

Sexually Transmitted Infections in Palm Beach County 2019

Biennial Report



DIVISION OF EPIDEMIOLOGY & COMMUNICABLE DISEASES
FLORIDA DEPARTMENT OF HEALTH PALM BEACH COUNTY

SEXUALLY TRANSMITTED INFECTIONS IN PALM BEACH COUNTY 2019

This report summarizes the patterns, trends and prevention of Sexually Transmitted Infections in Palm Beach County for 2019. This report is for DOH use only.

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*Data Source: STI data were generated from STARS and FL Health Charts. All other information was extracted as referenced. Data were analyzed/presented using SAS Release:3.6 (Enterprise Edition) and Microsoft Excel 2016. *STARS is a Florida's web-based reportable disease surveillance and investigation systems. *Florida Health Charts (www.flhealthcharts.com) is a community health assessment and resource tool set by Florida's Bureau of Vital Statistics.*

LIST OF CONTENTS

INTRODUCTION

Program Goals	2
Future Priorities	4

STI TRENDS SUMMARY

Counts and Rates of STIs in 2019	5
STI Reporting	6

CHLAMYDIA

Summary of Chlamydial Infections in 2019	7
Trends	8
Demographic Distribution	9
Geographic Distribution	10
Descriptive Risk Profile	11

GONORRHEA

Summary of Gonococcal Infections in 2019	13
Trends	14
Demographic Distribution	15
Geographic Distribution	16
Descriptive Risk Profile	17

SYPHILIS

Summary of Early Syphilis Infections in 2019	19
Trends	20
Demographic Distribution	22
Geographic Distribution	24
Descriptive Risk Profile	25

REFERENCES	27
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ABBREVIATIONS	28
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INTRODUCTION

The United States has been experiencing a steady rise in STI cases since 2014 (2). Nationally, bacterial STI cases reached an all-time high in 2018, with over 26 million new STI cases recorded (4). Factors driving the increase in STIs can be categorized into 5 risk factors; drug use, poverty, stigma, unstable housing, and decreased condom use among vulnerable groups (1). STIs affect men, women, and even infants of infected mothers. Florida, especially Palm Beach County (PBC), is no exception to this trend. From 2014 - 2019, PBC experienced a 36% increase in bacterial STI cases, and a 69% increase in total syphilis cases.

Bacterial STIs are easily prevented and treatable, but the consequence of untreated infections can be severe and may result in death of the patient or their newborn (12). STI prevention aims to decrease infertility, new HIV infections, pelvic inflammatory disease, ectopic pregnancies, newborn complications, and death of the patient. Unfortunately, the surge in STI cases, especially syphilis, has ultimately led to an increase of pregnant women with STIs and congenital cases within PBC.

The STI team of PBC works together in order to identify, locate, and ensure treatment per CDC guidelines for STI cases. STI clients are interviewed to identify risk factors and elicit sexual partners. Sexual partners are located, screened, counseled, and linked to appropriate treatment or care.

Annual reports allow our team to observe and evaluate STI trends within our community in order to identify populations and areas in need of STI services.

PROGRAM GOALS

Mission:

To protect, promote and improve the health of all people in Florida through integrated state, county, and community efforts.

Vision:

To be the Healthiest State in the Nation

Goal:

The goal of the STD Program in Palm Beach County is to reduce the incidence of Sexually Transmitted Infections by providing and promoting screening, counseling, treatment, and partner notification services to persons infected with or suspected of being infected with STIs (syphilis, chlamydia, gonorrhea and HIV).

Florida State Health Improvement Plan 2017-2021 (SHIP)

Priority 7 - Sexually Transmitted Infections (STIs) - Infectious organisms that are primarily acquired and transmitted through sexual activity cause many harmful often irreversible, and costly clinical complications in reproductive fetal, and perinatal health. Other emerging infectious agents pose the threat of disease outbreaks. Prevention, treatment and diagnostic strategies are essential

Goal ID1 Reduce syphilis in Florida.

- Strategy ID1.1 Reduce the number of syphilis cases through provider and public awareness, enhanced surveillance and expanded quality improvement activities.
- Strategy ID1.2 Reduce congenital syphilis cases in Florida by reducing the transmission of syphilis among sexually active persons through expanded surveillance, enhanced partner services and increased awareness of appropriate Sexually Transmitted Infections screening during pregnancy.

Goal ID2 Reduce new HIV infections in Florida through a coordinated response across public health systems partners.

- Strategy ID2.1 Prevent new HIV infections in Florida through increased provider awareness of prescribing prophylaxis for high-risk populations, increased offering of routine HIV screening in all health care settings and increased public awareness of HIV through a statewide minority media campaign.
- Strategy ID2.2 Foster improved health outcomes for people living with HIV/AIDS and reduce the chance of HIV transmissions to others through expedited linkage to care, achievement of viral load suppression through retention in care and increased awareness of appropriate HIV screening during pregnancy.

Goal ID3 Demonstrate readiness for existing and emerging infectious disease threats.


- Strategy ID3.1 Conduct surveillance to identify cases of reportable diseases among people residing or living in Florida, assess trends and identify emerging threats.
- Strategy ID3.2 Conduct syndromic surveillance through hospitals and urgent care centers to detect outbreaks, identify community trends and provide situational awareness during event response.
- Strategy ID3.3 Investigate and respond to cases, outbreaks and other public health events to protect persons residing or traveling in Florida and implement control measures and interventions as appropriate.

FUTURE PRIORITIES

- The STD Program in Palm Beach County will continue to pursue the **Florida State Health Improvement Plan 2017-2021 (SHIP)** and work towards reducing the incidence of Sexually Transmitted Infections by providing and promoting screening, counseling, treatment, and partner notification services to persons infected with or suspected of being infected with STIs.
- The program will look to improve on the Performance Indicators such as disease intervention index and partner index.
- Palm Beach County plans to implement measures to reduce the number of congenital syphilis in collaboration with community partners.
- The STD Program will continue to work on the development of local STI Guidelines/Manuals

STI REPORTING

In alignment to the Florida Administrative Code Chapter 64.D, all health care providers are required to report STI cases to the health department for tracking of communicable diseases. Laboratories are required to electronically report STI tests as well. The STD Program determines the characteristics of infection and follows up with those recently infected to ensure intervention of the disease process and prevention of transmission. A sample provider reporting form is given below



*****PLEASE ENCLOSE LABS*****
Gonorrhea, Chlamydia & Syphilis
FLORIDA CONFIDENTIAL REPORT OF
SEXUALLY TRANSMITTED DISEASES

TO REPORT STD CONTACT
 STD SURVEILLANCE AT
 PHONE: (561) 803-7326
 OR (561) 803-7316
 CONFIDENTIAL FAX:
 (561) 840-0148

PROVIDER INFORMATION DATE REPORTED _____

Physician / Provider Name _____ Person Reporting (Print Name) _____
 Address _____ Telephone _____
 City _____ State _____ Zip-code _____ County _____

PATIENT INFORMATION * Required fields

*Name: _____ *DOB: _____ *Gender: Male Female
 SSN: _____ Marital Status: _____

*Race: White Black Asian/Pacific Islander American Indian/Pacific Islander
 *Ethnicity: Hispanic Non-Hispanic

*Address: _____ City: _____ State: _____ Zip code: _____
 Phone: _____ Alternate Phone: _____

*If female, pregnancy status: Not Pregnant Pregnant LMP _____ EDD _____ Weeks _____
 OB Provider: _____

*Most recent HIV test date: _____

*Emergency contact: _____ Phone: _____
 Employer name: _____ Phone: _____
 Spouse / Partner name: _____ Age / DOB: _____
 Address: _____ Phone: _____

*If pregnant, was partner treated? YES NO Treatment: _____ Date of Treatment: _____

FOR ALL THE LATEST TREATMENT GUIDELINES, PLEASE VISIT www.cdc.gov/std/tg2015

CHLAMYDIA *PLEASE ATTACH LAB*	GONORRHEA *PLEASE ATTACH LAB*	SYPHILIS *PLEASE ATTACH LAB*
<p>Treatment :</p> <p><input type="checkbox"/> Azithromycin 1gm po <input type="checkbox"/> Doxycycline 100mg po BID x 7 Days <input type="checkbox"/> Other _____</p> <p>Date of Treatment _____ <input type="checkbox"/> Referred to: _____</p>	<p>Treatment:</p> <p><input type="checkbox"/> Ceftriaxone 250mg IM x 1 dose PLUS Azithromycin 1gm PO</p> <p>Date of Treatment _____ For allergic patient to Cephalosporin: <input type="checkbox"/> Gentamicin 240mg IM single dose PLUS Azithromycin 2gm PO x 1 dose <input type="checkbox"/> Referred to: _____</p>	<p>Treatment and Date (M/D/Y):</p> <p><input type="checkbox"/> 2.4mu BIC (/ /) <input type="checkbox"/> 2.4mu BIC (/ /) <input type="checkbox"/> 2.4mu BIC (/ /) <input type="checkbox"/> Doxy 100mg orally BID X 14 days</p> <p>Date of Treatment _____ <input type="checkbox"/> Referred to: _____ For allergies to penicillin, please read the latest MMWR at www.cdc.gov/std/tg2015</p>

FLORIDA DEPARTMENT OF HEALTH IN PALM BEACH COUNTY
 STD SURVEILLANCE
 851 AVENUE 'P' RIVIERA BEACH FL, 33404
 PHONE: (561) 803-7326 OR (561) 803-7316 CONFIDENTIAL FAX: (561) 840-0148
 PLEASE ENCLOSE LAB

9

STI TRENDS SUMMARY

COUNTS & RATES OF STIs

Table 1: Counts & Rates of STIs - 2019

	Chlamydia		Gonorrhea		Total Syphilis		Early Syphilis		All Bacterial STIs	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Total	Population
Palm Beach	6,367	436.5	1,501	102.9	515	35.3	289	19.8	8,384	1,458,576
Florida	111,757	525.5	37,207	174.9	12,233	57.5	7,391	34.8	161,216	21,268,553

