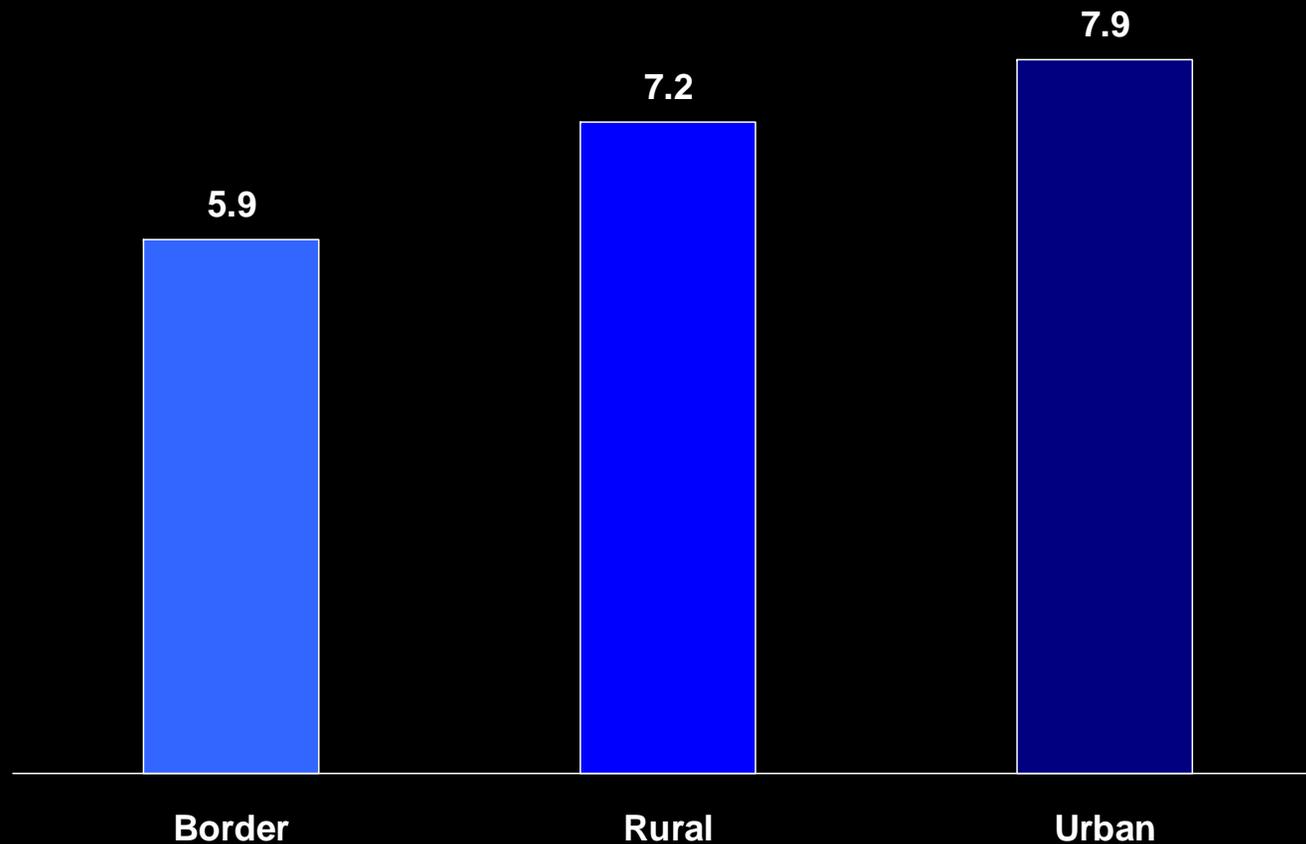
Division of Family and Community Health

Texas Department of State Health Services

# Infant Mortality Rates, 2004



# Feto-Infant Mortality Rates by Geography, Texas, 1999-2003



**Age at Death**

**Fetal  
Death**

**Neonatal**

**Post-  
neonatal**

**Birth weight**

**500 g -  
1499 g**

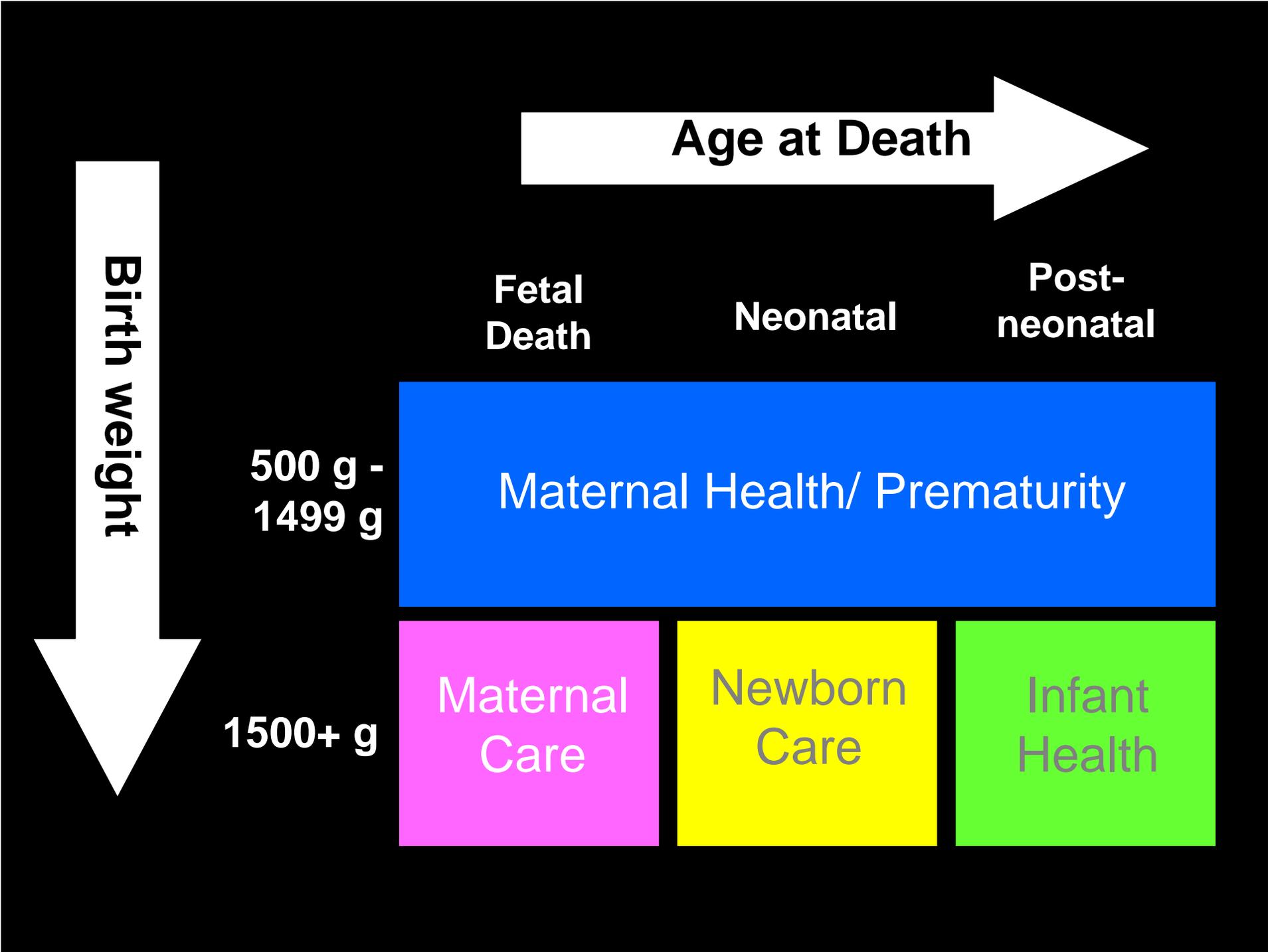
**Maternal Health/ Prematurity**

**1500+ g**

**Maternal  
Care**

**Newborn  
Care**

**Infant  
Health**



**Maternal  
Health/  
Prematurity**



**Preconception  
Health  
Health Behaviors  
Perinatal Care**

**Maternal  
Care**



**Prenatal Care  
High Risk Referral  
Obstetric Care**

**Newborn  
Care**



**Perinatal  
Management  
Neonatal Care  
Pediatric Surgery**

**Infant  
Health**



**Safe Sleep  
Breastfeeding  
Injury Prevention**

## Rural

|  |                              |                               |
|--|------------------------------|-------------------------------|
| Maternal Health / Prematurity<br>256 (2.1) |                              |                               |
| Maternal<br>Care<br>204 (1.7)              | Newborn<br>Care<br>133 (1.1) | Infant<br>Health<br>298 (2.4) |

Feto-Infant Mortality: 7.2

## Urban

|  |                                  |                                   |
|--|----------------------------------|-----------------------------------|
| Maternal Health / Prematurity<br>4521(3.1) |                                  |                                   |
| Maternal<br>Care<br>2602<br>(1.8)          | Newborn<br>Care<br>1808<br>(1.2) | Infant<br>Health<br>2657<br>(1.8) |

