

# Pediatric and Maternal HIV in Texas Border Counties and Urban Areas

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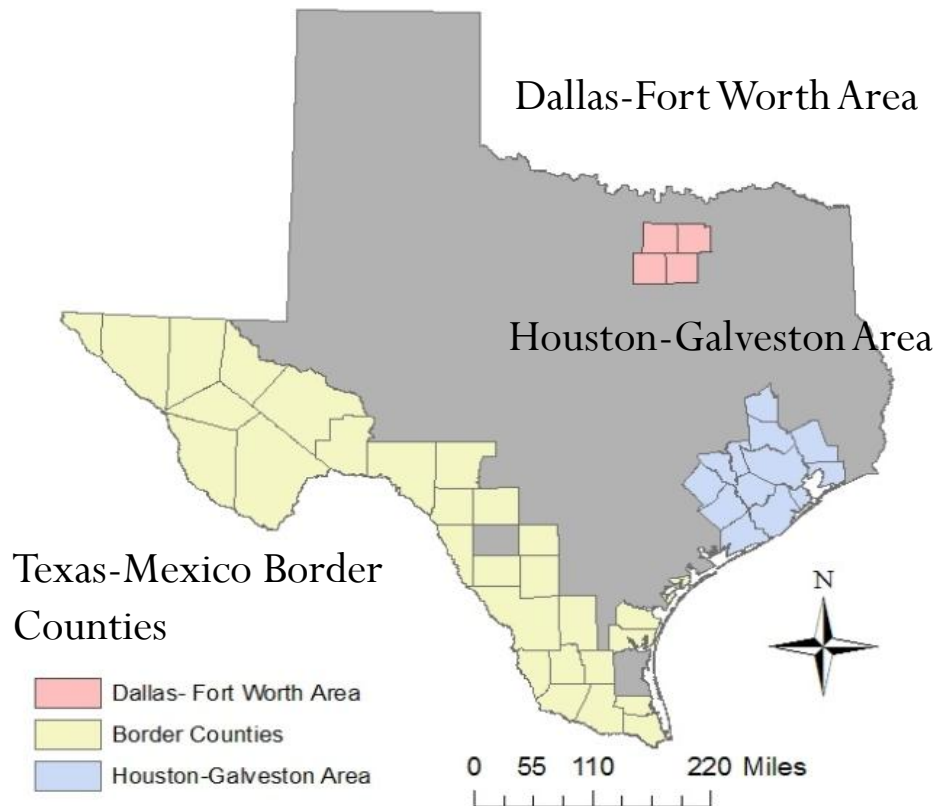
# Introduction

- HIV seriously threatens an increasing number of women in the US, increasing the risk of transmission to children.
- Texas has the 4<sup>th</sup> highest HIV rates in the US, particularly in impoverished urban and rural areas.
- This study examines the geography of pediatric and female HIV in Houston-Galveston, Dallas-Fort Worth, and the Texas-Mexico Border Counties.

# Study Area

**Dallas Fort-Worth  
Area- 4 counties**

**Houston- Galveston  
Area- 13 counties as  
defined by the Houston-  
Galveston Area Council**



**Texas-Mexico  
Border Counties -The  
29 counties containing a  
colonia within 150 miles  
of the border**

# Research Question

Are there higher pediatric and female HIV rates in the impoverished border counties than in the urban areas? Is this because of a younger age of diagnosis in females and a lower socioeconomic status?

# Methods

- 2000 US Census
  - Median Income, Race/Ethnicity
- Texas Health Ranking Data
  - % Uninsured, % Unemployed, Primary Care Provider per 100K
- Texas Department of State Health Services
  - Pediatric and Female HIV cases by county 1980-2009
  - Female Age of Diagnosis
- Maps made by Arc GIS
- Statistical analysis with SPSS 15.0 Spearman's Rho correlation

# Hypotheses

- Counties with below characteristics will have a higher female and pediatric HIV rates:
  - Lower median income
  - Low access to healthcare
  - Higher percentage of blacks and Hispanics
  - Younger age of diagnosis in females
  - Higher female HIV rate