Figure 1: Number of Bacterial STI Cases in PBC from 2015 - 2019

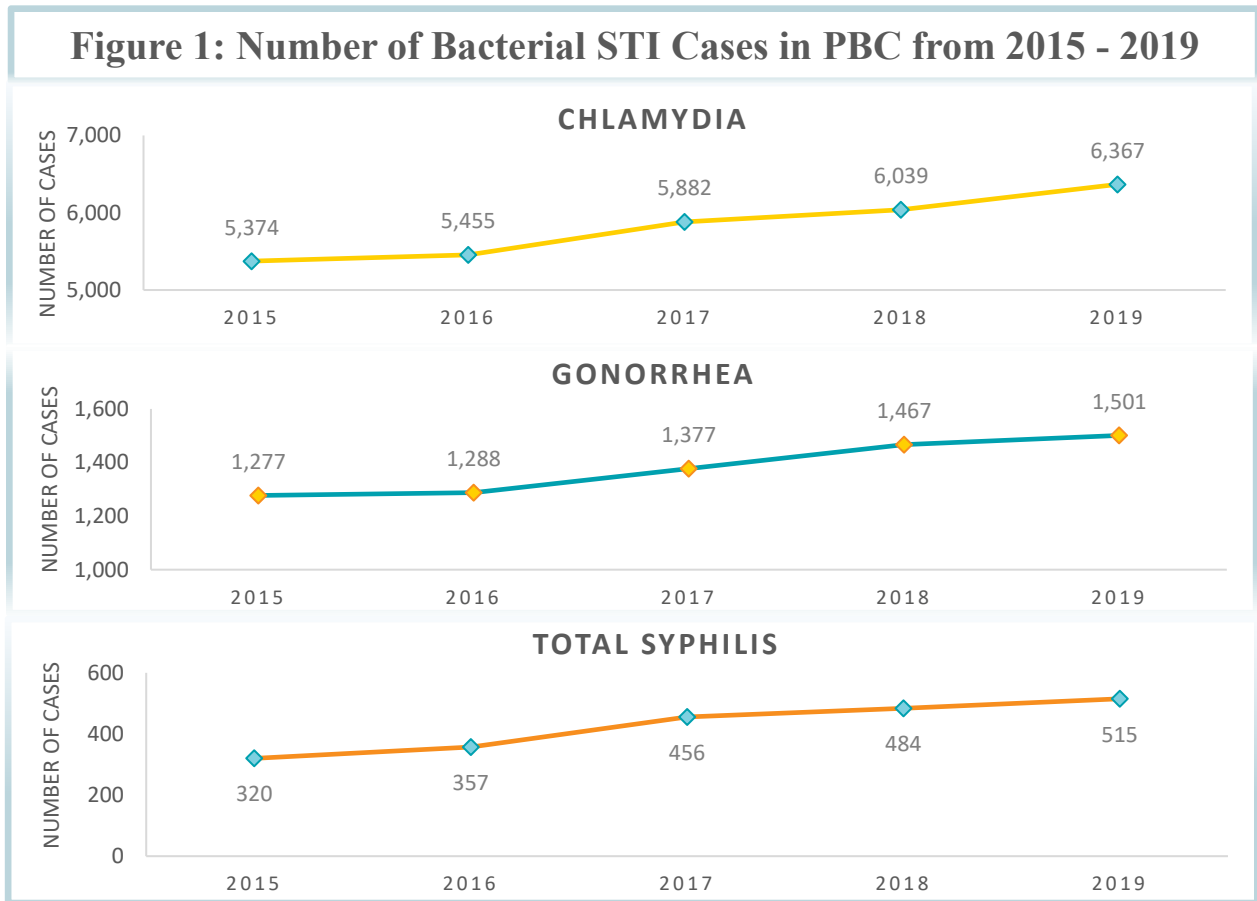


Figure 1: Palm Beach County reported a total of 8,384 cases of Bacterial Sexually Transmitted Infections in 2019, an increase of 8.6% from 2017. Chlamydia cases increased by 8.2% from 5,882 cases in 2017 to 6,367 cases in 2019. Gonorrhea cases increased by 9% from 1,377 cases in 2017 to 1,501 cases in 2019. Total syphilis cases (including primary, secondary, early latent and late or unknown duration) increased by 13% from 456 cases in 2017 to 515 cases in 2019.

CHLAMYDIA

SUMMARY OF CHLAMYDIAL INFECTIONS IN 2019

Table 2: Demographics of Chlamydial Infections in Palm Beach County, 2019

Category	Number of Cases	Percent	Incidence Rate per 100,000 people*
Overall	6,367	100%	436.5
Sex/Pregnancy			
Males	2,177	34%	307.7
Females	4,190	66%	557.9
Pregnant Cases <u>Among Females</u>	680	16%	4,584
Missing	0	0%	--
Race/Ethnicity			
All Hispanic	1,305	20%	390.4
Black, Non-Hispanic	3,097	49%	1,141.9
Other, Non-Hispanic	60	1%	93.4
White, Non-Hispanic	1,473	23%	186.7
Unknown/Missing Race	908	14%	-
Unknown/Missing Ethnicity	244	4%	-
Age Group			
0--19	1,711	27%	552.4
20-29	3,422	54%	2,155.8
30-39	875	14%	515.5
40-49	226	4%	129.7
50+	133	2%	20.9
Missing	0	0%	--
Disposition Outcomes*			
Favorable**	5,704	81%	--
Neutral***	1,004	14%	--
Unfavorable****	334	5%	--
Missing	0	0%	--

***Disposition Outcomes:** Numbers reflect all chlamydia cases in STARS for 2019 including sexual partners who were preventively treated without testing.

****Favorable Outcome:** Preventative Treatment, Infected & brought to treatment, Previously treated for infection, Not infected, Administrative closure OOJ.

*****Neutral Outcomes:** Refused preventive treatment, Infected & morbidity only, Administrative closure, Located but refused partner services, Other, Administrative closure per reactor grid

******Unfavorable Outcomes:** Infected & brought to non-standard treatment, Infected & not treated, Unable to locate, Located but refused treatment

TRENDS

Figure 2: Number & Rates of Chlamydia Infections within Palm Beach County vs Florida Chlamydia Rates from 2015-2019

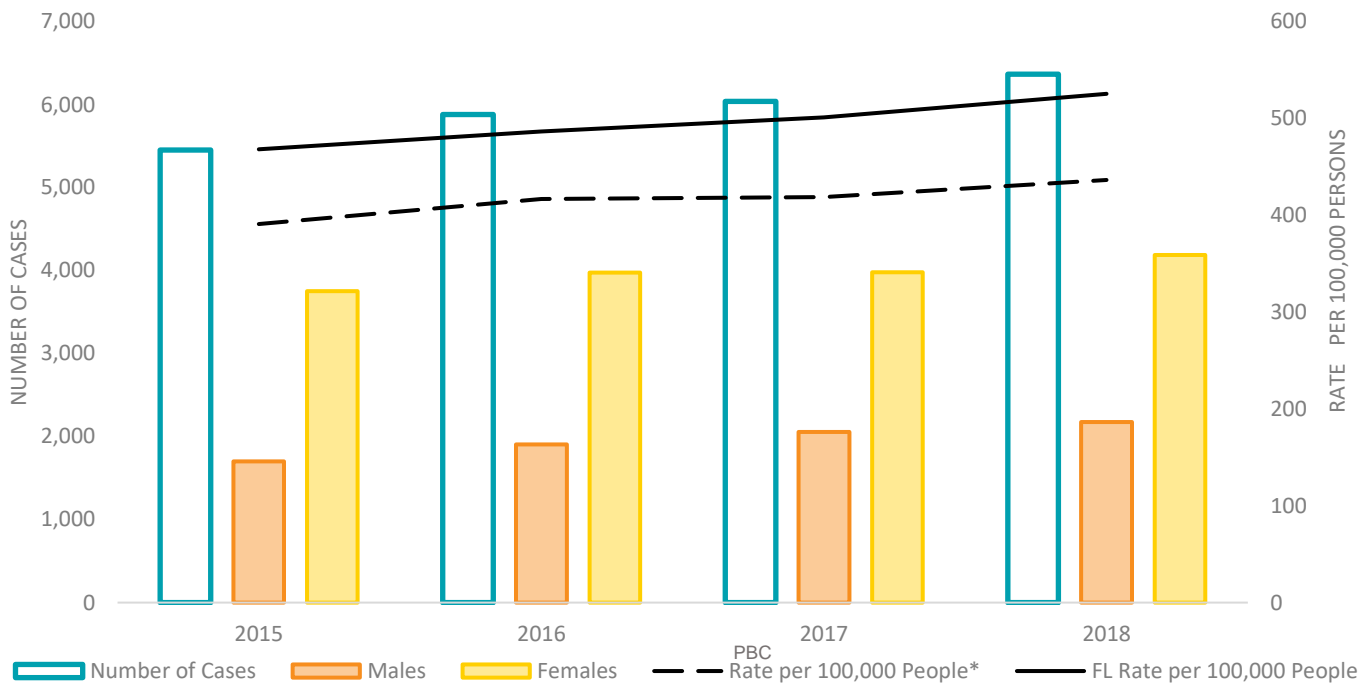


Table 3: Data for Figure 2

Year	# of Cases	Males	Females	PBC Rate per 100,000 People	FL Rate per 100,000 People
2015	5375	1,575	3,800	388.9	455.5
2016	5455	1,701	3,751	391	468.2
2017	5888	1,909	3,979	417.3	486.8
2018	6,026	2,050	3,976	417.8	499.9
2019	6,367	2,177	4,190	436.5	525.5

Data Highlights

Figure 2: In 2019, Palm Beach County (PBC) had the 6th highest case load in the state of Florida. (6). However, after accounting for PBC’s large population, the county had an intermediate rate of infection and ranked 36th out of 67 counties (6). Over the past 5 years, female cases have been approximately twice as high as male cases, with females accounting for 66% of infections in 2019. When observing the change in rate for both PBC and Florida, the last substantial increase in cases was from 2016 to 2017 when PBC had a 3% larger change in rate than Florida. However, from 2018 to 2019, both PBC and Florida had similar changes of rate despite both having a more substantial increase in chlamydia cases.

DEMOGRAPHIC DISTRIBUTION

Figure 3: Race/Ethnicity Distribution of Chlamydia Infections in Palm Beach County, 2019

