



# High Prevalence of STI's in West Texas

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## Disclosure Statement

- Speaker: Cristina Penon
- Dr. Penon has documented that she has nothing to disclose.

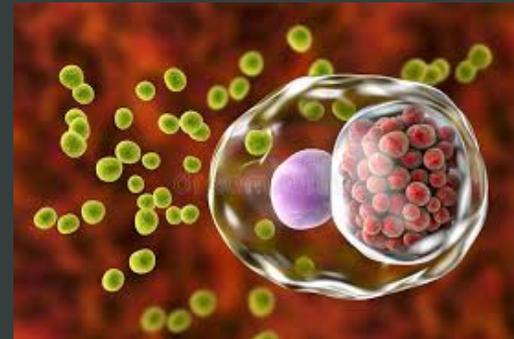
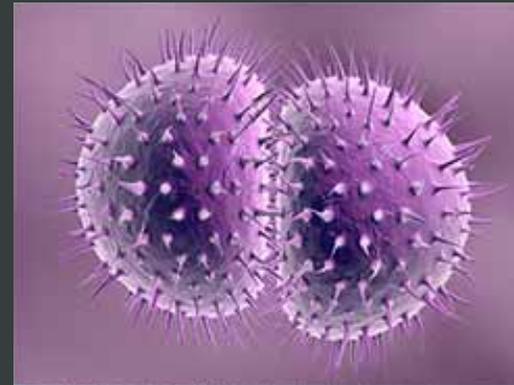


# BACKGROUND



# Gonorrhea and Chlamydia

- Pelvic Inflammatory Disease
  - Internal abscesses and chronic abdominal pain
  - Infertility
  - Ectopic Pregnancy
- Epididymitis
  - Infertility
- Disseminated Gonococcal Infection
  - Arthritis, tenosynovitis, dermatitis
  - Life threatening
- Neonatal Infections
- Facilitate HIV transmission



# Annual Costs

- United States- \$16 billion
- Chlamydia- \$516.7 million
- Gonorrhea- \$162.1 million

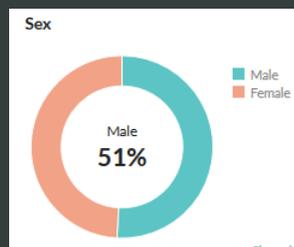
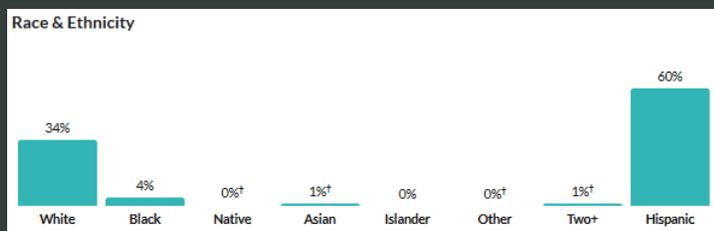
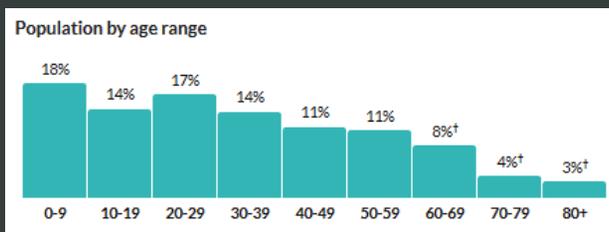


**Table 1: Summary of STI cost estimates (in 2006 US dollars) and selected parameter values applied in the formulas**

Parameter	Value applied		Range
	Females	Males	
<b>Direct medical costs</b>			
Average cost per case of PID [23–25]	\$1,995	not applicable	± 50%
Average cost per case of epididymitis [26]	not applicable	\$274	± 50%
Average sequelae costs per case of syphilis [5]	\$572*	\$572*	± 50%
Average cost per case of chlamydia [5]	\$315	\$26	± 50%
Average cost per case of gonorrhea [5]	\$343	\$68	± 50%
Average cost per case of syphilis [5]	\$572*	\$572*	± 50%
Average cost per case of HIV [6]	\$198,471	\$198,471	± 50%
Average cost per case of congenital syphilis [1,64,65]	\$6,738	\$6,738	± 50%

