



Department of
Health

Tennessee STI Epidemiological Profile, 2020

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Executive Summary

This report presents 2020 surveillance data for Sexually Transmitted Infections (STI) in Tennessee. The report focuses on newly reported cases of chlamydia, gonorrhea, and syphilis in the state. The purpose of this report is to effectively present the STI epidemic in Tennessee to assist with education, outcome monitoring, and program planning.

All data reported are based on information received by the Tennessee Department of Health (TDH) as of November 19, 2021. The data in this report reflect five-year trends between 2016 and 2020 for all categories of data.

Data are presented in the form of total counts, rates per 100,000 persons, and percentages of the total. Data are also stratified by various categories, including sex, race and ethnicity, and age. Rates are equal to counts divided by the total population times 100,000 and are presented alongside totals to account for differences in total population, such as between racial and ethnic groups. Data release limitations were set to ensure that the information cannot be used to inadvertently identify an individual. Rates where the numerator is less than 20 cases should be interpreted with caution because of the low reliability of rates based on a small number of cases. The data in this edition supersede those in earlier publications of the data.

STI data for 2020 should be interpreted with caution due the impact of COVID-19. Intermittent clinic closures, lack of availability of testing kits, and redirection of Disease Intervention Specialists (DIS) for COVID-19 contact tracing impacted STI testing services and partner services.

Key Findings

- In 2020, there were 31 reported cases of congenital syphilis, yielding a rate of 39.4 cases per 100,000 live births. Congenital syphilis cases have quadrupled from 2016 to 2020 and doubled from 2019 to 2020.
- From 2016 to 2020, the rate of P&S syphilis among women of reproductive age has more than doubled. The increase in congenital syphilis cases paralleled the increase in the rate of P&S syphilis among reproductive-aged women from 2017 to 2020.
- During 2016–2020, the number and rate of reported cases of gonorrhea and primary and secondary (P&S) syphilis increased.
- In 2020, Shelby was the public health region with the highest rate of chlamydia (959.7 cases per 100,000 population) and P&S syphilis (26.6 cases per 100,000 population). Madison had the highest rate of gonorrhea (481.9 cases per 100,000 population).

- During 2016–2020, non-Hispanic Black individuals had the highest rate of chlamydia, gonorrhea, and P&S syphilis infections compared to non-Hispanic white individuals and Hispanic individuals.
- Among men, men who have sex with men only (MSM) accounted for the majority of P&S syphilis cases. Of the 758 reported P&S syphilis cases in 2020, 318 (42%) were among MSM, and 54 (7%) among men who have sex with men and women (MSMW). The number and rate of P&S syphilis cases among women have more than doubled from 2016 to 2020.
- From 2019 to 2020, the rate of reported cases of chlamydia decreased by 10.5%.
- In 2020, there were 37,462 chlamydia infections reported for a rate of 544.0 cases per 100,000 population, 18,288 gonorrhea infections reported for a rate of 265.6 cases per 100,000 population, and 758 cases of P&S syphilis reported for a rate of 11.0 cases per 100,000 population

Background

Tennessee is a mid-sized state that consists of 95 counties and borders eight other states. TDH's Communicable and Environmental Diseases and Emergency Preparedness Division (CEDEP), located in Nashville, partners with all the state's counties, which are divided into thirteen public health regions. Six of the most populous counties operate as stand-alone metropolitan public health regions, and the remaining 89 counties are divided into seven rural health regions. The rural counties are considered an extension of TDH, whereas TDH partners with the metropolitan regions through contractual agreements.

Population: Tennessee was home to 6,886,834 people in 2020, which accounts for approximately 2% of the population in the United States.¹ With a growth rate of 1% each year which is similar to the national rate, the population of Tennessee increased by 235,557 people between 2016 and 2020.¹ The geographic areas with the largest percentages of the population include the Memphis/Shelby County, Nashville/Davidson County, and the Mid-Cumberland public health region.

Women of Reproductive Age: In 2020, 51.2% (3,528,814) of the population were women, of which 38.1% (1,345,434) were of reproductive age, between 15–44 years of age.² There were 78,685 live births in 2020.³

LGBT: It is estimated that 159,631 (3.1%) of adults in Tennessee identify as lesbian, gay, bisexual or transgender (LGBT) compared to 4.5% in the United States.⁴ In 2021, there were an estimated 1.2 million same-sex couple households in the United States.⁵

Age: The median age in Tennessee in 2020 was 39 years, same as that of the U.S. median age. The age distribution in Tennessee roughly reflects that of the U.S. population in general.⁶

Race and Ethnicity: In 2020, 73% of the population in Tennessee was non-Hispanic white, followed by 17% non-Hispanic Black and 6% Hispanic. Other racial groups make up the remaining 4% of the population, with the largest category being Asian (2%).⁶

Income and Poverty: The median household income in Tennessee in 2020 was \$54,833, compared to the national median income of \$64,994.⁵ In 2020, 14.6% of TN's population was below the federal poverty level, which is greater than the U.S. average of 12.8%.⁷ There are noticeable racial and ethnic disparities in household income in Tennessee. Non-Hispanic white households had a median income of \$59,125 in 2020, while Black and Hispanic households had median incomes of \$40,020 and \$46,503 respectively.⁶ In 2020, the highest rates of poverty, between 20 and 31%, were primarily in rural regions of Tennessee, including the East, Southeast, Northeast, Upper Cumberland, South Central and West regions.^{6,7}

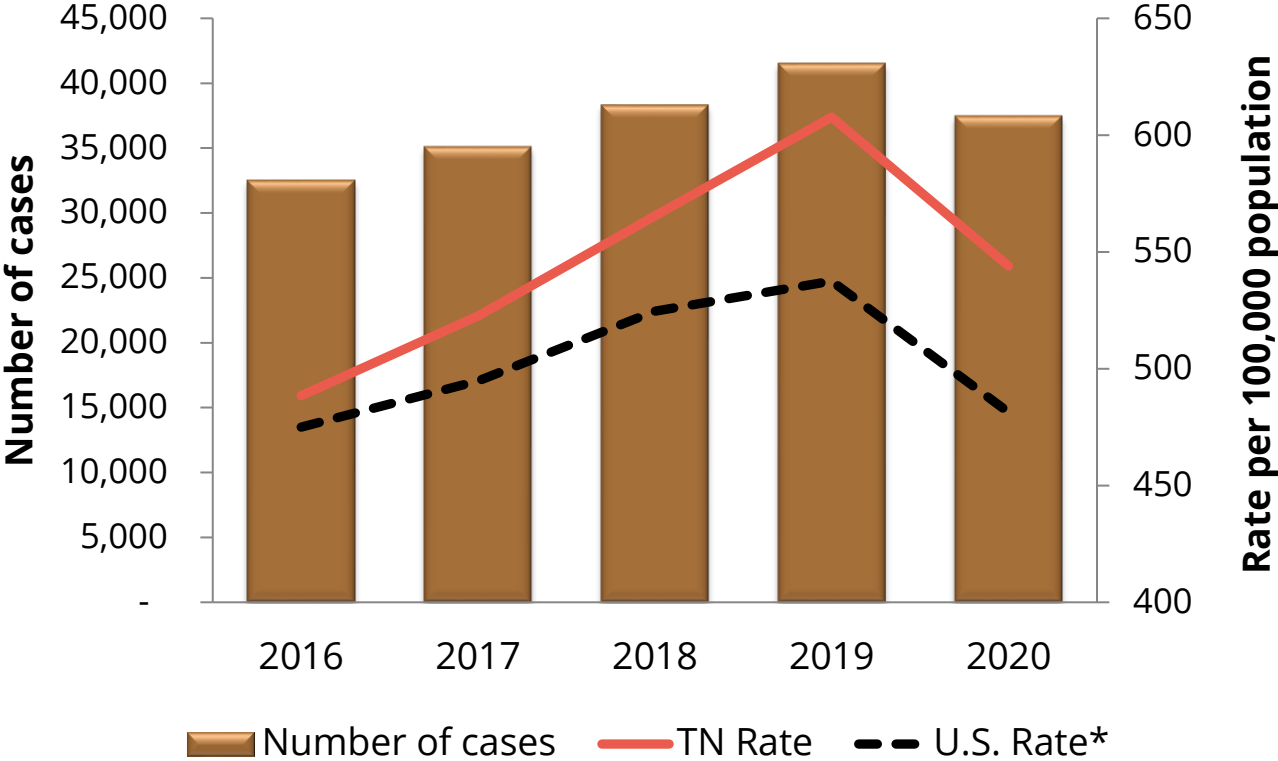
Reporting Laws and Regulations

The Tennessee Department of Health's (TDH) STI Prevention Program manages the Tennessee STI case surveillance registry. Chlamydia, gonorrhea, and syphilis are reportable conditions by law (T.C.A. §68-10-112) and medical laboratories are required to report all positive chlamydia, gonorrhea, and syphilis laboratory reports to TDH. Laboratory results are reported by providers and laboratories either by paper, electronic files, secure email, and/or via Electronic Laboratory Reporting. These are reported to TDH within one week of identification. In accordance with T.C.A. §37-1-403, any physician or other person diagnosing or treating any reportable sexually transmitted infection in children 13 years of age or younger, should immediately make a confidential written report of the case to TDH.

In addition to the laboratory results, case report forms containing demographic characteristics, STI risk factors, and treatment information are collected. This information is then stored in the Patient Reporting Investigation Surveillance Manager (PRISM) and is used to create yearly epidemiological reports. TDH's Reportable Disease regulations and guidance can be found at <https://www.tn.gov/health/cedep/reportable-diseases.html>.

Chlamydia

Figure 1: Chlamydia — Number and Rate of Reported Cases, Tennessee and U.S., 2016–2020



*U.S. rates are from the CDC STD Surveillance 2020 report.⁸

Table 1: Chlamydia — Number and Rate of Reported Cases, Tennessee and U.S., 2016–2020

	2016	2017	2018	2019	2020
Number of cases	32,487	35,088	38,282	41,501	37,462
TN Rate	488.4	522.5	565.5	607.7	544.0
U.S. Rate*	494.7	524.6	537.5	552.8	481.3

All rates are per 100,000 population.

*U.S. rates in tables and figures are from the CDC STD Surveillance Report, 2020.⁸

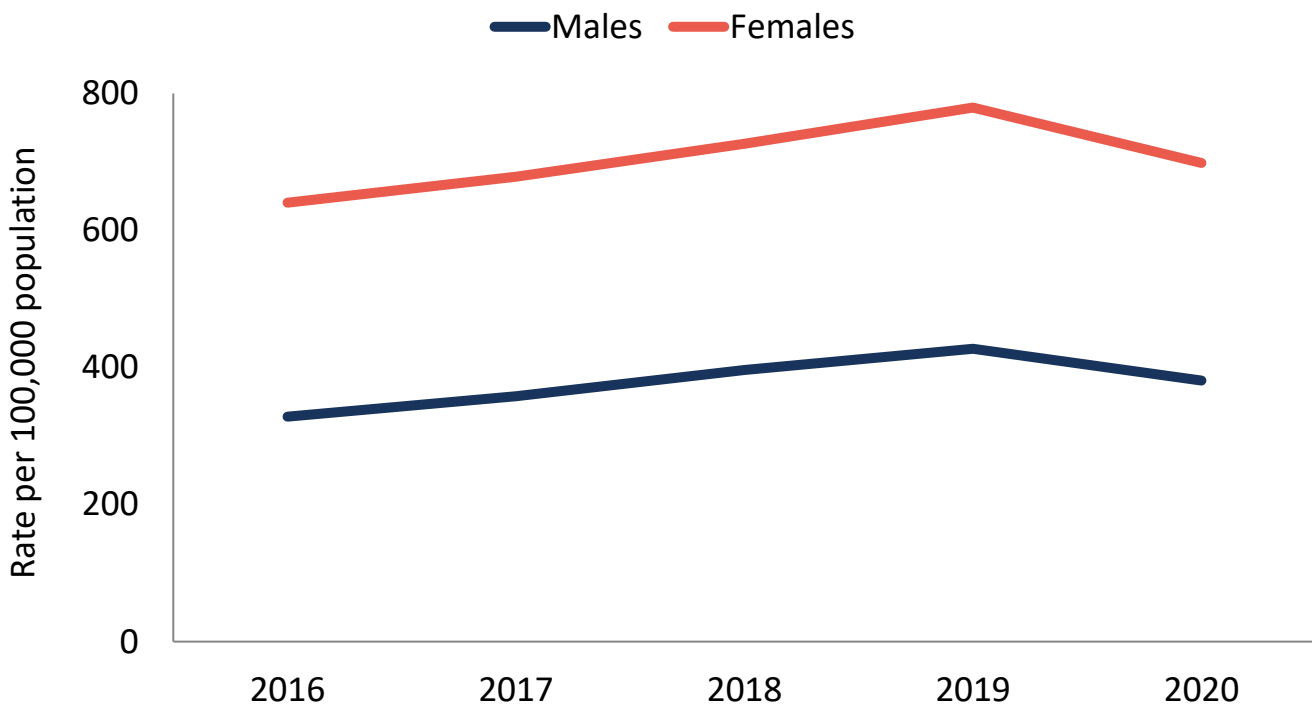
Despite annual increases in reported cases and rates of chlamydia from 2016 to 2019, the number and rate of infections decreased in 2020. This decrease in cases is likely due to a reduction in screenings during the first year of the COVID-19 pandemic. The rate of chlamydia infections in 2020 was 544.0 cases per 100,000 population, which is a 10.5% decrease from the rate reported in 2019. However, it was still higher than the national rate of 481.3 cases per 100,000 population.

Table 2: Chlamydia — Number and Rate of Reported Cases by Sex, Tennessee, 2016–2020

Sex	2016		2017		2018		2019		2020	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	32,487	488.4	35,088	522.5	38,282	565.5	41,501	607.7	37,462	544.0
Males	10,646	328.3	11,738	358.3	13,085	396.3	14,243	427.4	12,799	381.1
Females	21,837	640.6	23,347	678.7	25,193	726.5	27,254	779.4	24,659	698.8

All rates are per 100,000 population.

