



2017 - 2019 STI Surveillance Report

Communicable Disease Prevention and Control Unit
Cook County Department of Public Health

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Abbreviations, Acronyms and Definitions

CCDPH: Cook County Department of Public Health. Jurisdiction includes all areas in Cook County, Illinois excluding Chicago, Evanston, Oak Park, Skokie, and Stickney Township.

CDC: Centers for Disease Control and Prevention.

CT: *Chlamydia trachomatis*, the bacterium that causes chlamydia.

GC: *Neisseria gonorrhoeae*, the bacterium that causes gonorrhea.

PSS, P&S Syphilis: Primary or secondary syphilis; highly infectious stages of syphilis.

STI: Sexually Transmitted Infection. Generally, this refers to chlamydia (*Chlamydia trachomatis*), gonorrhea (*Neisseria gonorrhoeae*) or syphilis (*Treponema pallidum*) infection.

Foreword

Cook County, including the City of Chicago, has some of the highest rates of sexually transmitted infections in the country. Nationally, half of STIs are diagnosed in young people, aged 15-24 years.¹ The same is true in the Cook County Department of Public Health's (CCDPH's) jurisdiction. Untreated STIs can have long-term consequences, including infertility and ectopic pregnancy, which can be life-threatening. STIs can also facilitate HIV transmission and acquisition. The fact that there are probably hundreds or thousands of STIs that go undiagnosed speaks to the stigma associated with STIs, as well as the barriers to accessing not just STI testing, but routine health care.

When we drill down a level and take a closer look at the data, it does not take long to note disparities by race and ethnicity. Persons of color experience higher rates of chlamydia, gonorrhea and primary and secondary syphilis compared to whites. But why are persons of color at higher risk?

The answers are complex. They are also not easily found in the surveillance data health departments across the U.S. collect, including our own. Social conditions that affect persons of color can play an outsized role in sexual health and health in general: poverty, the kind of jobs people hold, income inequality, and educational levels--these factors matter. People may not be able to take off work, may lack transportation, or may lack insurance, for example. People who struggle to meet their daily needs may not be able to access the care they need.²

Persons of color may also distrust the health care system because discrimination by doctors and health care providers or because of past abuses, like the The U.S. Public Health Service Syphilis Study at Tuskegee, in which African American men were intentionally infected with syphilis, were not informed, and were not given treatment even after it became available.³

These factors can be much more important in transmission rates and prevalence than individual behaviors. In communities with higher STD rates, sexually active people may be more likely to get an STD because they have greater odds of selecting a partner who is infected.^{4,5}

Sustaining reductions in STI morbidity will not be easy. In the short term, we need to work to reduce prevalence of STIs and to make testing, diagnoses and treatment as easy as possible. Services need to be accessible, and free for those without the ability to pay. For the longer term, CCDPH and its partners need to work together to examine the social and structural factors that lead to higher STI rates in communities of color--along with many other diseases and conditions in order to begin to realize our health equity goals. Please consider these issues as you read through this report.

Rachel Rubin. M.D., M.P.H., F.A.C.P
Senior Public Health Officer and Co-Lead
Cook County Department of Public Health

1. Satterwhite CL, Tortone E, Meites E, et al. Sexually transmitted infections among US women and men: Prevalence and incidence estimates, 2008. *Sex Transm Dis* 2013; 40(3):187–193. DOI: 10.1097/OLQ.0b013e318286bb53. Review.

2. Institute of Medicine. *The Hidden Epidemic: Confronting Sexually Transmitted Diseases* External icon. Washington, DC: National Academy Press; 1997.

3. CDC. The U.S. Public Health Service Syphilis Study at Tuskegee. Website: <https://www.cdc.gov/tuskegee/index.html>. Accessed 6/1/2022.

4. Hogben M, Leichter JS. Social determinants and sexually transmitted disease disparities. *Sex Transm Dis*. 2008;35(12 Suppl):S13-8.

5. Laumann EO, Yoon Y. Racial/ethnic group differences in the prevalence of sexually transmitted diseases in the United States: a network explanation. *Sex Transm Dis*. 1999;26(5):250-61.

Executive Summary

In 2019, the number of reported chlamydia and gonorrhea rates reached all-time highs in CCDPH's jurisdiction:

- 12,333 chlamydia cases (544.0 per 100,000 population)
- 3,573 gonorrhea cases (157.6 per 100,000 population)

Most of these cases were in non-Hispanic Black/African American and Hispanic/Latinx populations. The rate in non-Hispanic Blacks was about 10 times higher than the rate in non-Hispanic Whites, about 3 times higher than in Hispanics, and about 19 times higher than the rate in Asian/Pacific Islanders.

Gonorrhea rates were even more extreme: 22 times higher in non-Hispanic Black/African Americans compared to non-Hispanic Whites, about 7 times higher than in Hispanics, and about 45 times higher than rates in Asian/Pacific Islanders.

Chlamydia rates are highest in those aged 15-24 years; gonorrhea rates are highest in those aged 20-24 years of age.

In 2019, 172 cases of primary and secondary syphilis were diagnosed. This corresponds to a rate of 7.6 per 100,000 population. Men are over-represented: 86% of primary and secondary syphilis diagnoses were in men). This is likely a result of male-to-male sexual transmission.

Although men are over-represented, rates of congenital syphilis have skyrocketed in the USA. Rates in CCDPH's jurisdiction were not as high as the US rate in 2019, but given that fewer women are diagnosed with syphilis to begin with, these rates are concerning. In suburban Cook County, 84% of babies born with congenital syphilis were born to non-Hispanic Black/African American mothers.

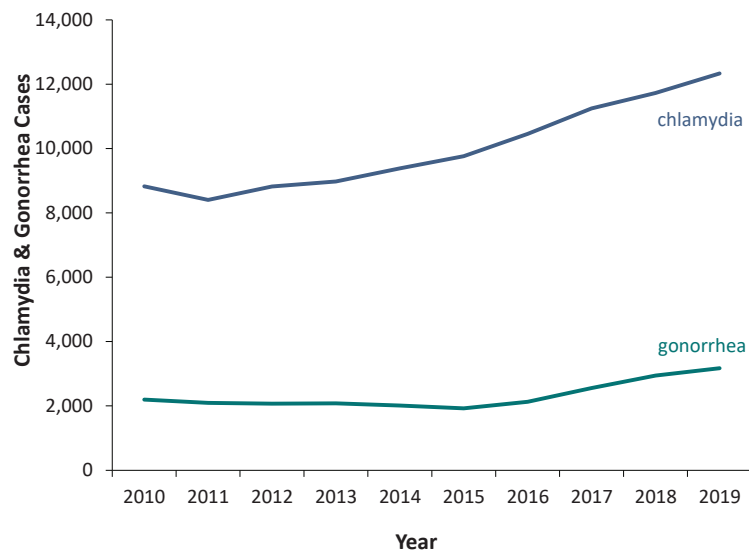


Figure 1. Rates of chlamydia and gonorrhea continued to rise over the past decade.