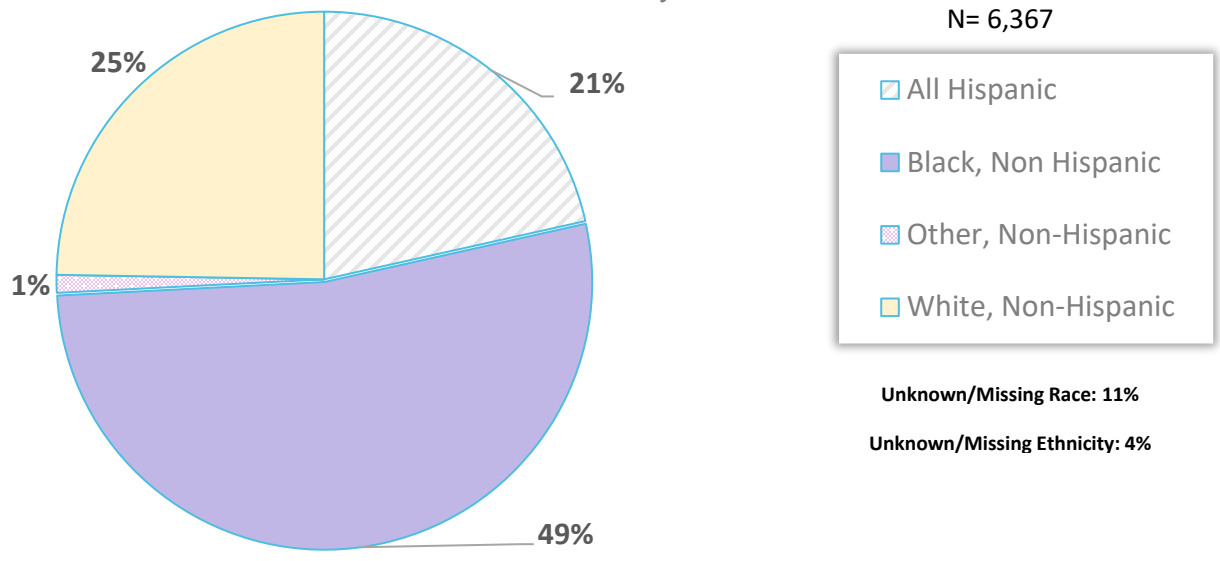
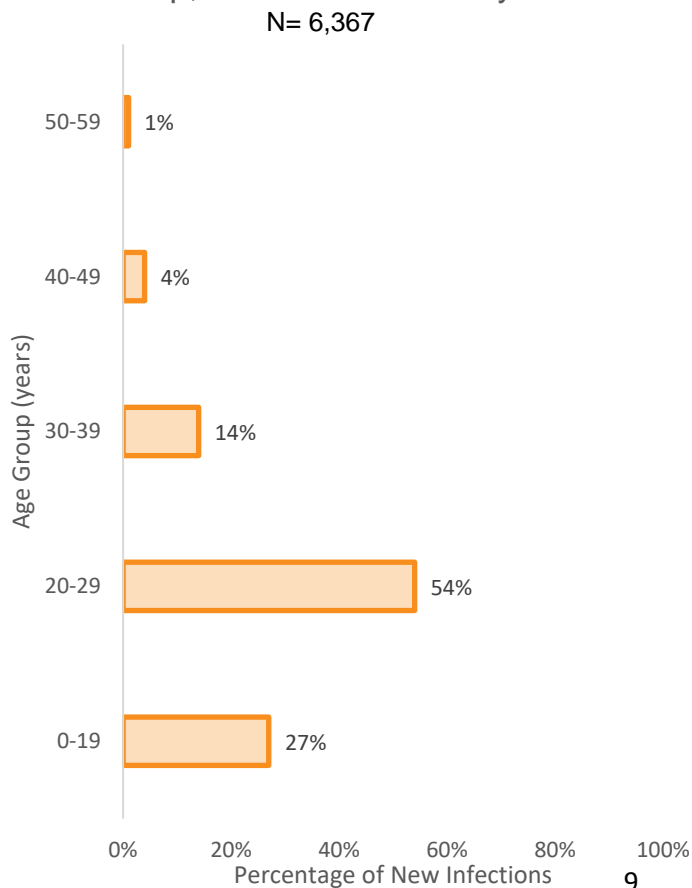


Figure 4: Percentage of Chlamydia Infections by Age Group, Palm Beach County 2019



Data Highlights

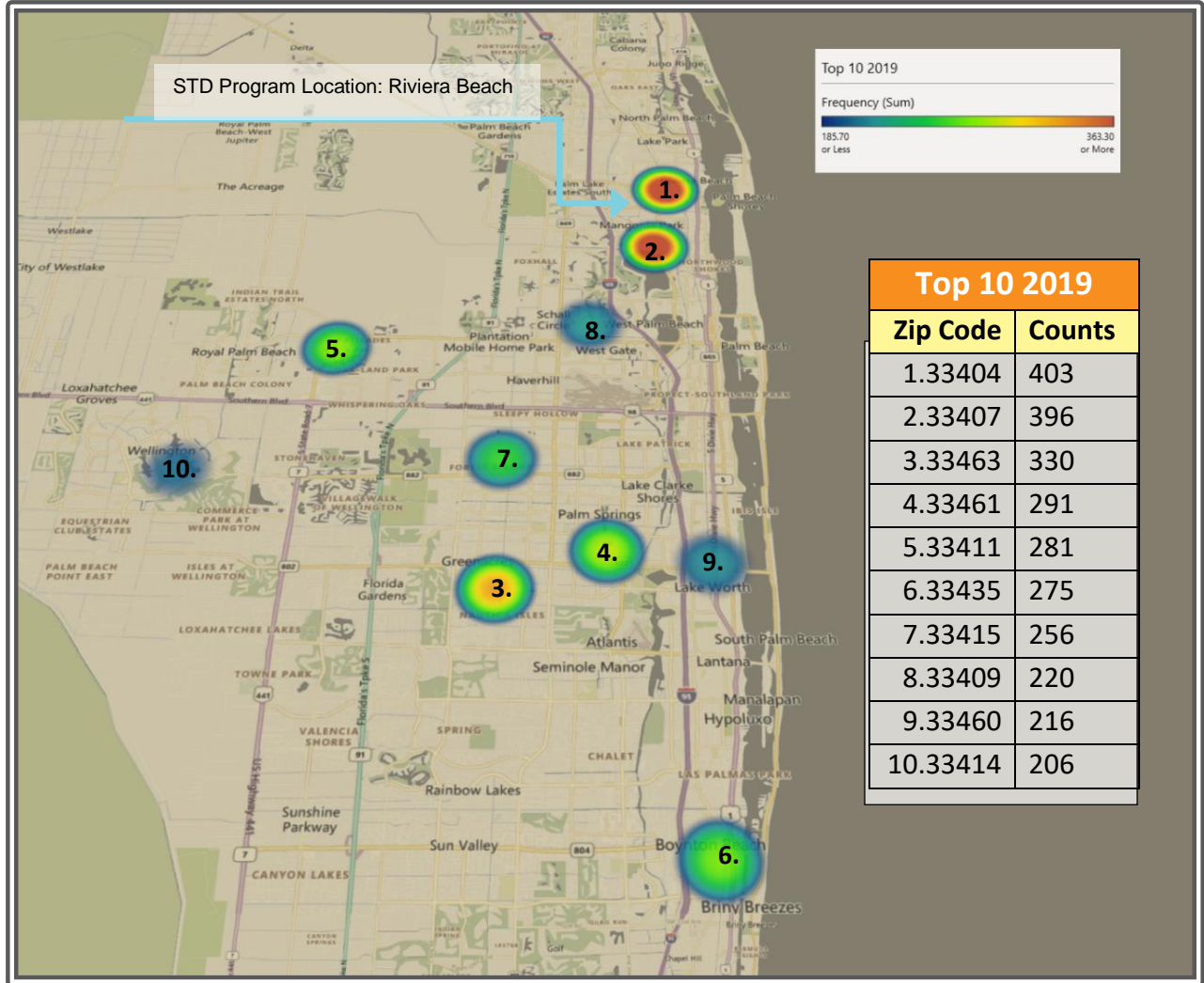
Figure 3 & Table 2: Most chlamydia cases recorded in PBC during 2019 were within the black, non-Hispanic community (49%) with a rate of 1,141.9 per 100,000 persons. Black, non-Hispanics experienced a rate of chlamydial infections 6 times higher than their white counterparts. The Hispanic community, while lower in case numbers than whites, experienced a rate 2 times higher than white, non-Hispanics.

Figure 4 & Table 2: The highest percentage and rate of chlamydia cases was in the 20- 29-year-old age group with a percentage of 54% and a rate of 2,155.8 per 100,000 persons. Teenagers and young adults remain a main target in STI prevention, counseling, and treatment within PBC.

GEOGRAPHIC DISTRIBUTION

Map 1:

Top 10 Zip Codes for Highest Chlamydia Infection Burden in Palm Beach County, 2019



Data Highlights

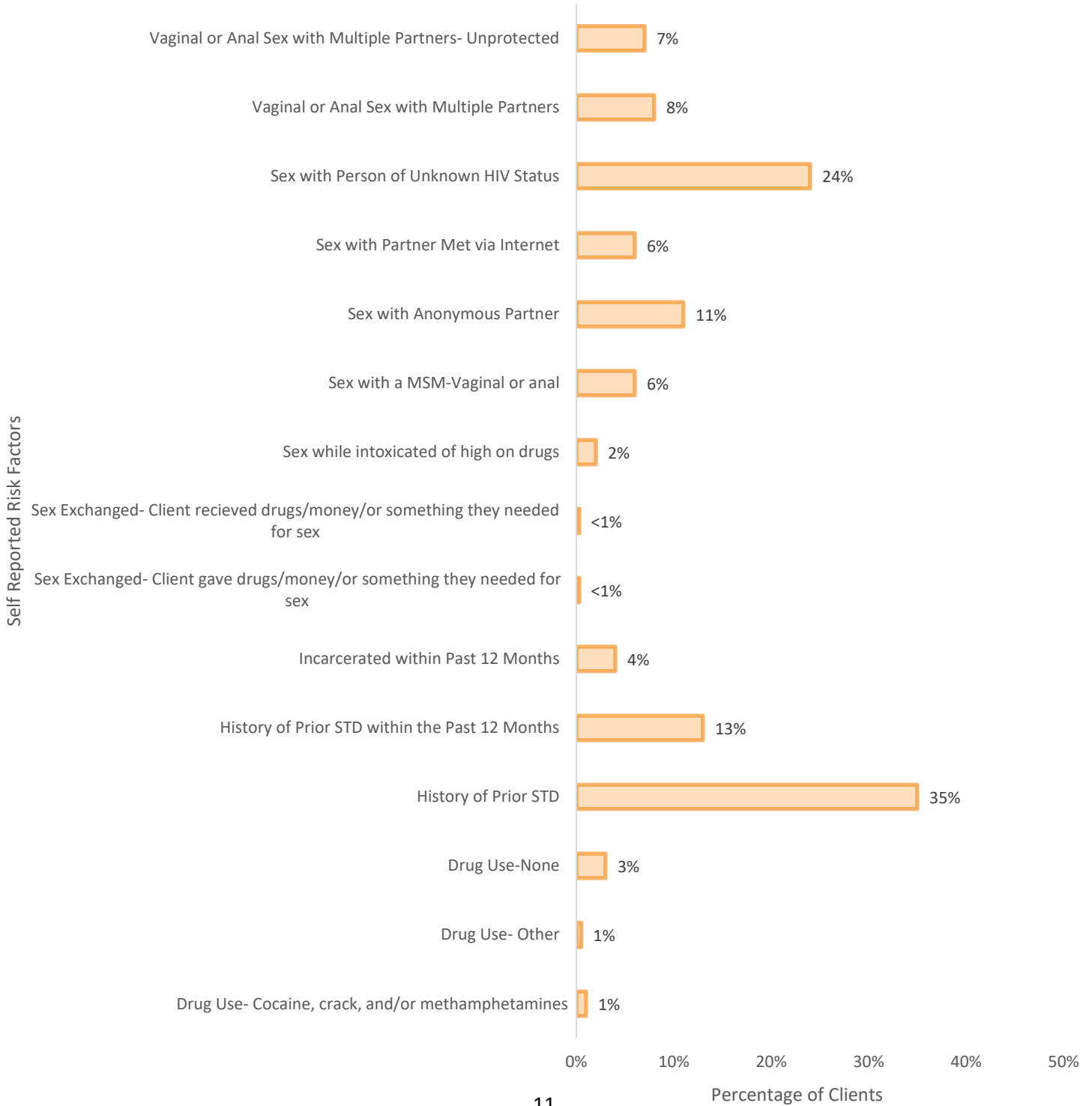
Map 1: The top 10 zip codes for chlamydia infections represent the top 20% of cases recorded within PBC in 2019. The two highest disease burden zip codes are located within the West Palm Beach city area. Demographically, zip codes 33404 and 33407 are predominately composed of black, non-Hispanics, 67% and 60% respectively (8,9). The third highest effected city was Greenacres, a predominantly Hispanic community (11). Mapping the top 20% of chlamydia cases in PBC mimics the case rates within each racial group/ethnicity. Furthermore, around 50% of the cases in each of the top 3 zip codes fall into the 20-29 age group category.