Figure 2: Chlamydia — Rate of Reported Cases by Sex, Tennessee, 2016–2020



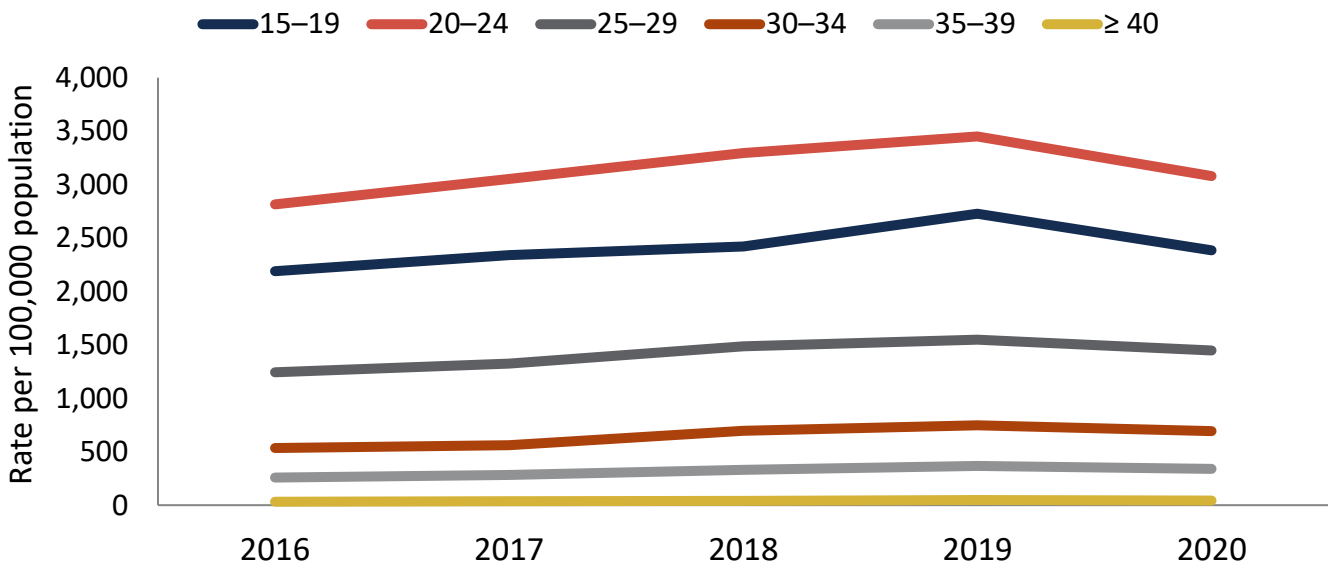
In 2020, 24,659 cases of chlamydia were reported among females for a rate of 698.8 cases per 100,000 females. The rate among males was lower, with 12,799 cases reported for a rate of 381.1 cases per 100,000 males. Although reported cases and rates of chlamydia among males and females increased every year from 2016 to 2019, these cases and rates decreased among both sexes in 2020.

Table 3: Chlamydia — Number and Rate of Reported Cases by Age Group, Tennessee, 2016–2020

Age group (years)	2016		2017		2018		2019		2020	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	32,487	488.4	35,088	522.5	38,282	565.5	41,501	607.7	37,462	544.0
15–19	9,237	2,189.1	9,947	2,340.6	10,635	2,420.0	11,569	2,726.7	10,079	2,384.5
20–24	12,802	2,814.3	13,644	3,051.9	14,413	3,295.6	15,349	3,449.8	13,763	3,077.9
25–29	5,779	1,243.1	6,396	1,323.3	7,199	1,486.8	7,700	1,548.4	7,173	1,448.7
30–34	2,284	534.7	2,421	559.6	2,997	696.0	3,380	747.2	3,233	692.6
35–39	1,085	258.1	1,208	282.6	1,434	330.9	1,598	366.9	1,480	339.6
≥ 40	1,036	32.2	1,216	37.4	1,333	40.5	1,594	48.0	1,457	43.3

All rates are per 100,000 population.

Figure 3: Chlamydia — Rate of Reported Cases by Age Group, Tennessee, 2016–2020



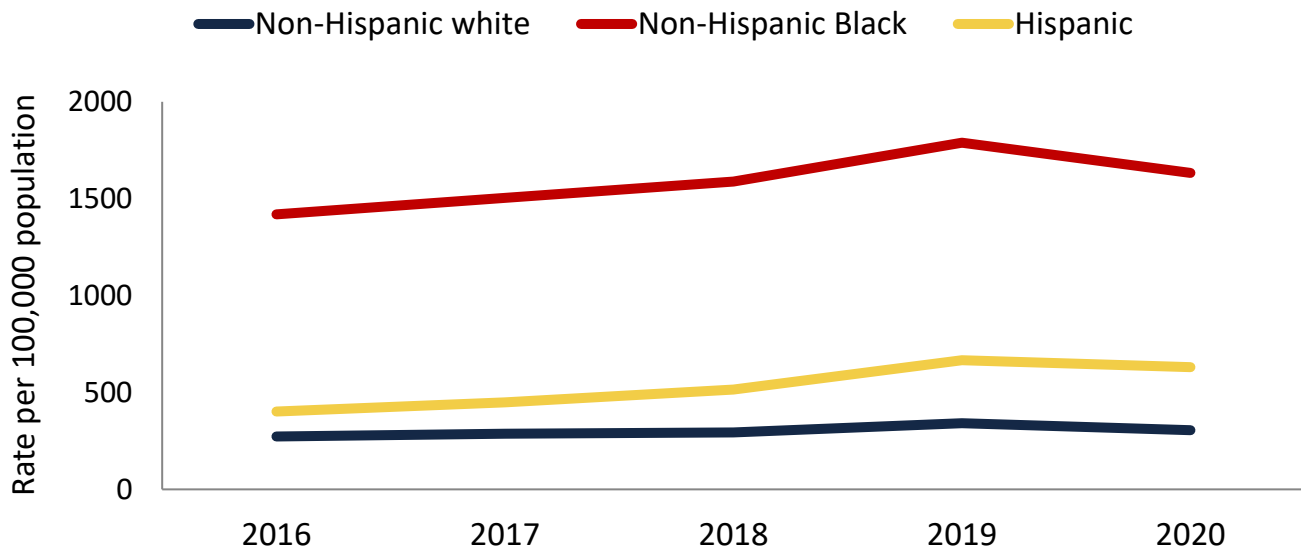
In 2020, the highest rates of chlamydia were reported among persons aged 20–24, followed by persons aged 15–19. Among persons 20–24 years of age, 13,763 cases were reported for a rate of 3,077.9 cases per 100,000 population. Among persons 15–19 years of age, 10,079 cases were reported for a rate of 2,384.5 cases per 100,000 population. Despite annual increases in cases and rates within all age groups from 2016 to 2019, there were decreases observed in all age groups in 2020.

Table 4: Chlamydia — Number and Rate of Reported Cases by Race and Ethnicity, Tennessee, 2016–2020

Race/Ethnicity	2016		2017		2018		2019		2020	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	32,487	488.4	35,088	522.5	38,282	565.5	41,501	607.7	37,462	544.0
Non-Hispanic white	13,475	272.9	14,224	286.6	15,380	293.8	17,139	341.4	15,295	302.8
Non-Hispanic Black	15,840	1,419.1	16,950	1,504.4	18,070	1,588.2	20,426	1,788.9	18,638	1,624.2
Hispanic	1,401	401.7	1,646	449	1,920	514.9	2,608	666.4	2,467	610.0

All rates are per 100,000 population.

Figure 4: Chlamydia — Rate of Reported Cases by Race and Ethnicity, Tennessee, 2016–2020



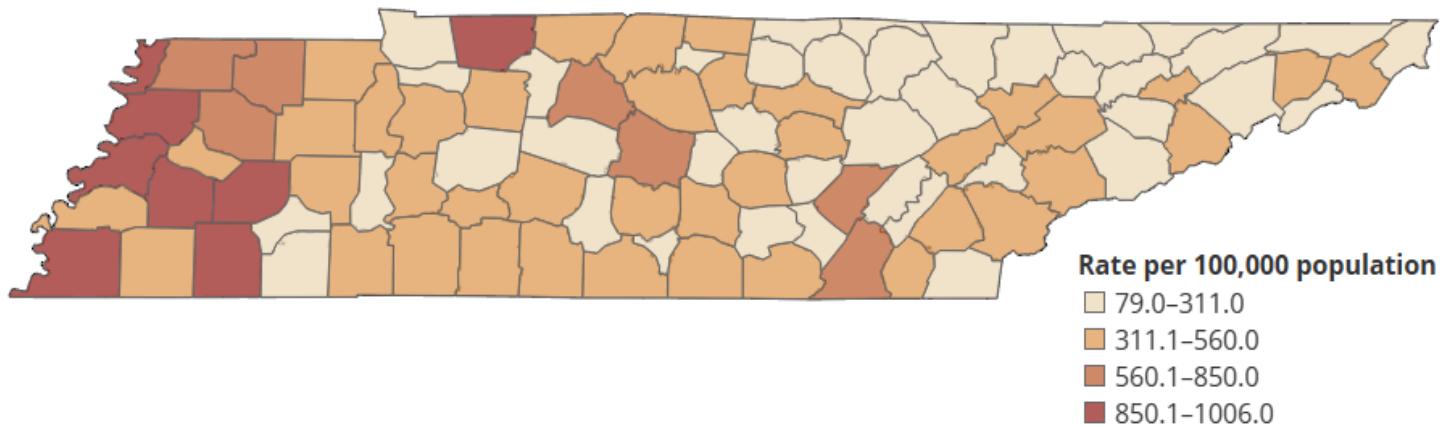
In the last five years, non-Hispanic Black individuals had the highest number and rate of chlamydia infections in the state. In 2020, 18,638 cases of chlamydia were reported among non-Hispanic Black individuals for a rate of 1,624.2 cases per 100,000 persons, as compared to 302.8 cases per 100,000 persons among non-Hispanic white individuals and 610.0 cases per 100,000 persons among Hispanic individuals. As with sex and age, cases and rates among non-Hispanic white individuals, non-Hispanic Black individuals, and Hispanic individuals decreased in 2020.

Table 5: Chlamydia — Number and Rate of Reported Cases by Region, Tennessee, 2016–2020

Regions/Metros	2016		2017		2018		2019		2020	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	32,487	488.4	35,088	522.5	38,282	565.5	41,501	607.7	37,462	544.0
Northeast	947	269.7	1,017	289.2	1,166	330.6	1,172	331.2	1,228	345.7
East	2,193	288.1	2,242	292.6	2,515	326.4	2,494	321.3	2,388	304.9
Southeast	1,132	341.3	1,178	353.9	1,292	384.9	1,433	422.8	1,223	358.2
Upper-Cumberland	1,103	316.7	1,163	330.1	1,093	307.1	1,212	336.3	1,068	293.0
Mid-Cumberland	5,023	403.4	5,779	452.5	6,157	471.2	7,154	536.3	6,489	476.3
South Central	1,375	346.1	1,582	392.9	1,693	414.6	1,930	466.6	1,621	386.2
West	2,703	510.8	2,875	545.9	2,909	551.7	3,117	592.2	2,937	558.7
Shelby	7,871	842.2	9,004	961.0	9,770	1,044.1	10,280	1,096.9	8,980	959.7
Davidson	4,544	663.9	4,567	660.7	5,383	777.2	5,906	850.8	5,581	804.0
Knox	2,418	530.1	2,600	562.9	2,679	575.8	2,876	611.5	2,384	501.3
Hamilton	2,069	578.4	1,922	531.5	2,243	615.7	2,511	682.7	2,248	604.9
Madison	730	747.5	725	742.5	936	959.0	907	925.7	872	886.5
Sullivan	379	241.9	434	276.2	446	282.9	509	321.4	443	279.0

All rates are per 100,000 population.

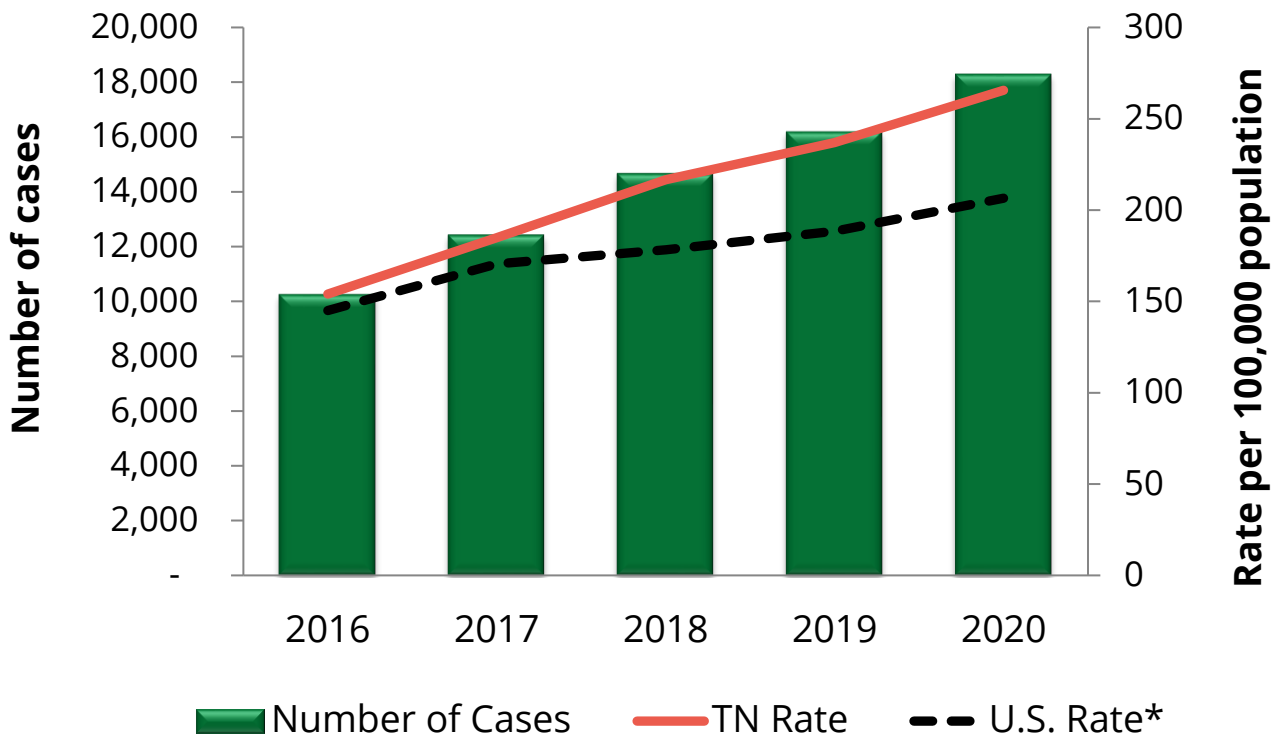
Figure 5: Chlamydia — Rate of Reported Cases by County, Tennessee, 2020



In 2020, rates of reported cases of chlamydia by public health region ranged from 279.0 cases per 100,000 population in the Sullivan region to 959.7 cases per 100,000 population in the Memphis/Shelby region. The counties with the highest rates of cases were Montgomery (1,005.8.1/100,000), Shelby (959.7/100,000), and Hardeman (946.2/100,000).