Chlamydia rates increased nearly 40% from 2010 to 2019.

Gonorrhea rates increased 45% from 2010 to 2019. However, most of the rate increases took place between 2015 and 2019.

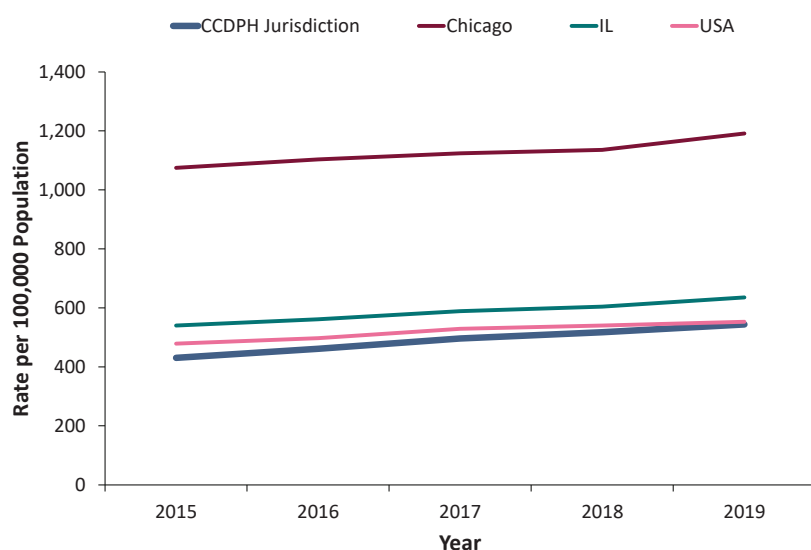


Figure 2. Chlamydia rates have increased locally, regionally, state-wide and nationally over the last 5 years.

Rates of chlamydia are lowest in suburban Cook County compared the state and the USA overall.

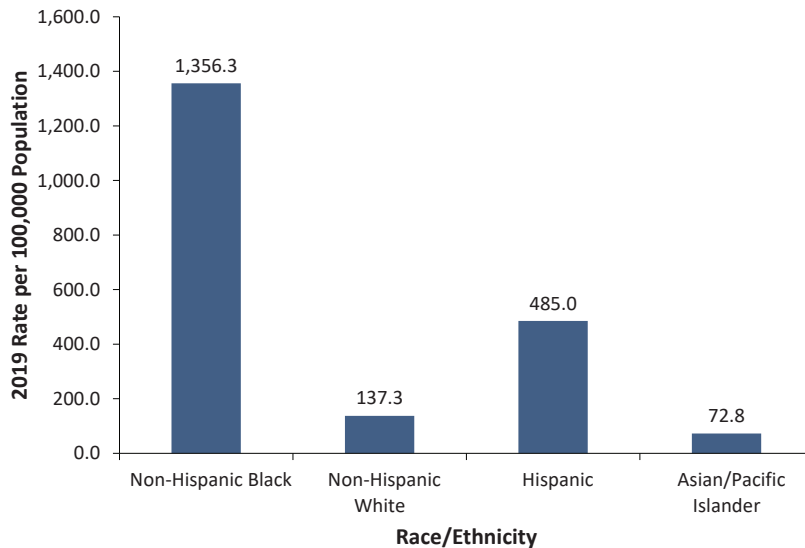


Figure 3. Non-Hispanic Black and Hispanic/Latinx populations are affected by chlamydia more than other race/ethnic groups.

The rate in non-Hispanic Blacks was about 10 times higher than the rate in non-Hispanic Whites, about 3 times higher than in Hispanics, and about 19 times higher than rates in Asian/Pacific Islanders.