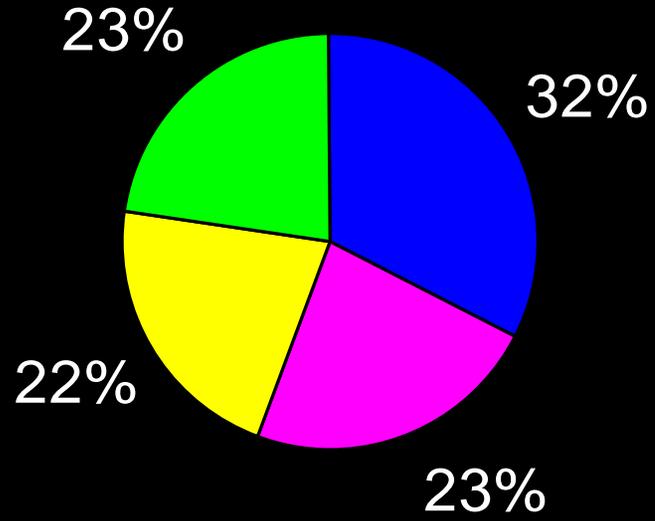
Feto-Infant Mortality: 7.9

## Border

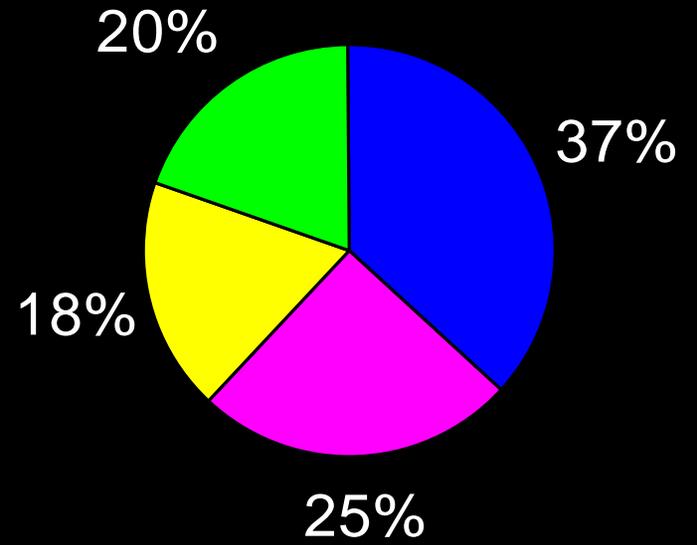
|  |                                 |                               |
|--|---------------------------------|-------------------------------|
| Maternal Health / Prematurity<br>497 (2.1) |                                 |                               |
| Maternal<br>Care<br>310<br>(1.3)           | Newborn<br>Care<br>284<br>(1.2) | Infant<br>Health<br>329 (1.4) |

