



Department of
Health

Tennessee STD Epidemiological Profile 2017

Tennessee Department of Health | September 2018



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Executive Summary

This report presents 2017 surveillance data for Sexually Transmitted Diseases (STD) in Tennessee. The report focuses on new reported cases of Chlamydia, Gonorrhea, and Syphilis in the state. The purpose of this report is to effectively present the STD epidemic in Tennessee to assist with education, outcome monitoring, and program planning.

All data reported are based on information received by Tennessee Department of Health (TDH) as of July 1, 2018. The data in this report reflect five year trends between 2013 and 2017 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 gender, race and ethnicity, and age category. 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.

Key Findings

- During 2013-2017, the number and rate of reported cases of Chlamydia, Gonorrhea and P&S Syphilis increased.
- In 2017, 35,088 Chlamydia infections were reported for a rate of 522.5 cases per 100,000 population; 12,425 Gonorrhea infections were reported for a rate of 185.0 cases per 100,000; and 354 cases of primary and secondary (P&S) Syphilis were reported for a rate of 7.3 cases per 100,000.
- During 2013-2017, Non-Hispanic Blacks had highest rate of Chlamydia, Gonorrhea, and P&S Syphilis infections as compared to Non-Hispanic whites and Hispanics.
- In 2017, Shelby was the public health region with the highest rate of Chlamydia (961.0 cases per 100,000 population) and Gonorrhea (394.3 cases per 100,000 population). Davidson had highest rate of P&S Syphilis (15.5 cases per 100,000 population).
- In 2017, men accounted for a large majority (90%) of P&S Syphilis cases.
- MSM accounted for the majority of P&S Syphilis cases. Of the 489 reported P&S Syphilis cases in 2017, 274 (56%) were among men that have sex with men (MSM), and 44 (9%) among men that have sex with men and women (MSMW).
- In 2017, there were 11 reported cases of congenital Syphilis, yielding a rate of 13.6 cases per 100,000 live births in the state.

Background

Tennessee is a mid-sized state that consists of 95 counties and borders eight other states. TDH's Central Office (CO), located in Nashville, partners with all of 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 to be an extension of TDH, whereas TDH partners with the metropolitan regions through contractual agreements.

Population: Tennessee was home to 6,715,984 people in 2017, which accounts for approximately 2% of the population in the United States.¹ With a growth rate of 3%, similar to the national rate, the population of Tennessee increased by 221,163 people between 2013 and 2017.¹ The geographic areas with the largest percentages of the population include the Memphis/Shelby County, Nashville/Davidson County, and Mid-Cumberland public health region.

Women of Reproductive Age: In 2017, 51.2% (3,440,018) of the population were women, of which 3.8% (1,312,517) were of reproductive age, between 15-44 years of age.² In the state there were 89,941 pregnancies of which 81,024 were live births.^{3,4}

LGBT: It is estimated that 159,631 (3.1%) of adults in Tennessee identify themselves as lesbian, gay, bisexual or transgender (LGBT) compared to 4.5% in the United States.⁵ Approximately, 10,898 same-sex couple households were estimated in Tennessee in the last census decennial. Data on LGBT is limited.

Age: The median age in Tennessee in 2017 was 39 years, similar to that of the US median age (38 years). The age distribution in Tennessee roughly reflects that of the US population in general.⁶

Race and Ethnicity: In 2017, 74% 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 5% of the population, with the largest category in this fraction being Asian (2%).⁶

Income and Poverty: The median household income in Tennessee in 2016 was \$48,547, compared to the national median income of \$57,617.⁷ There are noticeable racial and ethnic disparities in household income in Tennessee. White households had a median income of \$51,488 in 2016, while Black and Hispanic households had median incomes of \$35,673 and \$41,013, respectively.⁸ The overall poverty rate in Tennessee in 2017 was 15.0%. The highest rates of poverty, between 25 and 40%, were primarily in rural regions of Tennessee, including East, West, and Upper Cumberland regions.^{7,9}

Reporting Laws and Regulations

The Tennessee Department of Health's (TDH) STD Prevention Program manages the Tennessee STD case surveillance registry. Chlamydia, Gonorrhea, and Syphilis are reportable conditions by law and medical labs are required to send all positive STD related laboratory reports to TDH, . Laboratory results are reported by providers and laboratories either by paper, electronic files (i.e., Excel files via email), and/or via ELR. 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 sexually transmitted disease set out in T.C.A. §68-10-112, or venereal herpes 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, STD 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 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., 2013-2017

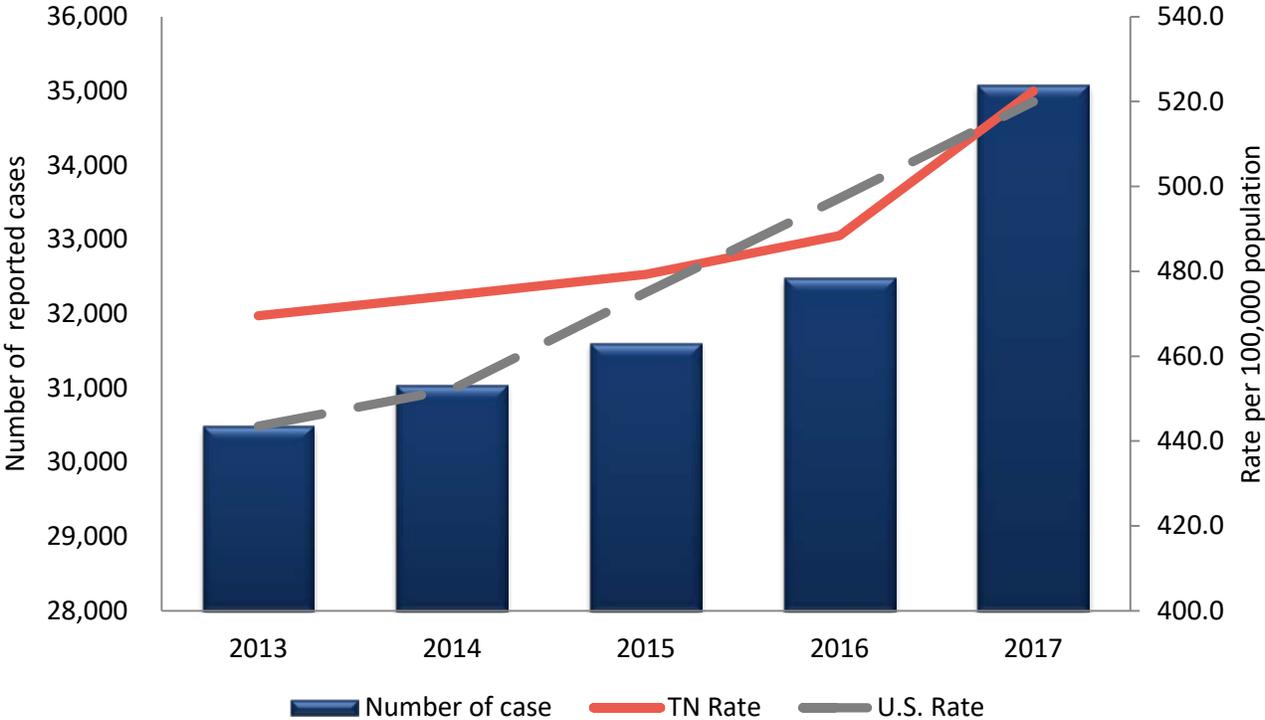


Table 1: Chlamydia - Number and Rate of Reported Cases, Tennessee and U.S., 2013-2017

	2013	2014	2015	2016	2017
Number of cases	30,493	31,043	31,607	32,487	35,088
TN rate	469.5	474.3	479.3	488.4	522.5
U.S. rate*	443.5	452.2	475.0	497.3	520.0

All rates per 100,000 population.

*United States (U.S.) rates are from the CDC STD Surveillance 2017 report.