DESCRIPTIVE RISK PROFILE

Figure 5:

Percentages of Patient Reported Risk Factors Among Those Who Reported at least 1 Risk Factor During a Chlamydia Interview in Palm Beach County, 2019

N = 394 (6% of all chlamydia cases) *



Data Highlights

Figure 5: Patients are interviewed regarding their individual risk factors for chlamydial infection. Most patients reported having a prior history of STIs, with almost half of these patients having a history of STI infection within the past 12 months. Over 24% of patients interviewed reported having sex with someone of unknown HIV status, highlighting the importance of HIV education and PrEP among high-risk STI patients.

*394/487 of cases interviewed that reported at least one risk factor.

*Interview criteria for chlamydia cases: CHD pregnant females, all cases ≤ 15 years old, and HIV co-infected cases with an unsuppressed viral load. Interviews and partner services are done voluntarily by the client.

GONORRHEA

SUMMARY OF GONOCOCCAL INFECTIONS IN 2019

Table 4: Demographics of Gonococcal Infections in Palm Beach County, 2019

Category	Number of Cases	Percent	Incidence Rate per 100,000 people*
Overall	1,501	100%	102.9
Sex/Pregnancy			
Males	963	64%	136.1
Females	538	36%	71.6
Pregnant Cases <u>Among Females</u>	65	12%	438.2
Missing	0	0%	-
Race/Ethnicity			
All Hispanic	222	15%	66.4
Black, Non-Hispanic	793	53%	292.4
Other, Non-Hispanic	12	1%	18.7
White, Non-Hispanic	372	25%	47.2
Unknown/Missing Race	159	11%	-
Unknown/Missing Ethnicity	60	4%	-
Age Group			
0--19	254	17%	82
20-29	679	45%	405.9
30-39	302	20%	177.9
40-49	145	10%	83.2
50+	121	8%	19
Missing	0	0%	-
Disposition Outcomes*			
Favorable**	2,683	92%	-
Neutral***	145	5%	-
Unfavorable****	87	3%	-
Missing	0	0%	-

***Disposition Outcomes:** Numbers reflect all gonorrhea cases in STARS for 2019 including sexual partners who were preventively treated without testing.

****Favorable Outcome:** Preventative Treatment, Infected & brought to treatment, Previously treated for infection, Not infected, Administrative closure OOJ.

*****Neutral Outcomes:** Refused preventive treatment, Infected & morbidity only, Administrative closure, Located but refused partner services, Other, Administrative closure per reactor grid

******Unfavorable Outcomes:** Infected & brought to non-standard treatment, Infected & not treated, Unable to locate, Located but refused treatment

TRENDS

Figure 6:

Number & Rates of Gonorrhea Infections within Palm Beach County vs Florida Gonorrhea Rates from 2015-2019

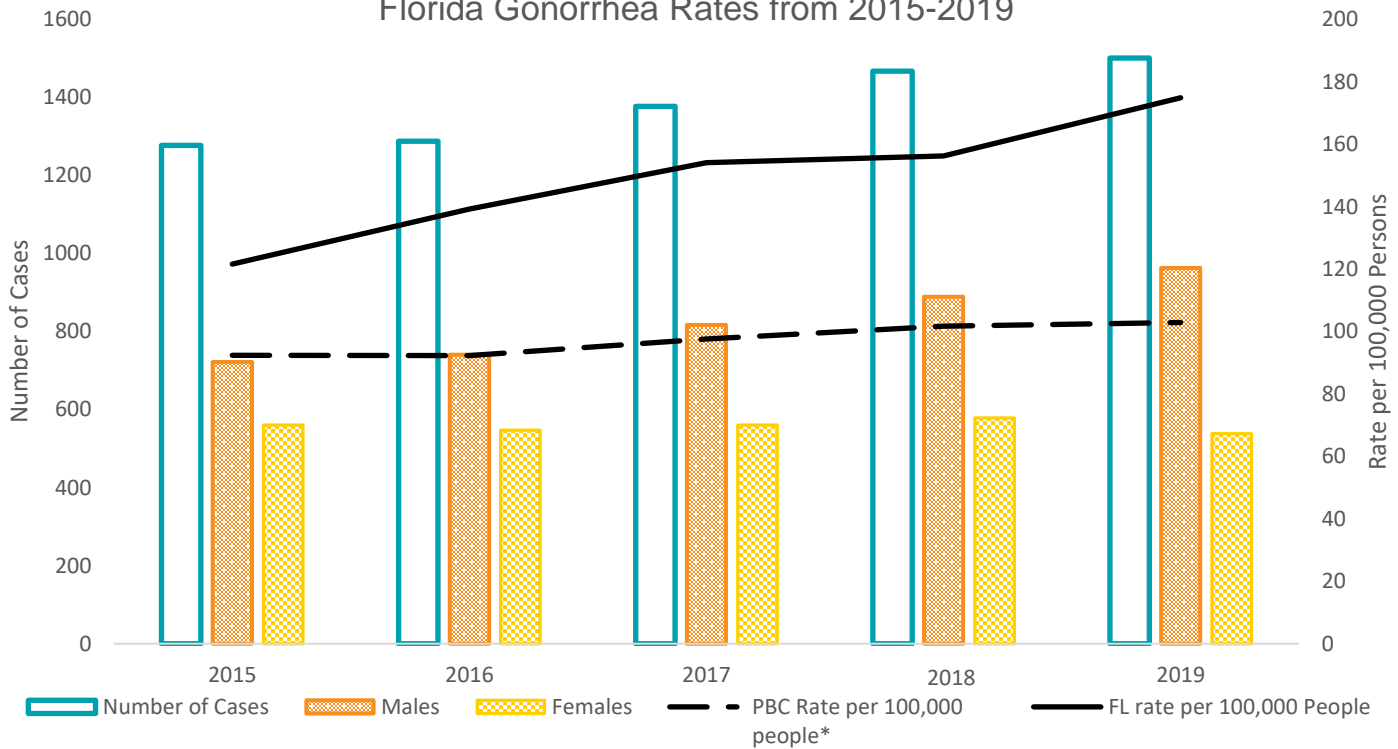


Table 5: Data for Figure 6

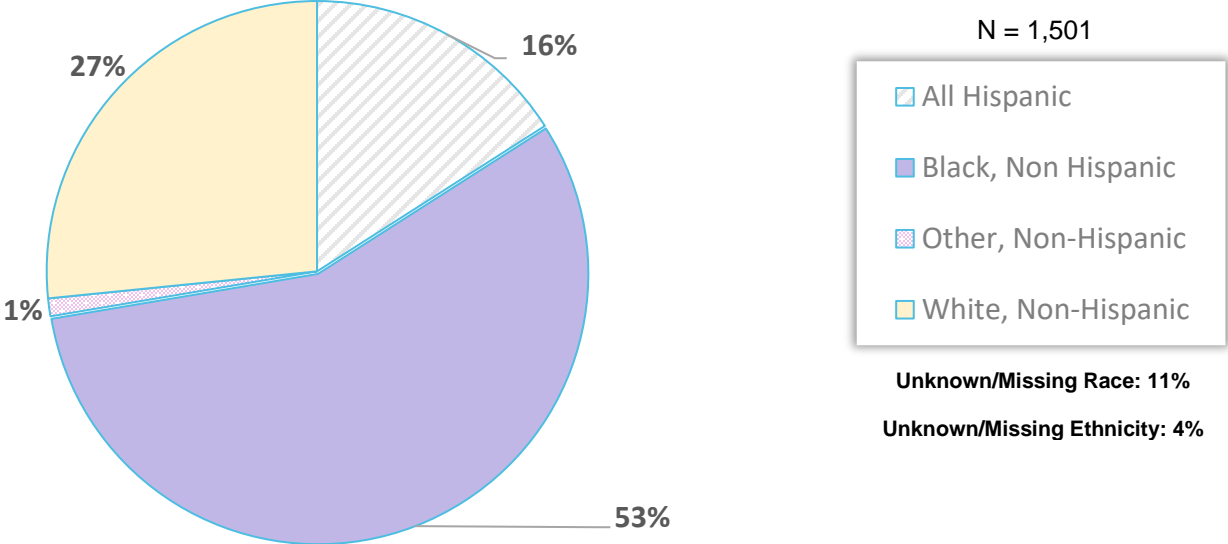
Year	# of Cases	Males	Females	PBC Rate per 100,000 People	FL Rate per 100,000 People
2015	1277	722	555	92.4	121.6
2016	1288	741	547	92.3	139.2
2017	1378	818	560	97.7	154.3
2018	1,462	885	577	101.7	155.8
2019	1,501	963	538	102.9	174.9

Data Highlights

Figure 6: In 2019, Palm Beach County (PBC) had the 7th highest case load in the state of Florida. (6). However, after accounting for PBC's large population, the county had one of the lower rates in the state and ranked 44th out of 67 counties (6). Throughout the past 5 years, males have been driving the increase in gonorrhea infections in PBC, accounting for 64% of the cases in 2019. From 2015-2019, males had an average increase of 60 new cases per year. On the other hand, females only had an average net increase of 4 cases per year.