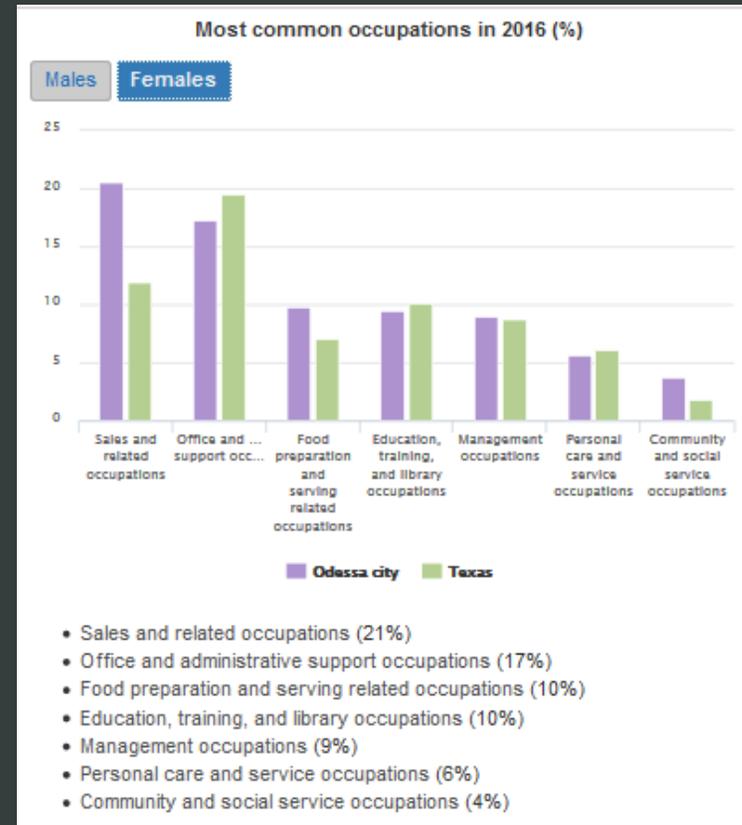
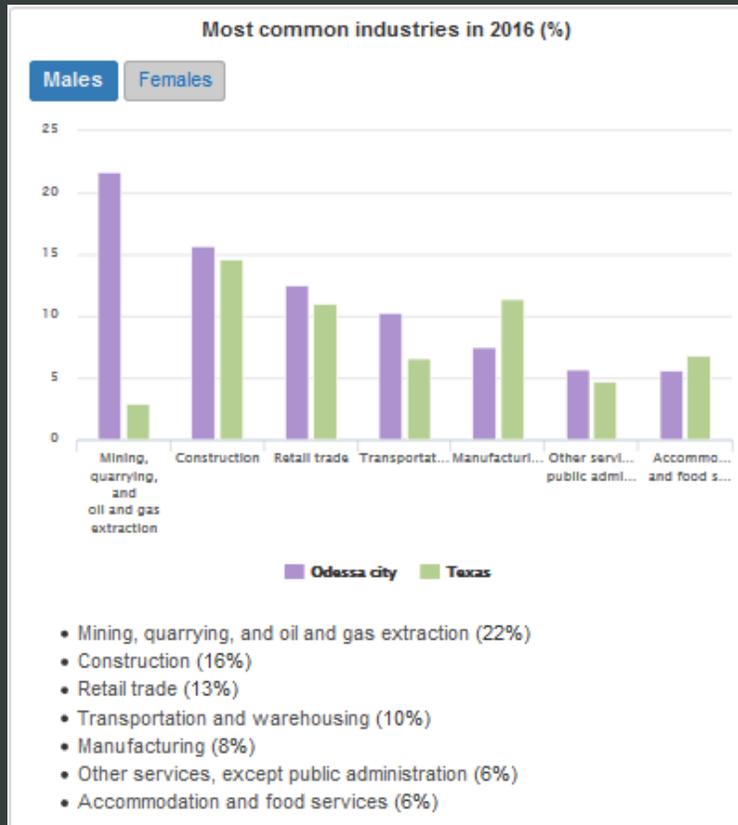
# West Texas-Ector County

- Population: 157,462 (2016)



<https://censusreporter.org/profiles/05000US48135-ector-county-tx/>

# West Texas-Ector County



# Objective

To identify the age groups with the highest rates of chlamydia or gonorrhea and to compare them to those of the state and the country.



# Hypothesis

We hypothesize Ector County will have higher rates of STI's compared to state and national rates. We also expect the age group with the most reported infections to be under the age of 35.



# Methods

- Five-year cross-sectional study (2012-2016)
- Texas DSHS, CDC STD Data and Statistics
- Reported gonorrhea or chlamydia
- Data reported includes age, gender, race, and ethnicity
- STI rates compared between Ector County, Texas, and USA
- Chi-square
- $p < 0.05$  statistically significant

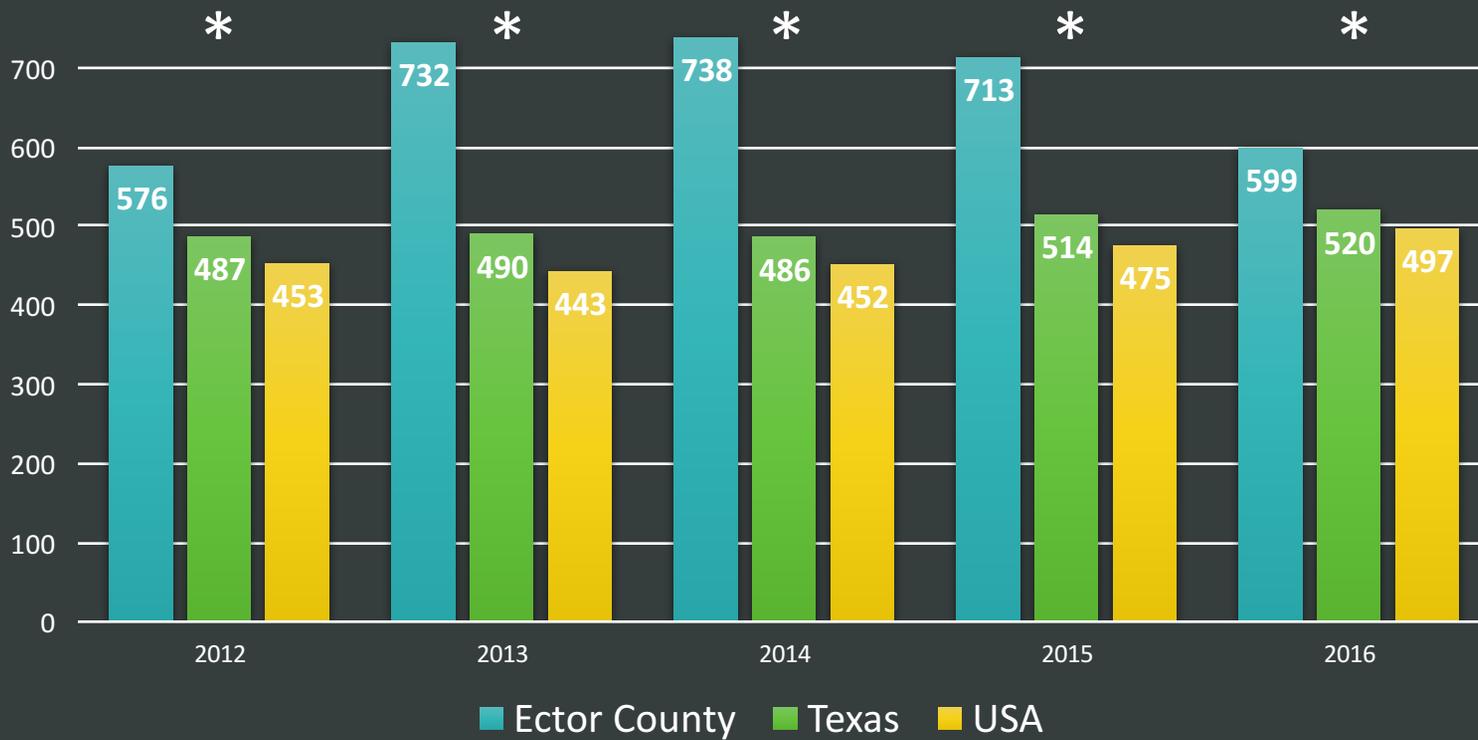


Centers for Disease Control and Prevention  
CDC 24/7: Saving Lives, Protecting People™