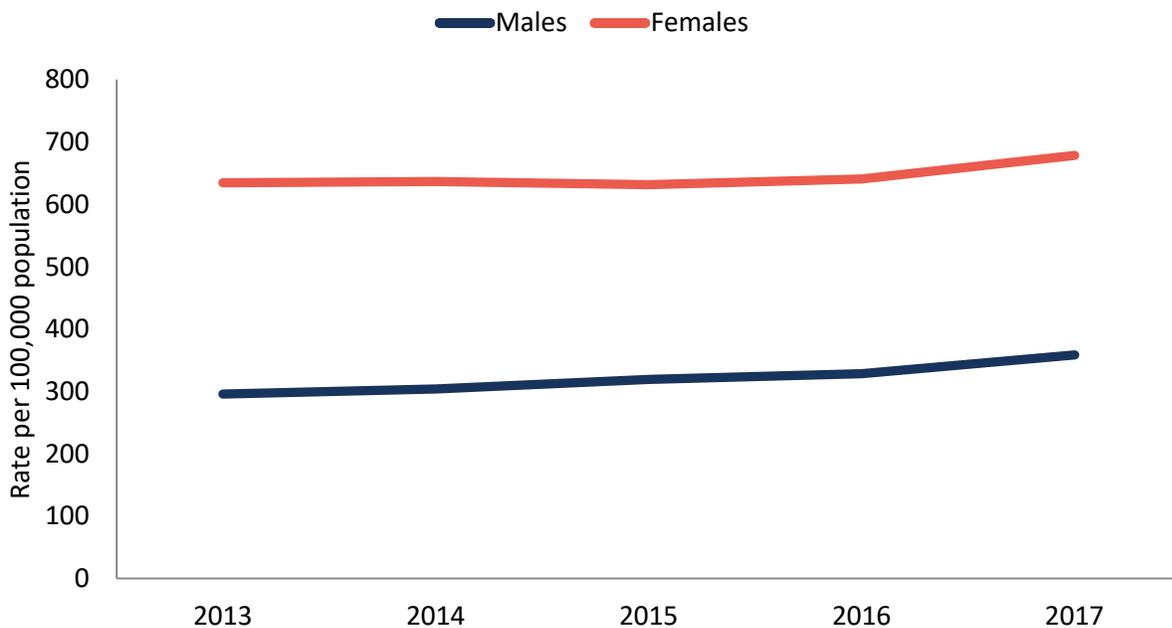
The rate and number of reported cases of Chlamydia increased from 2013-2017 in Tennessee. In 2013, Tennessee’s rate of Chlamydia was higher than the national average, but the U.S. rate has sharply increased in the last five years. In 2017, 35,088 Chlamydia infections were reported to TDH. This cases count corresponds to a rate of 522.5 cases per 100,000 population, which was similar to the national rate of 520.0.

Table 2: Chlamydia - Number and Rate of Reported Cases by Gender, Tennessee, 2013-2017

Gender	2013		2014		2015		2016		2017	
	Cases	Rate								
Total cases	30,493	469.5	31,043	474.3	31,607	479.3	32,487	488.4	35,088	522.5
Males	9,364	295.7	9,696	303.8	10,259	319.0	10,646	328.3	11,738	358.3
Females	21,127	634.8	21,345	636.6	21,348	631.7	21,837	640.6	23,347	678.7

All Rates are per 100,000 population.

Figure 2: Chlamydia - Rate of Reported Cases by Gender, Tennessee, 2013-2017



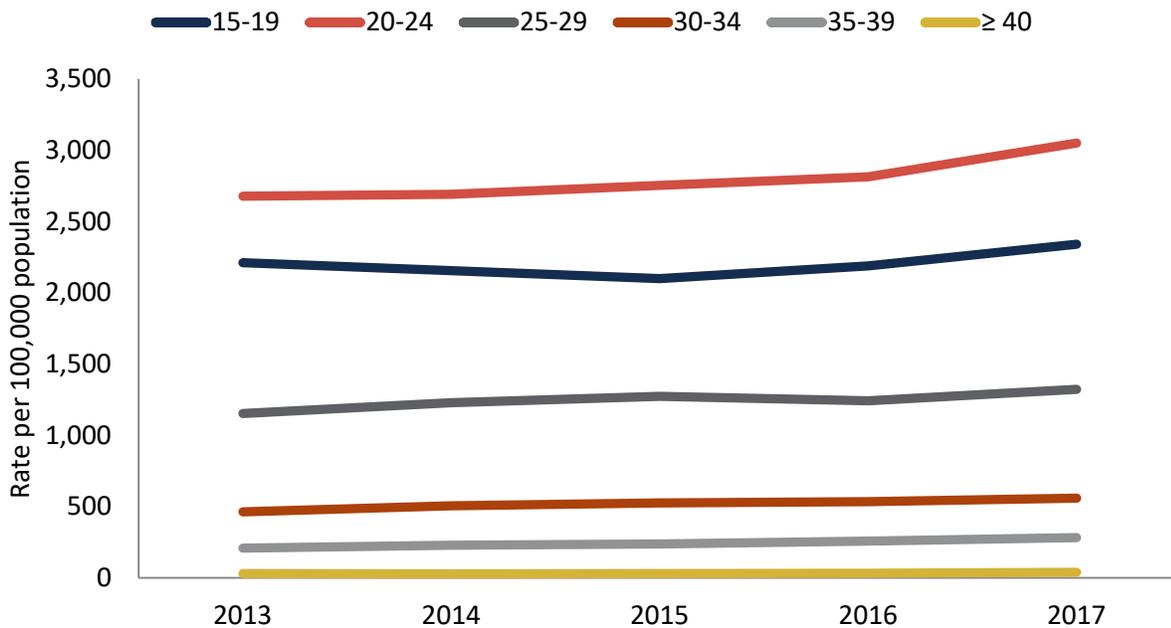
In 2017, 23,342 cases of Chlamydia were reported among females for a rate of 678.7 cases per 100,000 females. The rate among males was lower, with 11,738 cases reported for a rate of 358.3 cases per 100,000 males. For both males and females, the rates have steadily increased from 2013-2017.

Table 3: Chlamydia - Number and Rate of Reported Cases by Age Group, Tennessee, 2013-2017

Age group (years)	2013		2014		2015		2016		2017	
	Cases	Rate								
Total cases	30,493	469.5	31,043	474.3	31,607	479.3	32,487	488.4	35,088	522.5
15-19	9,250	2,211.5	8,998	2,156.2	8,807	2,099.1	9,237	2,189.1	9,947	2,340.6
20-24	12,395	2,677.2	12,517	2,690.6	12,709	2,753.8	12,802	2,814.3	13,644	3,051.9
25-29	4,862	1,153.3	5,318	1,228.5	5,689	1,273.7	5,779	1,243.1	6,396	1,323.3
30-34	1,963	462.1	2,149	504.2	2,236	524.7	2,284	534.7	2,421	559.6
35-39	838	208.2	930	229.1	981	238.1	1,085	258.1	1,208	282.6
≥ 40	889	28.5	871	27.6	962	30.2	1,036	32.2	1,216	37.4

All Rates are per 100,000 population.

Figure 3: Chlamydia - Rate of Reported Cases by Age Group, Tennessee, 2013-2017



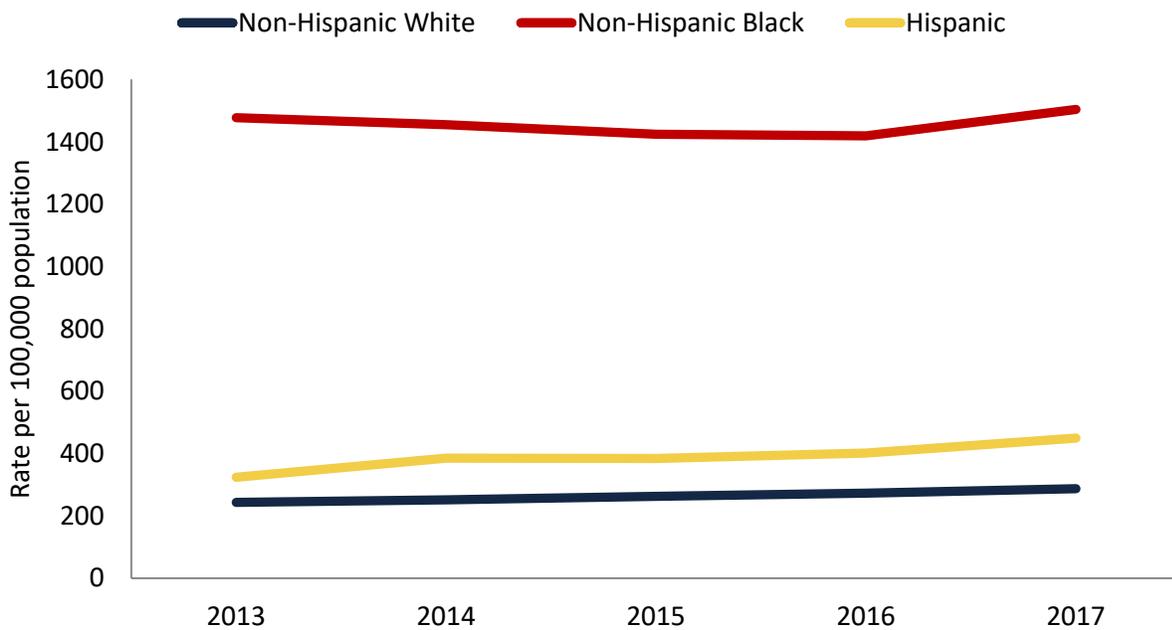
In 2017, the highest rates of Chlamydia infections were reported among individuals 20-24 years old, followed by 15-19 year olds. Among 20-24 year olds, 13,644 cases were reported for a rate of 3,051.9 cases per 100,000 individuals aged 20-24. Among, 15-19 year olds, 9,947 cases were reported for a rate of 2,340.6 cases per 100,000 individuals aged 15-19. The rate of Chlamydia increased among all age groups from 2013-2017.