Feto-Infant Mortality: 5.9

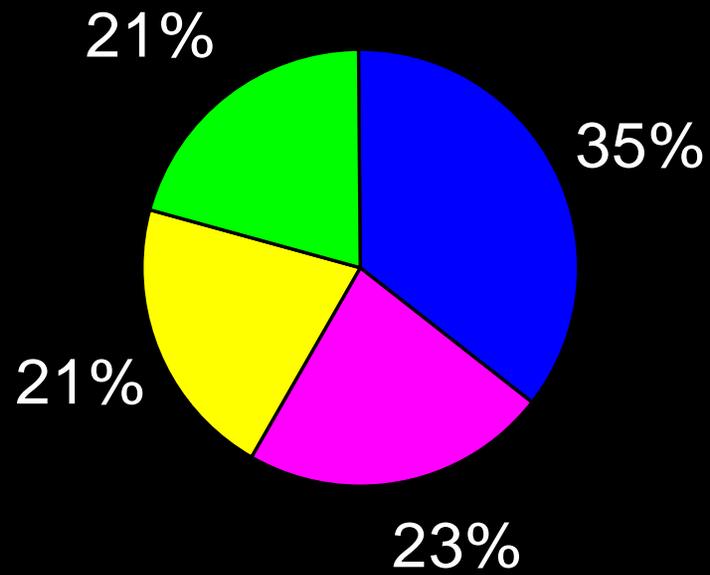
### Rural



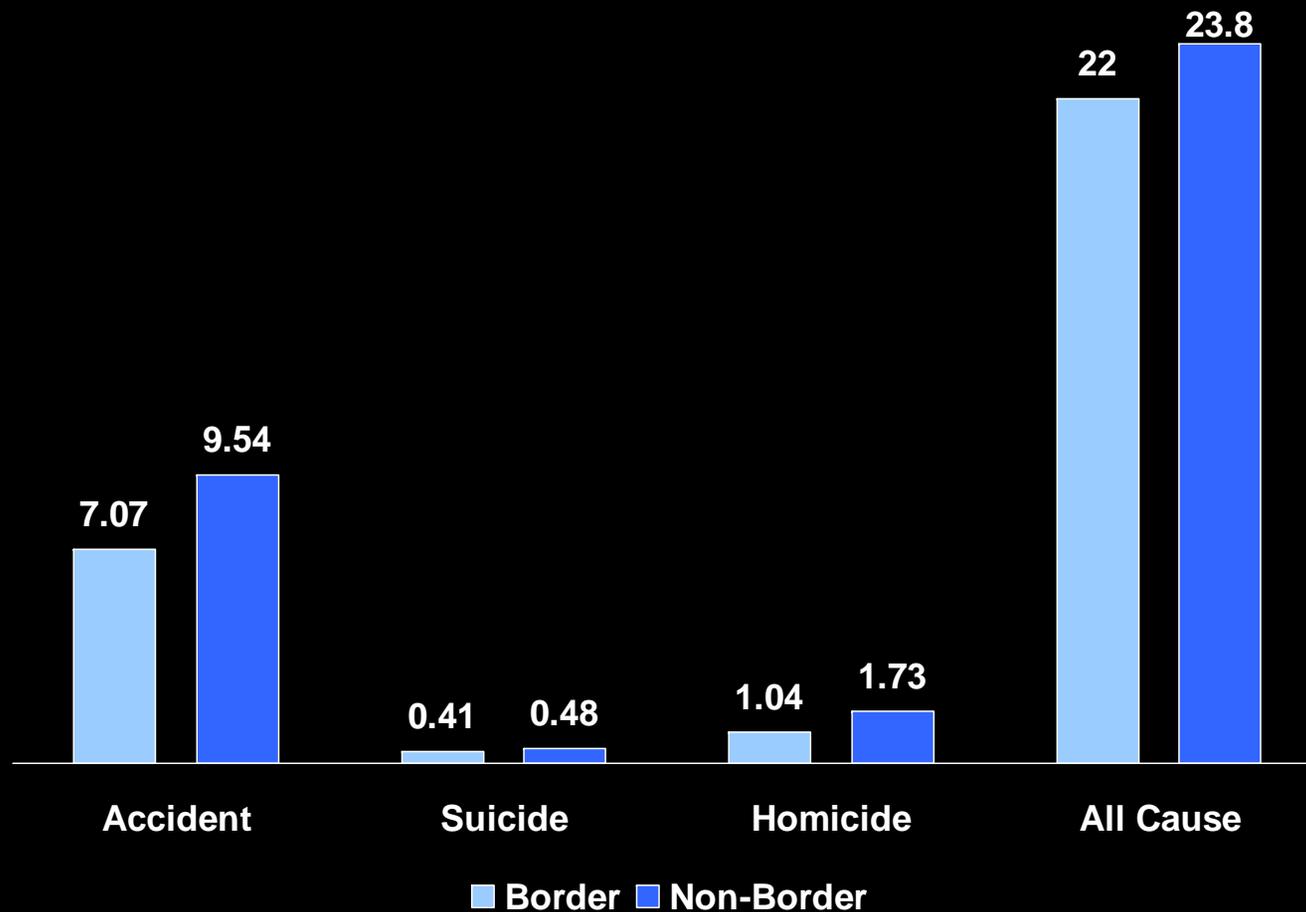
### Urban



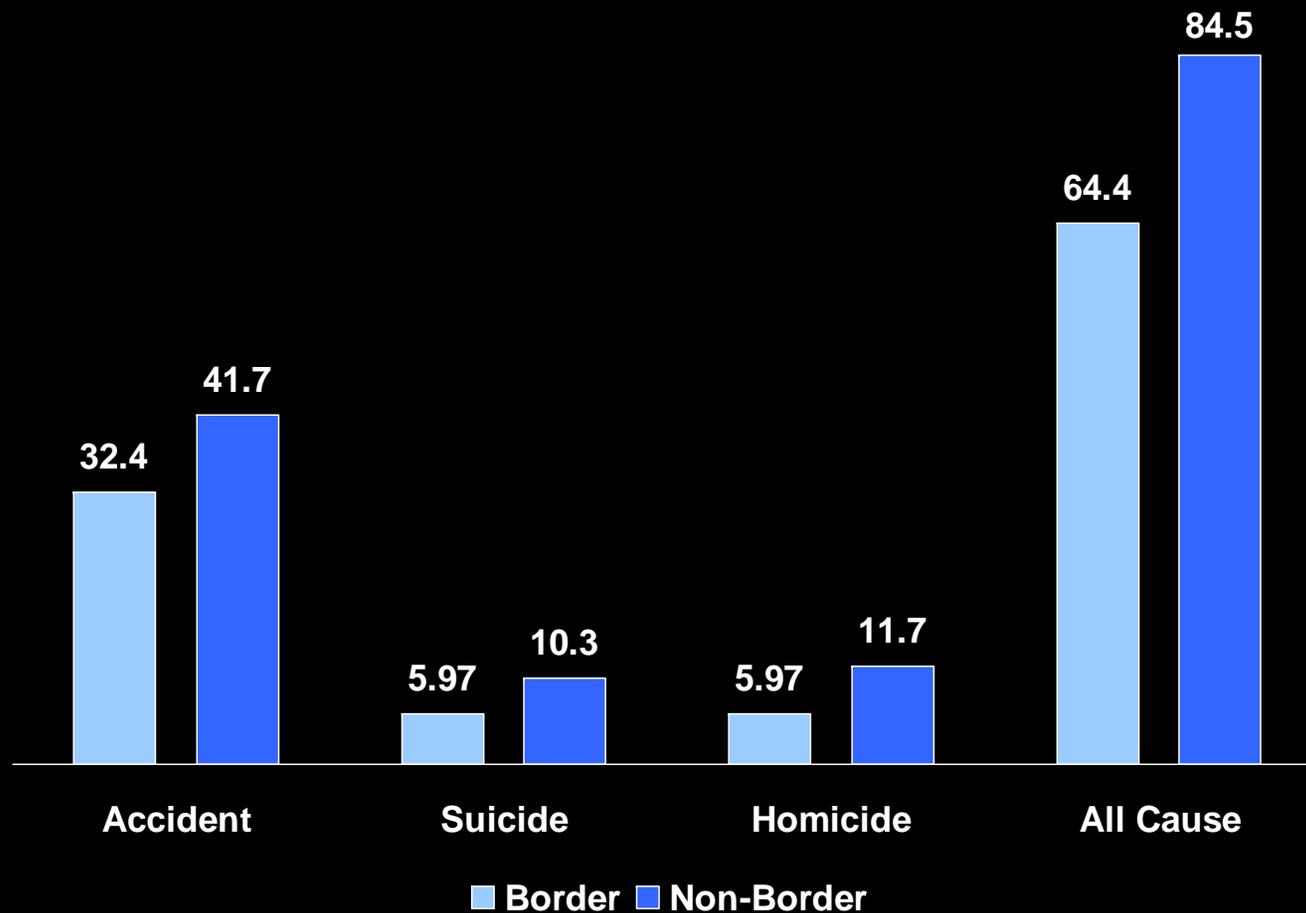
### Border

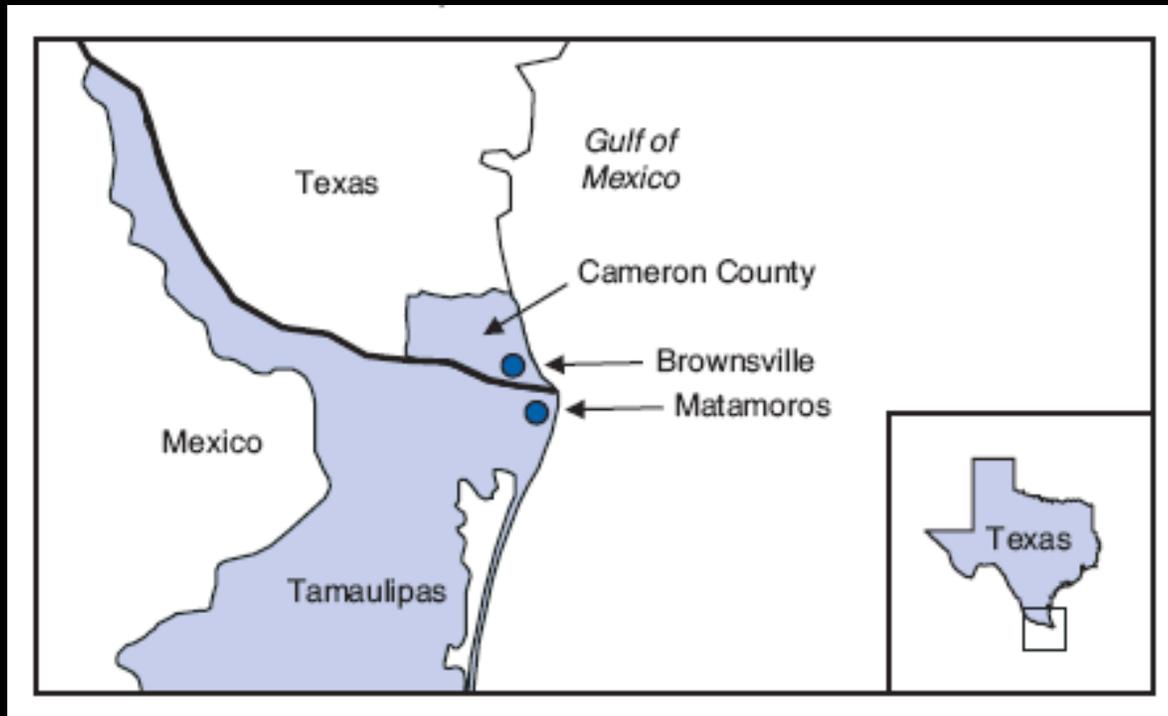


# Child Mortality Rates Ages 1 to 14 Years, Texas, 2004



# Child Mortality Rates Ages 15 to 24 Years, Texas, 2004





### Prevalence and Odds of Attempted Breastfeeding

|                | <u>Prevalence</u> | <u>Odds Ratio</u> |
|----------------|-------------------|-------------------|
| Cameron County | 63.7%             | ----              |
| Matamoros      | 81.9%             | 1.97(1.31-2.84)   |