Gonorrhea

Figure 6: Gonorrhea — Number and Rate of Reported Cases, Tennessee and U.S., 2016–2020



*U.S. rates are from the CDC STD Surveillance 2020 report.⁸

Table 6: Gonorrhea — Number and Rate of Reported Cases, Tennessee and U.S., 2016–2020

	2016	2017	2018	2019	2020
TN-Number of cases	10,245	12,425	14,666	16,183	18,288
TN Rate	154.0	185.0	216.6	237.0	265.6
U.S. Rate*	145.0	170.6	178.3	188.4	206.5

All rates per 100,000 population.

*U.S. rates in tables and figures are from the CDC STD Surveillance Report, 2020.⁸

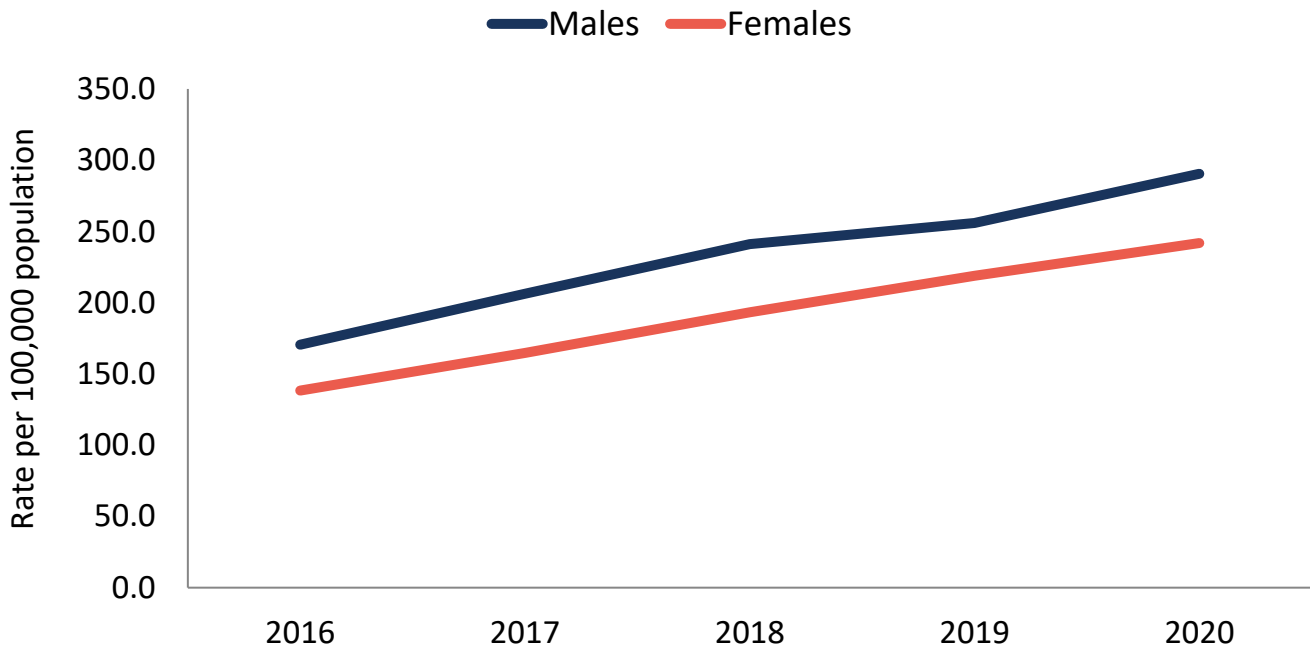
In Tennessee, the number and rate of reported cases of gonorrhea increased from 2016 to 2020. Similarly, the national rate of gonorrhea increased. However, Tennessee had higher rates of reported cases of gonorrhea compared to the United States over the last five years. In 2020, 18,288 gonorrhea infections were reported for a rate of 265.6 cases per 100,000 population, which was higher than the U.S. rate of 206.5 cases per 100,000 population.

Table 7: Gonorrhea — Number and Rate of Reported Cases by Sex, Tennessee, 2016–2020

Sex	2016		2017		2018		2019		2020	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	10,245	154.0	12,425	185.0	14,666	216.6	16,183	237.0	18,288	265.6
Males	5,529	170.5	6,757	206.3	7,962	241.1	8,527	255.9	9,753	290.4
Females	4,715	138.3	5,667	164.7	6,704	193.3	7,656	218.9	8,534	241.8

All rates are per 100,000 population.

Figure 7: Gonorrhea — Rate of Reported Cases by Sex, Tennessee, 2016–2020



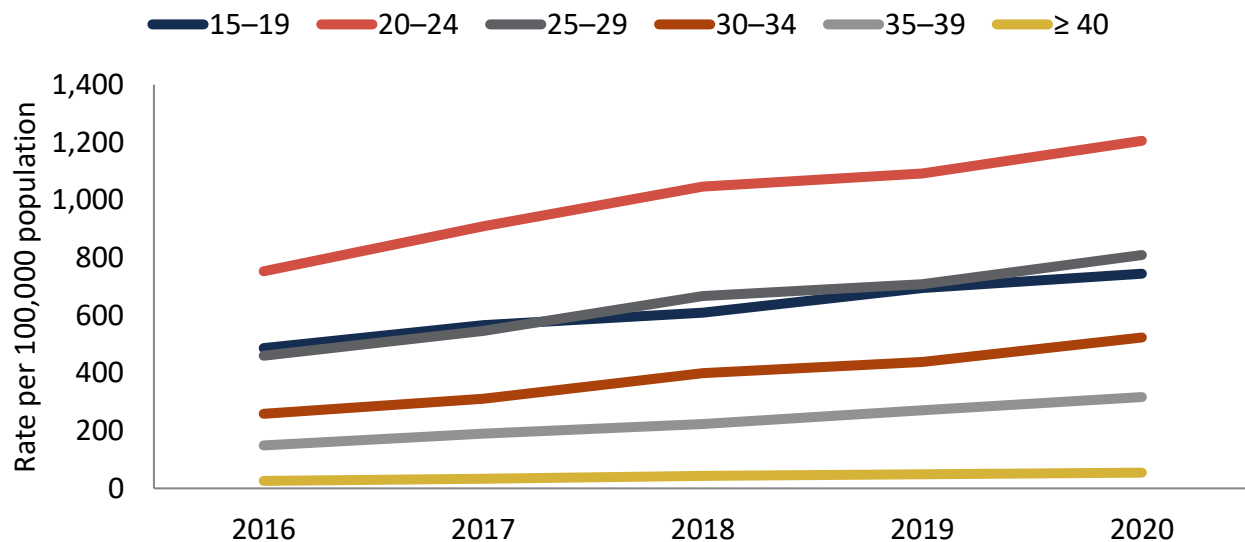
In 2020, 9,753 cases of gonorrhea were reported among males for a rate of 290.4 cases per 100,000 males. The rate among females was lower, with 8,534 cases reported for a rate of 241.8 cases per 100,000 females. For both males and females, reported cases and rates increased annually from 2016 to 2020.

Table 8: Gonorrhea — Number and Rate of Reported Cases by Age Group, Tennessee, 2016–2020

Age group (years)	2016		2017		2018		2019		2020	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	10,245	154.0	12,425	185.0	14,666	216.6	16,183	237.0	18,288	265.6
15–19	2,052	486.3	2,403	565.4	2,675	608.7	2,946	694.4	3,146	744.3
20–24	3,424	752.7	4,063	908.8	4,574	1,045.9	4,856	1,091.4	5,389	1,205.2
25–29	2,138	459.9	2,637	545.6	3,228	666.7	3,521	708.0	4,006	809.1
30–34	1,104	258.5	1,346	311.1	1,720	399.4	1,983	438.4	2,442	523.1
35–39	626	148.9	811	189.7	966	222.9	1,181	271.2	1,379	316.5
≥ 40	832	25.8	1,092	33.6	1,413	42.9	1,618	48.7	1,833	54.5

All rates are per 100,000 population.

Figure 8: Gonorrhea — Rate of Reported Cases by Age group, Tennessee, 2016–2020



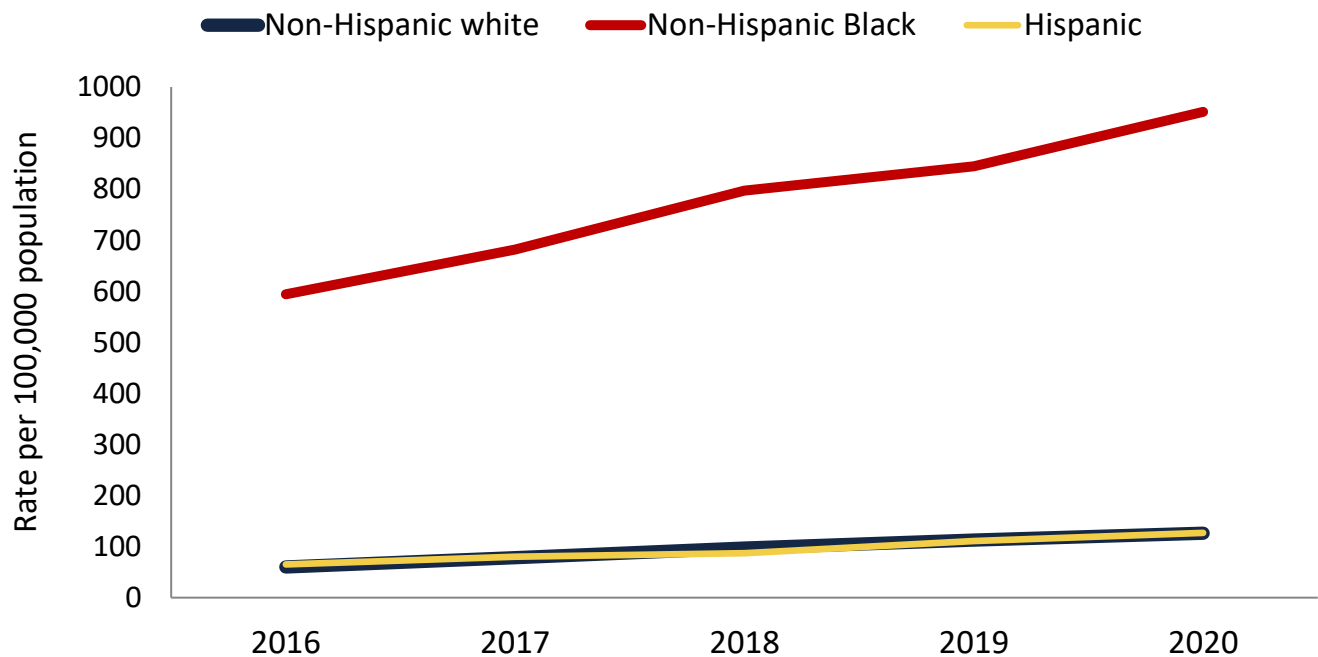
In 2020, the highest rates of gonorrhea were reported among persons aged 20–24, followed by persons aged 25–29. Among persons 20–24 years of age, 5,389 cases were reported for a rate of 1,205.2 cases per 100,000 population. Among persons 25–29 years of age, 4,006 cases were reported for a rate of 809.1 cases per 100,000 population. The rate of gonorrhea increased among all age groups from 2016 to 2020.

Table 9: Gonorrhea — Number and Rate of Reported Cases by Race and Ethnicity, Tennessee, 2016–2020

Race/Ethnicity	2016		2017		2018		2019		2020	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	10,245	154.0	12,425	185.0	14,666	216.6	16,183	237.0	18,288	265.6
Non-Hispanic white	2,968	60.1	3,891	78.4	4,847	97.1	5,650	112.6	6,374	126.2
Non-Hispanic Black	6,631	594.1	7,678	681.5	9,035	797.0	9,643	844.6	10,917	951.4
Hispanic	227	65.1	293	79.9	332	87.2	434	110.9	513	126.9

All rates are per 100,000 population.

Figure 9: Gonorrhea — Rate of Reported Cases by Race and Ethnicity, Tennessee, 2016–2020



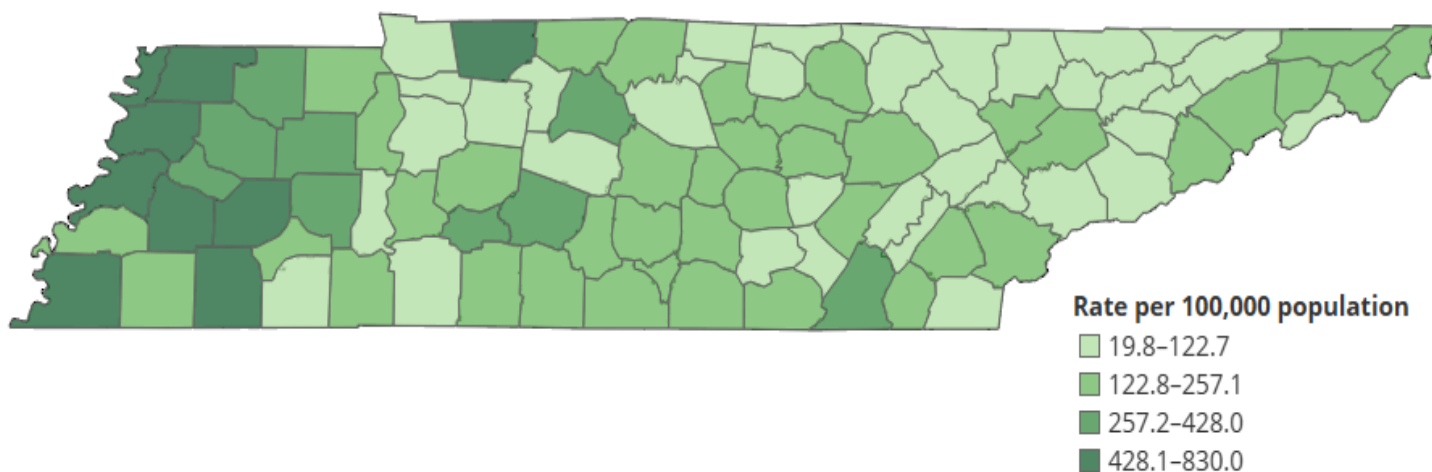
Non-Hispanic Black individuals had the highest rate of gonorrhea infections in the state from 2016 to 2020. In 2020, 10,917 cases of gonorrhea were reported among non-Hispanic Black individuals for a rate of 951.4 cases per 100,000 population, as compared to 126.2 cases per 100,000 population among non-Hispanic white individuals and 126.9 cases per 100,000 population among Hispanic individuals.