Table 4: Chlamydia - Number and Rate of Reported Cases by Race and Ethnicity, Tennessee, 2013-2017

Race/Ethnicity	2013		2014		2015		2016		2017	
	Cases	Rate								
Total cases	30,493	469.5	31,043	474.3	31,607	479.3	32,487	488.4	35,088	522.5
Non-Hispanic White	11,817	242.9	12,304	251.7	12,901	262.7	13,475	272.9	14,224	286.6
Non-Hispanic Black	16,078	1,477.2	15,972	1,454.8	15,773	1,424.6	15,840	1,419.1	16,950	1,504.4
Hispanic	1,027	324.3	1,257	384.7	1,296	384.3	1,401	401.7	1,646	449.0

All Rates are per 100,000 population.

Figure 4: Chlamydia- Rate of Reported Cases by Race and Ethnicity, Tennessee, 2013-2017



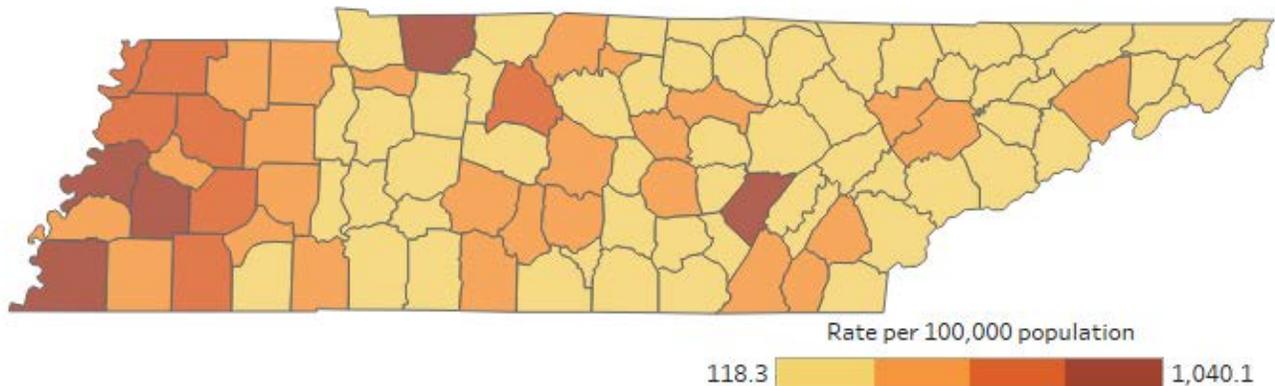
In the last five years, Non-Hispanic Blacks had highest rate of Chlamydial infections in the state. In 2017, 16,950 cases of Chlamydia were reported among Non-Hispanic Black for a rate of 1,504.4 cases per 100,000, as compared to 286.6 cases per 100,000 among Non-Hispanic whites and 449.0 cases per 100,000 among Hispanics.

Table 5: Chlamydia - Number and Rate of Reported Cases by Public Health Region, Tennessee, 2013-2017

Regions/Metros	2013		2014		2015		2016		2017	
	Cases	Rate								
Total cases	30,493	469.5	31,043	474.3	31,607	479.3	32,487	488.4	35,088	522.5
Northeast	772	220.4	841	240.5	874	249.7	947	269.7	1,017	289.2
East	1,802	240.1	2,020	268.3	2,110	278.9	2,193	288.1	2,242	292.6
Southeast	1,038	317.7	1,125	341.7	1,124	340.2	1,132	341.3	1,178	353.9
Upper-Cumberland	957	279.7	929	270.2	864	249.9	1,103	316.7	1,163	330.1
Mid-Cumberland	4,590	395.5	5,031	423.5	4,951	407.4	5,023	403.4	5,779	452.5
South Central	1,310	340.0	1,269	326.5	1,316	334.9	1,375	346.1	1,582	392.9
West	2,581	483.4	2,447	459.4	2,561	482.6	2,703	510.8	2,875	545.9
Shelby	8,504	906.5	8,108	865.2	8,120	867.4	7,871	842.2	9,004	961.0
Davidson	4,000	607.0	4,379	654.9	4,453	656.5	4,544	663.9	4,567	660.7
Knox	1,857	417.9	1,982	442.3	2,191	485.3	2,418	530.1	2,600	562.9
Hamilton	1,914	548.7	1,824	520.3	1,867	528.0	2,069	578.4	1,922	531.5
Madison	779	789.1	729	742.9	784	803.2	730	747.5	725	742.5
Sullivan	389	248.5	359	229.0	392	250.2	379	241.9	434	276.2

All Rates are per 100,000 population.

Figure 5: Chlamydia - Rate of Reported Cases by County, Tennessee, 2017



In 2017, rates of reported cases of Chlamydia by public health region ranged from 276.2 cases per 100,000 population in Sullivan to 961.0 cases per 100,000 population in Shelby. The counties with the highest rates of reported cases of Chlamydia were Montgomery (1,040.1 cases /100,000 population), Shelby (961.0/100,000), Bledsoe (964.9/100,000), Lauderdale (957.5/100,000), and Haywood (893.4/100,000).

Gonorrhea

Figure 6: Gonorrhea - Number and Rate of Reported Cases, Tennessee and U.S., 2013-2017

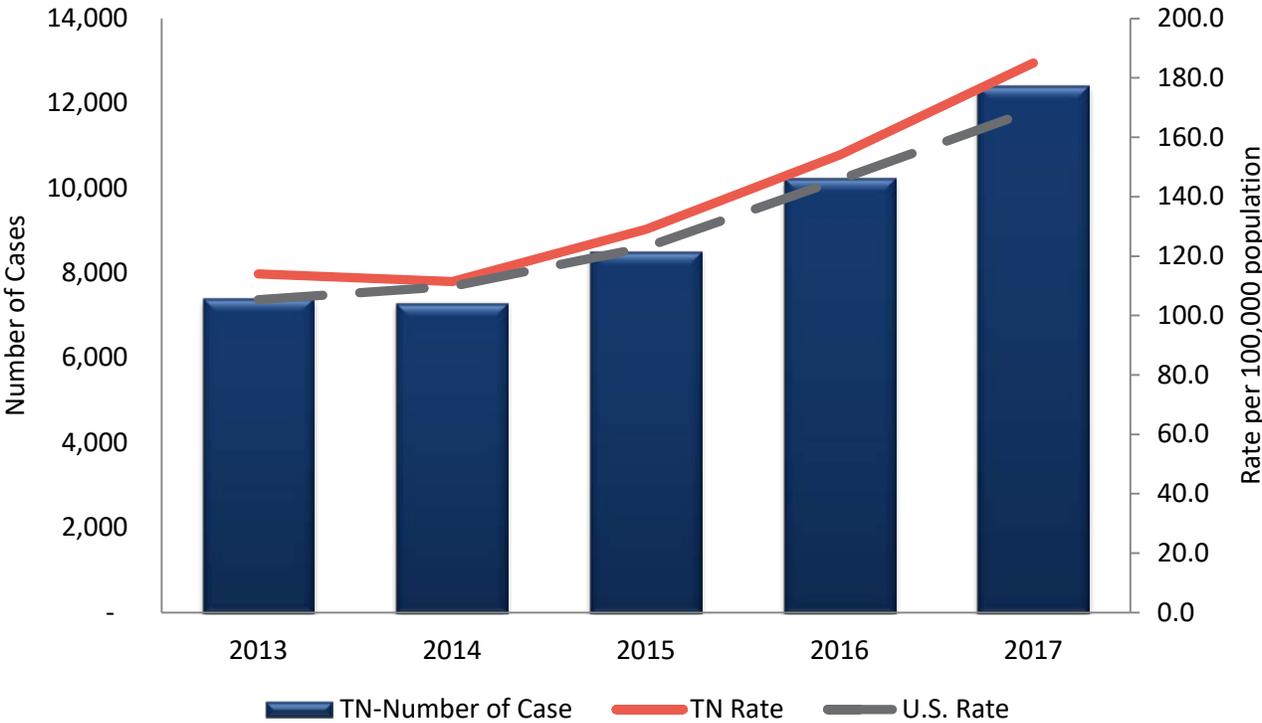


Table 6: Gonorrhea - Number and Rate of Reported Cases, Tennessee and U.S., 2013-2017

	2013	2014	2015	2016	2017
Number of cases	7,406	7,294	8,509	10,245	12,425
TN rate	114.0	111.5	129.0	154.0	185.0
U.S. rate*	105.3	109.8	123.0	145.8	169.2

All rates per 100,000 population.

*United States (U.S.) rates are from the CDC STD Surveillance 2017 report.