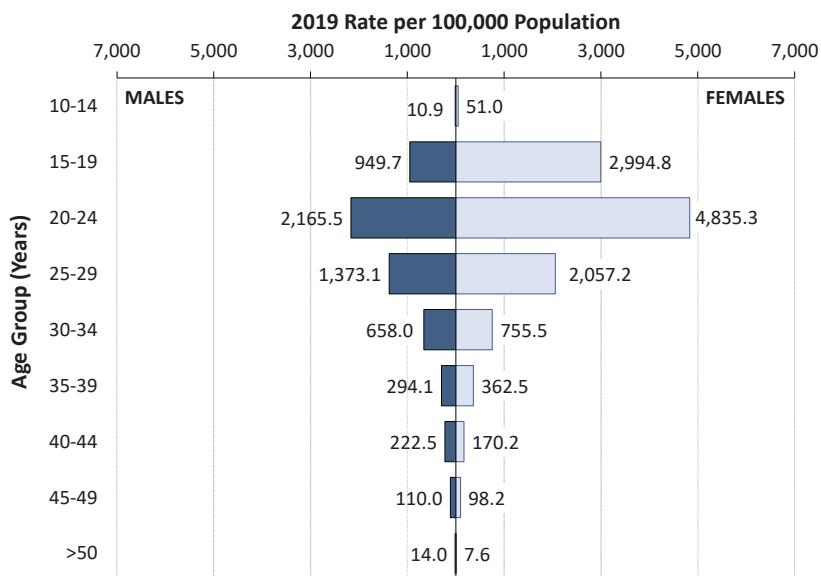
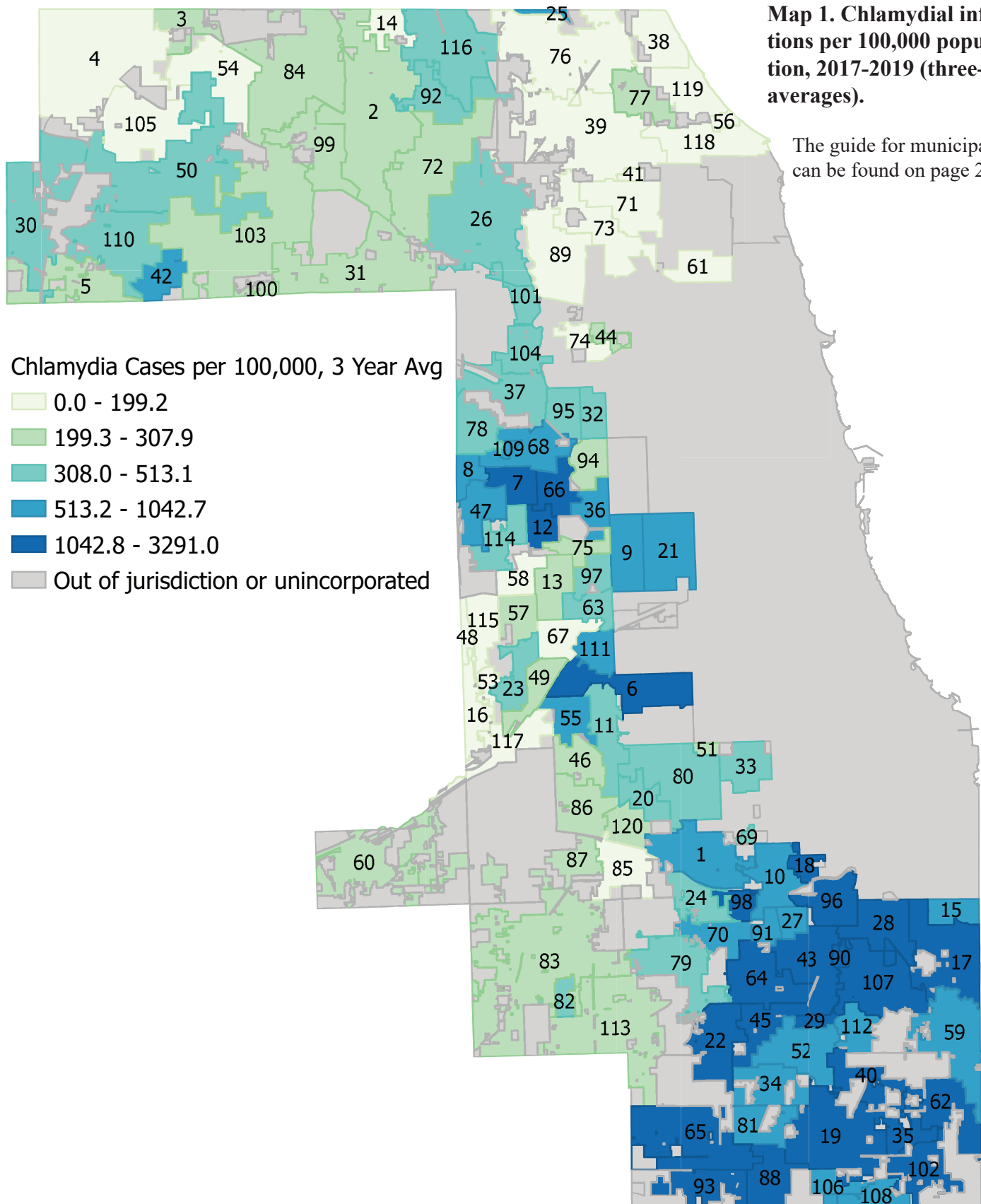


Figure 4. Chlamydial infections are concentrated in younger people, especially those aged 15-24 years of age.

Because symptoms are not common in persons infected with chlamydia, many do not seek care.

We believe rates are higher in women partially because they go to the doctor more often than men and get screened more often.



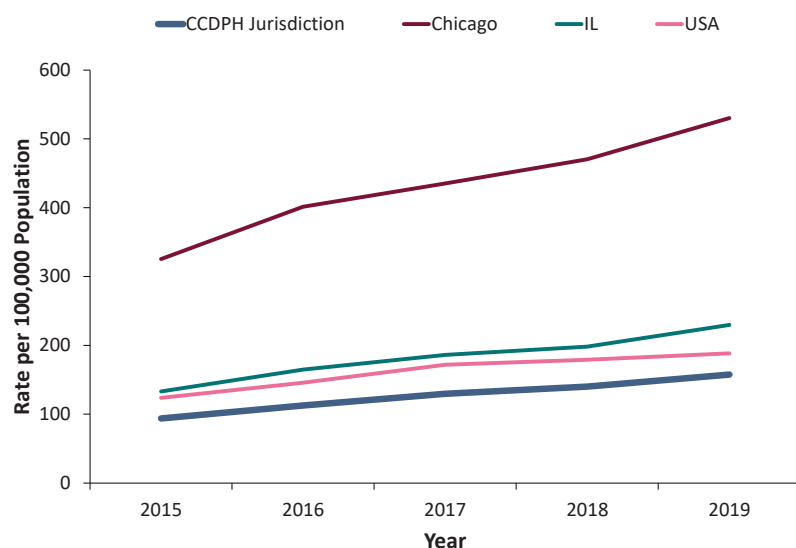


Figure 5. Gonorrhea rates have increased locally, regionally, state-wide and nationally over the last 5 years.

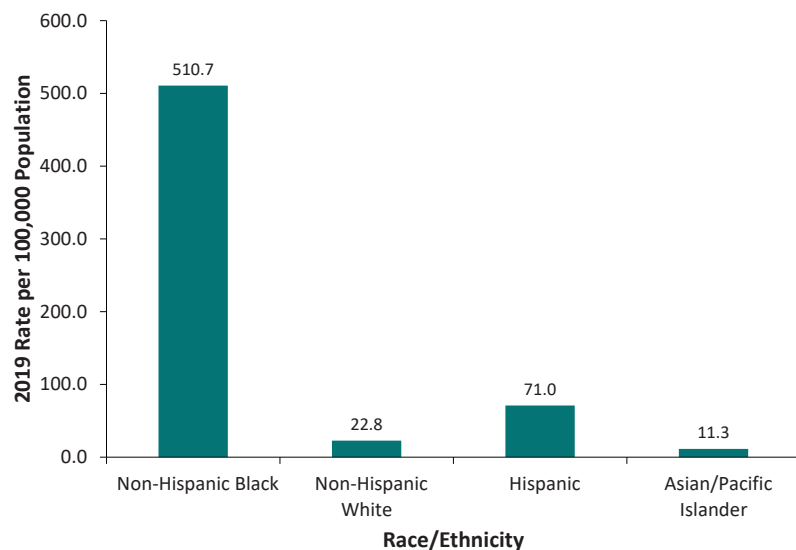


Figure 6. Rates of gonorrhea in non-Hispanic Blacks/African Americans compared to other race/ethnicity groups is even more extreme than with chlamydia.