Table 10: Gonorrhea — Number and Rate of Reported Cases by Public Health Region, Tennessee, 2016–2020

Regions/Metros	2016		2017		2018		2019		2020	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	10,245	154.0	12,425	185.0	14,666	216.6	16,183	237.0	18,288	265.6
Northeast	116	33.0	142	40.4	318	90.2	469	132.5	622	175.1
East	408	53.6	583	76.1	777	100.9	773	99.6	799	102.0
Southeast	413	124.5	404	121.4	512	152.5	573	169.0	566	165.8
Upper-Cumberland	166	47.7	372	105.6	223	62.7	338	93.8	499	136.9
Mid-Cumberland	1,346	108.1	1,705	133.5	1,812	138.7	2,086	156.4	2,493	183.0
South Central	293	73.7	321	79.7	494	121.0	743	179.6	925	220.4
West	681	128.7	900	170.9	1,280	242.8	1,526	289.9	1,892	359.9
Shelby	2,934	313.9	3,694	394.3	4,354	465.3	4,262	454.8	4,456	476.1
Davidson	1,895	276.9	1,656	239.6	1,882	271.7	2,350	338.5	2,975	428.6
Knox	940	206.1	1,333	288.6	1,329	285.6	1,369	291.1	1,151	242.0
Hamilton	749	209.4	928	256.6	1,024	281.1	1,107	301.0	1,120	301.3
Madison	241	246.8	311	318.5	523	535.8	373	380.7	474	481.9
Sullivan	63	40.2	76	48.4	138	87.5	214	135.1	316	199.0

All rates are per 100,000 population.

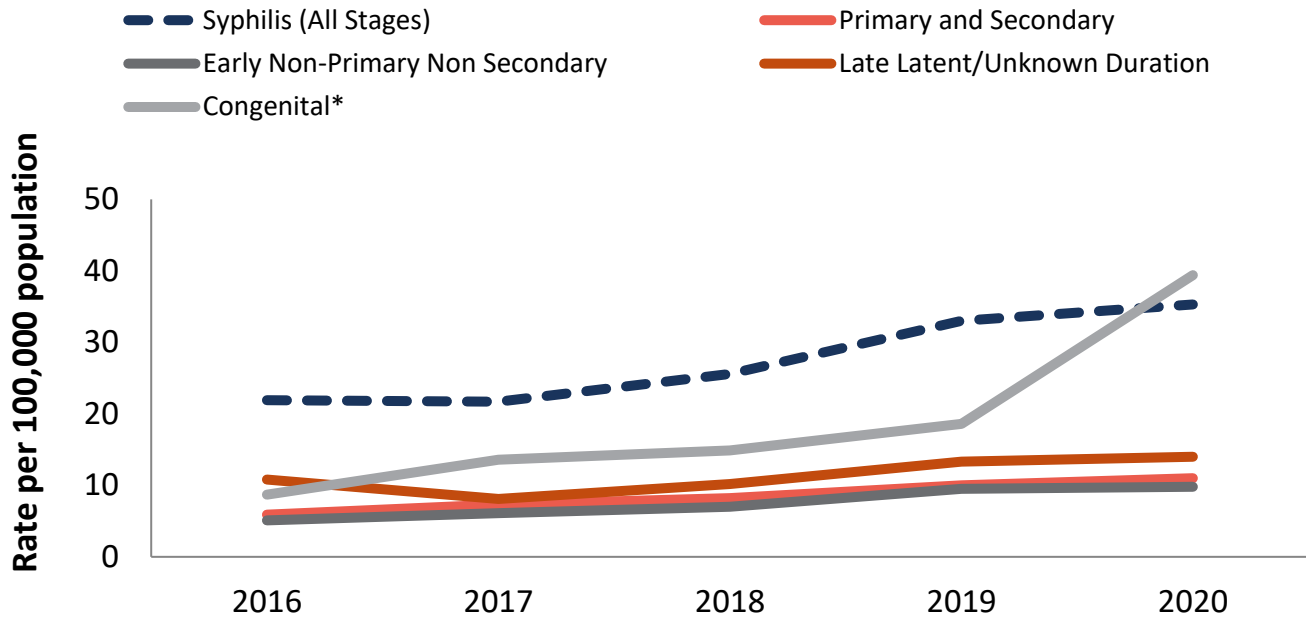
Figure 10: Gonorrhea — Rate of Reported Cases by County, Tennessee, 2020



In 2020, rates of reported cases of gonorrhea by public health region ranged from 102.0 cases per 100,000 population in the East region to 481.9 cases per 100,000 population in the Jackson/Madison region. The counties with the highest rates of cases were Lake (830.0/100,000), Dyer (675.9/100,000), and Lauderdale (675.8/100,000).

Syphilis

Figure 11: Syphilis — Rate of Reported Cases by Disease Stage, Tennessee, 2016–2020



Rates are per 100,000 population. Congenital syphilis rates are per 100,000 live births.

*Congenital syphilis cases are based on case report year.

Table 11: Syphilis — Number and Rate of Reported Cases by Disease Stage, Tennessee, 2016–2020

Stage of Infection	2016		2017		2018		2019		2020	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Syphilis (All Stages)	1,459	21.9	1,456	21.7	1,730	25.6	2,253	33.0	2,433	35.3
Primary and Secondary	390	5.9	489	7.3	553	8.2	683	10.0	758	11.0
Early Non-Primary Non-Secondary*	341	5.1	411	6.1	474	7.0	646	9.5	678	9.8
Late Latent/Unknown Duration*	721	10.8	544	8.1	691	10.2	909	13.3	966	14.0
Congenital**	7	8.7	11	13.6	12	14.9	15	18.6	31	39.4

Rates are per 100,000 population. Congenital syphilis rates are per 100,000 live births.

Note: Rates based on counts of < 20 are unreliable. Interpret with caution.

*In 2018 CDC changed naming of early latent and late latent stages to these

** Congenital syphilis cases are based on case report year

In 2020, there were 2,433 total cases of syphilis in Tennessee. The reported cases and rates for all stages of syphilis increased from 2016 to 2020, with congenital syphilis having the greatest increase.

Table 12: Syphilis (All Stages)* — Number and Rate of Reported Cases by Public Health Region, Tennessee, 2016–2020

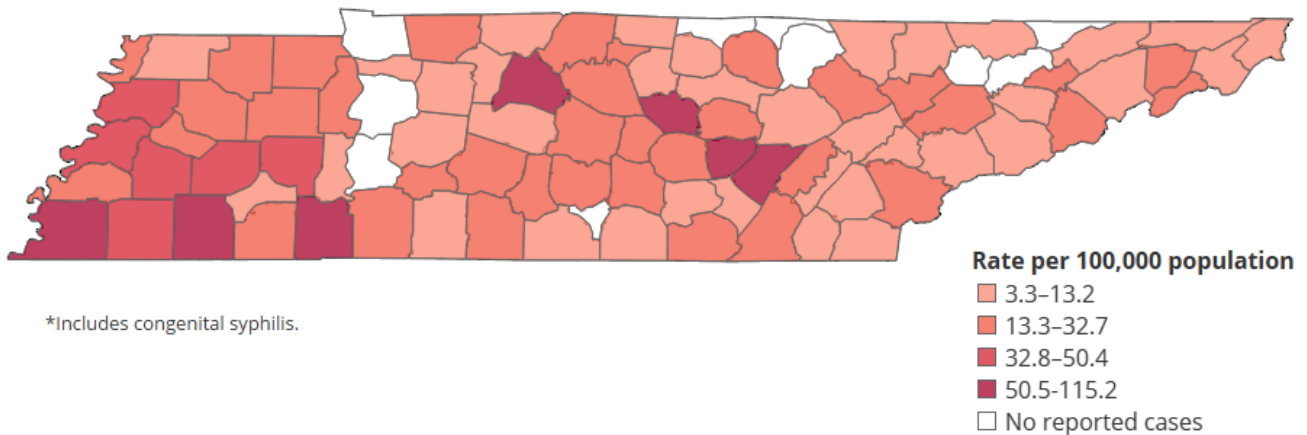
Regions/Metros	2016		2017		2018		2019		2020	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	1,459	21.9	1,456	21.7	1,730	25.6	2,253	33.0	2,433	35.3
Northeast	10	2.8	28	8.0	29	8.2	43	12.1	42	11.8
East	80	10.5	60	7.8	61	7.9	74	9.5	76	9.7
Southeast	28	8.4	35	10.5	29	8.6	51	15.0	41	12.0
Upper-Cumberland	18	5.2	25	7.1	31	8.7	40	11.1	67	18.4
Mid-Cumberland	140	11.2	167	13.1	210	16.1	216	16.2	206	15.1
South Central	28	7.0	33	8.2	42	10.3	58	14.0	79	18.8
West	29	5.5	45	8.5	49	9.3	101	19.2	150	28.5
Shelby	693	74.1	590	63.0	634	67.8	929	99.1	1,055	112.7
Davidson	264	38.6	236	34.1	399	57.6	495	71.3	502	72.3
Knox	92	20.2	103	22.3	102	21.9	99	21.0	101	21.2
Hamilton	66	18.4	104	28.8	85	23.3	86	23.4	69	18.6
Madison	17	17.4	20	20.5	45	46.1	42	42.9	37	37.6
Sullivan	<5	2.6	9	5.7	14	8.9	19	12.0	8	5.0

All rates are per 100,000 population.

Note: Rates based on counts of < 20 are unreliable. Interpret with caution.

*Includes congenital syphilis

Figure 12: Syphilis (All Stages)* — Rate of Reported Cases by County Tennessee, 2020

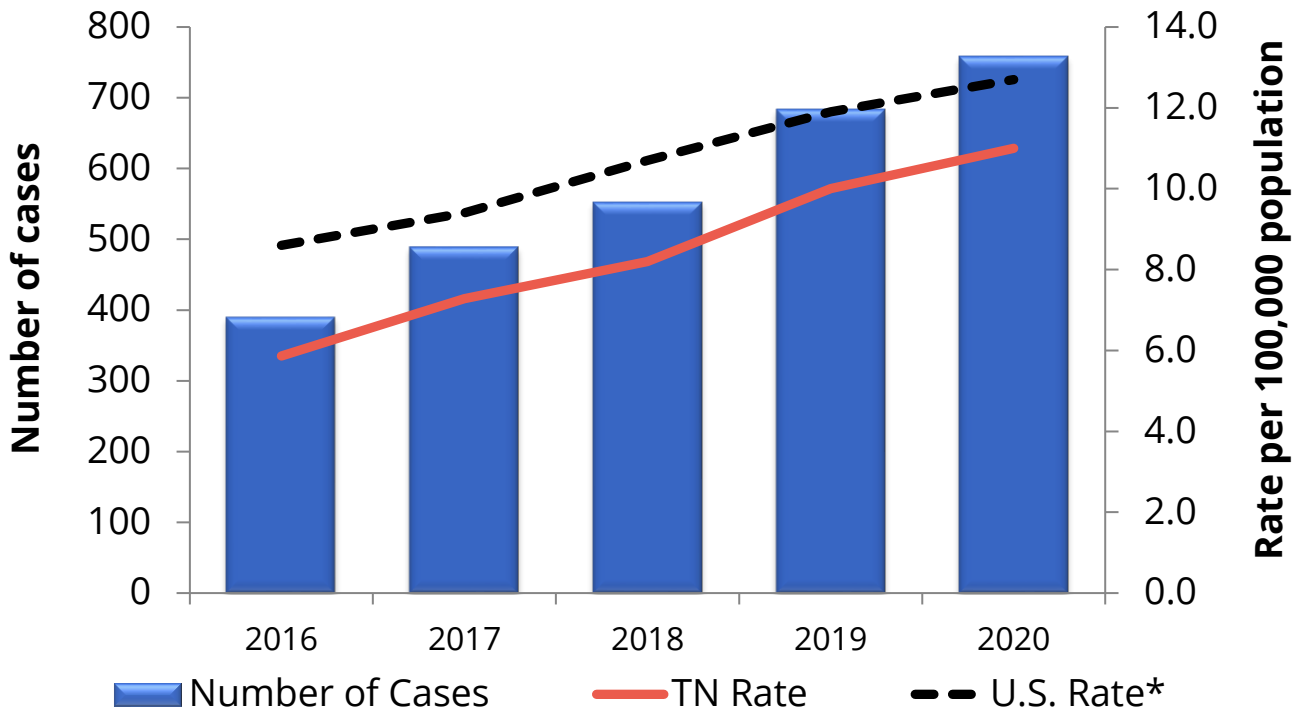


*Includes congenital syphilis.

In 2020, rates of reported cases of syphilis by public health region ranged from 5.0 cases per 100,000 population in the Sullivan region to 112.7 cases per 100,000 population in the Memphis/Shelby region. There were 10 counties with no reported cases of syphilis in 2020. Of those that did report cases, the counties with the highest rates were Dekalb (115.2 /100,000), Shelby (112.7/100,000), and Davidson (72.3/100,000).

Primary and Secondary (P&S) Syphilis

Figure 13: Primary and Secondary Syphilis — Number and Rate of Reported Cases, Tennessee and U.S., 2016–2020



*U.S. rates are from the CDC STD Surveillance 2020 report.⁸

Table 13: Primary and Secondary Syphilis — Number and Rate of Reported Cases, Tennessee and U.S., 2016–2020

	2016	2017	2018	2019	2020
Number of Cases	390	489	553	683	758
TN Rate	5.9	7.3	8.2	10.0	11.0
U.S. Rate*	8.6	9.4	10.7	11.9	12.7

*All rates are per 100,000 population.