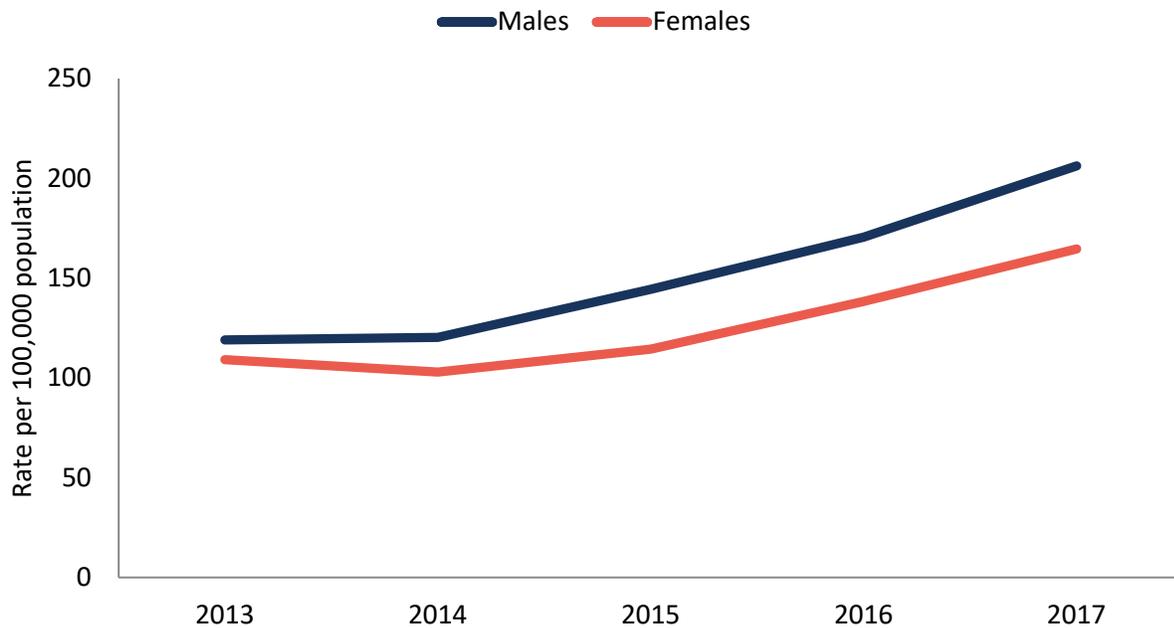
The rate and number of reported cases of Gonorrhea increased from 2013-2017. Similarly, the national rate of Gonorrhea has increased in the last five years, but Tennessee had higher rates of reported cases of Gonorrhea compared to the U.S. the last five years. In 2017, 12,425 Gonorrhea infections were reported for a rate of 185.0 cases per 100,000 population, which was higher than the U.S. rate of 169.2 cases per 100,000 population.

Table 7: Gonorrhea - Number and Rate of Reported Cases by Gender, Tennessee, 2013-2017

Gender	2013		2014		2015		2016		2017	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	7,406	114	7,294	111.4	8,509	129	10,245	154	12,425	185
Males	3,771	119.1	3,839	120.3	4,644	144.4	5,529	170.5	6,757	206.3
Females	3,634	109.2	3,453	103.0	3,865	114.4	4,715	138.3	5,667	164.7

All Rates are per 100,000 population.

Figure 7: Gonorrhea - Rate of Reported Cases by Gender, Tennessee, 2013-2017



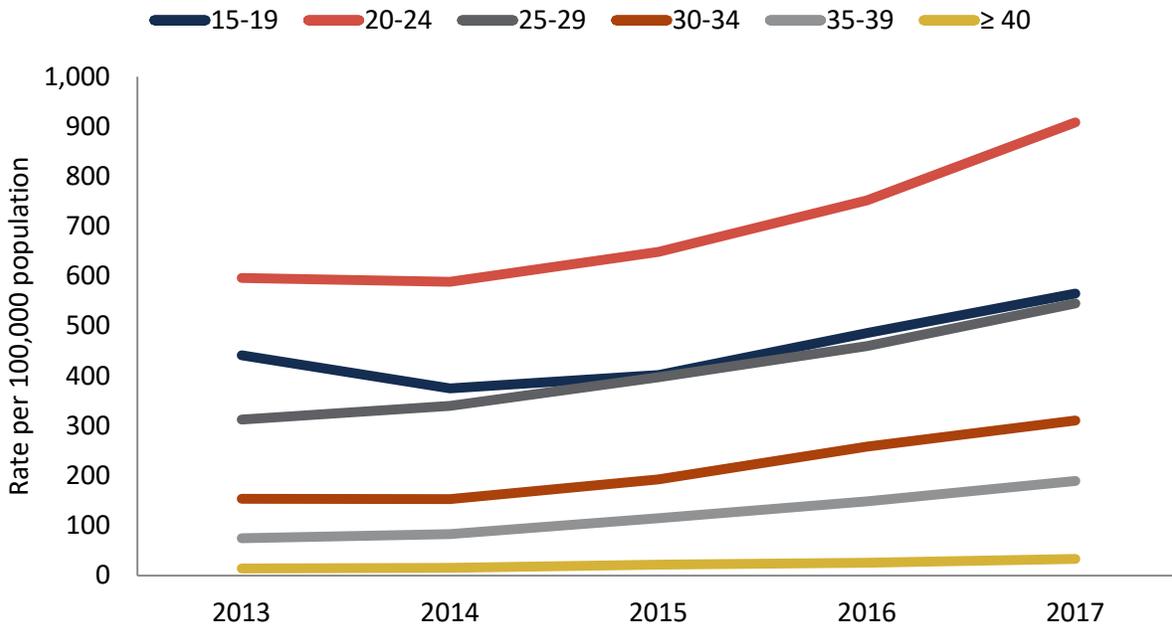
In 2017, 6,757 cases of Gonorrhea were reported among males for a rate of 206.3 cases per 100,000 males. The rate among females was lower, with 5,667 cases reported for a rate of 164.7 cases per 100,000 females. For both, males and females, the rates increased from 2013-2017.

Table 8: Gonorrhea - Number and Rate of Reported Cases by Age Group, Tennessee, 2013-2017

Age group (years)	2013		2014		2015		2016		2017	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	7,406	114	7,294	111.4	8,509	129	10,245	154	12,425	185
15-19	1,848	441.8	1,565	375.0	1,688	402.3	2,052	486.3	2,403	565.4
20-24	2,763	596.8	2,739	588.8	2,995	649.0	3,424	752.7	4,063	908.8
25-29	1,320	313.1	1,474	340.5	1,777	397.9	2,138	459.9	2,637	545.6
30-34	654	154.0	652	153.0	823	193.1	1,104	258.5	1,346	311.1
35-39	300	74.5	338	83.3	474	115.0	626	148.9	811	189.7
≥ 40	443	14.2	479	15.2	702	22.0	832	25.8	1,092	33.6

All Rates are per 100,000 population.

Figure 8: Gonorrhea - Rate of Reported Cases by Age group, Tennessee, 2013-2017



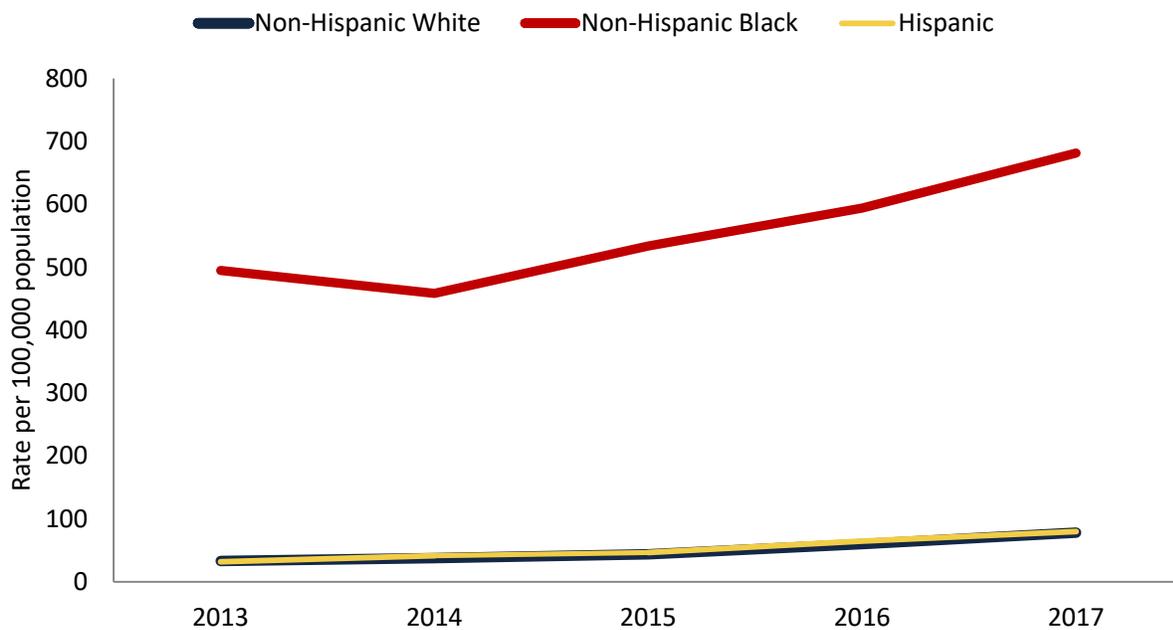
In 2017, the highest rates of Gonorrhea infections were reported among individuals 20-24 years old, followed by 15-19 and 25-29 year olds. Among 20-24 year olds, 4,063 cases were reported for a rate of 908.8 cases per 100,000 individuals aged 20-24. The rate of Gonorrhea increased among all age groups from 2013-2017.