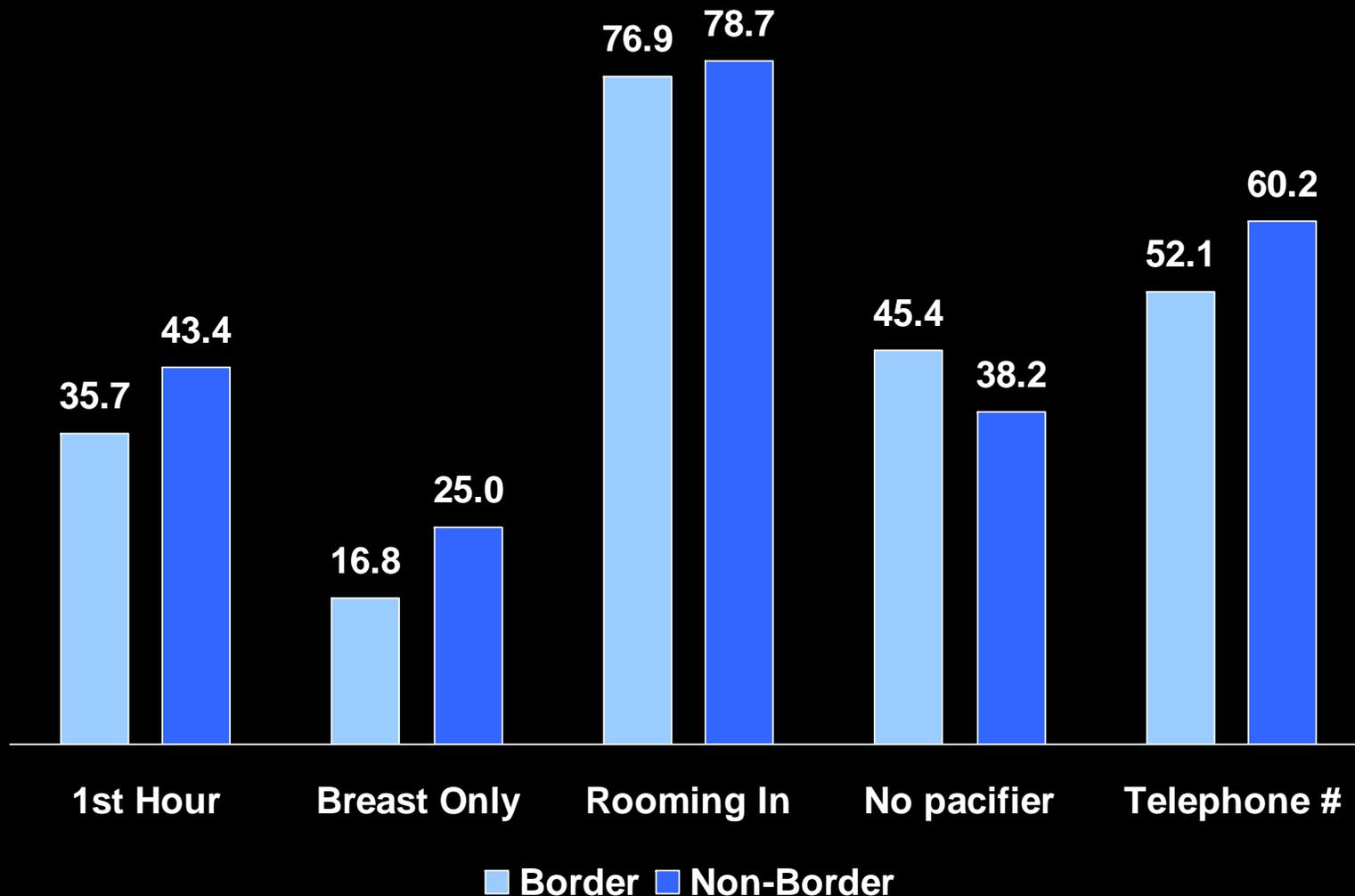
# Hospital-Level Breastfeeding Policy in the US and Mexico

- United States
  - No national policy
- Mexico
  - Federal regulations
    - 2 hours following delivery
    - Support feeding on demand
    - Require standards to support exclusive breastfeeding
    - Restrict distribution of infant formula