**U.S. rates in tables and figures are from the CDC STD Surveillance report, 2020.⁸

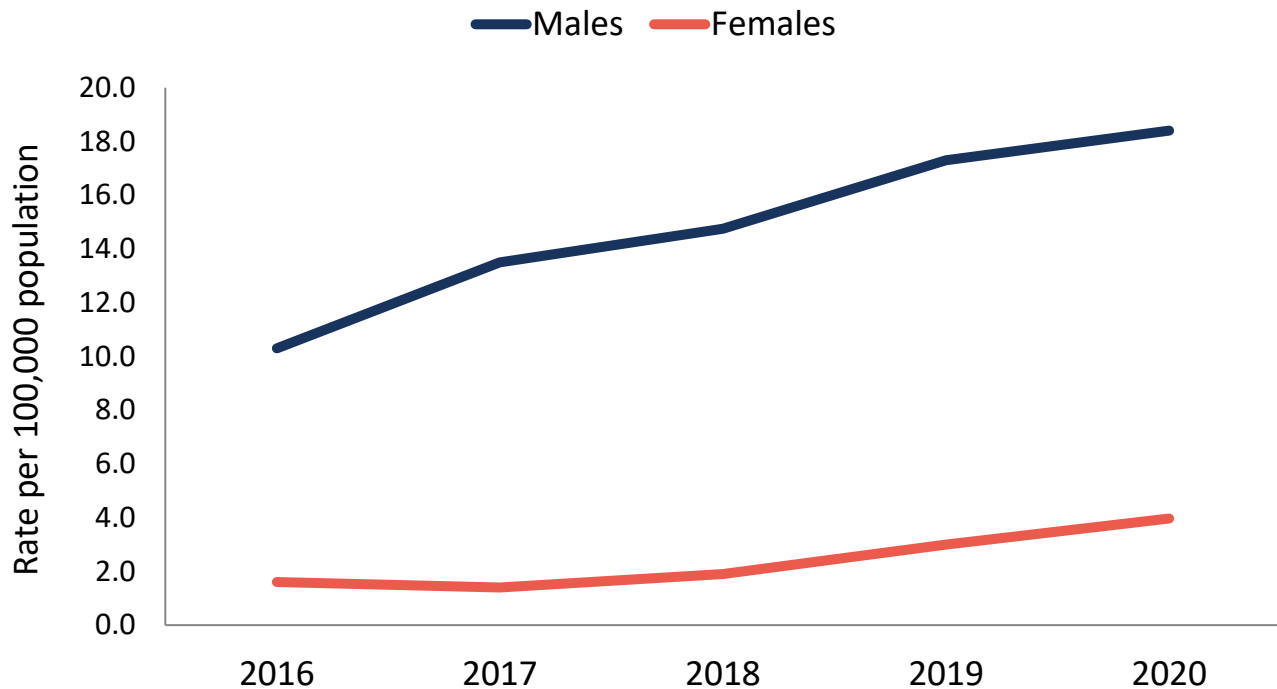
From 2016 to 2020, the number and rate of reported cases of P&S syphilis in both Tennessee and the U.S. have consistently increased. However, they remained lower in Tennessee compared to the U.S. rate. In 2020, 758 cases of P&S syphilis were reported for a rate of 11.0 cases per 100,000 population, as compared to the U.S. rate of 12.7 cases per 100,000 population.

Table 14: Primary and Secondary Syphilis — Number and Rate of Reported Cases by Sex, Tennessee, 2016–2020

Sex	2016		2017		2018		2019		2020	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	390	5.9	489	7.3	553	8.2	683	10.0	758	11.0
Males	335	10.3	441	13.5	487	14.7	577	17.3	618	18.4
Females	55	1.6	48	1.4	66	1.9	106	3.0	140	4.0

All rates are per 100,000 population.

Figure 14: Primary and Secondary Syphilis — Rate of Reported Cases by Sex, Tennessee, 2016–2020



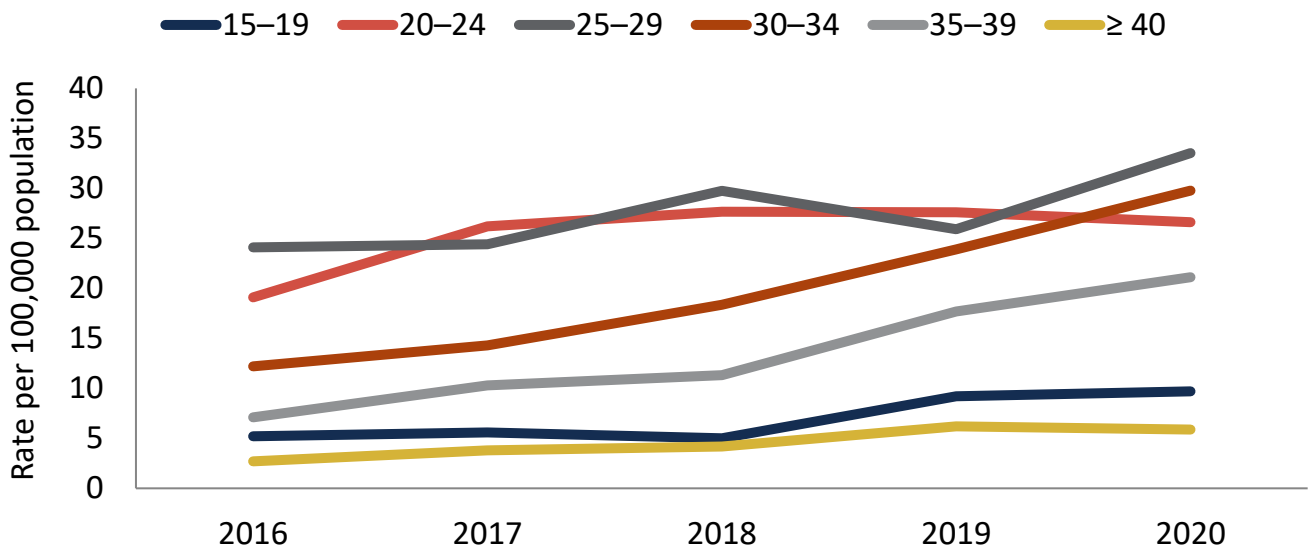
In 2020, 618 cases of P&S syphilis were reported among males for a rate of 18.4 cases per 100,000 males. The rate among females was significantly lower, with 140 cases reported for a rate of 4.0 cases per 100,000 females. Cases and rates among both sexes increased from 2016 to 2020, and more than doubled among females.

Table 15: Primary & Secondary Syphilis — Number and Rate of Reported Cases by Age Group, Tennessee, 2016–2020

Age group (years)	2016		2017		2018		2019		2020	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	390	5.9	489	7.3	553	8.2	683	10.0	758	11.0
15–19	22	5.2	24	5.6	22	5.0	39	9.2	41	9.7
20–24	87	19.1	117	26.2	121	27.7	123	27.6	119	26.6
25–29	112	24.1	118	24.4	144	29.7	129	25.9	166	33.5
30–34	52	12.2	62	14.3	79	18.3	108	23.9	139	29.8
35–39	30	7.1	44	10.3	49	11.3	77	17.7	92	21.1
≥ 40	87	2.7	124	3.8	138	4.2	207	6.2	198	5.9

*All rates are per 100,000 population.

Figure 15: Primary & Secondary Syphilis — Rate of Reported Cases by Age Group, Tennessee, 2016–2020



In 2020, the highest rates of P&S syphilis infections were reported among persons aged 25–29, followed by persons aged 30–34. Among persons 25–29 years old, 166 cases were reported for a rate of 33.5 cases per 100,000 population. Persons aged 30–34 years comprised 139 cases for a rate of 29.8 cases per 100,000 population. Rates per 100,000 population in the 30–34, 35–39, and ≥40 age groups have more than doubled from 2016 to 2020.

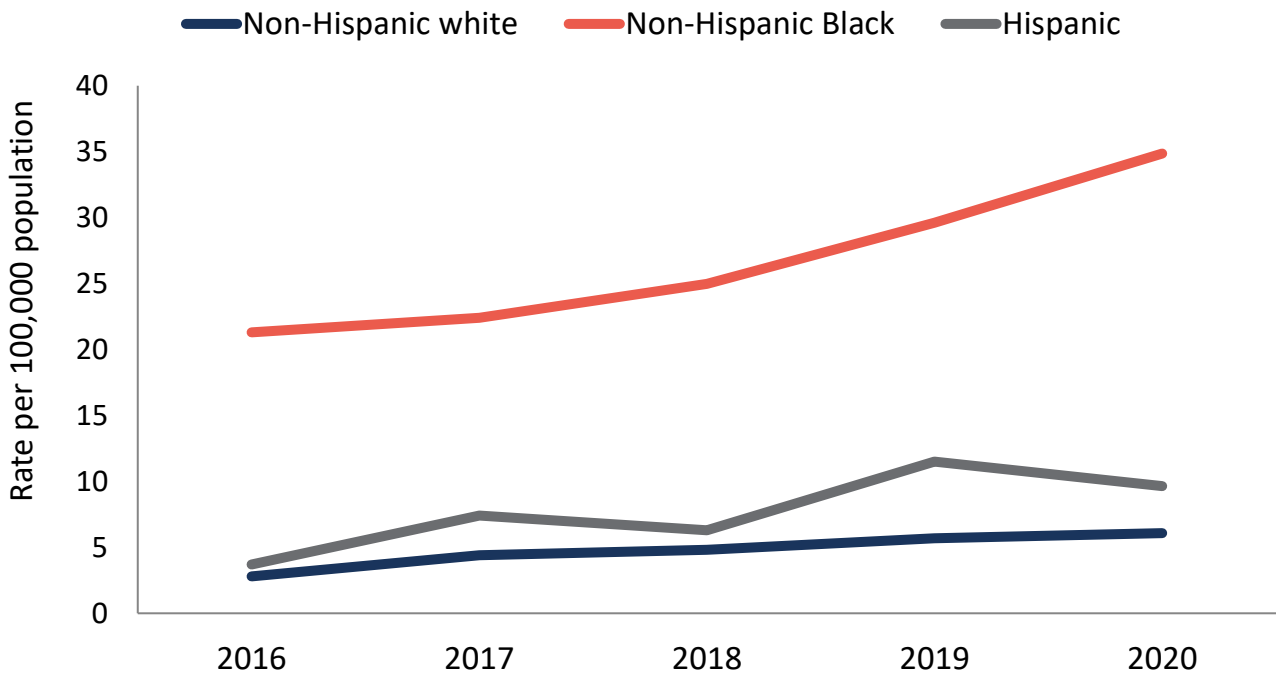
Table 16: Primary & Secondary Syphilis — Number and Rate of Reported Cases by Race and Ethnicity, Tennessee, 2016–2020

Race/Ethnicity	2016		2017		2018		2019		2020	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	390	5.9	489	7.3	553	8.2	683	10.0	758	11.0
Non-Hispanic white	138	2.8	216	4.4	240	4.8	288	5.7	307	6.1
Non-Hispanic Black	238	21.3	252	22.4	283	25.0	338	29.6	400	34.9
Hispanic	13	3.7	27	7.4	24	6.3	45	11.5	39	9.6

All rates are per 100,000 population.

Note: Rates based on counts of < 20 are unreliable. Interpret with caution.

Figure 16: Primary & Secondary Syphilis — Rate of Reported Cases by Race and Ethnicity, Tennessee, 2016–2020



From 2016 to 2020, non-Hispanic Black individuals had the highest number and rate of P&S syphilis infections in the state. However, the cases and rate of P&S syphilis among all race and ethnic groups increased over this period and have nearly tripled among Hispanic individuals. In 2020, 400 cases of P&S syphilis were reported among non-Hispanic Black individuals for a rate of 34.9 cases per 100,000 persons, as compared to 6.1 cases per 100,000 persons among non-Hispanic white individuals and 9.6 cases per 100,000 persons among Hispanic individuals.

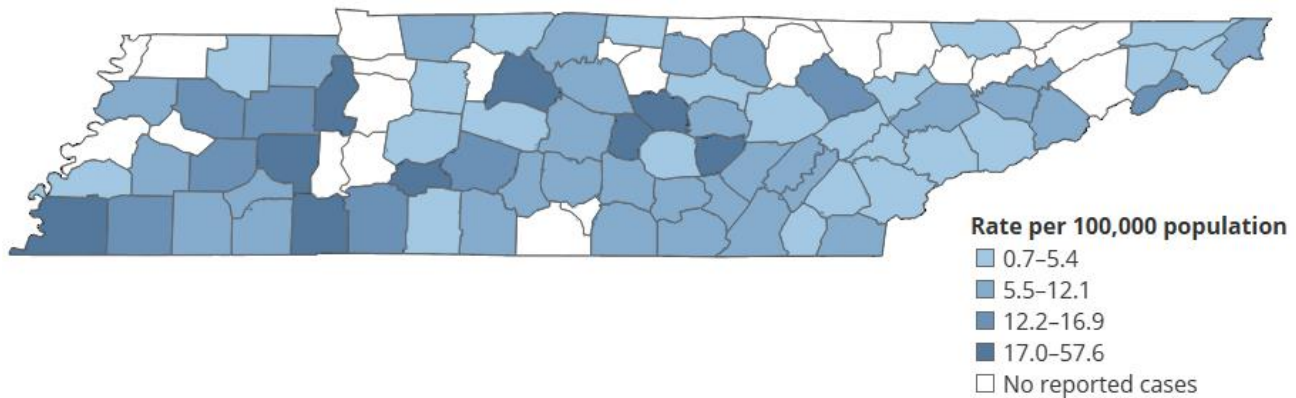
Table 17: Primary & Secondary Syphilis — Number and Rate of Reported Cases by Public Health Region, Tennessee, 2016–2020

Regions/Metros	2016		2017		2018		2019		2020	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	390	5.9	489	7.3	553	8.2	683	10.0	758	11.0
Northeast	<5	0.6	8	2.3	10	2.8	14	4.0	13	3.7
East	23	3.0	24	3.1	12	1.6	22	2.8	29	3.7
Southeast	5	1.5	12	3.6	10	3.0	14	4.1	19	5.6
Upper-Cumberland	18	5.2	25	7.1	16	4.5	17	4.7	31	8.5
Mid-Cumberland	48	3.9	69	5.4	105	8.0	84	6.3	71	5.2
South Central	16	4.0	17	4.2	24	5.9	26	6.3	33	7.9
West	5	0.9	11	2.1	8	1.5	43	8.2	50	9.5
Shelby	150	16.0	135	14.4	156	16.7	198	21.1	249	26.6
Davidson	73	10.7	107	15.5	140	20.2	185	26.7	179	25.8
Knox	21	4.6	38	8.2	25	5.4	26	5.5	39	8.2
Hamilton	28	7.8	43	11.9	24	6.6	28	7.6	28	7.5
Madison	11	11.3	8	8.2	17	17.4	20	20.4	14	14.2
Sullivan	<5	0.6	5	3.2	6	3.8	6	3.8	<5	1.9

All rates are per 100,000 population.

Note: Rates based on counts of < 20 are unreliable. Interpret with caution.

Figure 17: Primary and Secondary Syphilis — Rate of Reported Cases by County, Tennessee, 2020



In 2020, rates of reported cases of P&S syphilis ranged from 1.9 cases per 100,000 population in Sullivan county to 26.6 cases per 100,000 population in Shelby county . There were 24 counties that reported no cases of P&S syphilis in 2020. Of those that reported cases, the counties with the highest rates were DeKalb (57.6/100,000), Van Buren (50.4/100,000), and Hardin (31.3/100,000).