Table 9: Gonorrhea - Number and Rate of Reported Cases by Race and Ethnicity, Tennessee, 2013-2017

Race/Ethnicity	2013		2014		2015		2016		2017	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	7,406	114	7,294	111.4	8,509	129	10,245	154	12,425	185
Non-Hispanic White	1,628	33.5	1,850	37.9	2,167	44.1	2,968	60.1	3,891	78.4
Non-Hispanic Black	5,389	495.1	5,033	458.4	5,910	533.8	6,631	594.1	7,678	681.5
Hispanic	102	32.2	137	41.9	157	46.6	227	65.1	293	79.9

All Rates are per 100,000 population.

Figure 9: Gonorrhea - Rate of Reported Cases by Race and Ethnicity, Tennessee, 2013-2017



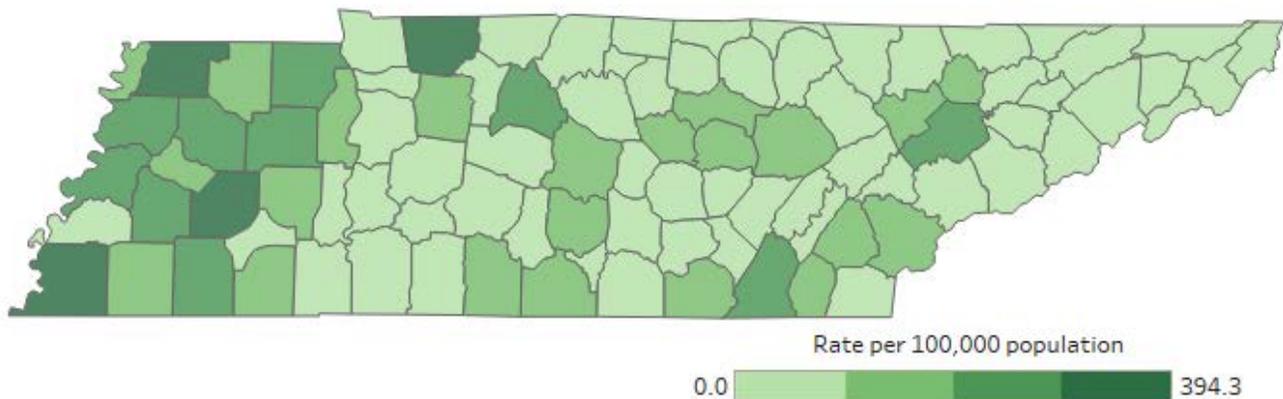
Non-Hispanic Blacks had highest rate of Gonorrhea infections in the state from 2013-2017. In 2017, 7,678 cases of Gonorrhea were reported among Non-Hispanic Black for a rate of 681.5 cases per 100,000, as compared to 78.4 cases per 100,000 among Non-Hispanic whites and 79.9 cases per 100,000 among Hispanics.

Table 10: Gonorrhea - Number and Rate of Reported Cases by Public Health Region, Tennessee, 2013-2017

Regions/Metros	2013		2014		2015		2016		2017	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	7,406	114	7,294	111.4	8,509	129	10,245	154	12,425	185
Northeast	70	20	109	31.2	115	32.9	116	33	142	40.4
East	191	25.5	225	29.9	226	29.9	408	53.6	583	76.1
Southeast	186	56.9	218	66.2	275	83.2	413	124.5	404	121.4
Upper-Cumberland	56	16.4	50	14.5	86	24.9	166	47.7	372	105.6
Mid-Cumberland	891	76.8	1,117	94	990	81.5	1,346	108.1	1,705	133.5
South Central	168	43.6	243	62.5	273	69.5	293	73.7	321	79.7
West	544	101.9	395	74.2	497	93.7	681	128.7	900	170.9
Shelby	2,514	268	2,163	230.8	2,582	275.8	2,934	313.9	3,694	394.3
Davidson	1,294	196.4	1,325	198.1	1,537	226.6	1,895	276.9	1,656	239.6
Knox	510	114.8	576	128.5	795	176.1	940	206.1	1,333	288.6
Hamilton	633	181.5	598	170.6	838	237	749	209.4	928	256.6
Madison	265	268.4	207	210.9	233	238.7	241	246.8	311	318.5
Sullivan	84	53.7	68	43.4	62	39.6	63	40.2	76	48.4

All Rates are per 100,000 population.

Figure 10: Gonorrhea - Rate of Reported Cases by County, Tennessee, 2017



In 2017, rates of reported cases of Gonorrhea by public health region ranged from 40.4 cases per 100,000 population in the Northeast region to 394.3 cases per 100,000 population in the Shelby region. The counties with the highest rates of reported cases of Gonorrhea were Shelby (394.3 cases /100,000 population), Montgomery (380.2 cases /100,000 population), Obion (315.9/100,000), and Madison (318.5/100,000).

Syphilis

Figure 11: Syphilis - Rate of Reported Cases by Disease Stage, Tennessee and U.S., 2013-2017

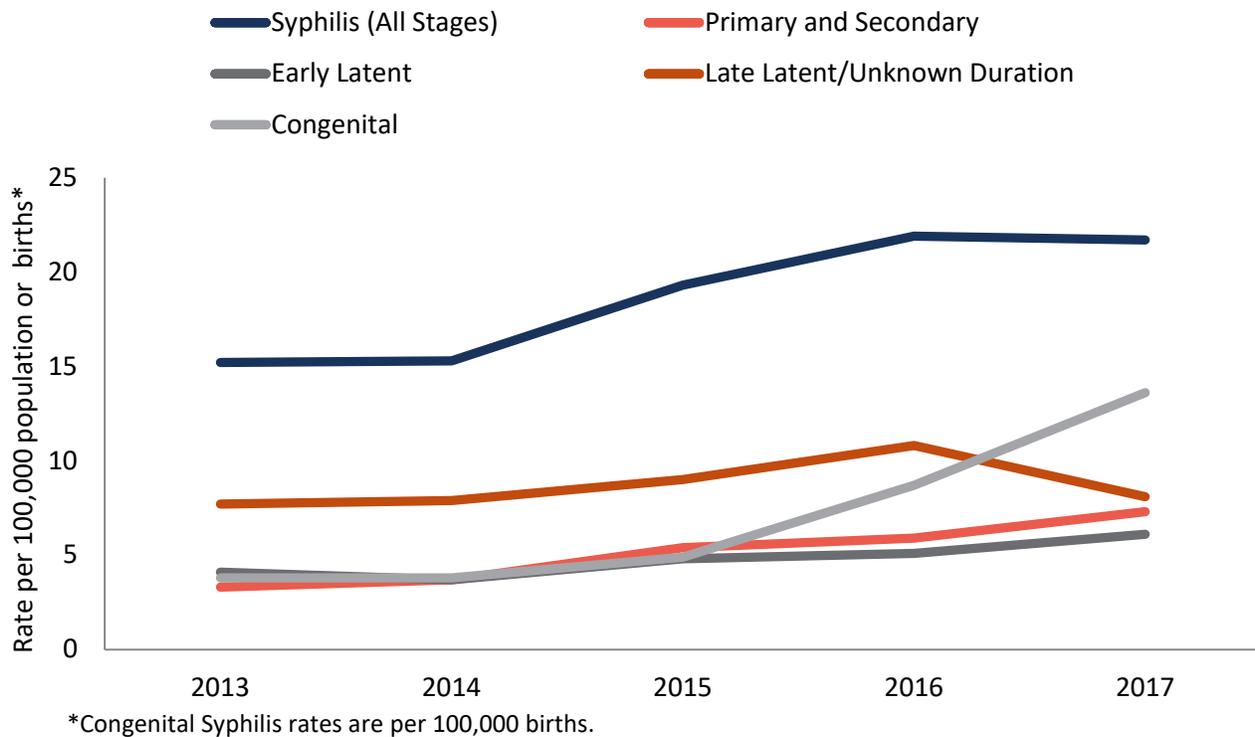


Table 11: Syphilis - Number and Rate of Reported Cases by Disease Stage, Tennessee, 2013-2017

Stage of Infection	2013		2014		2015		2016		2017	
	Cases	Rate								
Total cases	989	15.2	1,002	15.3	1,272	19.3	1,459	21.9	1,456	21.7
Primary and Secondary	215	3.3	239	3.7	356	5.4	390	5.9	489	7.3
Early Latent	269	4.1	241	3.7	316	4.8	341	5.1	411	6.1
Late Latent or Unknown Duration	502	7.7	519	7.9	594	9.0	721	10.8	544	8.1
Congenital*	3	3.8	3	3.8	4	4.9	7	8.7	11	13.6

Rates are per 100,000 population.

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

* Congenital syphilis rates are per 100,000 live births.

In 2017, there were a total of 1,456 reported cases of syphilis in Tennessee. Overall, the number and rate of total cases of Syphilis have increased since 2014. The rate of Late Latent Syphilis decreased from 10.8 cases per 100,000 population in 2016 to 8.1 cases per 100,000 in 2017. However, the rates for cases of primary and secondary Syphilis, early latent Syphilis, and congenital Syphilis increased from 2015-2017.