DEMOGRAPHIC DISTRIBUTION

Figure 7: Race/Ethnicity Distribution of Gonorrhea Infections in Palm Beach County, 2019

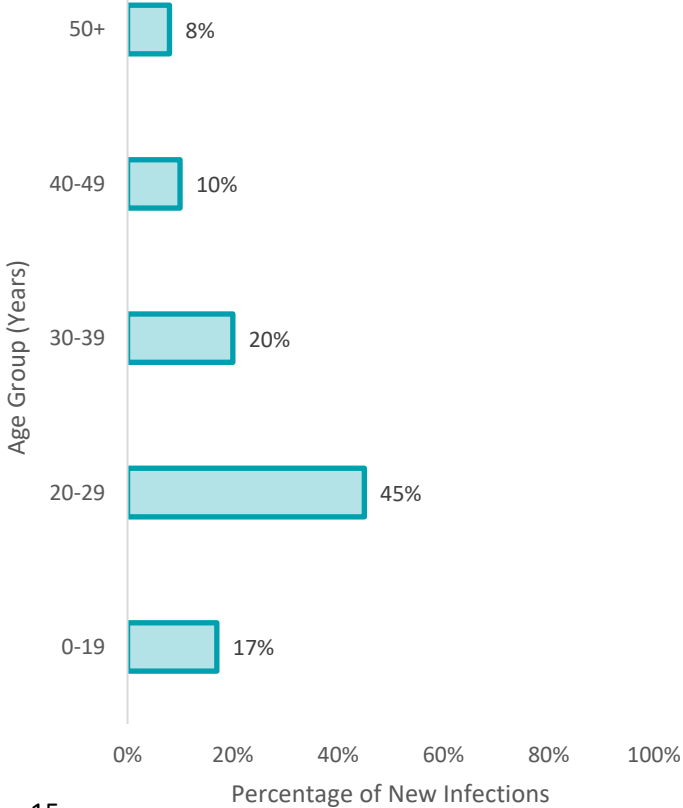


Data Highlights

Figure 7 & Table 4: Over half of the gonorrhea infections reported within PBC in 2019 were among the black, non-Hispanic community (56%). Black, non-Hispanics had a rate of infection 6 times higher than white, non-Hispanics. While whites had 11% more cases than Hispanics, Hispanics had a rate of infection 1.4 times higher than white, non-Hispanics.

Figure 8 & Table 4: Almost half of reported gonorrhea infections were among the 20-29-year-old age group with an incidence rate of 405.9 per 100,000 persons. When compared to the 0 – 19-year-old age group, the 20-29-year old group had a 5 times higher incidence rate.

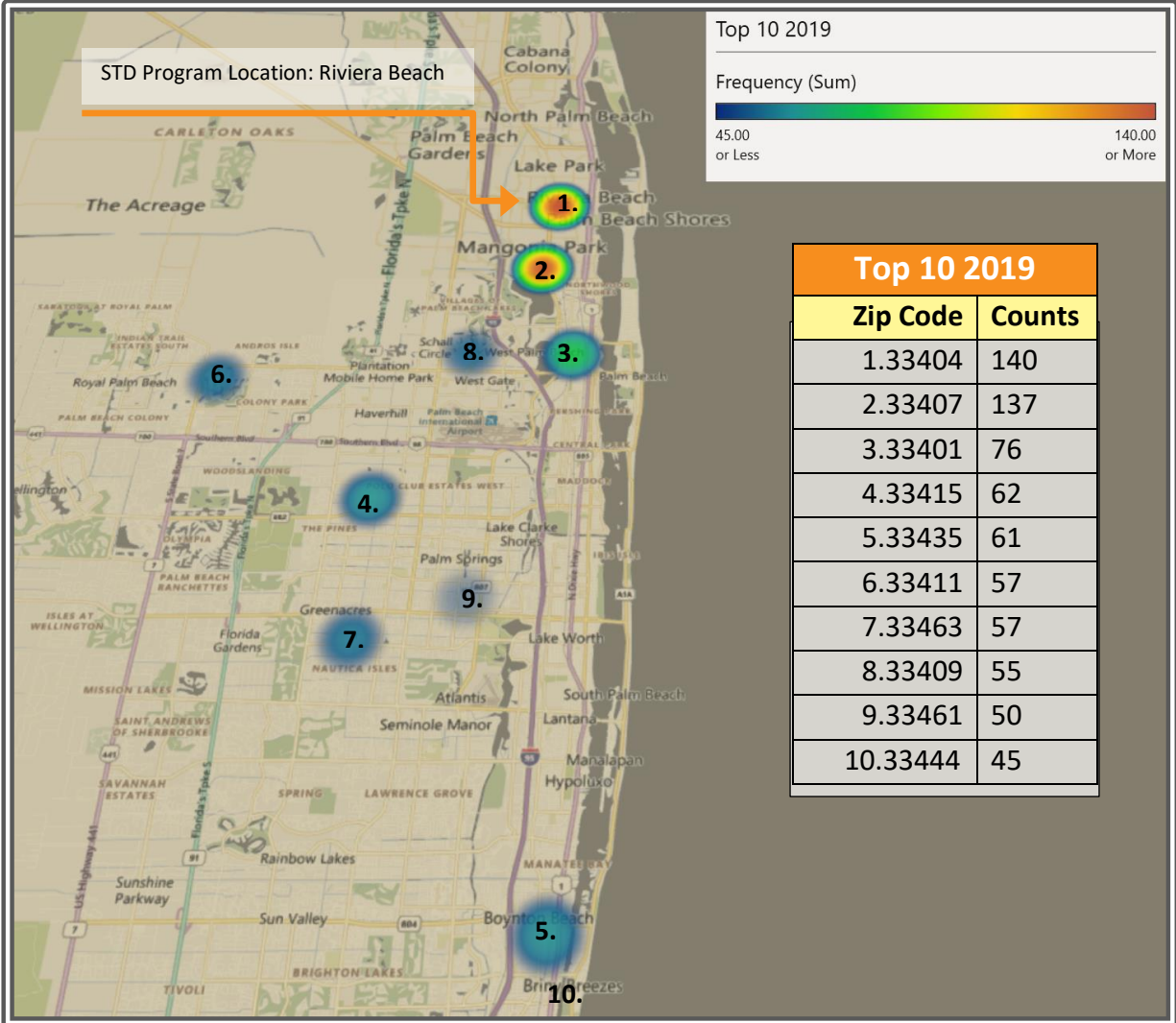
Figure 8: Percentage of Gonorrhea Infections by Age Group, Palm Beach County 2019
N = 1,501



GEOGRAPHIC DISTRIBUTION

Map 2:

Top 10 Zip Codes for Highest Gonorrhea Infection Burden in Palm Beach County, 2019



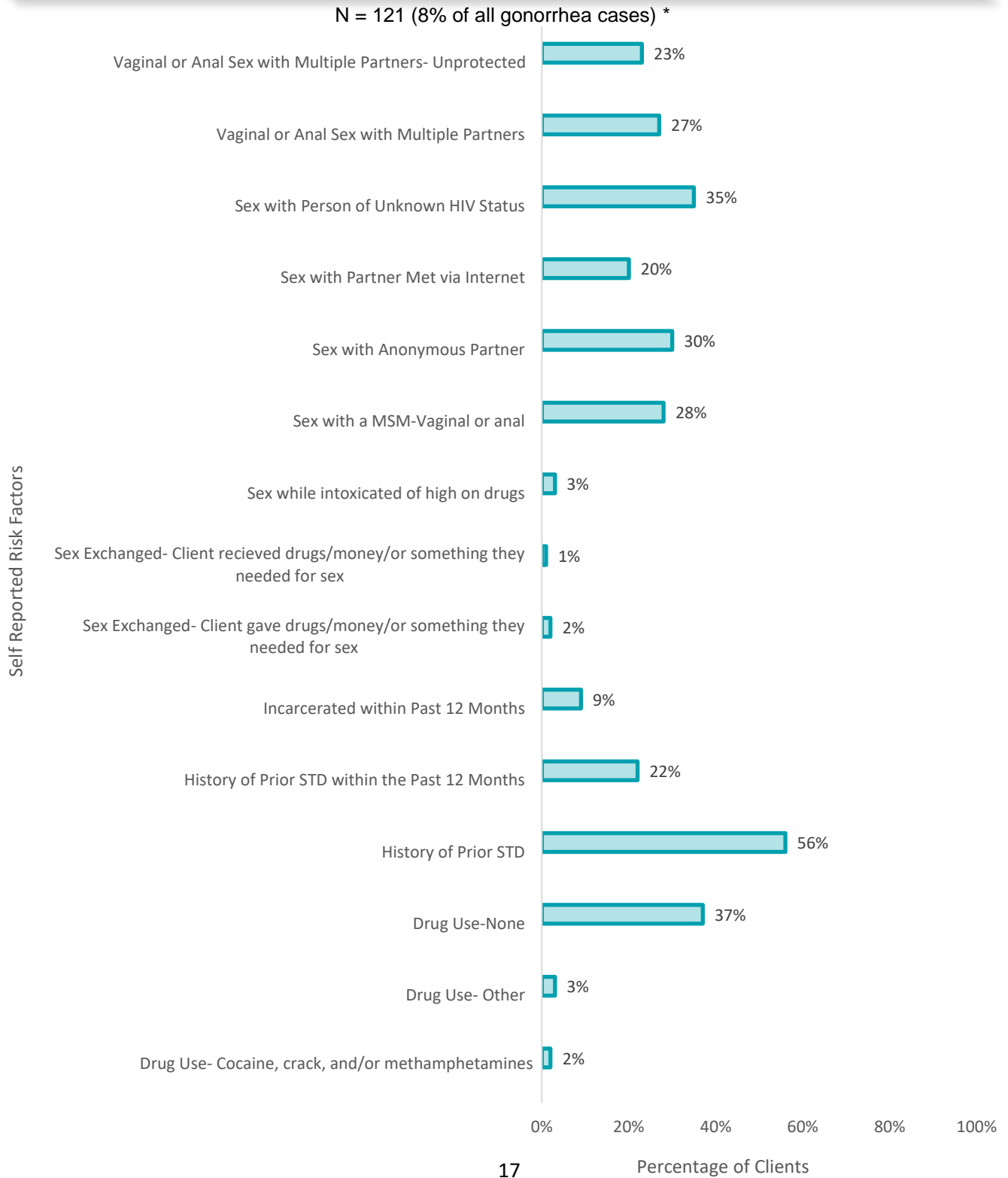
Data Highlights

Map 2: The top 10 zip codes for gonorrhea infections represent the top 50% of gonorrhea cases reported in PBC in 2019. The first and second highest zip codes for case incidence are the same as the top 2 zip codes for chlamydial infections, which include the cities of Riviera Beach and Greenacres. Demographically, zip codes 33404 and 33407 are predominately composed of black, non- Hispanics, 67% and 60% respectively (8, 9). Among 33404’s population, 68% of households compose of “Singles”, “Single Guardian”, or “Singles with Roommate” (8). Similarly, 33407’s population is composed of 72% of “Singles”, “Single Guardian”, or “Singles with Roommate” (9).

DESCRIPTIVE RISK PROFILE

Figure 9:

Percentages of Patient Reported Risk Factors Among Those Who Reported at least 1 Risk Factor During a Gonorrhea Interview in Palm Beach County, 2019



Data Highlights

Figure 9: When compared to the self-reported risk factors in 2018 (N=144), the 2019 report has a couple notable increases. The risk factor “Sex with a MSM-Vaginal or anal” doubled in 2019 when compared to 2018, and “Sex with Anonymous Partner” increased by 12%. However, “Sex with Partner Met via Internet” only increased by 5%. As expected, due to the increase in overall cases, “History of Prior STI” has also increased in 2019. Interviewing cases and increasing partner elicitation/partner meeting locations, especially among men who have sex with men (MSM), may be useful in decreasing gonorrhea cases within PBC.

*121/228 of cases interviewed that reported at least one risk factor.

*Interview criteria for gonorrhea cases: CHD pregnant females, all cases \leq 15 years old, all cases \geq 16 years old selected by the SSuN program, and HIV co-infected cases with an unsuppressed viral load. Interviews and partner services are done voluntarily by the client.