# RESULTS



## Chlamydia Rates per 100,000 2012-2016

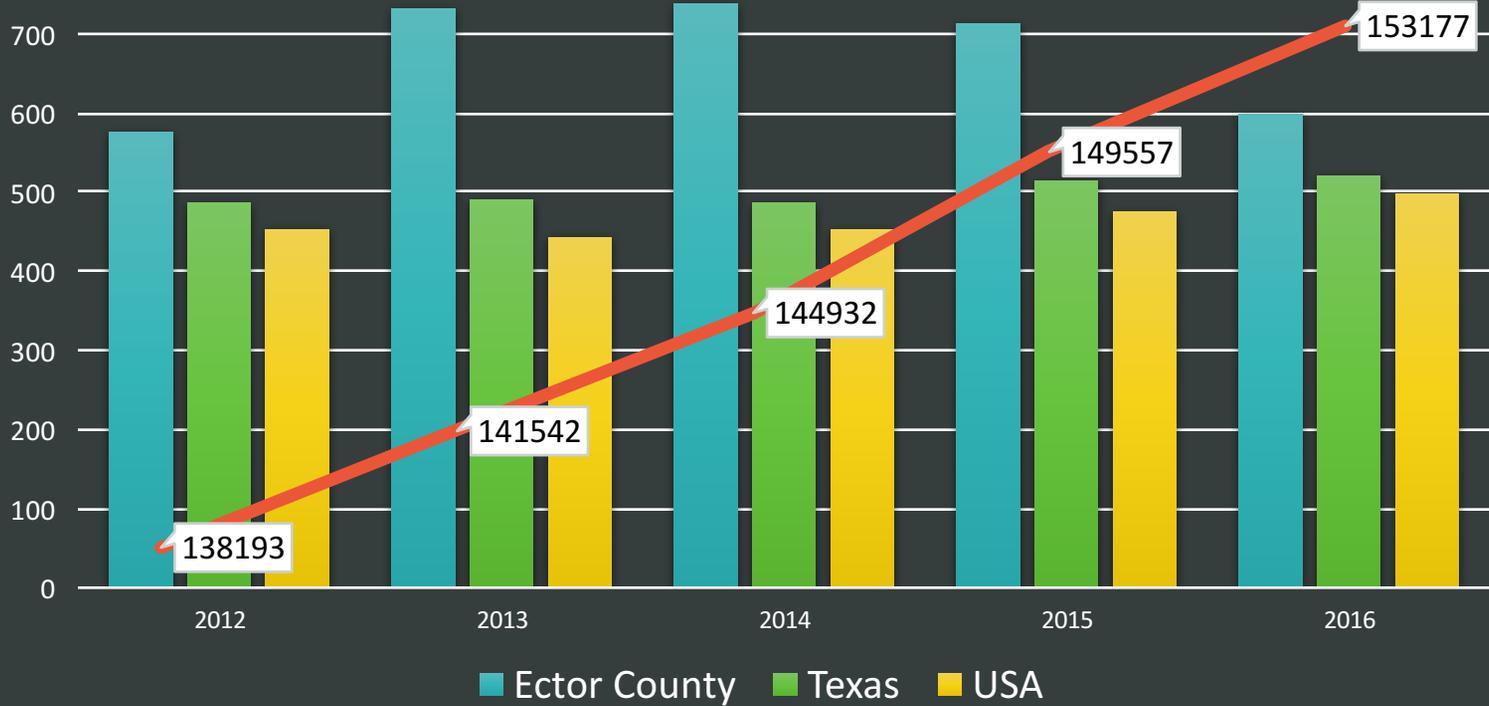


\*  $p < 0.05$

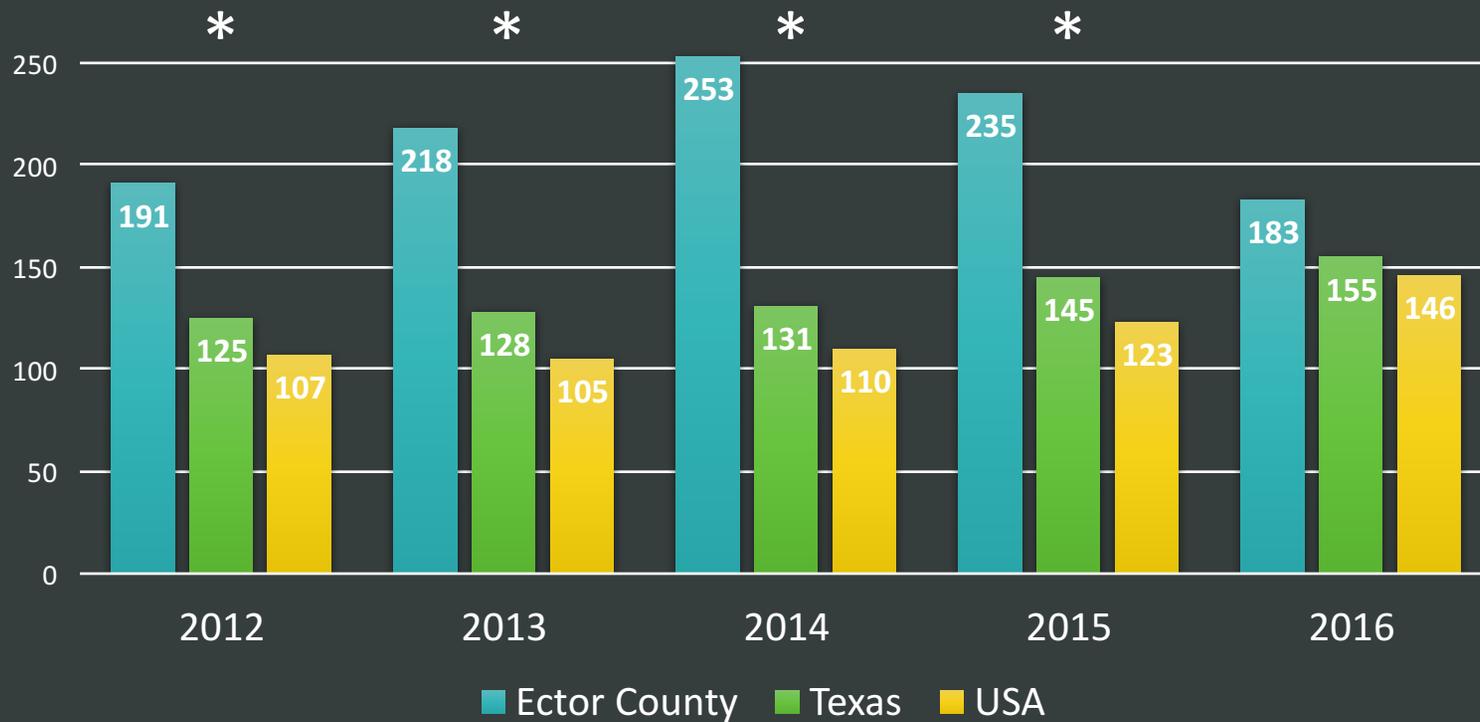
# Chlamydia Rates per 100,000

## 2012-2016

Population