Table 12: Syphilis* - Number and Rate of Reported Cases by Public Health Region, Tennessee, 2013-2017

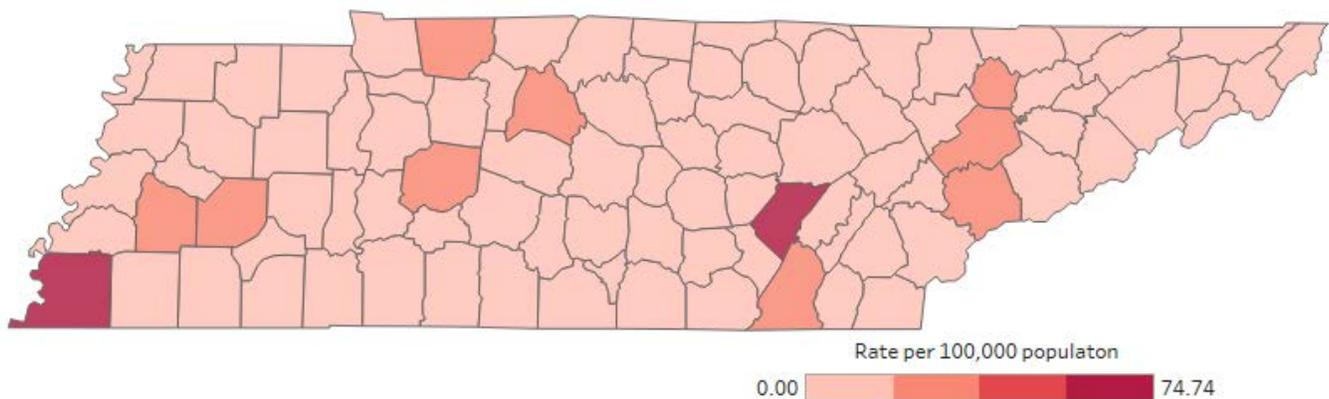
Regions/Metros	2013		2014		2015		2016		2017	
	Cases	Rate								
Total cases	989	15.2	1,002	15.3	1,272	19.3	1,459	21.9	1,456	21.7
Northeast	13	3.7	14	4.0	23	6.6	10	2.8	28	8.0
East	17	2.3	31	4.1	42	5.6	80	10.5	60	7.8
Southeast	16	4.9	32	9.7	23	7.0	28	8.4	35	10.5
Upper-Cumberland	12	3.5	10	2.9	13	3.8	18	5.2	25	7.1
Mid-Cumberland	70	6.0	95	8.0	129	10.6	140	11.2	167	13.1
South Central	16	4.2	9	2.3	20	5.1	28	7.0	33	8.2
West	25	4.7	26	4.9	31	5.8	29	5.5	45	8.5
Shelby	530	56.5	422	45.0	532	56.8	693	74.1	590	63.0
Davidson	185	28.1	237	35.4	268	39.5	264	38.6	236	34.1
Knox	49	11.0	53	11.8	109	24.1	92	20.2	103	22.3
Hamilton	38	10.9	60	17.1	53	15.0	66	18.4	104	28.8
Madison	12	12.2	9	9.2	20	20.5	17	17.4	20	20.5
Sullivan	6	3.8	< 5	2.6	9	5.7	< 5	2.6	9	5.7

All Rates are per 100,000 population.

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

*Includes all stages of infection, including congenital syphilis.

Figure 12: Syphilis* - Rate of Reported Cases by County Tennessee, 2017



*Includes all stages of infection, including congenital syphilis.

In 2017, rates of reported cases of Syphilis by public health region ranged from 5.7 cases per 100,000 population in the Sullivan region to 63.0 cases per 100,000 population in the Shelby region. The counties with the highest rates of reported cases of total Syphilis were Shelby (63.0 cases /100,000 population) and Bledsoe (74.7 cases /100,000 population).

Primary and Secondary (P&S) Syphilis

Figure 13: Primary and Secondary Syphilis - Number and Rate of Reported Cases, Tennessee and U.S., 2013-2017

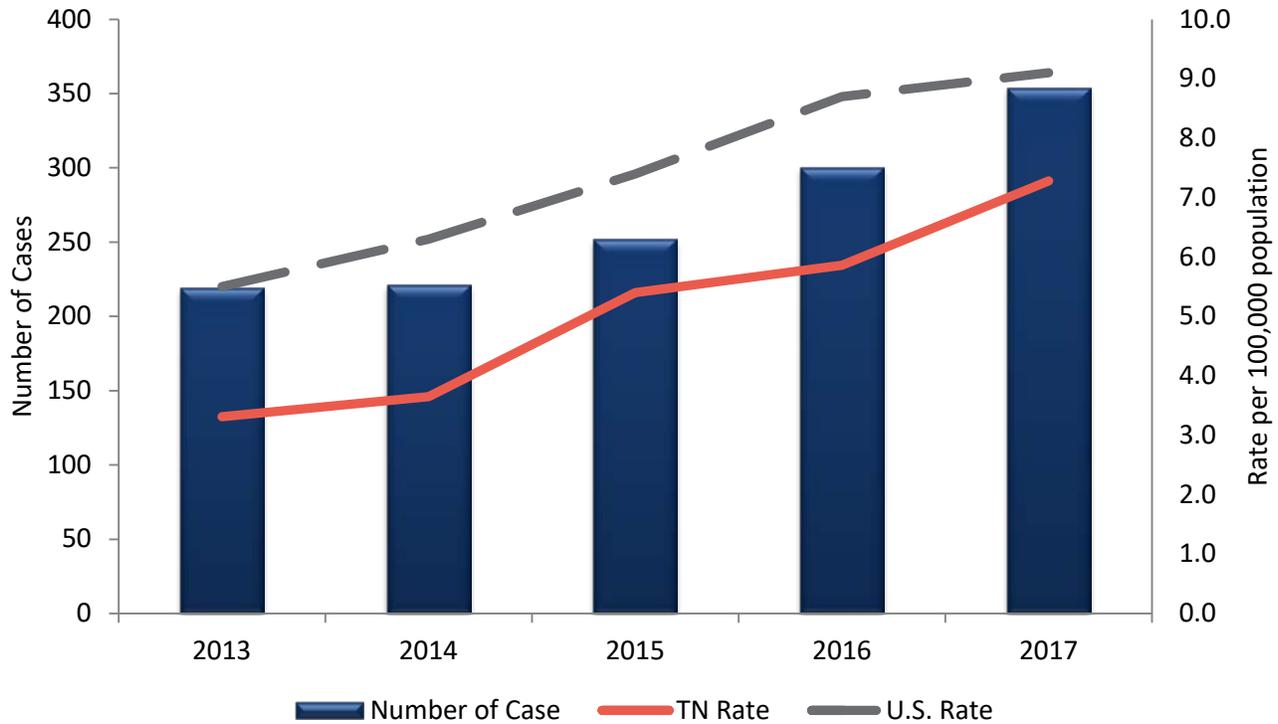


Table 13: Primary and Secondary Syphilis - Number and Rate of Reported Cases, Tennessee and U.S., 2013-2017

	2013	2014	2015	2016	2017
Number of cases	219	221	252	300	354
TN rate	3.3	3.7	5.4	5.9	7.3
U.S. rate*	5.5	6.3	7.4	8.7	9.1

All rates per 100,000 population.

*United States (U.S.) rates are from the CDC STD Surveillance 2017 report.

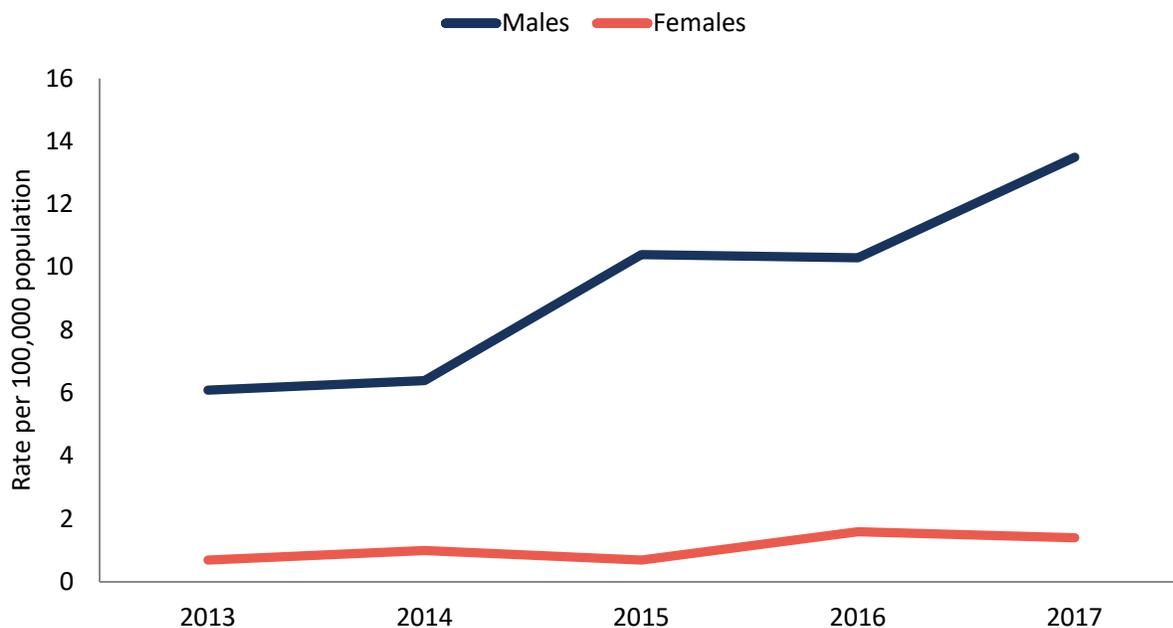
The rate and number of reported cases of P&S Syphilis increased from 2013-2017 in Tennessee, but remained lower than the U.S. rate. In 2017, 354 cases of P&S Syphilis were reported for a rate of 7.3 cases per 100,000 population, which was lower than the U.S. rate of 9.1 cases per 100,000 population.