SYPHILIS

SUMMARY OF EARLY SYPHILIS INFECTIONS IN 2019*

Table 6: Demographics of Early Syphilis Infections in Palm Beach County, 2019

Category	Number of Cases	Percent	Incidence Rate per 100,000 people
Overall	289	100%	19.8
Sex/Pregnancy			
Males	254	88%	35.9
Females	35	12%	4.7
Congenital Cases <u>Among Females</u>	9	26%	60.7
Missing	0	0%	-
Race/Ethnicity			
All Hispanic	82	28%	24.5
Black, Non-Hispanic	87	30%	32.1
Other, Non-Hispanic	4	1%	6.2
White, Non-Hispanic	106	37%	13.4
Unknown/Missing Race	21	7%	-
Unknown/Missing Ethnicity	6	2%	-
Age Group			
0--19	14	5%	4.5
20-29	68	24%	40.7
30-39	73	25%	43
40-49	49	17%	28.1
50+	85	29%	13.3
Missing	0	0%	-
Disposition Outcomes**			
Favorable**	3,696	76%	-
Neutral***	1,071	22%	-
Unfavorable****	97	2%	-
Missing	0	0%	-

* Early syphilis includes primary, secondary and early non-primary, non-secondary stages. The following trend analyses of syphilis focus on reported cases and rates of early syphilis as they reflect new/incident infections.

****Disposition Outcomes:** Numbers reflect all syphilis cases (all stages) in STARS for 2019 including sexual partners who were preventively treated without testing, previously treated individuals, and false positives.

*****Favorable Outcome:** Preventative Treatment, Infected & brought to treatment, Previously treated for infection, Not infected, Administrative closure OOJ.

******Neutral Outcomes:** Refused preventive treatment, Infected & morbidity only, Administrative closure, Located but refused partner services, Other, Administrative closure per reactor grid

*******Unfavorable Outcomes:** Infected & brought to non-standard treatment, Infected & not treated, Unable to locate, Located but refused treatment

TRENDS

Figure 10: Number & Rates of Early Syphilis Infections within Palm Beach County vs. Florida Early Syphilis Rates from 2015-2019

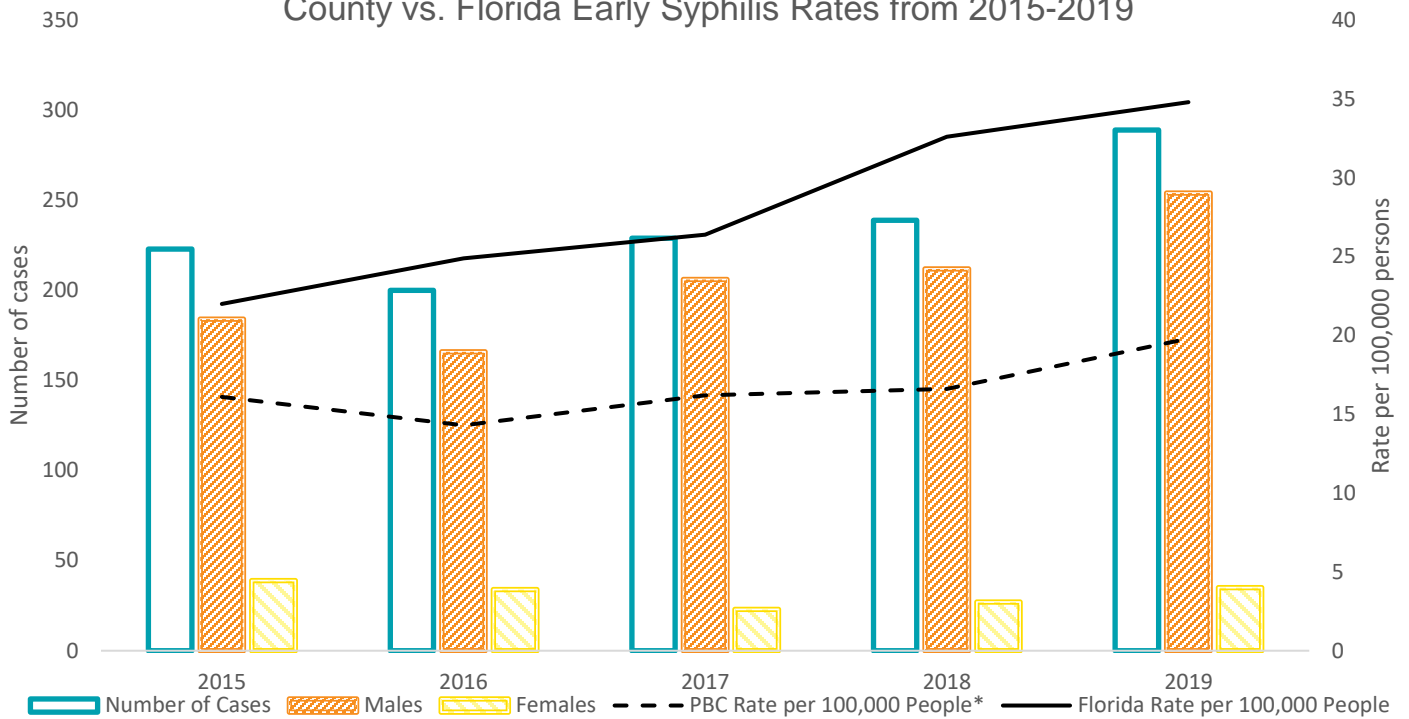


Table 7: Data for Figure 10

Year	Number of Cases	Males	Females	PBC Rate per 100,000 People	FL Rate per 100,000 People
2015	223	184	39	16.4	22
2016	200	166	34	14.2	24.9
2017	229	206	23	16.2	26.4
2018	239	212	27	16.6	32.6
2019	289	254	35	19.8	34.8

Data Highlights

Figure 10: In 2019, Palm Beach County (PBC) had the 7th highest case load in the state of Florida (6). However, after adjusting for the county's large population size by evaluating the incidence rate, it ranked 28th out of the 67 counties in Florida (6). When observing changes in PBC's early syphilis infection rates from the past 5 years, the largest magnitude of change occurred within the 2018-2019 period. However, the state of Florida has seen a substantial change in rate since 2017, and PBC's 2018-2019 rate jump is most likely following this trend. Males far outnumber female infections, as males accounted for 88% of all cases in 2019. Historically, this has been due to the vast amount of early syphilis infections among the MSM population in PBC. However, it's important to note that from 2018 to 2019 women experienced a 30% increase in cases. Comparatively, men only experienced a 20% increase.

Figure 11:

Rates of Congenital Syphilis Infections in Palm Beach County vs. the State of Florida, 2010-2019

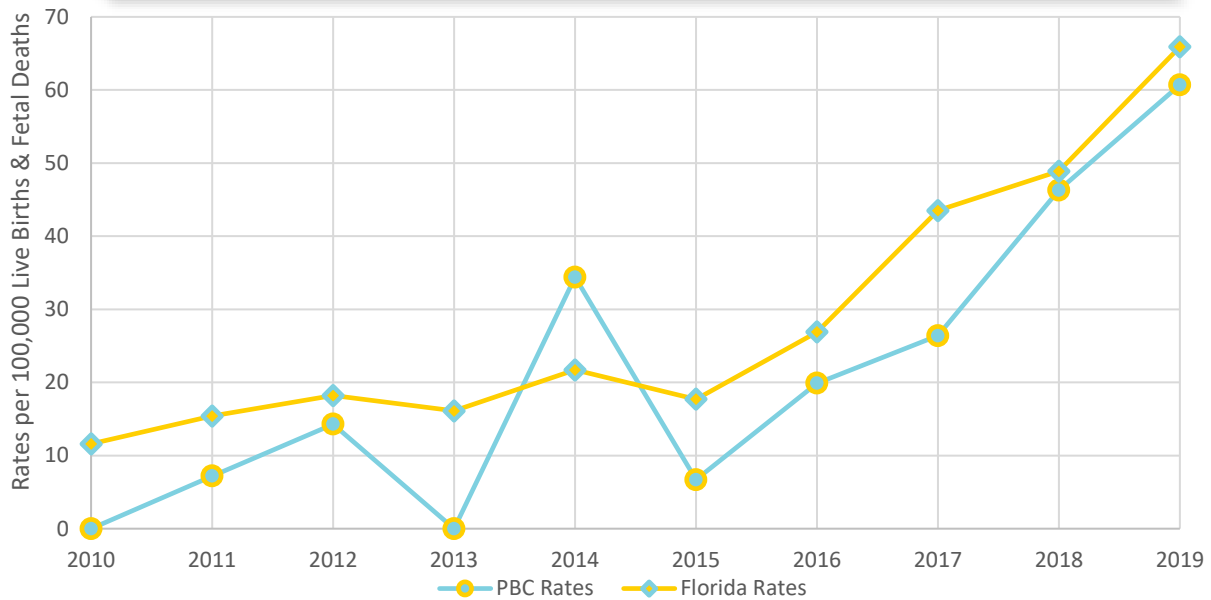


Table 8: Number and Rates of Congenital Syphilis Cases in PBC and Florida

Year	PBC: # of Female Cases	PBC: # of Congenital Cases	PBC Rates per 100,000 Live Births & Fetal Deaths	FL Rate per 100,000 Live Births & Fetal Deaths
2010	57	0	0	11.6
2011	57	1	7.2	15.4
2012	58	2	14.3	18.2
2013	60	0	0	16.1
2014	76	5	34.4	21.7
2015	66	1	6.7	17.7
2016	47	2	19.9	26.9
2017	67	4	26.4	43.5
2018	36	7	46.3	48.9
2019	35	9	60.7	65.9

Data Highlights

Figure 11: In 2019, PBC had the 6th highest case load in the state of Florida (6). Rates of congenital syphilis (CS) have been rising in PBC since 2014 and follow a similar trend as the overall cases in Florida. Out of the total reported cases of CS in 2019, 89% were Black/Non-Hispanic, 78% of mothers started prenatal care in second or third trimester, 22% of mothers had prior history of STI in the past 12 months, and 33% had previous history of Syphilis either during or prior to current pregnancy.