The rate in non-Hispanic Blacks was 22 times higher than the rate in non-Hispanic Whites, about 7 times higher than in Hispanics, and about 45 times higher than rates in Asian/Pacific Islanders.

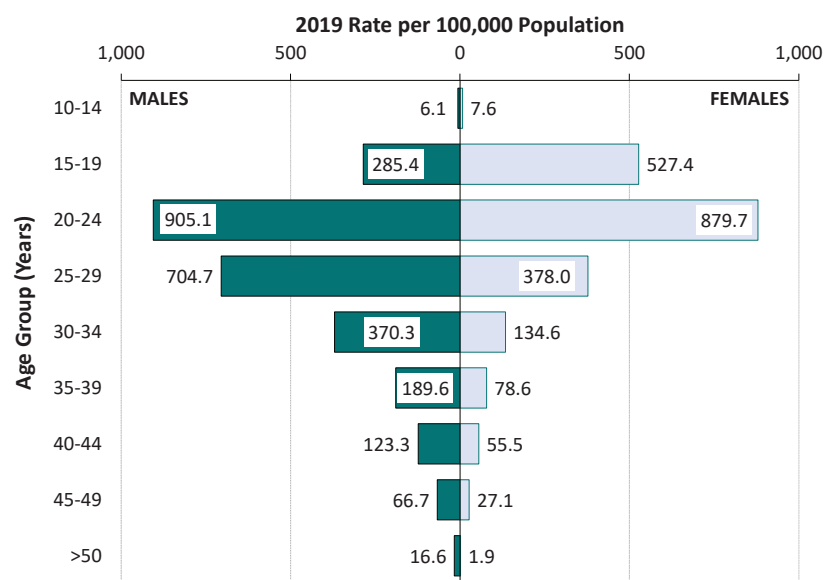


Figure 7. Gonorrhea rates are highest (and nearly even) in both males and females aged 20-24 years.

Rates are higher in men over 24 years of age compared to women, but all rates decrease in older age groups.

Attention Providers!

Please fax completed morbidity report forms to:

(708) 836-5450

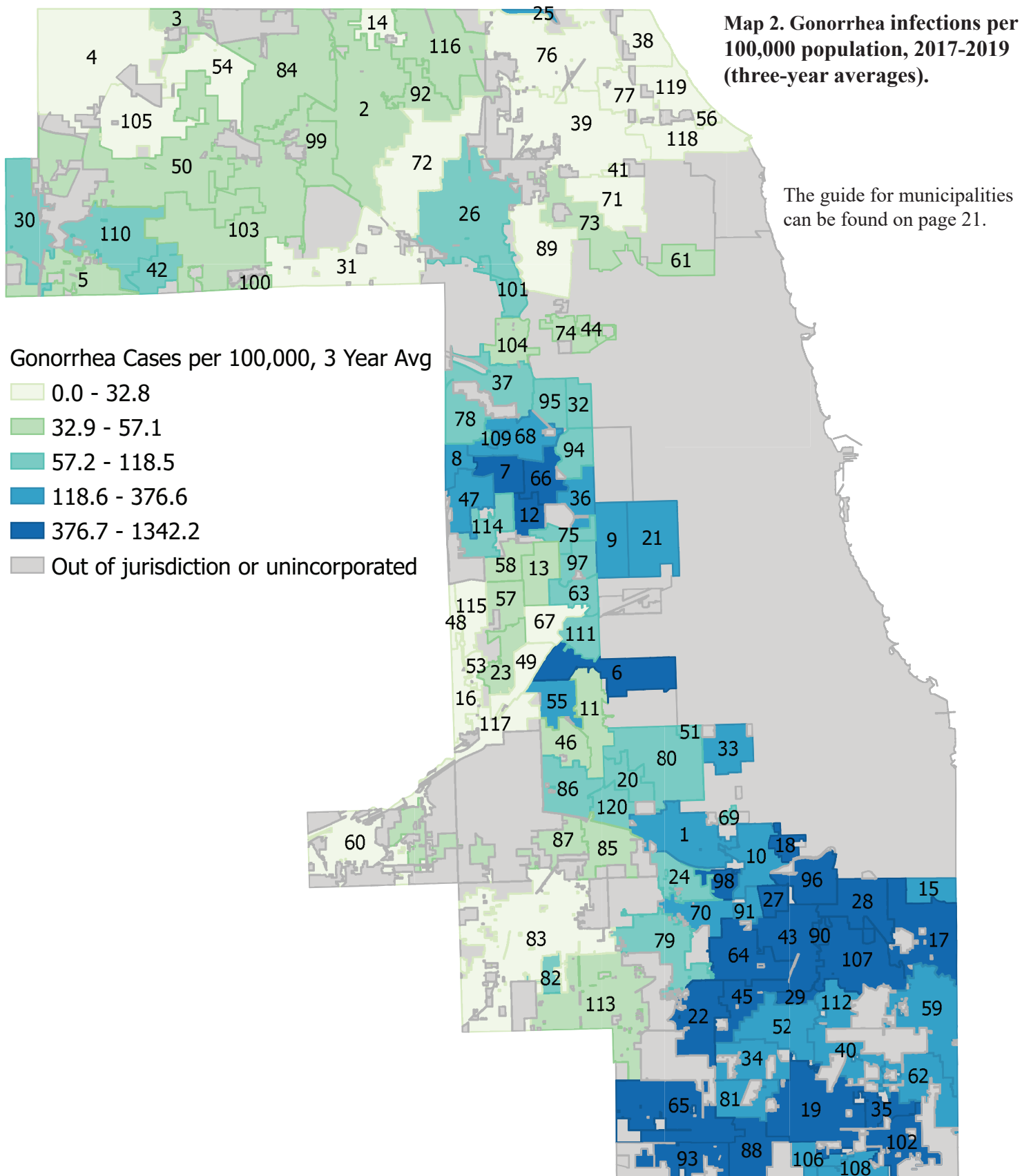
You may receive a call from the surveillance department asking for additional information such as symptoms, reason for visit, history of syphilis (including past labs), and possibly other questions (i.e. HIV status and pregnancy).