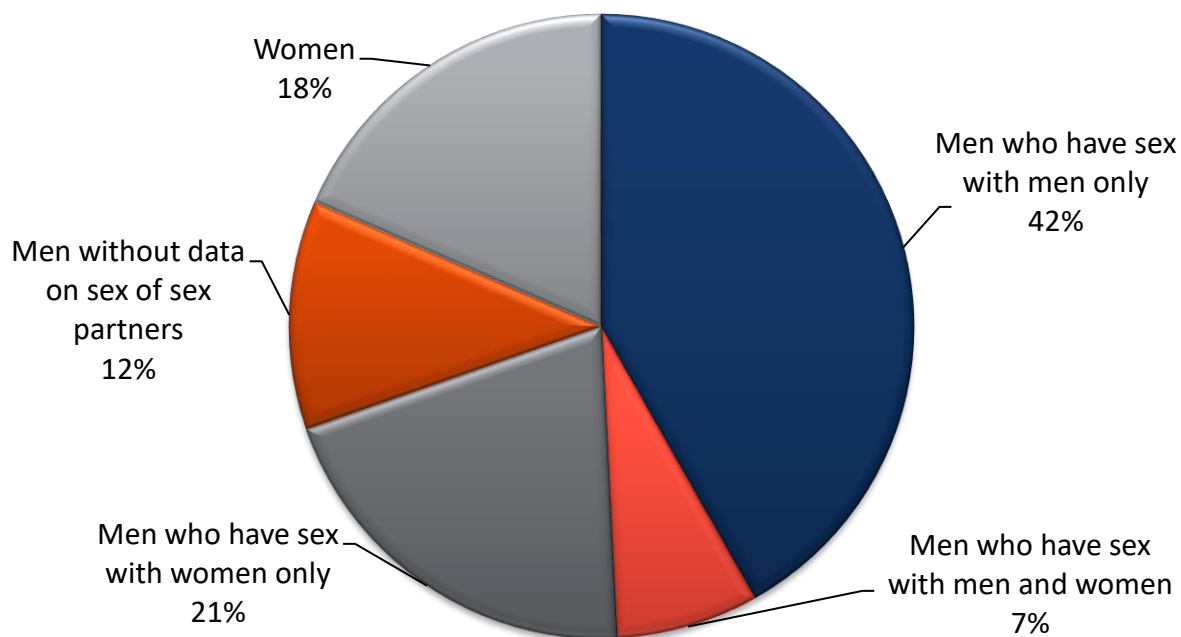
Syphilis by Sexual Behavior

Table 18: Primary and Secondary Syphilis — Distribution of Cases by Sex and Sexual Behavior, Tennessee, 2016–2020

Sex and Sexual Behavior	2016		2017		2018		2019		2020	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Total cases	390	-	489	-	553	-	683	-	758	-
MSM	202	52%	274	56%	300	54%	304	44%	318	42%
MSMW	27	7%	44	9%	33	6%	55	8%	54	7%
MSW	79	20%	94	19%	108	20%	171	25%	156	21%
Men without data on sex of sex partners	27	7%	29	6%	45	8%	47	7%	90	12%
Women	55	14%	48	10%	67	12%	106	16%	140	18%

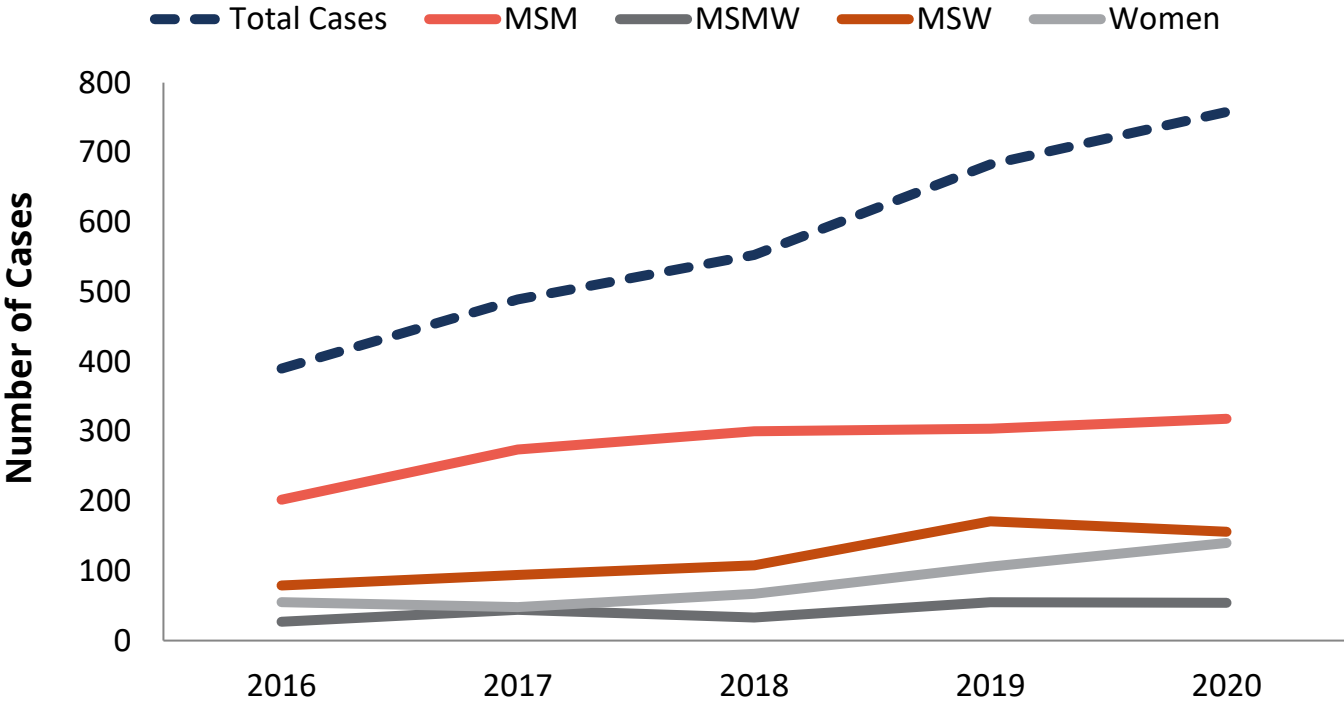
MSM = Gay, bisexual, and other men who have sex with men only; MSMW= Men who have sex with men and women; MSW = Men who have sex with women only.

Figure 18: Primary and Secondary Syphilis — Distribution of Cases by Sex and Sexual Behavior, Tennessee, 2020



In 2020, most P&S syphilis cases were among men who have sex with men (MSM). Of the 758 cases of P&S Syphilis, reported in 2020, 318 (42%) were among MSM, while 156 (21%) were among men who have sex with women (MSW). Females comprised 18% of all cases.

Figure 19: Primary and Secondary Syphilis — Number of Cases by Sex and Sexual Behavior, Tennessee, 2016–2020



MSM = Gay, bisexual, and other men who have sex with men only; MSMW= Men who have sex with men and women; MSW = Men who have sex with women only.

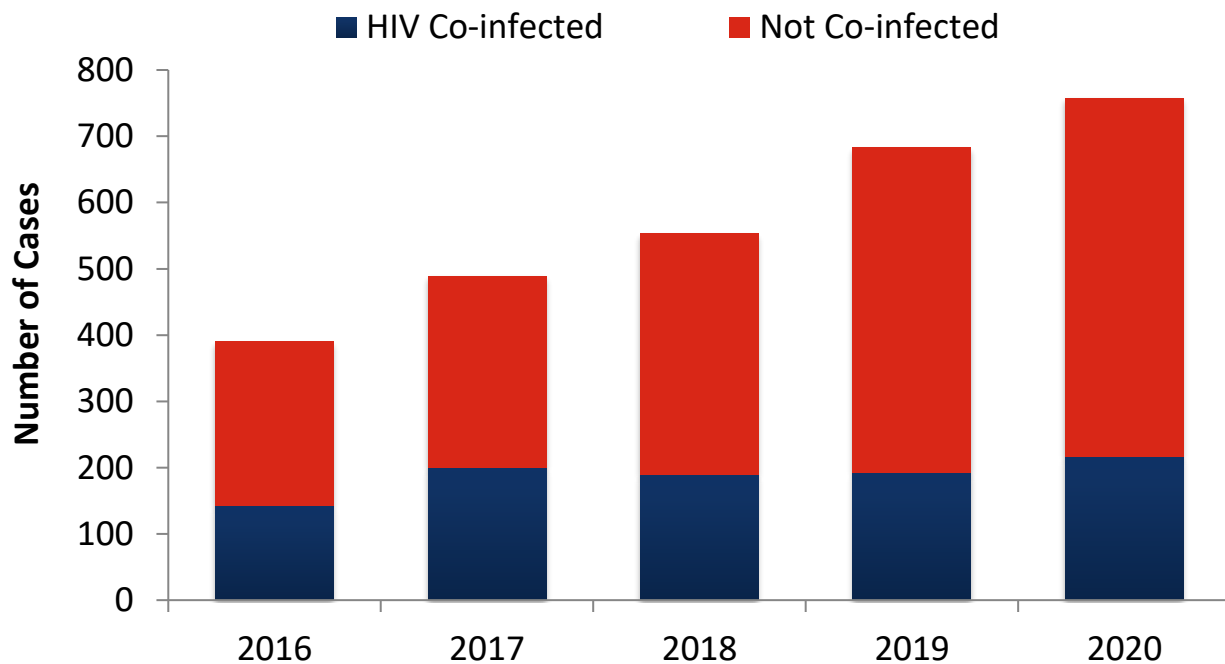
From 2016 to 2020, P&S syphilis case numbers doubled among MSW and MSMW. Although case numbers are typically the highest among MSM, the percentage of total P&S syphilis cases among MSM decreased by 10 percentage points from 2016 to 2020. Whereas, among women, the percentage share of total P&S syphilis increased by 4 percentage points. Among women, the number of P&S syphilis cases increased from 55 cases to 140 cases, which is a 154% increase.

Syphilis and Human Immunodeficiency Virus (HIV) Co-infections

Table 20: Primary and Secondary Syphilis — Number of Reported Cases Co-infected with HIV, Tennessee, 2016–2020

	2016		2017		2018		2019		2020	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Total cases	390	-	489	-	553	-	683	-	758	-
HIV co-infected	142	36%	200	41%	189	34%	192	28%	229	30%

Figure 20: Primary and Secondary Syphilis — Reported Cases by HIV Co-infection, Tennessee, 2016–2020



The proportion of P&S syphilis cases co-infected with HIV has decreased since 2016. Of the 758 P&S syphilis cases in 2020, 229 (30%) were co-infected with HIV.

Congenital Syphilis

Figure 21: Congenital Syphilis — Number and Rate of Reported Cases by Year of Report, Tennessee and U.S., 2016–2020

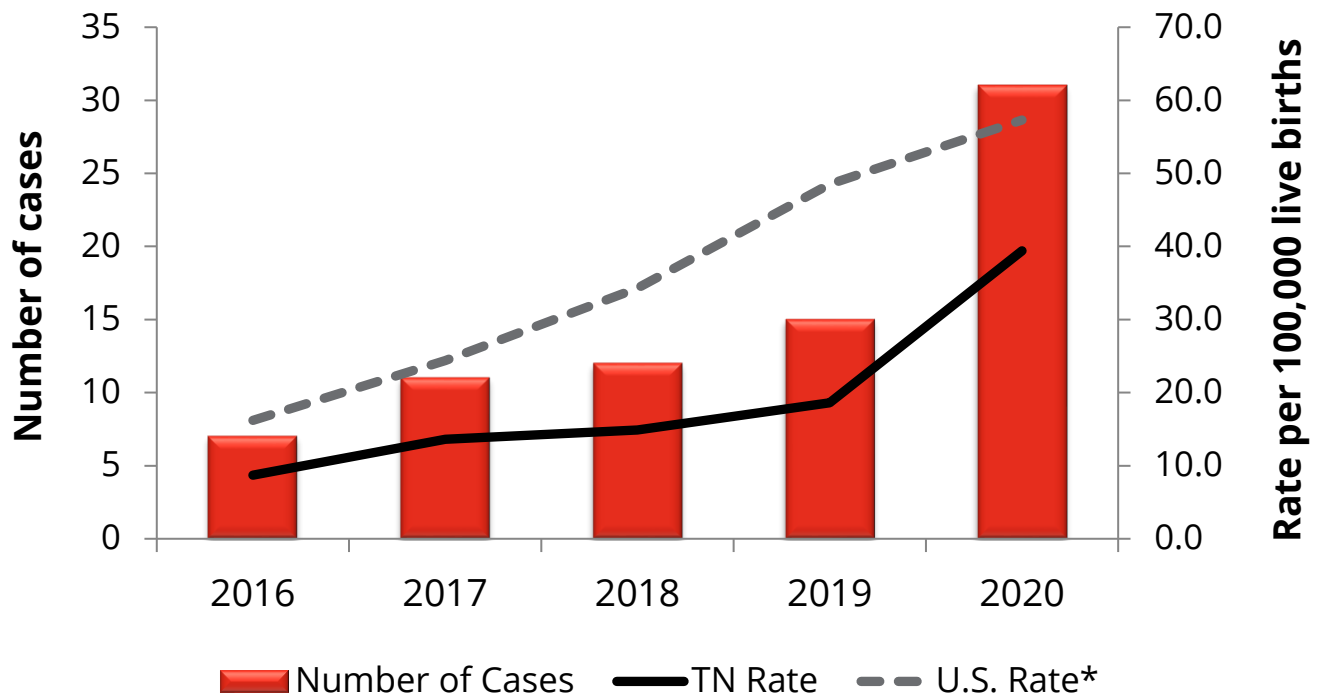


Table 21: Congenital Syphilis — Number and Rate of Reported Cases by Year of Report, Tennessee and U.S., 2016–2020

	2016	2017	2018	2019	2020
Number of cases	7	11	12	15	31
TN Rate	8.7	13.6	14.9	18.6	39.4
U.S. Rate*	16.2	24.4	34.3	48.5	57.3

All rates per 100,000 live births.

Note: Rates based on counts of < 20 are unreliable. Interpret with caution.

*U.S. rates in tables and figures are from the CDC STD Surveillance report, 2020.

In 2020, there were 31 reported cases of congenital syphilis, yielding a rate of 39.4 cases per 100,000 live births. From 2016 to 2020, the state rate of congenital syphilis remained lower than the national rate. However, it doubled from 2019–2020, and has increased over 300% since 2016.