Table 14: Primary and Secondary Syphilis - Number and Rate of Reported Cases by Gender, Tennessee, 2013-2017

Gender	2013		2014		2015		2016		2017	
	Cases	Rate								
Total cases	215	3.3	239	3.7	356	5.4	390	5.9	489	7.3
Males	193	6.1	205	6.4	333	10.4	335	10.3	441	13.5
Females	22	0.7	34	1.0	23	0.7	55	1.6	48	1.4

All Rates are per 100,000 population.

Figure 14: Primary and Secondary Syphilis - Rate of Reported Cases by Gender, Tennessee, 2013-2017



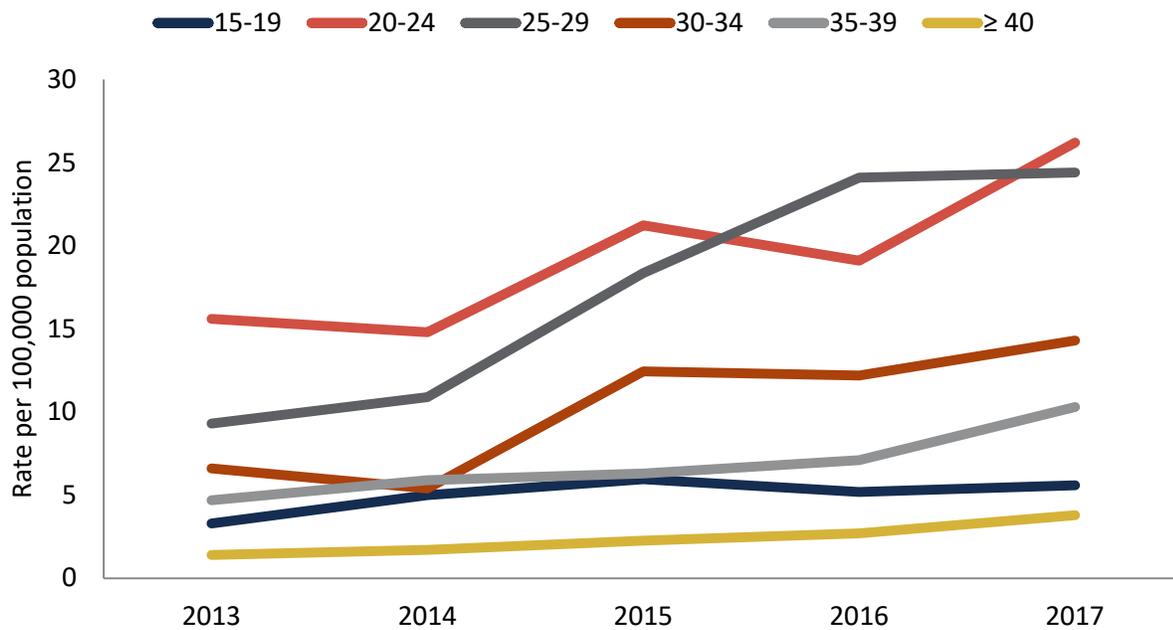
In 2017, 441 cases of P&S Syphilis were reported among males for a rate of 13.5 cases per 100,000 males. The rate among females was significantly lower, with 48 cases reported for a rate of 1.4 cases per 100,000 females. From 2014-2017, the rate of cases of P&S Syphilis among males has nearly doubled, from 6.4 cases per 100,000 males to 13.5 cases per 100,000 males.

Table 15: Primary & Secondary Syphilis - Number and Rate of Reported Cases by Age Group, Tennessee, 2013-2017

Age group (years)	2013		2014		2015		2016		2017	
	Cases	Rate								
Total cases	215	3.3	239	3.7	356	5.4	390	5.9	489	7.3
15-19	14	3.3	21	5.0	25	6.0	22	5.2	24	5.6
20-24	72	15.6	69	14.8	98	21.2	87	19.1	117	26.2
25-29	39	9.3	47	10.9	82	18.4	112	24.1	118	24.4
30-34	28	6.6	23	5.4	53	12.4	52	12.2	62	14.3
35-39	19	4.7	24	5.9	26	6.3	30	7.1	44	10.3
≥ 40	43	1.4	54	1.7	72	2.3	87	2.7	124	3.8

All Rates are per 100,000 population.

Figure 15: Primary & Secondary Syphilis - Rate of Reported Cases by Age Group, Tennessee, 2013-2017



In 2017, 117 cases of P&S Syphilis infections were reported among individuals 25-29 year old, for a rate of 26.2. The P&S Syphilis rate among 20-24 year olds has increased from 2013-2014. The state's second highest rate of P&S Syphilis (24.4 cases per 100,000) was among 25-29 years olds in 2017. The rate among this age group has sharply increased from 2013-2017.

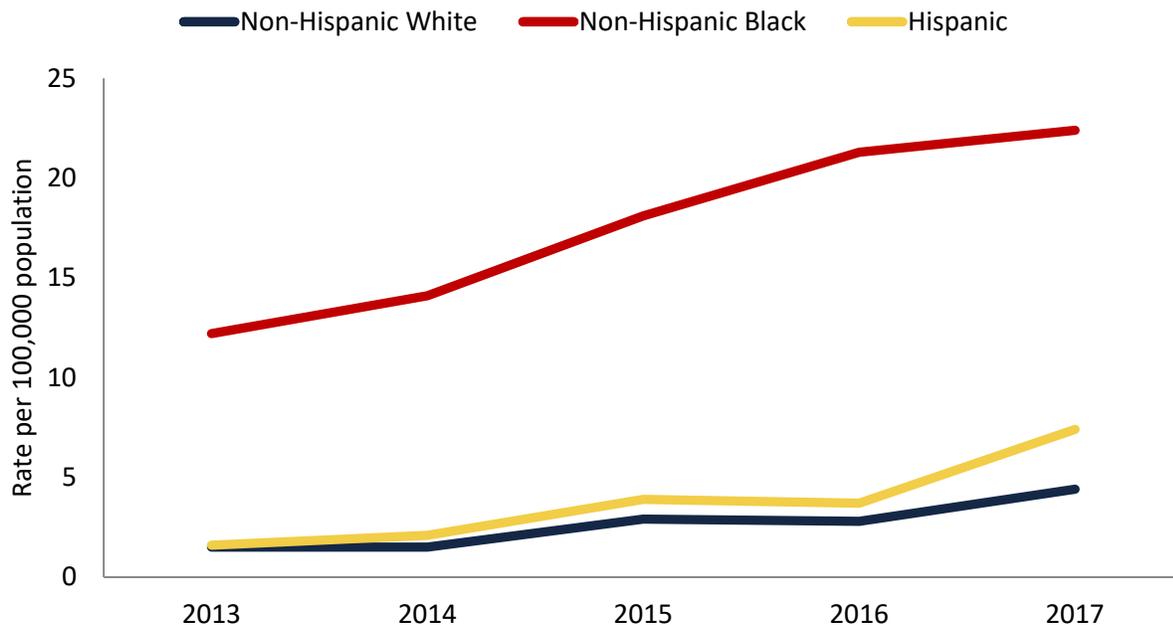
Table 16: Primary & Secondary Syphilis- Number and Rate of Reported Cases by Race and Ethnicity, Tennessee, 2013-2017

Race/Ethnicity	2013		2014		2015		2016		2017	
	Cases	Rate								
Total cases	215	3.3	239	3.7	356	5.4	390	5.9	489	7.3
Non-Hispanic White	74	1.5	72	1.5	140	2.9	138	2.8	216	4.4
Non-Hispanic Black	133	12.2	155	14.1	200	18.1	238	21.3	252	22.4
Hispanic	5	1.6	7	2.1	13	3.9	13	3.7	27	7.4

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, 2013-2017



Non-Hispanic Blacks had highest rate of P&S Syphilis infections in the state from 2013-2017. In 2017, 256 cases of P&S Syphilis were reported among Non-Hispanic Black for a rate of 622.4 cases per 100,000, as compared to 4.4 cases per 100,000 among Non-Hispanic whites and 7.4 cases per 100,000 among Hispanics. The rate of P&S Syphilis increased among all race and Ethnic groups from 2013-2017.