If you have any questions, please contact our STI Surveillance Coordinator:

Cerese Depardieu

(708) 836-5456

cerese.depardieu@cookcountyhhs.org



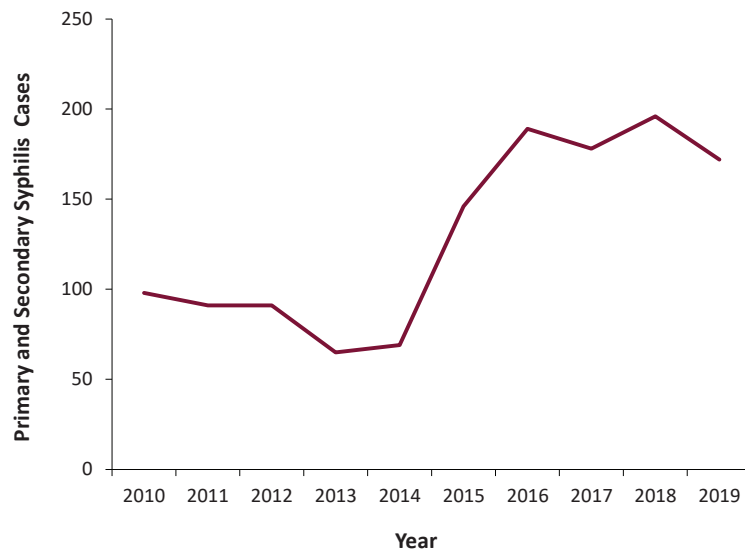


Figure 8. Primary and secondary syphilis cases increased dramatically between 2014-2016 and remain elevated.

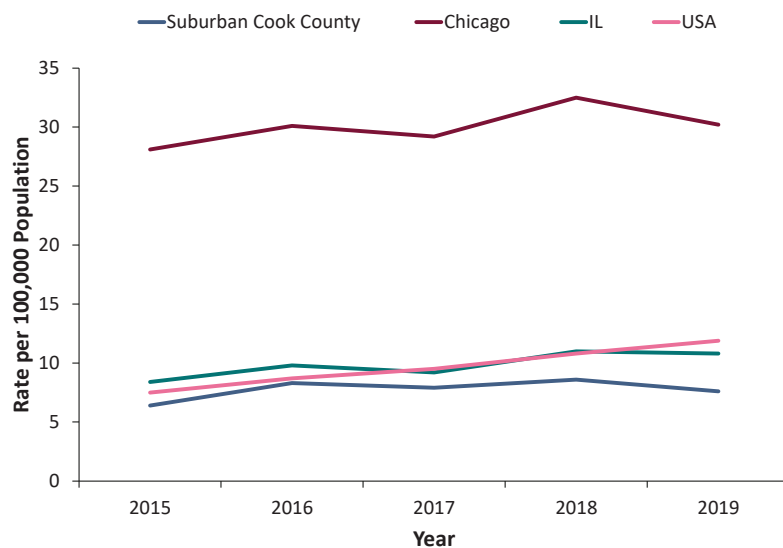


Figure 9. PSS rates are lowest in suburban Cook County compared to other selected public health jurisdictions.

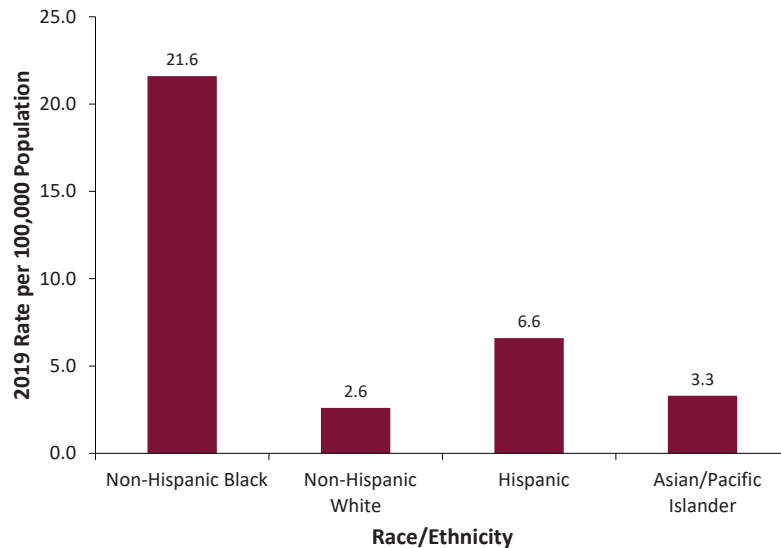


Figure 10. Non-Hispanic Black and Hispanic/Latinx populations are affected by PSS more than other race/ethnic groups.

The rate in non-Hispanic Blacks was 8 times higher than the rate in non-Hispanic Whites, about 3 times higher than in Hispanics, and about 7 times high than rates in Asian/Pacific Islanders.

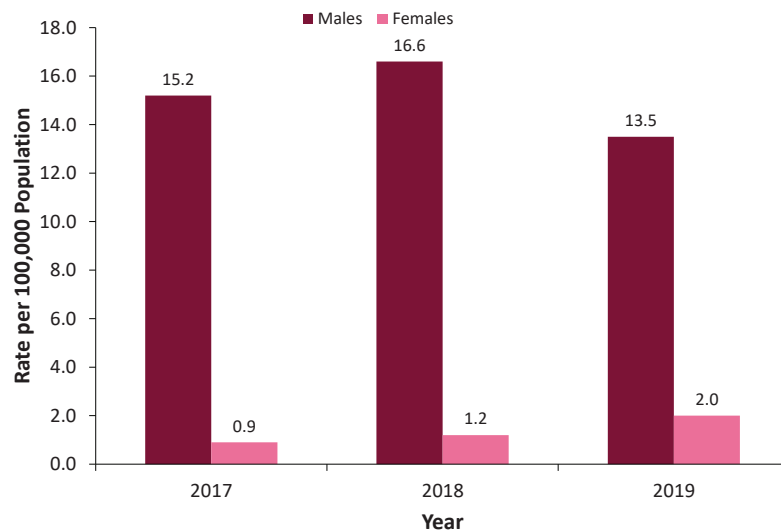


Figure 11. The rate of PSS in men is much higher than in women, but the proportion of women with PSS is increasing.