## Gonorrhea Rates per 100,000 2012-2016

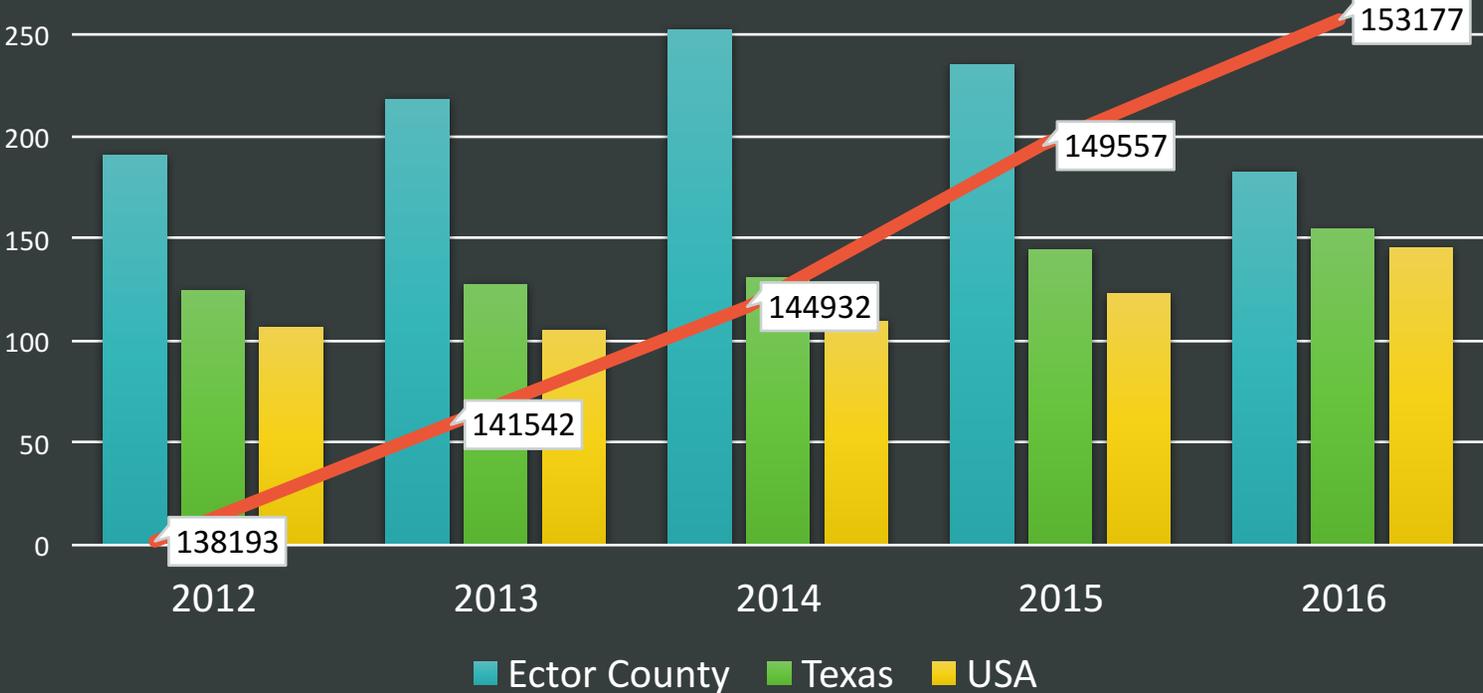


\*  $p < 0.05$

# Gonorrhea Rates per 100,000

## 2012-2016

Population

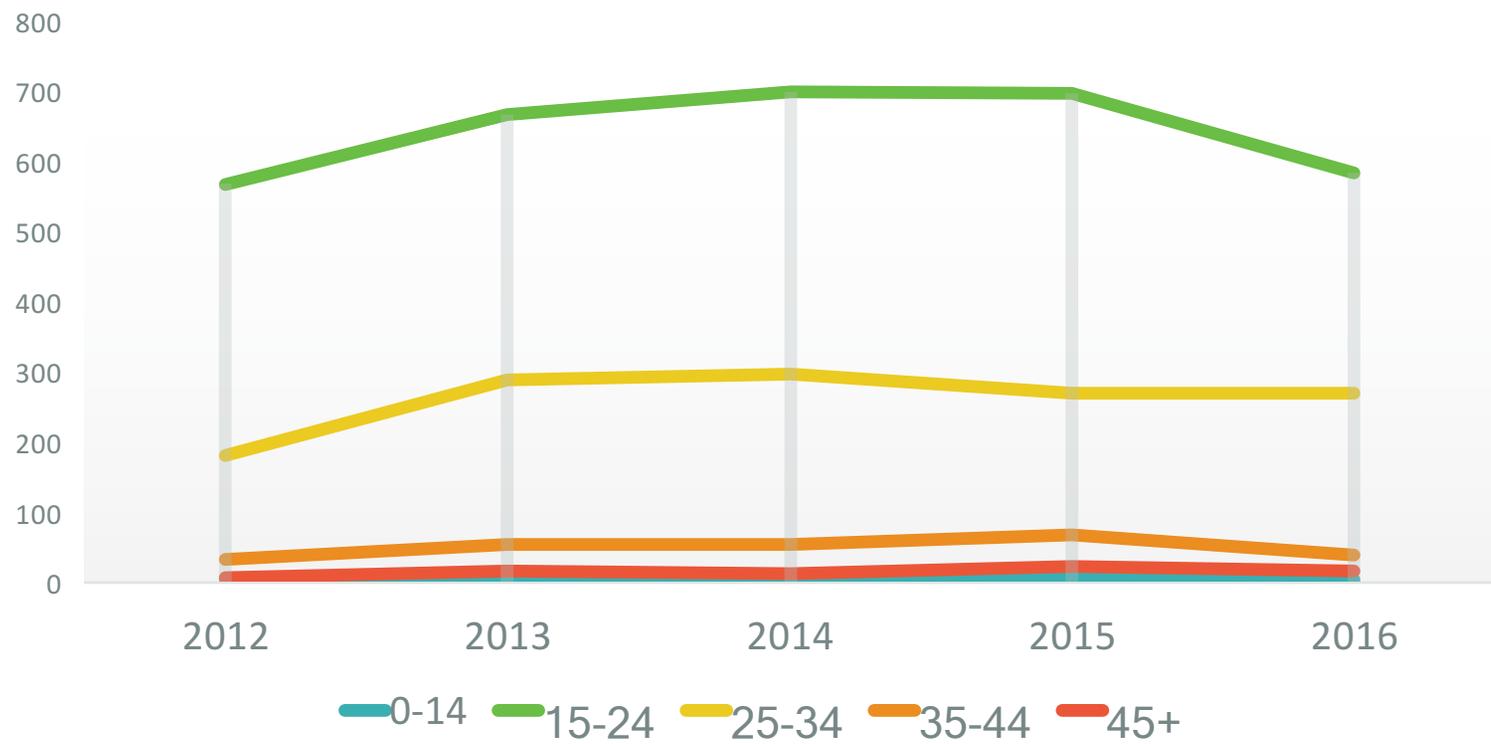