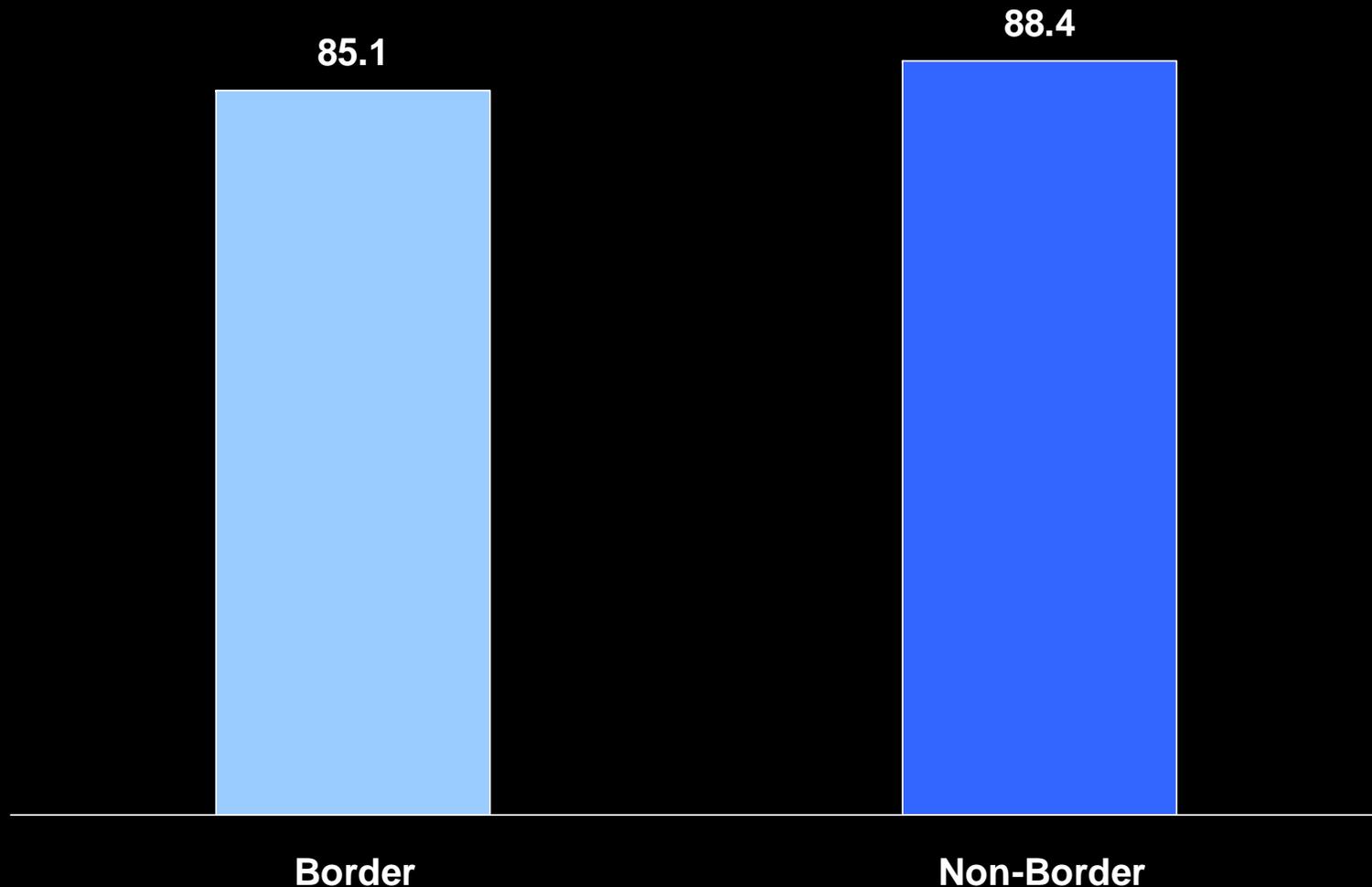
# Five Pro-Breastfeeding Hospital Practices

- Feeding within first hour after delivery
- Receiving only breastmilk while in hospital
- Allowing mother and infant to be in the same room
- Not using a pacifier
- Providing mothers with a breastfeeding support number

# Hospital Practices in Border and Non-Border Areas in Texas



# Percent of Breastfeeding Women Receiving Free Formula from Hospital



# Mexican Paradox

- Newly arrived immigrants
  - Low SES
  - Lack of education and insurance
  - Inadequate PNC
  - Younger maternal age
- Mexican culture protective
- Risk factors associated with US lifestyle