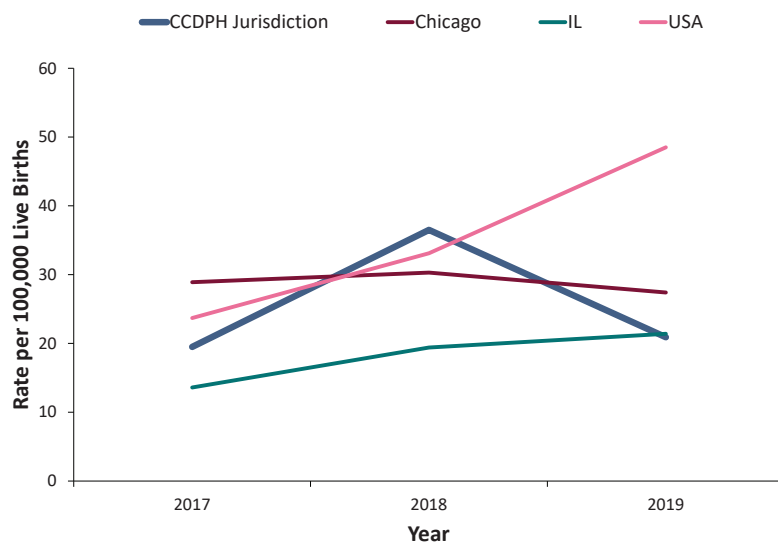


Figure 12. Congenital syphilis cases have fluctuated in CCDPH's jurisdiction but increased in the US by 47% from 2018 to 2019.

84%

of babies diagnosed with congenital syphilis in CCDPH's jurisdiction were born to non-Hispanic Black/African American mothers.

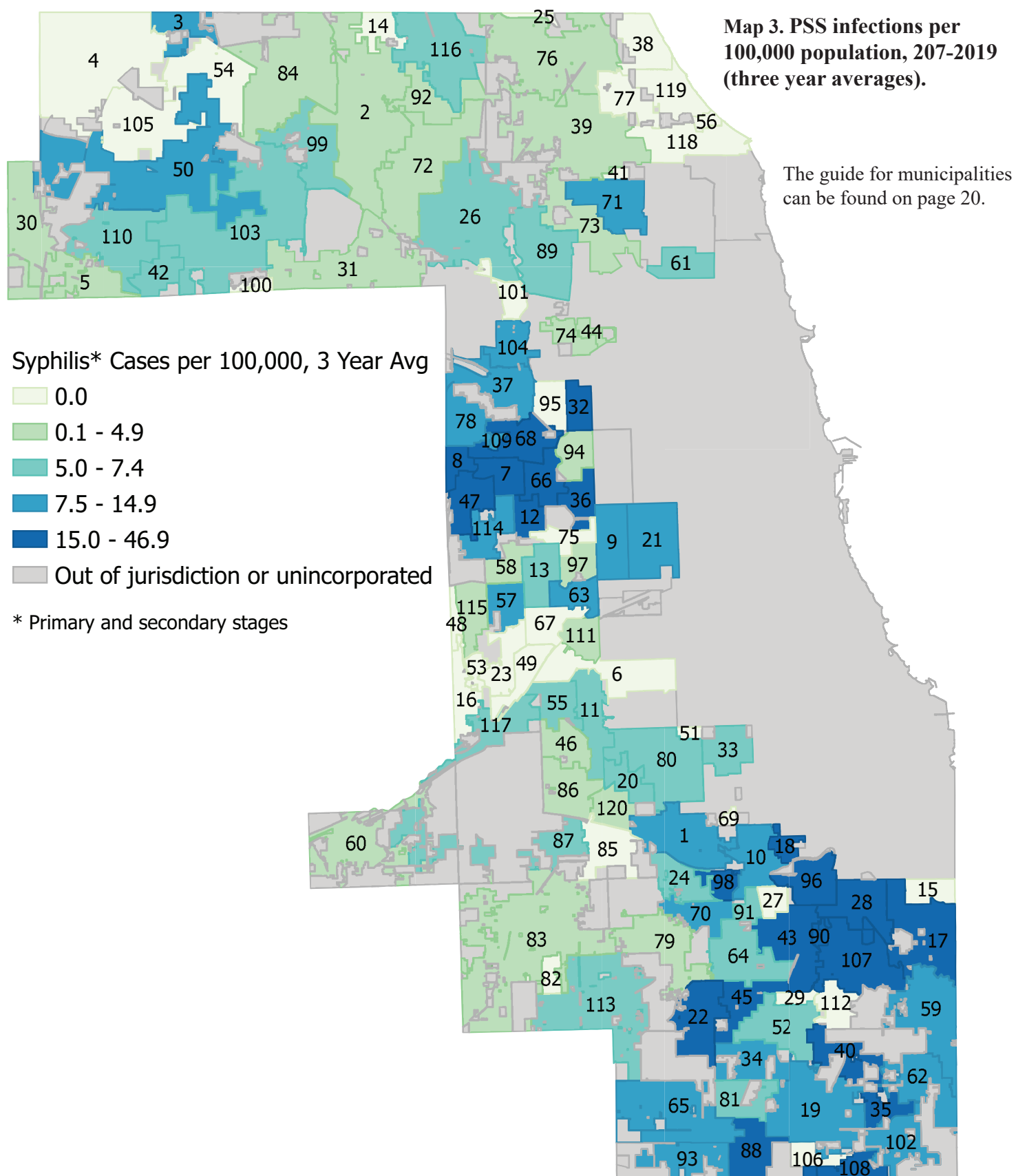


Table 1. Number and Rates of Chlamydia, Gonorrhea and P&S Syphilis
CCDPH Jurisdiction, 2015 - 2019

Disease	2015		2016		2017		2018		2019		5-Year Median	
	No.	Rate*	No.	Rate*	No.	Rate*	No.	Rate*	No.	Rate*	No.	Rate*
Chlamydia	9,760	430.5	10,453	461.1	11,244	495.9	11,726	517.2	12,333	544.0	11,244	495.9
Gonorrhea	2,128	93.9	2,555	112.7	2,941	129.7	3,173	140.0	3,573	157.6	2,941	129.7
P&S Syphilis	146	6.4	189	8.3	178	7.9	196	8.6	172	7.6	178	7.9

* Incidence rates calculated per 100,000 population based on 2010 estimates of the population (U.S. Census Bureau).