# Reported Cases By Age (2012-2016)-Ector County

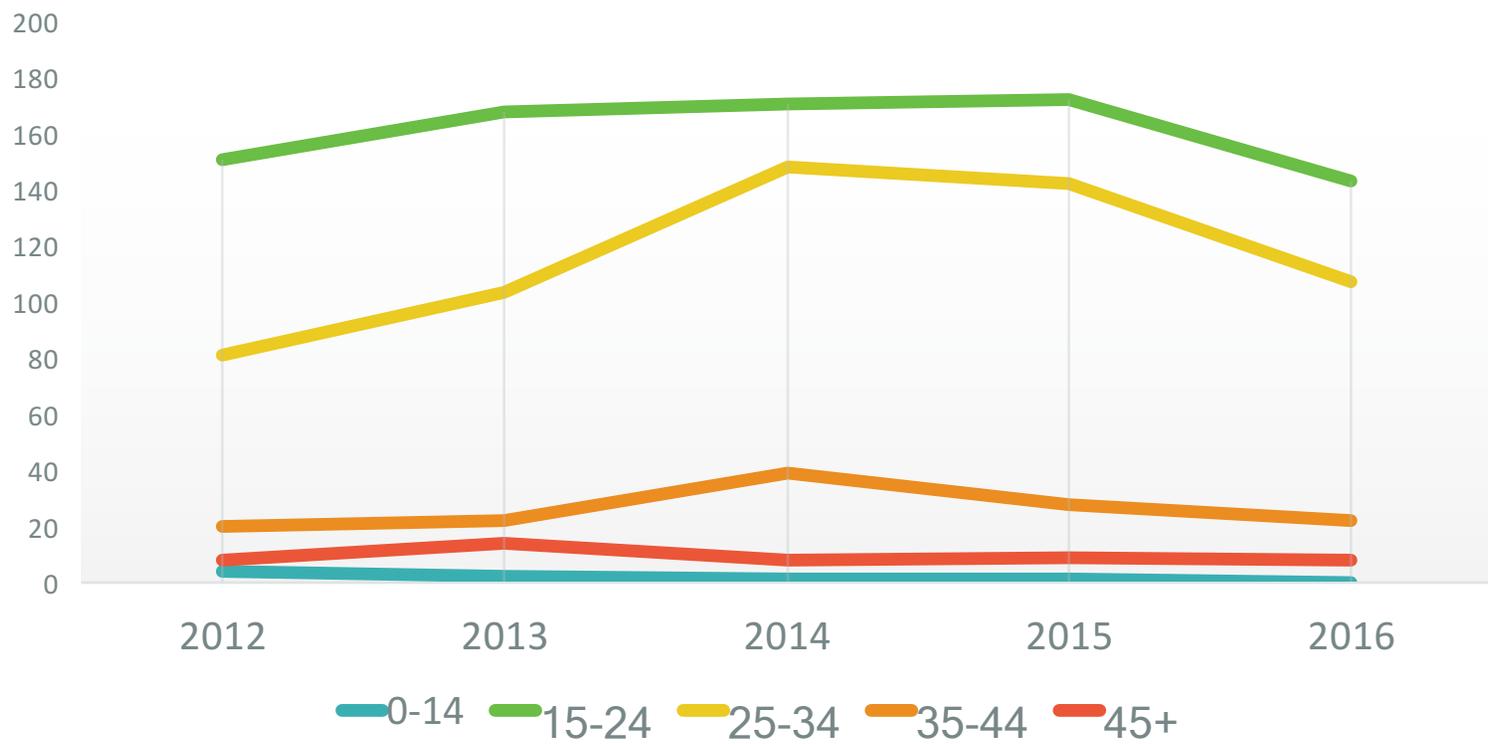
Age	Chlamydia	Gonorrhea
0-14	33	8
15-24	3214	804
25-34	1310	581
35-44	249	131
45+	76	47