DEMOGRAPHIC DISTRIBUTION

Figure 12: Race/Ethnicity Distribution of Early Syphilis Infections in Palm Beach County, 2019

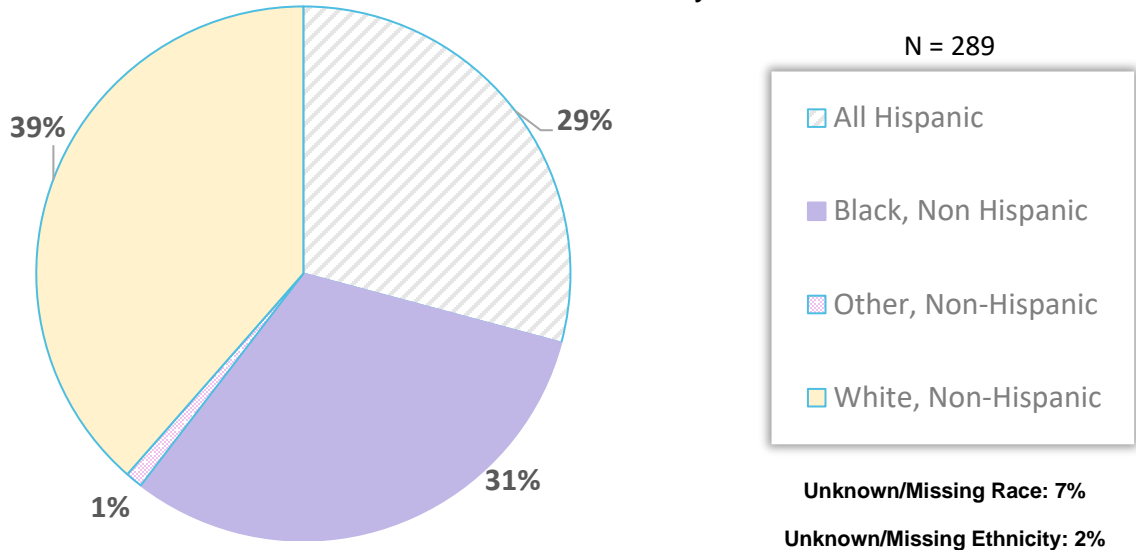
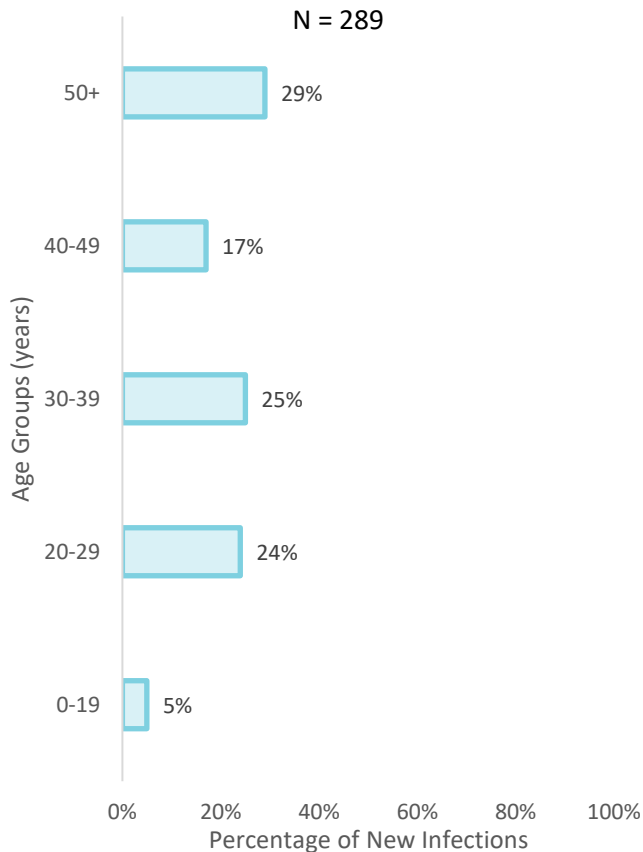


Figure 13: Percentage of Early Syphilis Infections by Age Group in Palm Beach County, 2019



Data Highlights

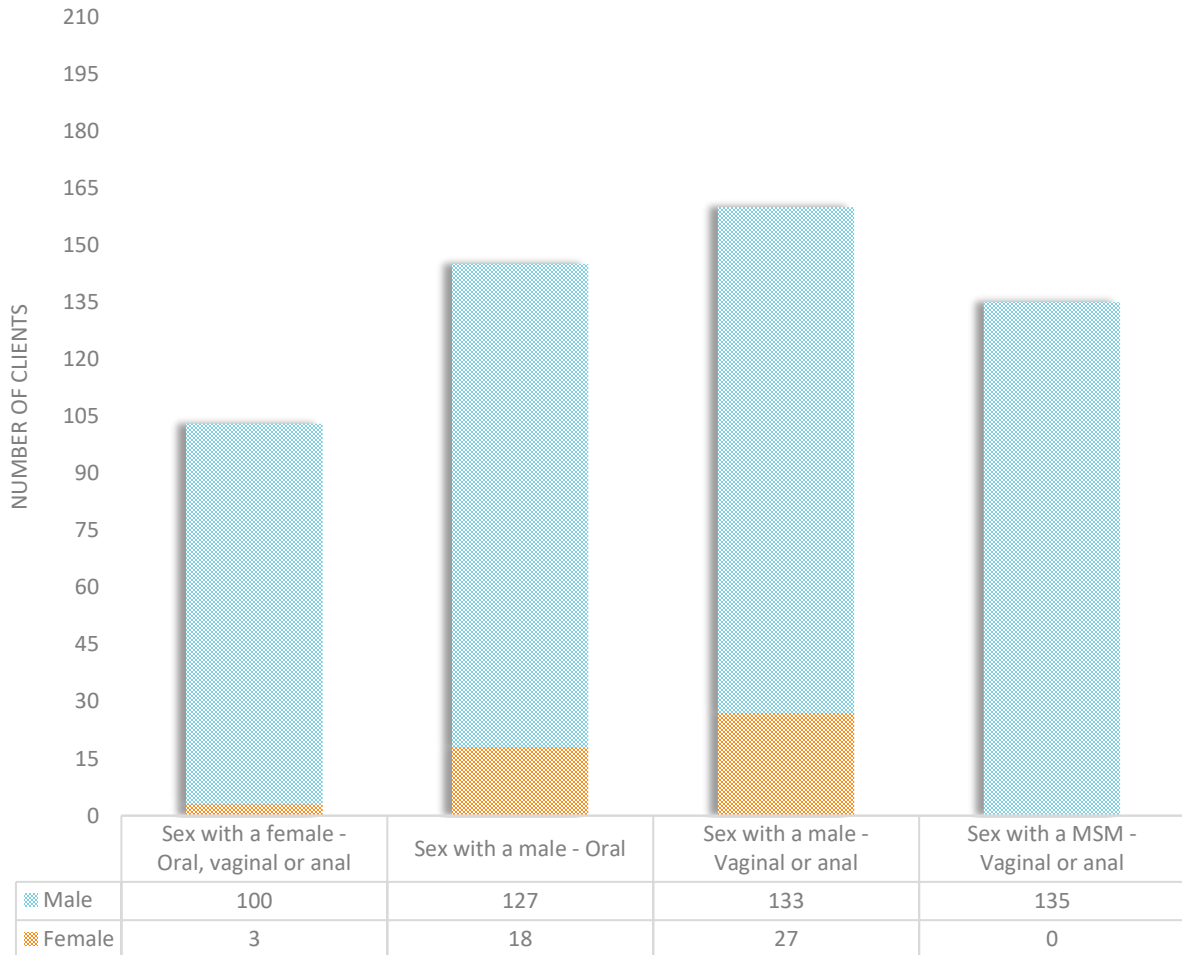
Figure 12 & Table 6: Black, non-Hispanics continue to be at higher risk for STIs than other racial/ethnic groups. However, early syphilis infection rates are more stable across all race/ethnicity groups when compared to the differences seen in chlamydial or gonococcal infections. Black, non-Hispanics experienced a 2.5 times higher rate of infection than white, non-Hispanics. Hispanics had a rate 2 times higher than white, non-Hispanics.

Figure 13 & Table 6: The largest percentage of cases occurred within the 50+ community. However, the largest rates occurred within the 20-29 and 30-39 age groups at 40.7 and 43 per 100,000 persons respectively. The lowest percentage and rate of infection was the 0-19-year-old age group.

Figure 14:

Early Syphilis Cases by Sex and Sexual Behavior in Palm Beach County, 2019

N = 197 (68% of all early syphilis cases) *



Data Highlights

Figure 14: Early syphilis infections within PBC are primarily found in MSM, with most MSM self-reporting that the men they have sex with also have sex with other men. No females self-reported having vaginal or anal sex with an MSM. However, it is plausible that females are not discussing sexual preferences with their partners and assuming that the male partners are only having sex with other females.

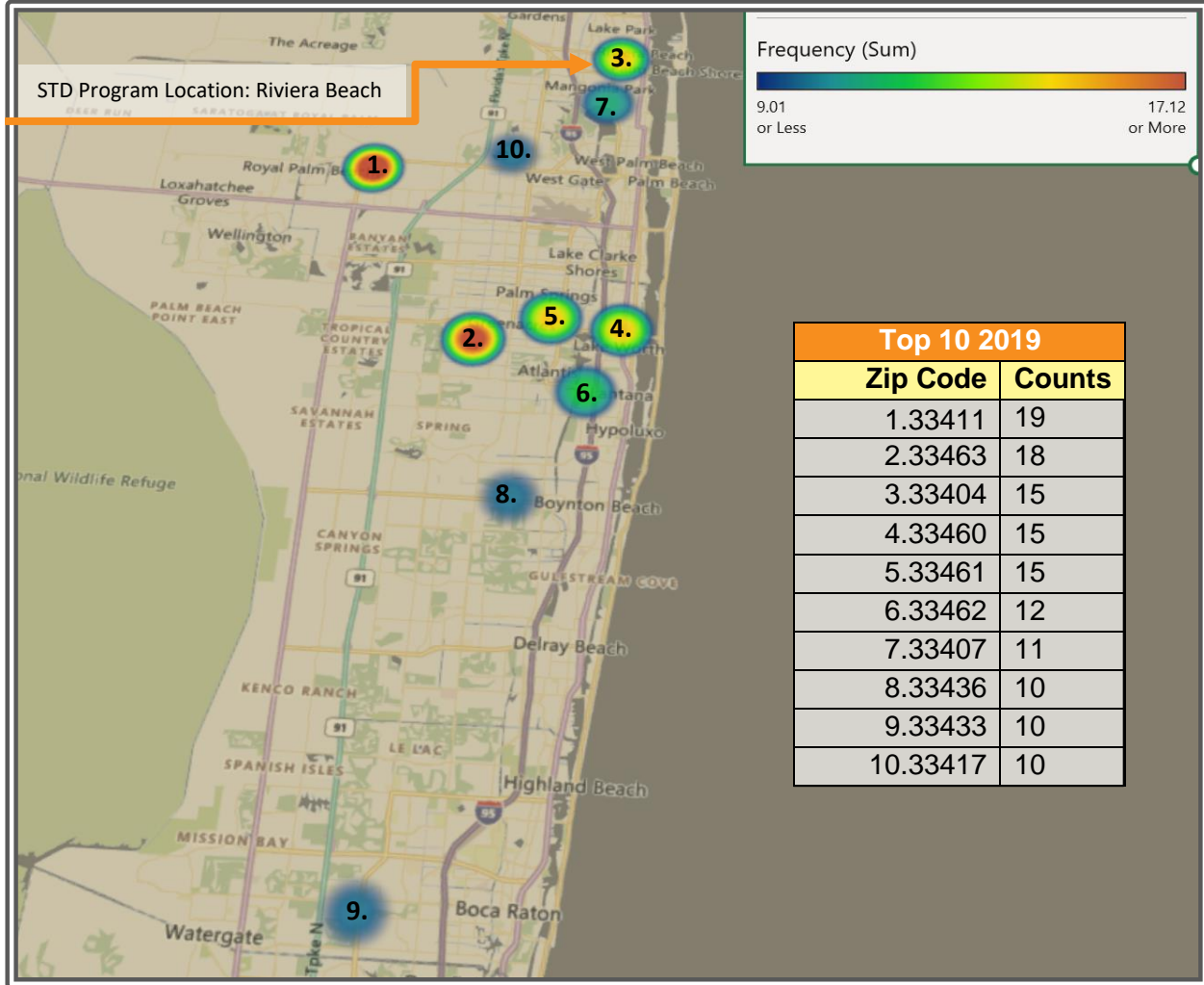
*197/289 cases interviews that reported at least one risk factor

*Interview criteria for early syphilis cases: All early syphilis cases require an interview and partner services. Interviews and partner services are done voluntarily by the client.