Table 2. Reported Chlamydia Cases, Proportions and Rates
by Selected Characteristics, CCDPH Jurisdiction, 2017 - 2019

Characteristic	2017			2018			2019		
	No.	(%)	Rate*	No.	(%)	Rate*	No.	(%)	Rate*
Sex									
Male	3,675	(32.7)	335.4	4,004	(34.1)	365.4	4,300	(34.9)	392.4
Female	7,569	(67.3)	646.1	7,722	(65.9)	659.2	8,033	(65.1)	685.7
Age Group (Years)									
<10	6	(0.1)	†	4	(0.03)	†	0	(0.0)	†
10-14	67	(0.6)	41.6	61	(0.52)	37.9	49	(0.4)	30.5
15-19	2,883	(25.6)	1,795.6	3,066	(26.15)	1,909.5	3,103	(25.2)	1,932.6
20-24	4,389	(39.0)	3,320.5	4,471	(38.13)	3,382.6	4,580	(37.1)	3,465.1
25-29	2,052	(18.2)	1,431.3	2,131	(18.17)	1,486.4	2,459	(19.9)	1,715.2
30-34	898	(8.0)	634.4	903	(7.70)	637.9	1001	(8.1)	707.1
35-39	454	(4.0)	309.3	494	(4.21)	336.6	483	(3.9)	329.1
40-44	242	(2.2)	157.2	297	(2.53)	192.9	301	(2.4)	195.5
45-49	116	(1.0)	68.4	152	(1.30)	89.7	176	(1.4)	103.8
>50	137	(1.2)	17.9	147	(1.25)	19.2	181	(1.5)	23.7
Race/Ethnicity									
Non-Hispanic Black	5,017	(44.6)	1,356.3	5,226	(44.57)	1,412.8	5,353	(43.4)	1,447.1
Non-Hispanic White	1,793	(15.9)	137.3	1,787	(15.24)	136.8	1,596	(12.9)	122.2
Hispanic	2,118	(18.8)	485.0	2,336	(19.92)	534.9	2,210	(17.9)	506.0
Asian/Pacific Islander	109	(1.0)	72.8	103	(0.88)	68.8	150	(1.2)	100.1
Other/Unknown	2,202	(19.6)	n/a	2,274	(19.39)	n/a	3,024	(24.5)	n/a
District									
North	2,286	(20.3)	246.5	2,423	(20.66)	261.2	2,534	(20.5)	273.2
West	2,865	(25.5)	568.5	3,068	(26.16)	608.8	3,045	(24.7)	604.2
Southwest	1,407	(12.5)	386.7	1,375	(11.73)	377.9	1,460	(11.8)	401.2
South	4,686	(41.7)	993.2	4,860	(41.45)	1,030.1	5,294	(42.9)	1,122.1
Unknown	0	(0.0)	n/a	0	(0.00)	n/a	0	(0.0)	n/a
Total	11,244	(100.0)	495.9	11,726	(100.00)	517.2	12,333	(100.0)	544.0

*Incident rates calculated per 100,000 population based on 2010 estimates of the population (U.S. Census Bureau).

†Rates not calculated for n<5.

Table 3. Reported Gonorrhea Cases, Proportions and Rates by Selected Characteristics, CCDPH Jurisdiction, 2017 - 2019

Characteristic	2017			2018			2019		
	No.	(%)	Rate*	No.	(%)	Rate*	No.	(%)	Rate*
Sex									
Male	1,713	(58.2)	156.3	1,900	(59.9)	173.4	2,085	(58.4)	190.3
Female	1,228	(41.8)	104.8	1,273	(40.1)	108.7	1,488	(41.6)	127.0
Age Group (Years)									
<10	2	(0.1)	†	4	(0.1)	†	2	(0.1)	†
10-14	23	(0.8)	14.3	61	(1.9)	37.9	11	(0.3)	6.8
15-19	639	(21.7)	398.0	3,066	(96.6)	1909.5	690	(19.3)	429.7
20-24	1,031	(35.1)	780.0	4,471	(140.9)	3382.6	1,180	(33.0)	892.7
25-29	553	(18.8)	385.7	2,131	(67.2)	1486.4	776	(21.7)	541.3
30-34	263	(8.9)	185.8	903	(28.5)	637.9	356	(10.0)	251.5
35-39	151	(5.1)	102.9	494	(15.6)	336.6	195	(5.5)	132.9
40-44	98	(3.3)	63.7	297	(9.4)	192.9	136	(3.8)	88.4
45-49	62	(2.1)	36.6	152	(4.8)	89.7	78	(2.2)	46.0
>50	119	(4.0)	15.6	147	(4.6)	19.2	149	(4.2)	19.5
Race/Ethnicity									
Non-Hispanic Black	1,889	(64.2)	510.7	2,028	(63.9)	548.3	2,255	(63.1)	609.6
Non-Hispanic White	298	(10.1)	22.8	363	(11.4)	27.8	348	(9.7)	26.6
Hispanic	310	(10.5)	71.0	352	(11.1)	80.6	388	(10.9)	88.8
Asian/Pacific Islander	17	(0.6)	11.3	32	(1.0)	21.4	32	(0.9)	21.4
Other/Unspecified	427	(14.5)	n/a	427	(13.5)	n/a	550	(15.4)	n/a
District									
North	318	(10.8)	34.3	371	(11.7)	40.0	385	(10.8)	41.5
West	712	(24.2)	141.3	782	(24.6)	155.2	817	(22.9)	162.1
Southwest	311	(10.6)	85.5	376	(11.8)	103.3	424	(11.9)	116.5
South	1,600	(54.4)	339.1	1,644	(51.8)	348.5	1,947	(54.5)	412.7
Total	2,941	(100.0)	129.7	3,173	(100.0)	140.0	3,573	(100.0)	157.6

*Incident rates calculated per 100,000 population based on 2010 estimates of the population (U.S. Census Bureau).

†Rates not calculated for n<5.