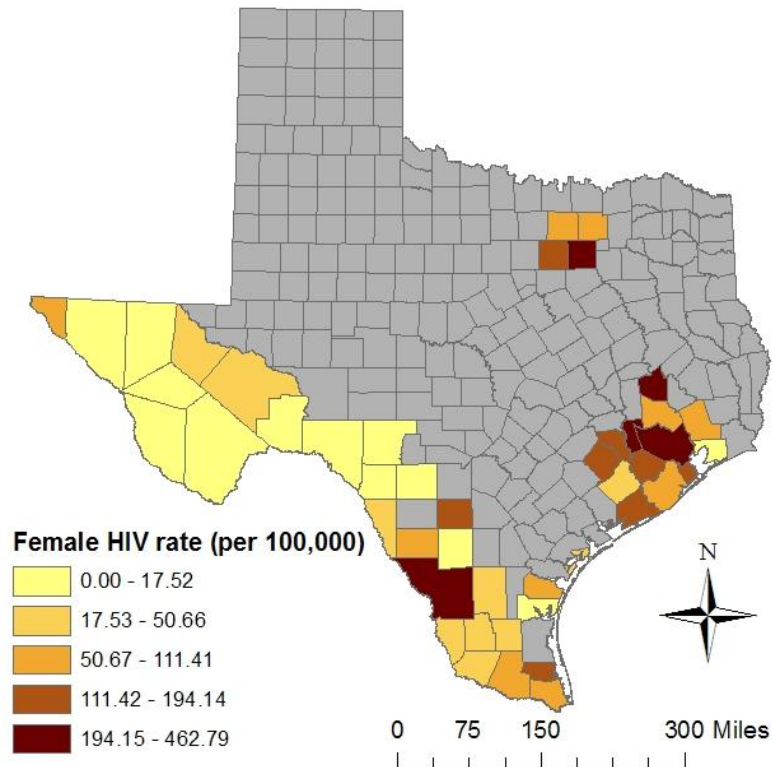
# Results/Discussion

- Average age of females at diagnosis (Houston-Galveston and DFW Area)- 30-35, but only 25 in border counties

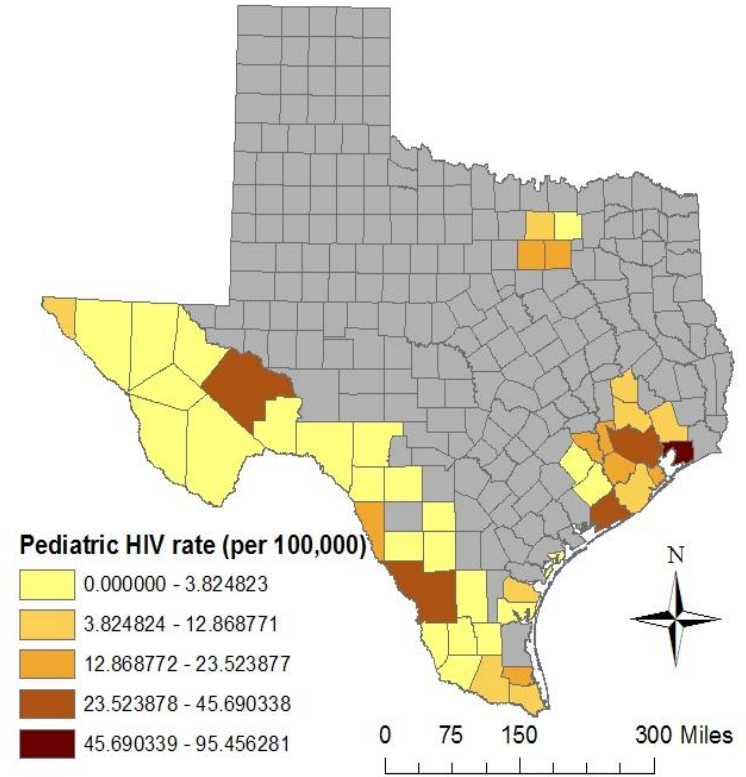
	Female HIV	Pediatric HIV
% black population	( $r=.731, p<.01$ )	( $r=.653, p<.01$ )
% Hispanic population	( $r=-.372, p<.01$ )	( $r=-.440, p<.01$ )
Median Income	( $r=.449, p<.01$ )	( $r=.561, p<.01$ )
Access to Healthcare		
Average Age of Diagnosis	( $r=.380, p<.01$ )	

# Results

## Female HIV Rate



## Pediatric HIV Rate



$r = .696, p < .01$



# Key Findings

	Female HIV Rate (per 100,000 women)	Pediatric HIV Rate (per 100,000 children <13)
Dallas-Fort Worth Area	232.7	17.9
Houston-Galveston Area	352.8	36.3
Border Counties	82.6	19.6

- Border counties female HIV rate is about 1 / 3 of Dallas Fort Worth Area while pediatric HIV rate is higher.

# Conclusions

- Current interventions are not reaching rural areas
- Health care should be brought to women in rural areas to decrease pediatric HIV rates
- Limited by availability of data and small numbers problem
- Future study on healthcare sites in Texas rural areas