GEOGRAPHIC DISTRIBUTION

Map 3:

Top 10 Zip Codes for Highest Early Syphilis Infection Burden in Palm Beach County, 2019



Data Highlights

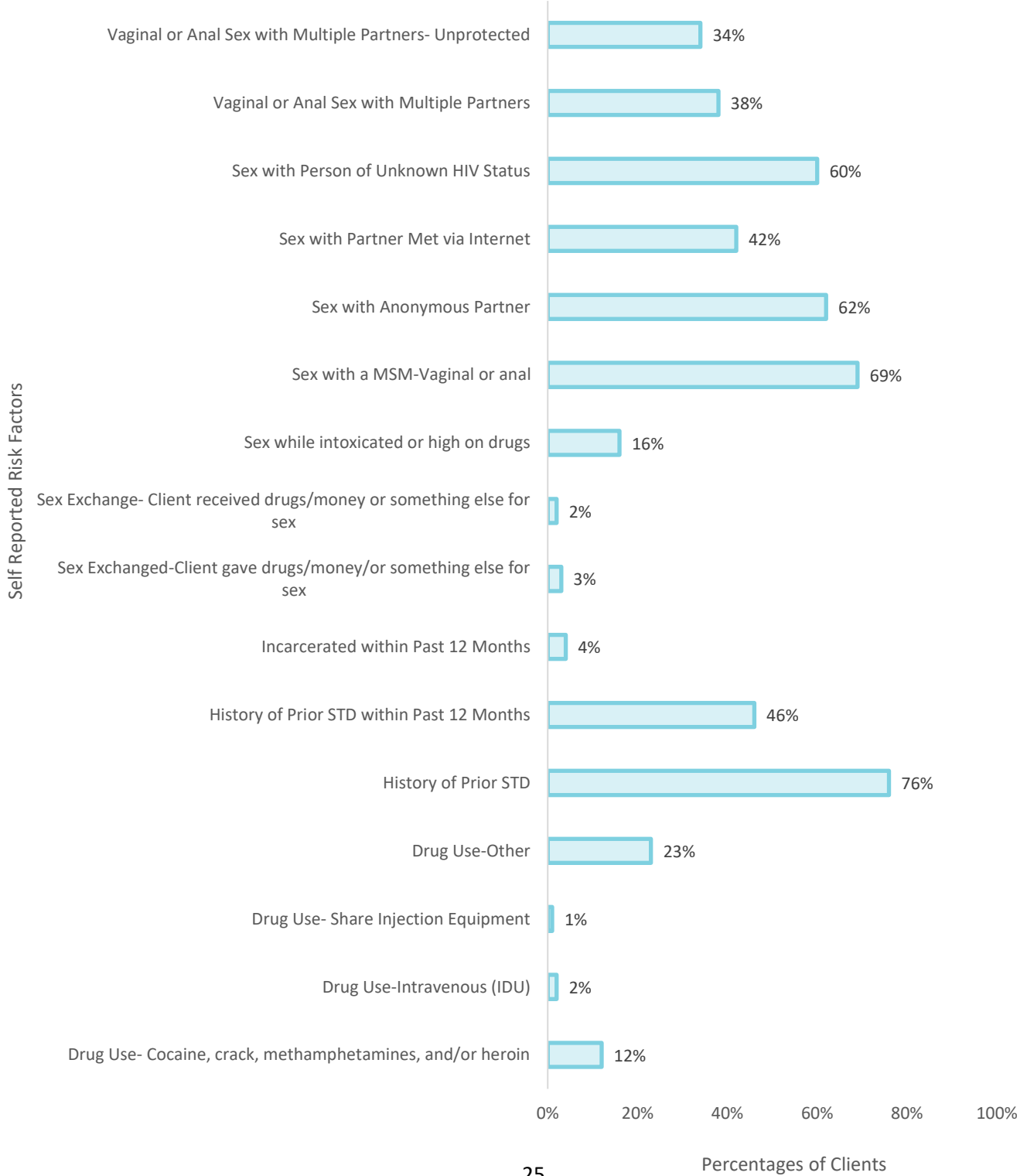
Map 3: The top 10 zip codes account for the top 45% of early syphilis infections reported in PBC in 2019. Interestingly, the two zip codes with the highest amount of cases in 2019, 33411 & 33463, did not appear in 2018's top 10. Zip code 33411's demographics include mostly white (70%) civilians with single and married households split 50/50 (10). Zip code 33463's demographics include predominately white (62%) civilians with single and married households split 50/50 (11). The Riviera Beach area, zip code 33404, remains a top priority for all STIs. The zip codes 33460 and 33461 are 4th and 5th respectively. Both zip codes lie in the city of Lake Worth which holds the annual Gay Pride Parade for Palm Beach County and has the county's main LGBTQ+ center (5).

DESCRIPTIVE RISK PROFILE

Figure 15:

Percentages of Patient Reported Risk Behaviors for Early Syphilis Infections in Palm Beach County, 2019

N = 197 (68% of all early syphilis cases) *



Data Highlights

Figure 15: When compared to the self-reported risk factors in 2018 (N=215), the 2019 report has several notable increases. First, there has been a 13% increase in “Sex with Person of Unknown HIV Status”. Secondly, there has been no change in “Sex with Partner Met via Internet”, but there has been a 10% or more increase in “Sex with Anonymous Partner” and “Vaginal or Anal Sex with Multiple Partners-Unprotected”. Identifying common partner meeting places, educating the importance of PrEP, and knowing partner HIV & STI status will continue to be important steps in addressing and preventing early syphilis infections within PBC.

*197/289 of cases interviewed that reported at least one risk factor

Interview criteria for early syphilis cases: All early syphilis cases require an interview and partner services. Interviews and partner services are done voluntarily by clients.

References

1. CDC- Centers for Disease Control and Prevention, 2019. *STIs Continue to Rise in the U.S.* [online] Available at: <<https://www.cdc.gov/nchhstp/newsroom/2019/2018-STI-surveillance-report-press-release.html>> [Accessed 14 February 2021].
2. Cdc.gov. 2019. *The State of STIs - HTML Version | Sexually Transmitted Infections | CDC.* [online] Available at: <<https://www.cdc.gov/STI/stats18/infographic-html.htm#:~:text=The%20State%20of%20STIs%20in%20the%20United%20States,syphilis%3B%2071%25%20increase%20of%20infectious%20syphilis%20since%202014.>>> [Accessed 8 February 2021].
3. Centers for Disease Control and Prevention. 2021. *STI Prevalence, Incidence, and Cost Estimates Infographic.* [online] Available at: <<https://www.cdc.gov/STI/statistics/prevalence-2020-at-a-glance.htm>> [Accessed 14 January 2021].
4. Centers for Disease Control and Prevention. 2019. *2018 Sexually Transmitted Infections Surveillance.* [online] Available at: <<https://www.cdc.gov/STI/stats18/default.htm>> [Accessed 6 October 2020].
5. En.wikipedia.org. n.d. *Lake Worth Beach, Florida - Wikipedia.* [online] Available at: <https://en.wikipedia.org/wiki/Lake_Worth_Beach,_Florida> [Accessed 4 February 2021].
6. Flhealthcharts.com. n.d. *FLHealthCHARTS.com: Reportable and Infectious Diseases Data.* [online] Available at: <<http://www.flhealthcharts.com/charts/CommunicableDiseases/>> [Accessed 6 October 2020].
7. Unitedstateszipcodes.org. 2021. *ZIP Code 33401 Map, Demographics, More for West Palm Beach, FL.* [online] Available at: <<https://www.unitedstateszipcodes.org/33401/>> [Accessed 28 October 2020].
8. Unitedstateszipcodes.org. 2021. *ZIP Code 33404 Map, Demographics, More for Palm Beach Shores, FL.* [online] Available at: <<https://www.unitedstateszipcodes.org/33404/>> [Accessed 28 October 2020].
9. Unitedstateszipcodes.org. 2021. *ZIP Code 33407 Map, Demographics, More for West Palm Beach, FL.* [online] Available at: <<https://www.unitedstateszipcodes.org/33407/>> [Accessed 31 October 2020].
10. Unitedstateszipcodes.org. 2021. *ZIP Code 33411 Map, Demographics, More for Royal Palm Beach, FL.* [online] Available at: <<https://www.unitedstateszipcodes.org/33411/>> [Accessed 3 October 2020].
11. Unitedstateszipcodes.org. 2021. *ZIP Code 33463 Map, Demographics, More for Lake Worth, FL.* [online] Available at: <<https://www.unitedstateszipcodes.org/33463/>> [Accessed 14 May 2021].
12. Who.int. 2019. *Sexually transmitted infections (STIs).* [online] Available at: <[https://www.who.int/news-room/fact-sheets/detail/sexually-transmitted-infections-\(stis\)](https://www.who.int/news-room/fact-sheets/detail/sexually-transmitted-infections-(stis))> [Accessed 6 January 2021].

*Data Source: STI data were generated from STARS and FL Health Charts. All other information was extracted as referenced. Data were analyzed/presented using SAS Release:3.6 (Enterprise Edition) and Microsoft Excel 2016. *STARS is a Florida's web-based reportable disease surveillance and investigation systems. *Florida Health Charts (www.flhealthcharts.com) is a community health assessment and resource tool set by Florida's Bureau of Vital Statistics.*

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<https://www.cdc.gov/nchhstp/newsroom/images/2016/Gonorrhea-illustration.jpg>

https://www.cdc.gov/nchhstp/newsroom/images/2017/Chlamydia-illustration_high-res.jpg

https://www.cdc.gov/nchhstp/newsroom/images/2017/syphilis-bacteria_High-Res.jpg

ABBREVIATIONS

CHD	County Health Department
DOH	Department of Health
MSM	Men having sex with men
N	Population size / Total frequency or number
n	Sample size / Frequency or number in population subset
PBC	Palm Beach County
STI	Sexually Transmitted Infections