Table 22: Congenital Syphilis — Number and Rate of Reported Congenital Cases by Year of Report and P&S Syphilis among Women Aged 15–44 Years, Tennessee and U.S., 2016–2020

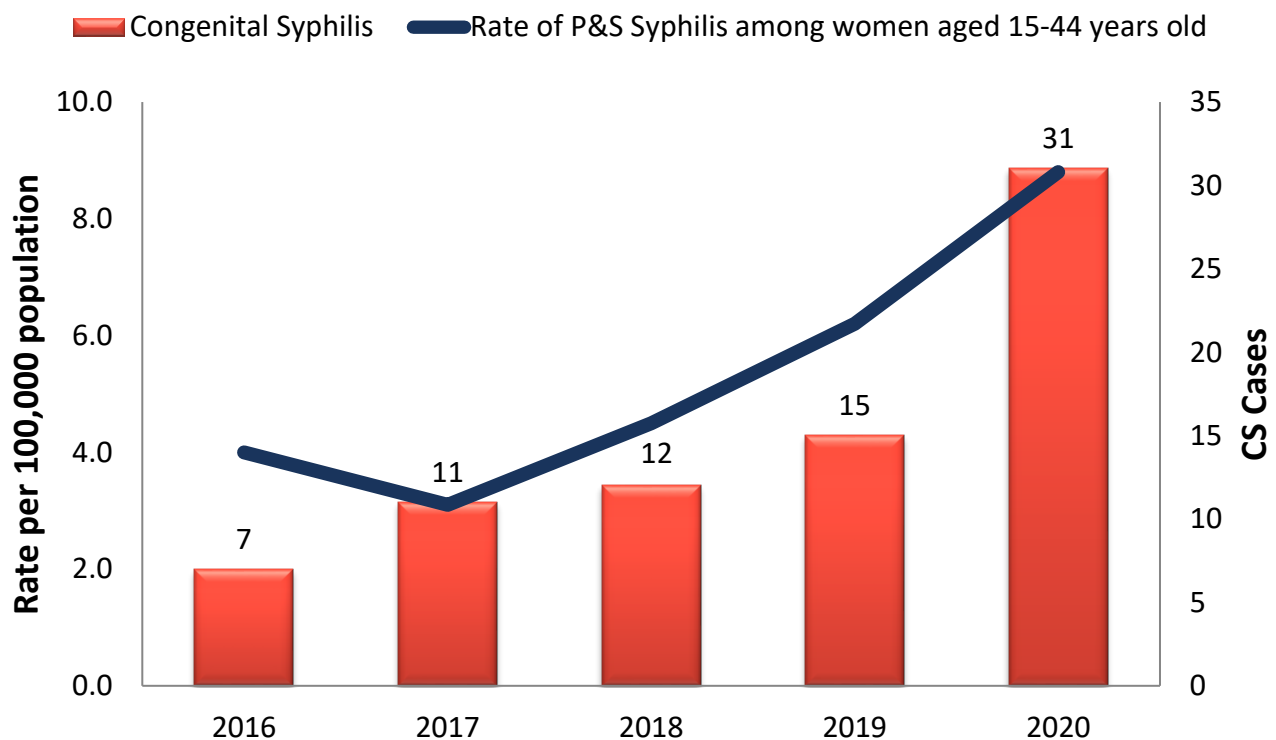
	2016		2017		2018		2019		2020	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total P&S Syphilis among Women*	55	1.6	48	1.4	66	1.9	106	3.0	140	4.0
P&S Syphilis among women aged 15-44 years old*	52	4.0	41	3.1	59	4.5	83	6.2	118	8.8
Congenital Syphilis**	7	8.7	11	13.6	12	14.9	15	18.6	31	39.4

Note: Rates based on counts of < 20 are unreliable. Interpret with caution.

*Rates are per 100,000 population.

** Rates are per 100,000 live births.

Figure 22: Congenital Syphilis — Number of Reported Congenital Cases by Year of Report and Rate of P&S Syphilis among Women Aged 15–44 Years, Tennessee, 2016–2020



From 2017 to 2020, the rate of P&S syphilis among women of reproductive age increased by 183%. During the same period, the increase in congenital syphilis cases paralleled the increase in the rate of P&S syphilis among reproductive-aged women.

Technical Notes

About this Report:

This report provides an overview of the reported STI cases in Tennessee using finalized surveillance data from 2016-2020, and presents statistics and trends from the reporting period based on core surveillance activities in the state.

The surveillance information in this report is based on case report data received and stored in the Patient Reporting Investigation Surveillance Manager (PRISM) from 2016–2020; however, it is important to note that these case reports reflect only a portion of STIs occurring in the state’s population. STIs are often asymptomatic and may not be diagnosed; therefore, case report data underestimate the number of infections that occurred.

The case definitions used are those defined by the Council of State and Territorial Epidemiologists (CSTE). Case definitions are periodically revised via CSTE’s Position Statements and provide uniform criteria of nationally notifiable conditions for reporting purposes. Please see the NNDSS website (<https://wwwn.cdc.gov/nndss/case-definitions.html>) for case definitions.

Reporting Delay: Delays exist between the time a STI infection is diagnosed and the time the infection is reported to TDH. The data in this report represent all information reported to TDH through November 19, 2021. However, the case counts may change as new information is received and may differ from other reports. Therefore, data from recent years should be considered provisional. The figures and tables in this edition supercede those in earlier publication of the data.

Place of Residence: STI diagnoses are presented based on an individual’s residence at the time of the most recent laboratory results.

Population: Population estimates for Tennessee were obtained from the U.S. Census Bureau website. Because of the use of the updated population data, rates from 2016–2020 may be different from those presented in previous STI epidemiological profiles.

Small Numbers: Data release limitations are set to ensure that the information cannot be used to inadvertently identify an individual. Please interpret rates where the numerator is less than 20 cases with caution because of the low reliability of rates based on a small number of cases.

Public Health Regions: Tennessee’s 95 counties are divided into thirteen public health regions. A map showing the public health region is located in Appendix A.

Acknowledgements

The authors would like to thank the central office and public health regional STI surveillance staff throughout the state of Tennessee, without whom, an accurate accounting of the STI epidemic in Tennessee would not be possible. The authors also thank the Grand Regional Consultants - Diana Saia, Darnell Brooks, and Dan Burke, Administrative Assistant Kelsey Stratton, and the CDC Consultant, Lavonne Cole, for their dedication to ensure the accuracy of STI data. Additionally, we would like to thank Tennessee Department of Health's STI Prevention and HIV Surveillance and Epidemiology programs for providing valuable data collection, guidance, and support.

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Glossary

Case: A condition of a disease or infection diagnosed according to a standard case definition.

Case rate: The frequency of a defined event in a specified population for a given time period, usually expressed as the number of cases per 100,000 people in a population. Case rates provide a measure of the effect of illness relative to the size of the population. Case rate is calculated by first dividing the number of cases in the population of interest by the total number of people in the population and multiplying it by 100,000 to get the rate per 100,000 people.

Chlamydia: A curable bacterial sexually transmitted infection caused by *Chlamydia trachomatis*. The infection may result in urethritis, epididymitis, cervicitis, acute salpingitis, or other syndromes; however, it can often be asymptomatic in women. Perinatal infections may result in inclusion conjunctivitis and pneumonia in newborns.

Co-infection: The infection of a person with two or more infectious agents at the same time. In this report, an HIV-syphilis co-infection was considered when a person was simultaneously diagnosed with syphilis and HIV or diagnosed with syphilis and known to be living with HIV.

Congenital syphilis: A condition caused by infection in utero with *Treponema pallidum*. A wide spectrum of severity exists, from asymptomatic infection to severe cases that are clinically apparent at birth. An infant or child (aged less than 2 years) may have signs such as hepatosplenomegaly, rash, condyloma lata, snuffles, jaundice, pseudoparalysis, anemia, or edema (nephrotic syndrome and/or malnutrition). An older child may have stigmata (e.g., interstitial keratitis, nerve deafness, anterior bowing of shins, frontal bossing, mulberry molars, Hutchinson teeth, saddle nose, rhagades, or Clutton joints).

Early non-primary non-secondary syphilis: A stage of infection caused by *Treponema pallidum* in which initial infection has occurred within the previous 12 months, but there are no signs or symptoms of primary or secondary syphilis.

Gonorrhea: A curable bacterial sexually transmitted infection caused by *Neisseria gonorrhoeae*. The infection is commonly manifested by urethritis, cervicitis, proctitis, salpingitis, or pharyngitis. Infection may be asymptomatic.

HIV (human immunodeficiency virus): The virus that causes AIDS. Persons with HIV in their system are referred to as HIV infected.

Percentage: A proportion of the whole, in which the whole is 100.

Primary syphilis: A stage of infection with *Treponema pallidum* categorized as infectious. This stage is characterized by one or more ulcerative lesions (e.g., chancre), which might differ considerably in clinical appearance.

Secondary syphilis: A stage of infection with the bacterium *Treponema Pallidum* categorized as infectious. This stage is characterized by localized or diffuse mucocutaneous lesions, often with generalized lymphadenopathy. Other symptoms can include mucous patches, condyloma lata, and alopecia.

Surveillance: In a public health context, refers to the collection of data on diseases or other important health conditions in order to monitor where the condition occurs, trends over time and to determine the risk factors associated with the condition.

Syphilis: A curable bacterial sexually transmitted infection caused by *Treponema pallidum*. It is composed of four stages of infection that include primary, secondary, early non-primary non-secondary, and unknown duration or late. In January 2018, a revised case definition for syphilis went into effect, including changing the stage previously termed “early latent syphilis” to “syphilis, early non-primary non-secondary”. Additionally, the stages of “late latent syphilis” and “late syphilis with clinical manifestations” were removed and “syphilis, unknown duration or late” was added.

Trend: A long-term movement or change in frequency over time, usually upward or downward; may be presented as a line graph.

Unknown duration or late syphilis: A stage of infection caused by *Treponema pallidum* in which initial infection has occurred >12 months previously or in which there is insufficient evidence to conclude that infection was acquired during the previous 12 months.

Abbreviations

CDC: Centers for Disease Control and Prevention

CSTE: Council of State and Territorial Epidemiologist

CT: Chlamydia

CS: Congenital Syphilis

GC: Gonorrhea

HIV: Human Immunodeficiency Virus

MSM: Gay, Bisexual, and other Men who have Sex with Men only

MSMW: Men who have Sex with both Men and Women

MSW: Men who have Sex with Women only

NNDSS: National Notifiable Disease Surveillance System

P&S: Primary and Secondary

PRISM: Patient Reporting Investigating Surveillance Manager

STI: Sexually Transmitted Infection

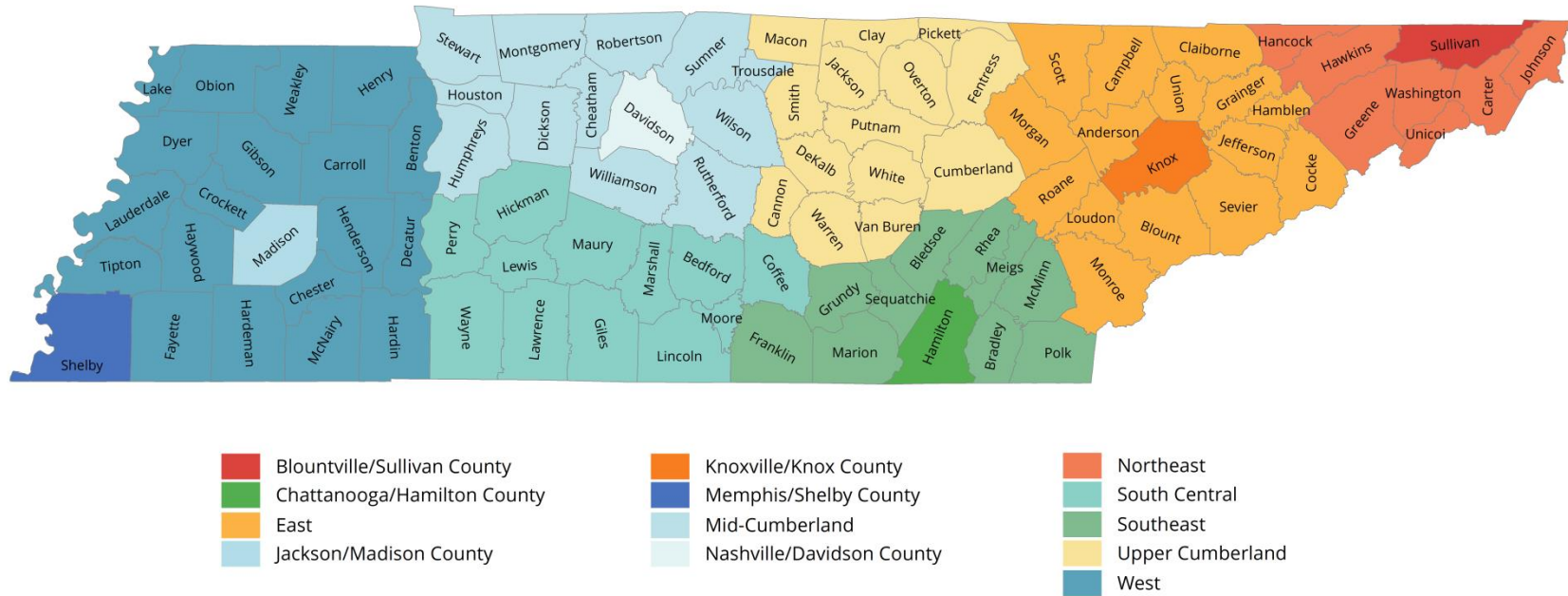
TDH: Tennessee Department of Health

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Appendix A: Tennessee Public Health Regions

Map 1. Public Health Regions, Tennessee



Appendix B: Regional data

Table 23: STIs, Nashville (Davidson County), Tennessee, 2020

	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	5,581	804.0	2,975	428.6	502	72.3	179	25.8
Male	2,163	644.6	1,795	537.4	426	127.5	156	46.7
Female	3,428	951.8	1,180	327.6	76	21.1	23	6.4
15-19	1,257	3,269.4	431	1,121.0	17	44.2	10	26.0
20-24	1,872	3,788.6	801	1,621.1	55	111.3	14	28.3
25-29	1,308	1,763.4	746	1,005.7	113	152.3	37	49.9
30-34	564	811.0	422	606.8	91	130.9	38	54.6
35-39	250	465.9	236	439.8	61	113.7	22	41.0
≥ 40	297	102.9	325	112.6	161	55.8	58	20.1
Non-Hispanic white	1,684	429.1	704	179.4	197	50.2	74	18.9
Non-Hispanic Black	3,065	1,656.2	2,061	1,113.7	244	131.8	89	48.1
Hispanic	694	959.0	151	208.7	53	73.2	13	18.0

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2020.

All stages of syphilis column include congenital cases. P&S refers to primary and secondary stages of syphilis.

Hispanics can be any race reported.

Rates are per 100,000 population. Rates were calculated using the 1-year U.S. Census Bureau 2020 Population estimates.

Counts < 5 have been suppressed.

Table 24: STIs, Chattanooga (Hamilton County), Tennessee, 2020

	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	2,248	604.9	1,120	301.3	69	18.6	28	7.5
Male	731	407.9	591	329.8	58	32.4	26	14.5
Female	1,516	787.7	528	274.3	11	5.7	<5	1.0
15-19	616	2,842.9	188	867.6	<5	13.8	<5	4.6
20-24	802	3,563.5	319	1,417.4	6	26.7	<5	8.9
25-29	452	1,642.4	257	933.9	8	29.1	5	18.2
30-34	202	739.3	163	596.6	10	36.6	<5	14.6
35-39	95	397.7	79	330.7	12	50.2	6	25.1
≥ 40	67	36.3	113	61.2	28	15.2	10	5.4
Non-Hispanic white	641	243.2	262	99.4	33	12.5	14	5.3
Non-Hispanic Black	1,374	1,968.5	798	1,143.3	30	43.0	10	14.3
Hispanic	176	772.4	32	140.4	5	21.9	<5	13.2

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2020.

