

Stop the Spread: Geographically Tracking the Syphilis Outbreak in Houston/Harris County, TX

Monica Branch
Legacy Community Health Services
Houston, TX



Introduction

- Purpose of this project was to identify the prevalence of syphilis infections by zip code
- Identifying these geographical areas will assist the S.E.A.C. and Legacy Community Health Services in deploying resources to these communities in efforts to provide education and screening to these high-risk populations
- Legacy can use this information to explore the social/sexual networks of these high-risk populations in efforts to identify trends regarding sexual behavior



Background

- Syphilis is a sexually transmitted disease caused by the bacterium *Treponema pallidum*, and can cause serious long-term complications and/or death if not properly treated
- Three stages
 - Primary
 - Secondary
 - Late/latent syphilis



Background

- In 2012, the Houston Department of Health and Human Services (HDHHS) declared a syphilis outbreak in Houston/Harris County after observing a 97% increase in the number of primary and secondary syphilis infections compared to the same time period in 2011
- Men who have sex with men (MSM) and who use social networks to find sex partners drive the majority of new syphilis cases
- More than 1/3 of Houstonians with a new syphilis infection also have HIV

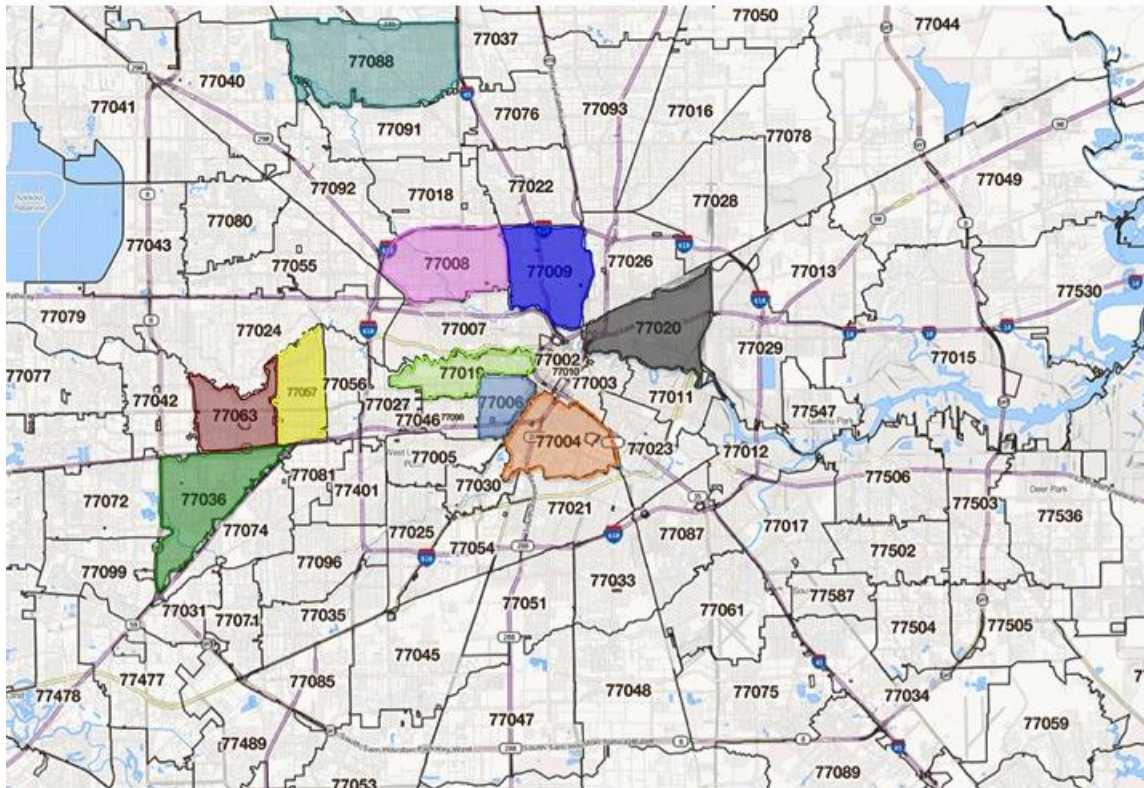
Methodology

- Performed inquiry of Centricity EMR system
- Searched for active patients with syphilis by:
 - Zip code
 - Sex
 - Race & ethnicity
 - HIV co-infection
- Calculated prevalence according to 2010 census data

Results

Demographics	Frequency	Percentage (%)
Total Syphilis Cases	1282	
Male	1165	91%
Male, HIV+	1023	88%
Female	117	9%
Female, HIV+	45	38%
White, Not Hispanic/Latino	317	25%
Black, Not Hispanic/Latino	530	41%
White, Hispanic/Latino	373	29%
Other Race/Ethnicity	62	5%

Geographic Locations of ≥ 29 Syphilis Cases per Zip Code



Zip Code	Syphilis Cases	Prevalence
77006	98	0.50%
77063	45	0.13%
77004	39	0.12%
77036	39	0.05%
77057	38	0.10%
77008	34	0.11%
77019	32	0.17%
77088	32	0.06%
77009	29	0.08%
77020	29	0.11%

Discussion

- Highest number of cases (98) among HIV+ White males in 77006 zip code (Montrose)
 - Majority of STD testing centers in this zip code
- Highest percentage of syphilis in Houston is among HIV+ Black males (41%)
 - 67-97% in some zip codes (3rd Ward, 5th Ward, Southwest)
 - No STD testing centers in these areas
- Individuals with syphilis but not HIV are a very vulnerable population
 - Aggressive prevention measures needed to prevent HIV

Recommendations

- Expand community STD testing centers to other high-risk communities
- Continue to provide prevention initiatives
 - Encourage safer sex practices
 - Promote awareness re. syphilis and other STDs
- Encourage more aggressive preventive measures (e.g. PrEP) for high-risk communities
- Explore social/sexual networks that play a role in syphilis outbreak

Conclusion

- Syphilis infections pose a serious health threat to Houston/Harris County
- Greatest risk among
 - MSM
 - Black males
 - HIV co-infection
- It is recommended that Legacy re-assess outreach initiatives to ensure high-risk populations are effectively targeted

Acknowledgements

- Legacy Community Health Services
- Dr. Ann Barnes – Site Supervisor
- Dr. Natalie Vanek – Site Mentor
- Mary Shepard, FNP – Mentor
- National Medical Fellowships