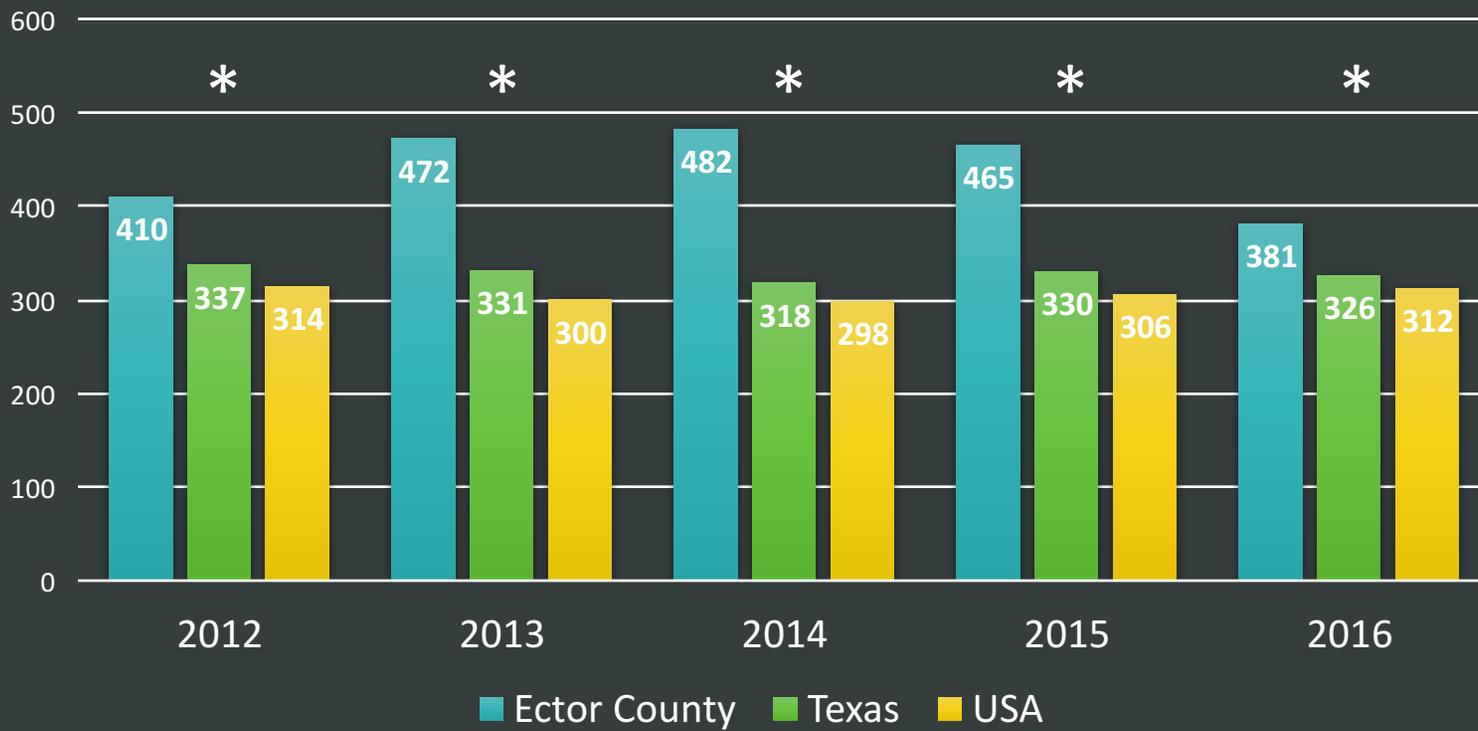
## Chlamydia Incidence By Age Ector County