Table 4. Reported Syphilis Cases and Primary and Secondary Syphilis Cases, Proportions and Rates by Selected Characteristics, CCDPH Jurisdiction, 2017- 2019

Characteristic	2017			2018			2019		
	No.	(%)	Rate*	No.	(%)	Rate*	No.	(%)	Rate*
Syphilis Stage									
Primary and Secondary	178	(35.1)	7.9	196	(30.0)	8.6	172	(25.8)	7.6
Early, non-Primary, non-Secondary	124	(24.5)	5.5	181	(27.7)	8.0	193	(29.0)	8.5
Late Latent	200	(39.4)	8.8	267	(40.9)	11.8	296	(44.4)	13.1
Congenital†	5	(1.0)	19.5	9	(1.4)	36.5	5	(0.8)	20.9
Total	507	(100.0)	22.4	653	(100.0)	28.8	666	(100.0)	29.4
Primary and Secondary Cases									
Sex									
Male	167	(93.8)	15.2	182	(92.9)	16.6	148	(86.0)	13.5
Female	11	(6.2)	0.9	14	(7.1)	1.2	24	(14.0)	2.0
Age Group (Years)									
<20	9	(5.1)	5.6	9	(4.6)	5.6	12	(7.0)	7.5
20-24	38	(21.3)	28.7	35	(17.9)	26.5	34	(19.8)	25.7
25-29	41	(23.0)	28.6	51	(26.0)	35.6	44	(25.6)	30.7
30-34	26	(14.6)	18.4	33	(16.8)	23.3	24	(14.0)	17.0
35-39	16	(9.0)	10.9	22	(11.2)	15.0	20	(11.6)	13.6
40-44	14	(7.9)	9.1	16	(8.2)	10.4	11	(6.4)	7.1
45-49	16	(9.0)	9.4	9	(4.6)	5.3	7	(4.1)	4.1
>50	18	(10.1)	2.4	21	(10.7)	2.7	20	(11.6)	2.6
Race/Ethnicity									
Non-Hispanic Black	77	(43.3)	20.8	84	(42.9)	22.7	80	(46.5)	21.6
Non-Hispanic White	43	(24.2)	3.3	39	(19.9)	3.0	34	(19.8)	2.6
Hispanic	50	(28.1)	11.4	63	(32.1)	14.4	29	(16.9)	6.6
Asian/Pacific Islander	8	(4.5)	5.3	4	(2.0)	2.7	5	(2.9)	3.3
Other/Unspecified	0	(0.0)	n/a	6	(3.1)	n/a	24	(14.0)	n/a
District									
North	46	(25.8)	5.0	37	(18.9)	4.0	37	(21.5)	4.0
West	61	(34.3)	12.1	76	(38.8)	15.1	51	(29.7)	10.1
Southwest	13	(7.3)	3.6	26	(13.3)	7.1	18	(10.5)	4.9
South	58	(32.6)	12.3	57	(29.1)	12.1	66	(38.4)	14.0
Total	178	(100.0)	7.9	196	(100.0)	8.6	172	(100.0)	7.6

*Incident rates calculated per 100,000 population based on 2010 estimates of the population (U.S. Census Bureau).

†Congenital syphilis rates calculated per 100,000 live births (taken from IDPH 2010 vital statistics).

#Rates not calculated for n<5.

Table 5. Map Key - Municipalities in CCDPH's Jurisdiction

Label City	Label City	Label City
1 Alsip	41 Golf	81 Olympia Fields
2 Arlington Heights	42 Hanover Park	82 Orland Hills
3 Barrington	43 Harvey	83 Orland Park
4 Barrington Hills	44 Harwood Heights	84 Palatine
5 Bartlett	45 Hazel Crest	85 Palos Heights
6 Bedford Park	46 Hickory Hills	86 Palos Hills
7 Bellwood	47 Hillside	87 Palos Park
8 Berkeley	48 Hinsdale	88 Park Forest
9 Berwyn	49 Hodgkins	89 Park Ridge
10 Blue Island	50 Hoffman Estates	90 Phoenix
11 Bridgeview	51 Hometown	91 Posen
12 Broadview	52 Homewood	92 Prospect Heights
13 Brookfield	53 Indian Head Park	93 Richton Park
14 Buffalo Grove	54 Inverness	94 River Forest
15 Burnham	55 Justice	95 River Grove
16 Burr Ridge	56 Kenilworth	96 Riverdale
17 Calumet City	57 La Grange	97 Riverside
18 Calumet Park	58 La Grange Park	98 Robbins
19 Chicago Heights	59 Lansing	99 Rolling Meadows
20 Chicago Ridge	60 Lemont	100 Roselle
21 Cicero	61 Lincolnwood	101 Rosemont
22 Country Club Hills	62 Lynwood	102 Sauk Village
23 Countryside	63 Lyons	103 Schaumburg
24 Crestwood	64 Markham	104 Schiller Park
25 Deerfield	65 Matteson	105 South Barrington
26 Des Plaines	66 Maywood	106 South Chicago Heights
27 Dixmoor	67 McCook	107 South Holland
28 Dolton	68 Melrose Park	108 Steger
29 East Hazel Crest	69 Merrionette Park	109 Stone Park
30 Elgin	70 Midlothian	110 Streamwood
31 Elk Grove Village	71 Morton Grove	111 Summit
32 Elmwood Park	72 Mount Prospect	112 Thornton
33 Evergreen Park	73 Niles	113 Tinley Park
34 Flossmoor	74 Norridge	114 Westchester
35 Ford Heights	75 North Riverside	115 Western Springs
36 Forest Park	76 Northbrook	116 Wheeling
37 Franklin Park	77 Northfield	117 Willow Springs
38 Glencoe	78 Northlake	118 Wilmette
39 Glenview	79 Oak Forest	119 Winnetka
40 Glenwood	80 Oak Lawn	120 Worth

Technical Notes

Cook County Department of Public Health Jurisdiction

The jurisdiction of the Cook County Department of Public Health excludes Chicago, Evanston, Oak Park, Skokie and Stickney Township, each of which has its own state-certified local health department. We have also intentionally omitted municipalities or portions with 0 population or with so few residents that calculating rates is impractical.

Data Methodology

Healthcare providers and laboratories within suburban Cook County are required by law to report positive cases of chlamydia, gonorrhea, and syphilis to the Cook County Department of Public Health within 7 days of diagnosis. The case reports are entered into a secure database hosted by the Illinois Department of Public Health, providing the basis for the information presented in this report.

Data Limitations

This report includes all reported cases of chlamydia, gonorrhea, and syphilis but does not represent the entire population of person infected. This is because not all infected persons have been tested or reported. Additionally, persons with asymptomatic STIs, such as chlamydia, may be underrepresented in surveillance reports because they may not seek care, may remain undiagnosed, and, consequently, are unreported.