# Analysis Plan

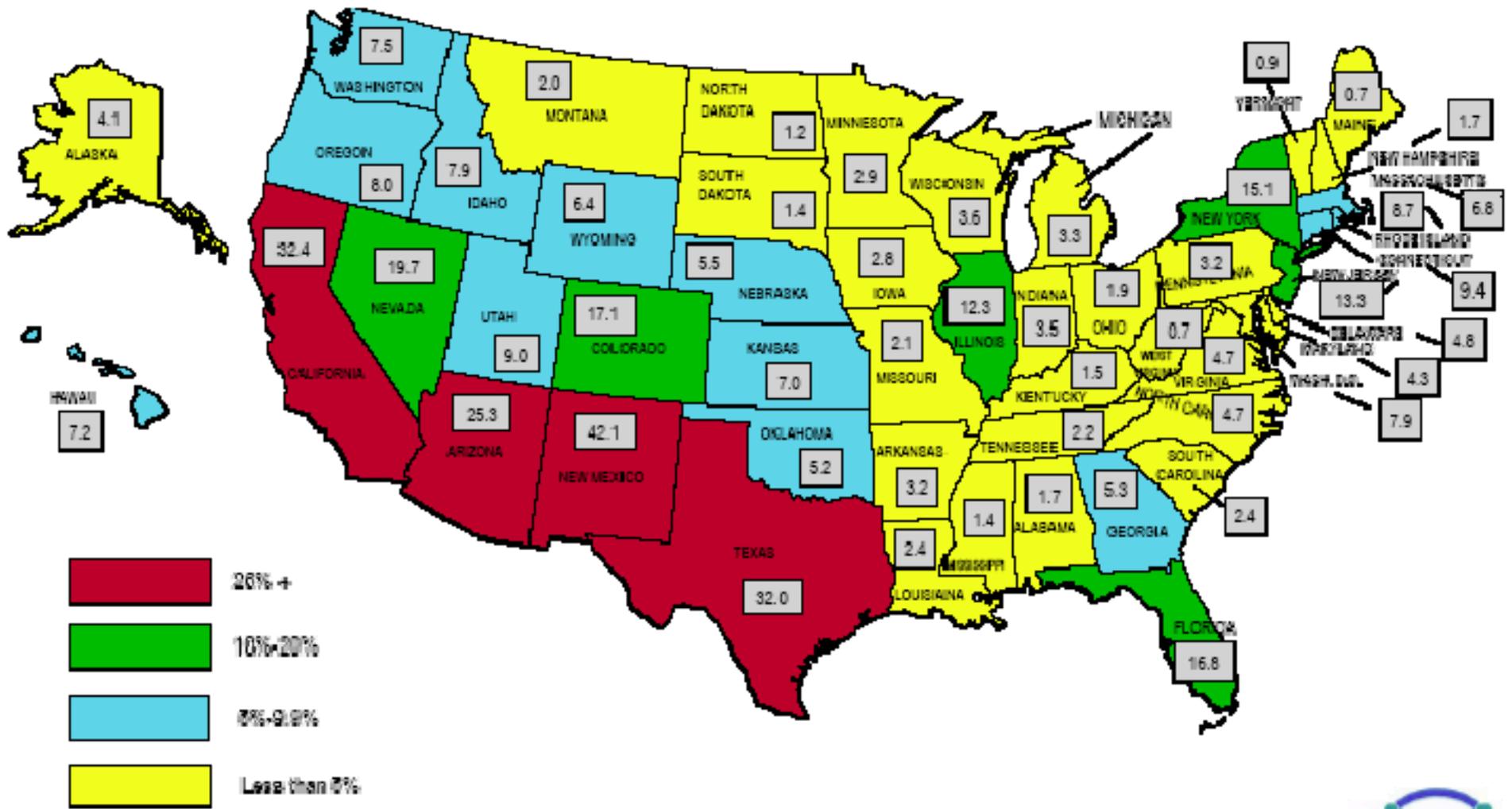
- Outcomes
  - Low birth weight (<2,500 g) (LBW)
  - Preterm delivery (PTD)
  - 1<sup>st</sup> trimester entry into prenatal care (PNC)
- Within border
  - US-born Hispanic women v. Mexican-born Hispanic women
- Among Mexican-born Hispanic women
  - Border v. Urban v. Rural

# Perinatal Outcomes **Along the Texas/Mexico Border** by Nativity

|     | US-Born<br>Hispanic | Mexican-Born<br>Hispanic |
|-----|---------------------|--------------------------|
| LBW | 7.8                 | 6.1                      |
| PTD | 10.2                | 8.2                      |
| PNC | 79.9                | 57.6                     |

# Perinatal Outcomes **Among Mexican-Born Hispanic Mothers** by Geography

|     | Border | Urban | Rural |
|-----|--------|-------|-------|
| LBW | 6.1    | 5.7   | 5.3   |
| PTD | 8.2    | 8.1   | 6.8   |
| PNC | 57.6   | 70.8  | 70.2  |



# Ethnicity Specific Birth Rates and Population in Three States

| <u>State</u> | <u>Rate Among Hispanics</u> | <u>% Hispanics of Population</u> | <u>% Hispanics of Birth Cohort</u> |
|--------------|-----------------------------|----------------------------------|------------------------------------|
| Texas        | 99.0                        | 38%                              | 36%                                |
| Delaware     | 133.3                       | 5%                               | 14%                                |
| Georgia      | 169.6                       | 6%                               | 12%                                |

# Stratified Birth Rates and Rankings

---

|          | Birth Rate | Ranking          |
|----------|------------|------------------|
| Texas    | 62.4       | 50 <sup>th</sup> |
| White    | 33.8       | 35 <sup>th</sup> |
| Black    | 67.7       | 32 <sup>nd</sup> |
| Hispanic | 99.0       | 31 <sup>st</sup> |

---

# Contact Information

Brian C. Castrucci

Office of Title V and Family Health

Division of Family and Community Health Services

Texas Department of State Health Services

1100 West 49<sup>th</sup> Street

Austin, Texas 78756

Telephone: 512.458.7111 ext. 2006

Email: [brian.castrucci@dshs.state.tx.us](mailto:brian.castrucci@dshs.state.tx.us)