## Gonorrhea Incidence By Age Ector County

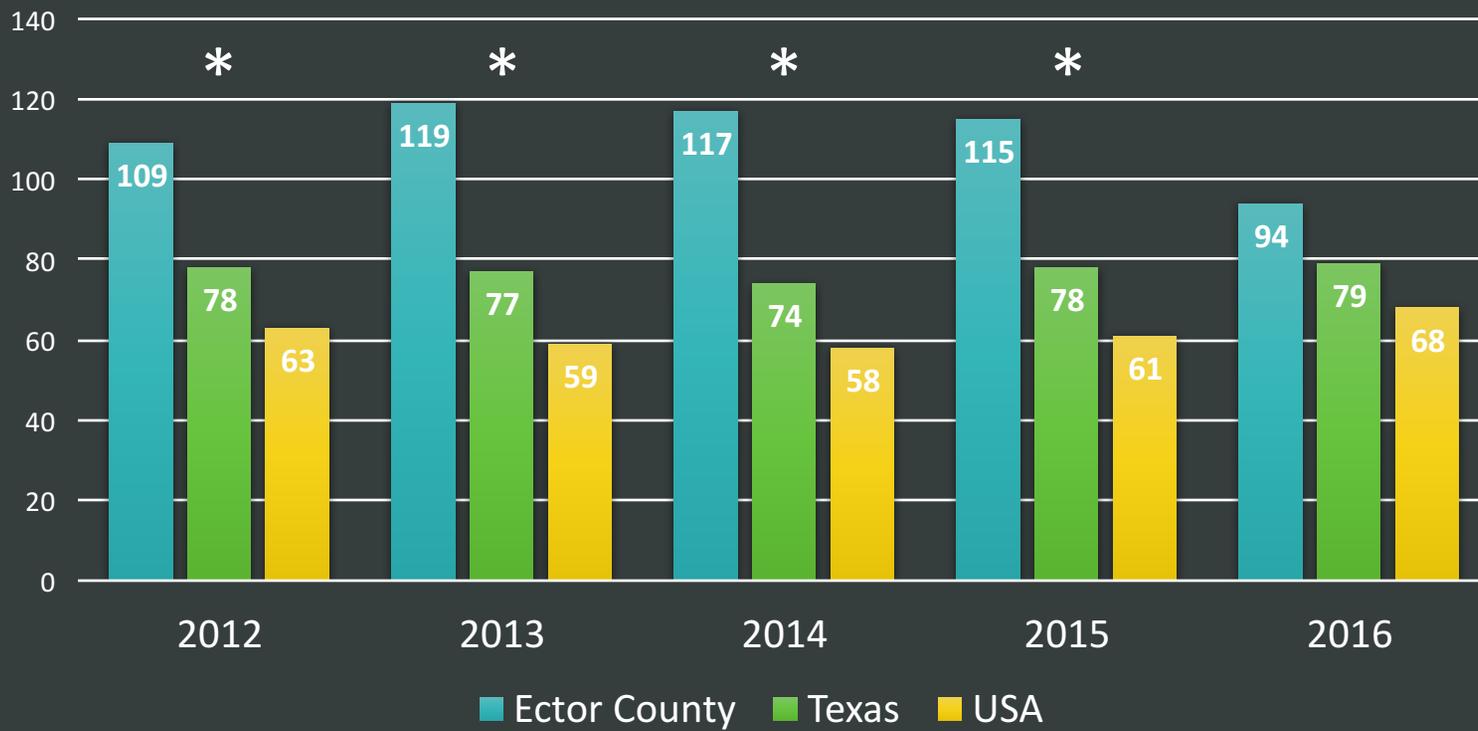


## Chlamydia Rates per 100,000 Ages 15-24



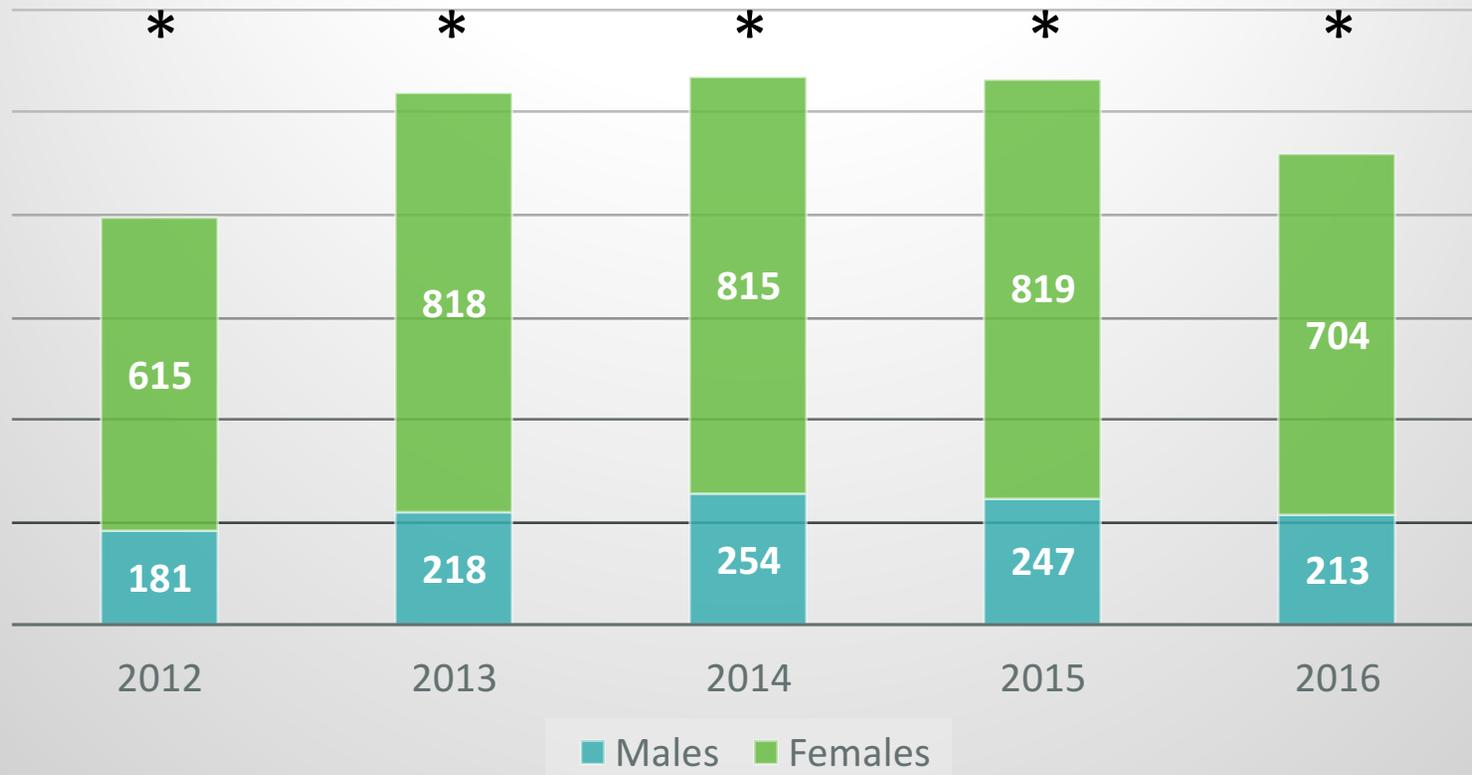
\* p < 0.05

## Gonorrhea Rates per 100,000 Ages 15-24



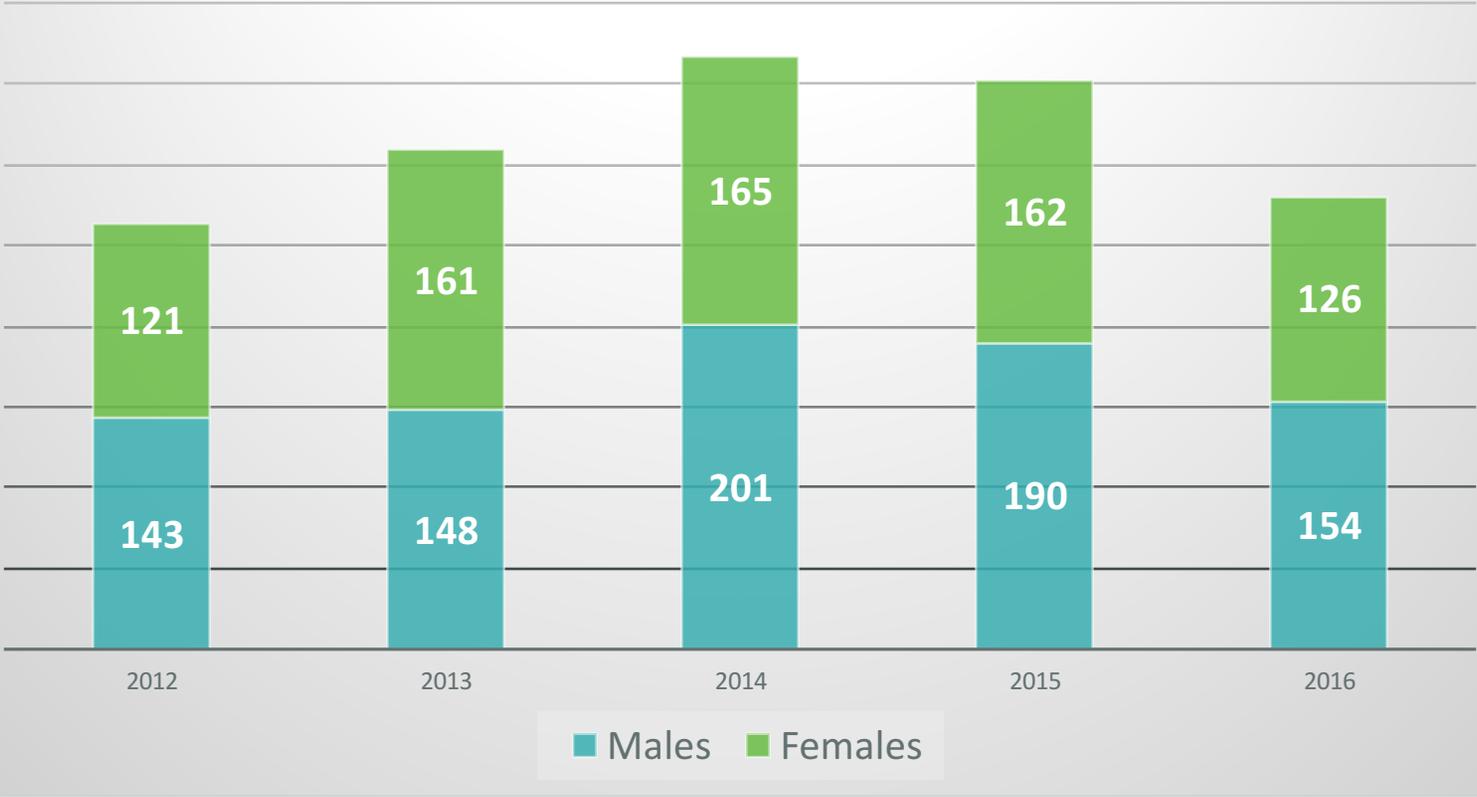
\* p < 0.05

## Ector County Chlamydia Incidence by Gender



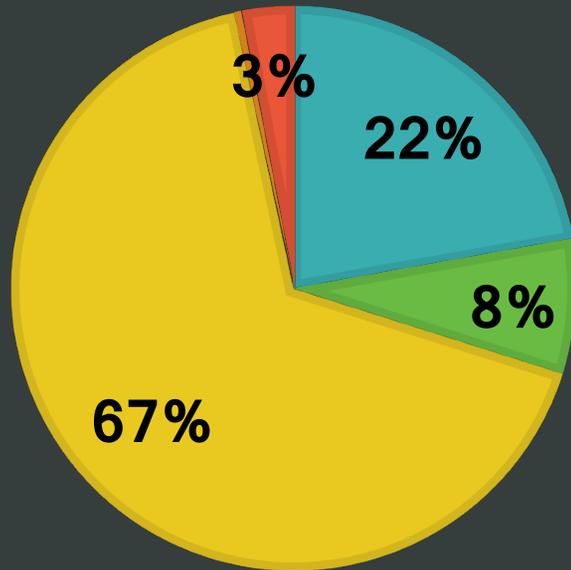
\*  $p < 0.05$

# Ector County Gonorrhea Incidence by Gender

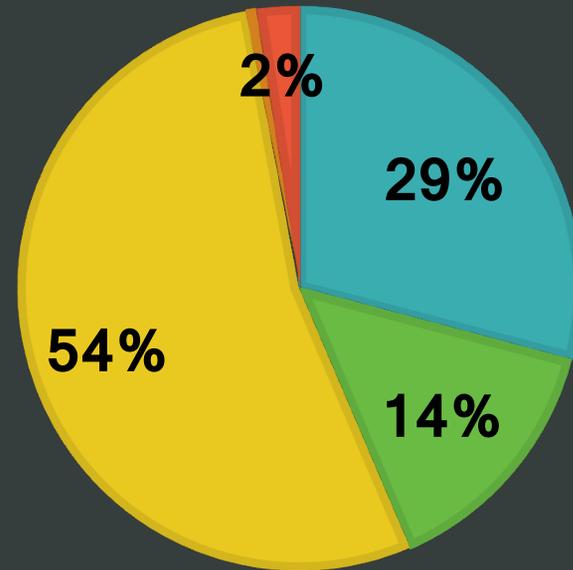


# Ector County STI Percentage by Race 2012-2016

## CHLAMYDIA



## GONORRHEA



White Black Hispanic Other Unknown

# Conclusions

- The rates of STI's in Ector County are higher than the state of Texas and the USA.
- The age range with the highest rates of STI's in West Texas is 15-24.
- Rates continued to increase with the growing population from 2012-2015, however decreased in 2016.
- Females have significantly higher rates of chlamydia than males.
- Incidence of STI's in Ector County is highest in Hispanics.



# Limitations to the Study

- Unknown amount of cases that are not reported
- The data is reported data



# Future Scope of Practice

- Utilize primary and secondary prevention practices to reduce the rates of reported STI cases in Ector County by 75% for the age group of 15-24 by 2020
- Prospective interventional study that will utilize education, screening, and treatment of STI's
- ECISD, institutions of higher education, Ector County Health Department, community outreach



# References

- Chesson, H. W., Collins, D., Koski, K. “Formulas for Estimating the Costs Averted by Sexually Transmitted Infection (STI) Prevention Programs in the United States.” Cost Effectiveness and Resource Allocation 2008, 6:10.
- <http://www.city-data.com/city/Odessa-Texas.html>
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- <https://www.dshs.texas.gov>
- <https://www.cdc.gov/nchhstp/atlas>



# Acknowledgements

- Research Advisor: Vani Selvan
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