All stages of syphilis column include congenital cases. P&S refers to primary and secondary stages of syphilis.

Hispanics can be any race reported.

Rates are per 100,000 population. Rates were calculated using the 1-year U.S. Census Bureau 2020 Population estimates.

Counts < 5 have been suppressed.

Table 25: STIs, Knoxville (Knox County), Tennessee, 2020

	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	2,384	501.3	1,151	242.0	101	21.2	39	8.2
Male	893	386.3	624	270.0	87	37.6	35	15.1
Female	1,489	609.1	527	215.6	14	5.7	<5	1.6
15-19	618	1,991.0	131	422.0	<5	6.4	<5	3.2
20-24	869	2,095.7	283	682.5	16	38.6	7	16.9
25-29	414	1,195.6	225	649.8	19	54.9	8	23.1
30-34	260	823.4	197	623.9	19	60.2	10	31.7
35-39	100	321.3	135	433.8	13	41.8	5	16.1
≥ 40	104	46.4	180	80.3	31	13.8	8	3.6
Non-Hispanic white	1,248	320.9	515	132.4	63	16.2	26	6.7
Non-Hispanic Black	834	2,028.0	549	1,335.0	26	63.2	12	29.2
Hispanic	124	555.2	32	143.3	8	35.8	<5	4.5

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2020.

All stages of syphilis column include congenital cases. P&S refers to primary and secondary stages of syphilis.

Hispanics can be any race reported.

Rates are per 100,000 population. Rates were calculated using the 1-year U.S. Census Bureau 2020 Population estimates.

Counts < 5 have been suppressed.

Table 26: STIs, Jackson (Madison County), Tennessee, 2020

	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	872	886.5	474	481.9	37	37.6	14	14.2
Male	292	627.6	266	571.7	28	60.2	10	21.5
Female	580	1,119.0	208	401.3	9	17.4	<5	7.7
15-19	263	3,763.6	108	1,545.5	<5	14.3	<5	14.3
20-24	321	4,709.5	146	2,142.0	5	73.4	<5	29.3
25-29	168	2,519.5	95	1,424.7	10	150.0	<5	45.0
30-34	61	1,031.8	57	964.1	8	135.3	<5	50.7
35-39	23	418.1	25	454.5	5	90.9	<5	36.4
≥ 40	24	49.6	37	76.5	8	16.5	<5	6.2
Non-Hispanic white	130	238.2	64	117.3	9	16.5	<5	3.7
Non-Hispanic Black	606	1,652.0	362	986.8	26	70.9	11	30.0
Hispanic	24	586.1	<5	24.4	<5	48.8	<5	24.4

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2020.

All stages of syphilis column include congenital cases. P&S refers to primary and secondary stages of syphilis.

Hispanics can be any race reported.

Rates are per 100,000 population. Rates were calculated using the 1-year U.S. Census Bureau 2020 Population estimates.

Counts < 5 have been suppressed.

Table 27: STIs, Memphis (Shelby County), Tennessee, 2020

	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	8,980	959.4	4,456	476.1	1,055	112.7	249	26.6
Male	2,780	627.3	2,366	533.9	757	170.8	190	42.9
Female	6,200	1,257.9	2,090	424.0	298	60.5	59	12.0
15-19	2,556	4,312.1	1,041	1,756.2	68	114.7	17	28.7
20-24	3,210	5,205.3	1,377	2,232.9	192	311.3	63	102.2
25-29	1,718	2,327.6	913	1,236.9	239	323.8	64	86.7
30-34	722	1,070.5	478	708.7	187	277.3	34	50.4
35-39	335	553.2	218	360.0	95	156.9	22	36.3
≥ 40	346	82.8	378	90.4	256	61.3	46	11.0
Non-Hispanic white	678	207.2	203	62.0	86	26.3	20	6.1
Non-Hispanic Black	7,702	1,527.8	4,122	817.7	911	180.7	219	43.4
Hispanic	366	583.2	54	86.0	42	66.9	9	14.3

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2020.

All stages of syphilis column include congenital cases. P&S refers to primary and secondary stages of syphilis.

Hispanics can be any race reported.

Rates are per 100,000 population. Rates were calculated using the 1-year U.S. Census Bureau 2020 Population estimates.

Counts < 5 have been suppressed.

Table 28: STIs, Blountville (Sullivan County), Tennessee, 2020

	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	443	279.0	316	199.0	8	5.0	<5	1.9
Male	142	183.8	160	207.0	7	9.1	<5	2.6
Female	301	369.4	156	191.5	<5	1.2	<5	1.2
15-19	129	1,508.9	36	421.1	0	0.0	0	0.0
20-24	172	1,998.4	74	859.8	<5	11.6	0	0.0
25-29	77	774.9	78	784.9	<5	30.2	<5	20.1
30-34	20	215.3	52	559.7	0	0.0	0	0.0
35-39	23	268.3	41	478.2	<5	11.7	0	0.0
≥ 40	15	16.8	31	34.8	<5	3.4	<5	1.1
Non-Hispanic white	383	259.6	263	178.3	6	4.1	<5	2.0
Non-Hispanic Black	31	872.3	43	1,209.9	0	0.0	0	0.0
Hispanic	16	462.2	<5	57.8	<5	28.9	0	0.0

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2020.

All stages of syphilis column include congenital cases. P&S refers to primary and secondary stages of syphilis.

Hispanics can be any race reported.

Rates are per 100,000 population. Rates were calculated using the 1-year U.S. Census Bureau 2020 Population estimates.

Counts < 5 have been suppressed.

Table 29: STIs, East Public Health Region, Tennessee, 2020

	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	2,388	304.9	799	102.0	76	9.7	29	3.7
Male	692	179.5	384	99.6	62	16.1	28	7.3
Female	1,696	426.4	415	104.3	14	3.5	<5	0.3
15-19	673	1,498.2	94	209.3	<5	2.2	0	0.0
20-24	880	2,071.5	217	510.8	7	16.5	<5	4.7
25-29	425	880.8	160	331.6	14	29.0	<5	4.1
30-34	220	491.5	128	286.0	18	40.2	11	24.6
35-39	91	214.0	91	214.0	11	25.9	<5	9.4
≥ 40	83	19.3	109	25.3	24	5.6	10	2.3
Non-Hispanic white	1,935	273.4	666	94.1	63	8.9	24	3.4
Non-Hispanic Black	177	1,040.7	100	588.0	10	58.8	<5	23.5
Hispanic	207	559.8	<5	54.1	9	8.1	<5	2.7

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2020.

All stages of syphilis column include congenital cases. P&S refers to primary and secondary stages of syphilis.

Hispanics can be any race reported.

Rates are per 100,000 population. Rates were calculated using the 1-year U.S. Census Bureau 2020 Population estimates.

Counts < 5 have been suppressed.

Table 30: STIs, Mid-Cumberland Public Health Region, Tennessee, 2020

	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	6,489	476.3	2,493	183.0	206	15.1	71	5.2
Male	2,398	357.2	1,388	206.8	169	25.2	64	9.5
Female	4,091	591.8	1,105	159.9	37	5.4	7	1.0
15-19	1,692	1,858.0	381	418.4	8	8.8	<5	4.4
20-24	2,687	2,929.2	865	943.0	37	40.3	14	15.3
25-29	1,169	1,255.0	535	574.3	44	47.2	17	18.3
30-34	459	499.4	307	334.0	30	32.6	9	9.8
35-39	237	249.2	181	190.4	20	21.0	8	8.4
≥ 40	220	35.3	219	35.1	65	10.4	19	3.0
Non-Hispanic white	3,368	322.2	986	94.3	110	10.5	36	3.4
Non-Hispanic Black	2,420	1,640.7	1,336	905.8	77	52.2	28	19.0
Hispanic	507	534.0	125	131.7	11	11.6	<5	4.2

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2020.

All stages of syphilis column include congenital cases. P&S refers to primary and secondary stages of syphilis.

Hispanics can be any race reported.

Rates are per 100,000 population. Rates were calculated using the 1-year U.S. Census Bureau 2020 Population estimates.

Counts < 5 have been suppressed.

Table 31: STIs, Northeast Public Health Region, Tennessee, 2020

	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	1,228	345.7	622	175.1	42	11.8	13	3.7
Male	386	220.6	313	178.9	36	20.6	12	6.9
Female	842	467.0	309	171.4	6	3.3	<5	0.6
15-19	345	1,692.9	85	417.1	<5	4.9	0	0.0
20-24	479	2,054.4	180	772.0	5	21.4	<5	8.6
25-29	198	885.5	120	536.6	9	40.2	<5	17.9
30-34	101	489.7	93	450.9	5	24.2	<5	14.5
35-39	54	278.4	67	345.4	7	36.1	<5	5.2
≥ 40	44	22.6	77	39.5	15	7.7	<5	1.5
Non-Hispanic white	1,003	308.1	508	156.1	34	10.4	11	3.4
Non-Hispanic Black	141	1,538.3	87	949.2	8	87.3	<5	21.8
Hispanic	52	477.4	15	137.7	0	0.0	0	0.0

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2020.

All stages of syphilis column include congenital cases. P&S refers to primary and secondary stages of syphilis.

Hispanics can be any race reported.

Rates are per 100,000 population. Rates were calculated using the 1-year U.S. Census Bureau 2020 Population estimates.

Counts < 5 have been suppressed.

Table 32: STIs, South Central Public Health Region, Tennessee, 2020

	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	1,621	386.2	925	220.4	79	18.8	33	7.9
Male	517	249.7	438	211.5	56	27.0	25	12.1
Female	1,104	519.1	487	229.0	23	10.8	8	3.8
15-19	429	1,711.9	143	570.6	6	23.9	<5	16.0
20-24	618	2,654.6	247	1,061.0	10	43.0	5	21.5
25-29	280	1,006.5	226	812.4	14	50.3	8	28.8
30-34	149	552.4	130	481.9	13	48.2	6	22.2
35-39	63	246.0	79	308.4	8	31.2	<5	3.9
≥ 40	61	28.8	96	45.4	28	13.2	9	4.3
Non-Hispanic white	1,092	307.8	602	169.7	55	15.5	23	6.5
Non-Hispanic Black	393	1,368.9	289	1,006.6	17	59.2	6	20.9
Hispanic	114	489.3	24	103.0	5	21.5	<5	8.6

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2020.

All stages of syphilis column include congenital cases. P&S refers to primary and secondary stages of syphilis.

Hispanics can be any race reported.

Rates are per 100,000 population. Rates were calculated using the 1-year U.S. Census Bureau 2020 Population estimates.

Counts < 5 have been suppressed.

Table 33: STIs, Southeast Public Health Region, Tennessee, 2020

	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	1,223	358.2	566	165.8	41	12.0	19	5.6
Male	450	266.7	295	174.9	34	20.2	15	8.9
Female	773	447.7	271	156.9	7	4.1	<5	2.3
15-19	295	1,385.4	70	328.7	0	0.0	0	0.0
20-24	457	2,160.9	137	647.8	<5	14.2	<5	4.7
25-29	229	1,070.7	136	635.9	8	37.4	<5	18.7
30-34	113	567.6	90	452.1	<5	15.1	<5	10.0
35-39	61	316.7	62	321.8	11	57.1	6	31.1
≥ 40	63	34.9	69	38.2	15	8.3	6	3.3
Non-Hispanic white	909	300.3	424	140.1	32	10.6	15	5.0
Non-Hispanic Black	197	1,531.8	112	870.8	7	54.4	<5	23.3
Hispanic	79	504.8	18	115.0	<5	12.8	<5	6.4

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2020.

All stages of syphilis column include congenital cases. P&S refers to primary and secondary stages of syphilis.

Hispanics can be any race reported.

Rates are per 100,000 population. Rates were calculated using the 1-year U.S. Census Bureau 2020 Population estimates.

Counts < 5 have been suppressed.

Table 34: STIs, Upper Cumberland Public Health Region, Tennessee, 2020

	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	1,068	293.0	499	136.9	67	18.4	31	8.5
Male	334	185.4	229	127.1	45	25.0	24	13.3
Female	734	398.2	270	146.5	22	11.9	7	3.8
15-19	275	1,290.1	62	290.9	0	0.0	0	0.0
20-24	373	1,633.4	140	613.1	7	30.7	<5	8.8
25-29	215	946.0	122	536.8	11	48.4	5	22.0
30-34	108	518.6	83	398.6	13	62.4	7	33.6
35-39	55	274.9	47	234.9	11	55.0	8	40.0
≥ 40	38	19.5	43	22.1	24	12.3	9	4.6
Non-Hispanic white	909	273.8	435	131.0	54	16.3	26	7.8
Non-Hispanic Black	60	1,035.0	37	638.3	7	120.8	0	0.0
Hispanic	50	284.5	17	96.7	5	28.5	<5	22.8

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2020.

All stages of syphilis column include congenital cases. P&S refers to primary and secondary stages of syphilis.

Hispanics can be any race reported.

Rates are per 100,000 population. Rates were calculated using the 1-year U.S. Census Bureau 2020 Population estimates.

Counts < 5 have been suppressed.

Table 35: STIs, West Public Health Region, Tennessee, 2020

	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	2,937	558.7	1,892	359.9	150	28.5	50	9.5
Male	1,031	398.1	904	349.0	93	35.9	31	12.0
Female	1,905	714.4	988	370.5	57	21.4	19	7.1
15-19	931	2,864.5	376	1,156.9	6	18.5	<5	9.2
20-24	1,023	3,207.9	603	1,890.9	18	56.4	5	15.7
25-29	520	1,590.8	393	1,202.3	26	79.5	7	21.4
30-34	254	827.0	242	788.0	21	68.4	12	39.1
35-39	93	304.4	118	386.2	20	65.5	7	22.9
≥ 40	95	34.6	156	56.8	52	18.9	16	5.8
Non-Hispanic white	1,315	322.1	742	181.7	80	19.6	33	8.1
Non-Hispanic Black	1,368	1,588.1	1,021	1,185.3	60	69.7	16	18.6
Hispanic	58	335.8	22	127.4	<5	5.8	0	0.0

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2020.

All stages of syphilis column include congenital cases. P&S refers to primary and secondary stages of syphilis.

Hispanics can be any race reported.

Rates are per 100,000 population. Rates were calculated using the 1-year U.S. Census Bureau 2020 Population estimates.

Counts < 5 have been suppressed.