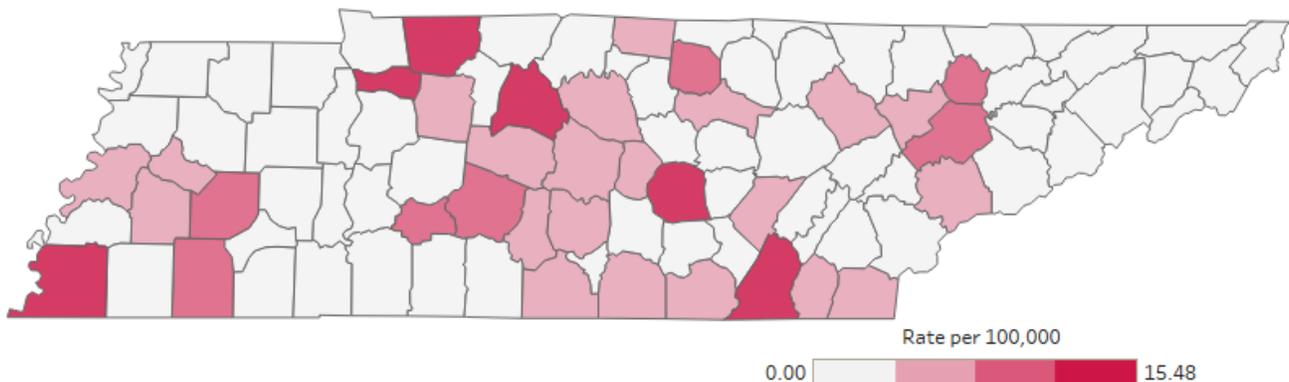
Table 17: Primary & Secondary Syphilis- Number and Rate of Reported Cases by Public Health Region, Tennessee, 2013-2017

Regions/Metros	2013		2014		2015		2016		2017	
	Cases	Rate								
Total cases	215	3.3	239	3.7	356	5.4	390	5.9	489	7.3
Northeast	< 5	1.1	< 5	1.1	7	2.0	< 5	0.6	8	2.3
East	< 5	0.5	9	1.2	20	2.6	23	3.0	24	3.1
Southeast	< 5	0.6	6	1.8	< 5	1.2	5	1.5	12	3.6
Upper-Cumberland	12	3.5	10	2.9	13	3.8	18	5.2	25	7.1
Mid-Cumberland	16	1.4	23	1.9	41	3.4	48	3.9	69	5.4
South Central	5	1.3	< 5	0.5	8	2.0	16	4.0	17	4.2
West Total	10	1.9	7	1.3	8	1.5	5	0.9	11	2.1
Shelby	89	9.5	79	8.4	107	11.4	150	16.0	135	14.4
Davidson	45	6.8	58	8.7	90	13.3	73	10.7	107	15.5
Knox	14	3.2	22	4.9	36	8.0	21	4.6	38	8.2
Hamilton	14	4.0	25	7.1	25	7.1	28	7.8	43	11.9
Madison	7	7.1	< 5	2.0	11	11.3	11	11.3	8	8.2
Sullivan	< 5	1.3	0	0.0	< 5	2.6	< 5	0.6	5	3.2

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, 2017



In 2017, rates of reported cases of P&S Syphilis by public health region ranged from 2.3 cases per 100,000 population in the Northeast region to 15.5 cases per 100,000 population in the Davidson region. The counties with the highest rates of reported cases of P&S Syphilis were Davidson (15.5/100,000), Shelby (14.4 cases /100,000 population), Montgomery (13.5/100,000), Warren (12.3/100,000), Houston (12.2/100,000), and Hamilton (11.9 /100,000).

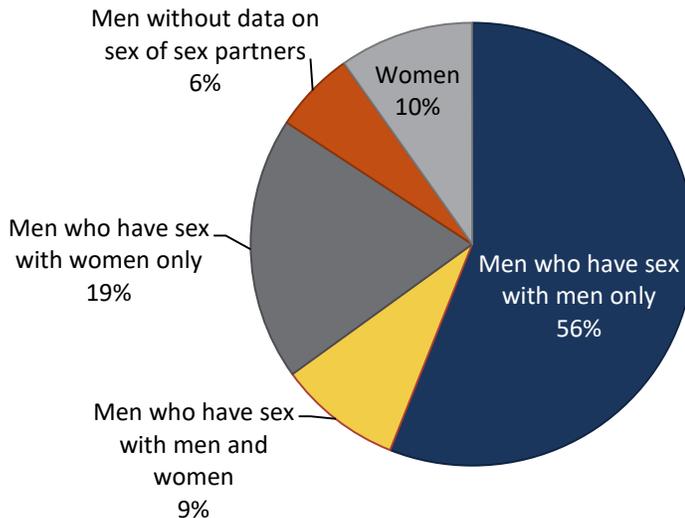
Syphilis among MSM

Table 18: Primary and Secondary Syphilis - Distribution of Cases by Gender and Sexual Behavior, Tennessee, 2013-2017

Gender and Sexual Behavior	2013		2014		2015		2016		2017	
	Cases	%								
Total cases	216	-	239	-	356	-	390	-	489	-
MSM	123	57%	148	62%	216	61%	202	52%	274	56%
MSMW	14	6%	16	7%	25	7%	27	7%	44	9%
MSW	43	20%	31	13%	64	18%	79	20%	94	19%
Men without data on sex of sex partners	14	6%	10	4%	28	8%	27	7%	29	6%
Women	22	10%	34	14%	23	6%	55	14%	48	10%

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

Figure 18: Primary and Secondary Syphilis – Distribution of Cases by Sex and Sexual Behavior, Tennessee, 2017



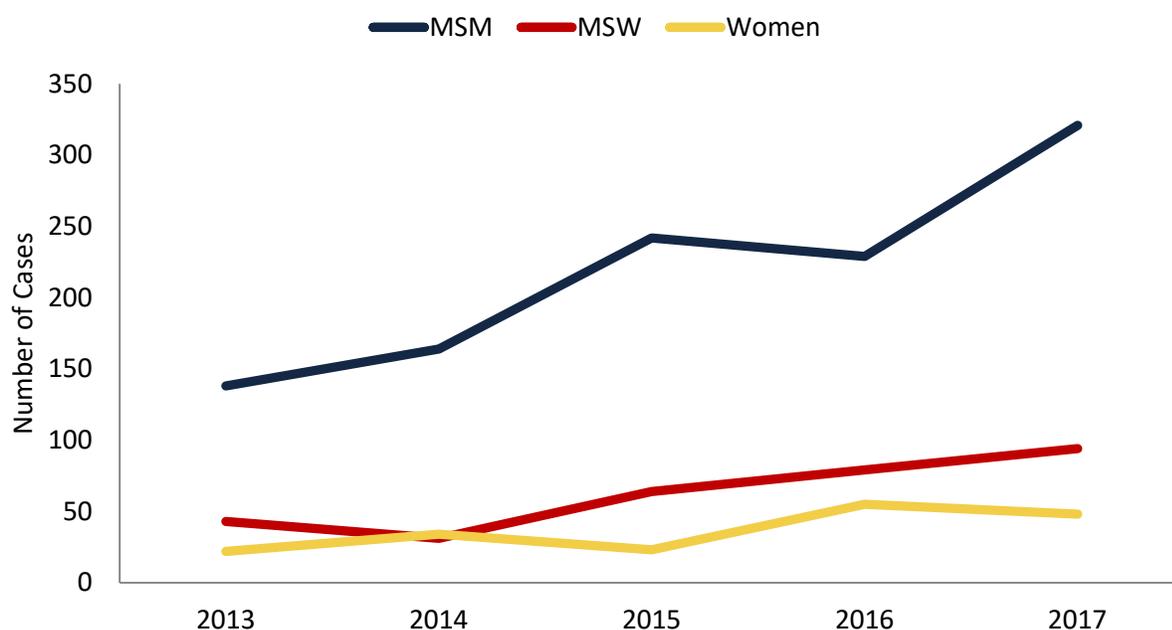
In 2017, men accounted for a large majority, 90%, of P&S Syphilis cases and MSM accounted for the majority of P&S Syphilis cases. Of the 489 reported P&S Syphilis cases in 2017, 274 (56%) were among MSM, and 44 (9%) among MSMW.

Table 19: Primary and Secondary Syphilis- Number of Cases by Gender and Sexual Behavior, Tennessee, 2013-2017

Gender/Sexual Behavior	2013 Cases	2014 Cases	2015 Cases	2016 Cases	2017 Cases
Total cases	216	239	356	390	489
MSM	138	164	242	229	321
MSW	43	31	64	79	94
Women	22	34	23	55	48

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

Figure 19: Primary and Secondary Syphilis – Number of Cases by Gender and Sexual Behavior, Tennessee, 2013-2017



During 2013-2017, the number of P&S Syphilis among MSM increased from 138 cases to 321 cases, which is a 133% increase.

Congenital Syphilis

Figure 20: Congenital Syphilis - Number and Rate of Reported Cases, Tennessee and U.S., 2013-2017

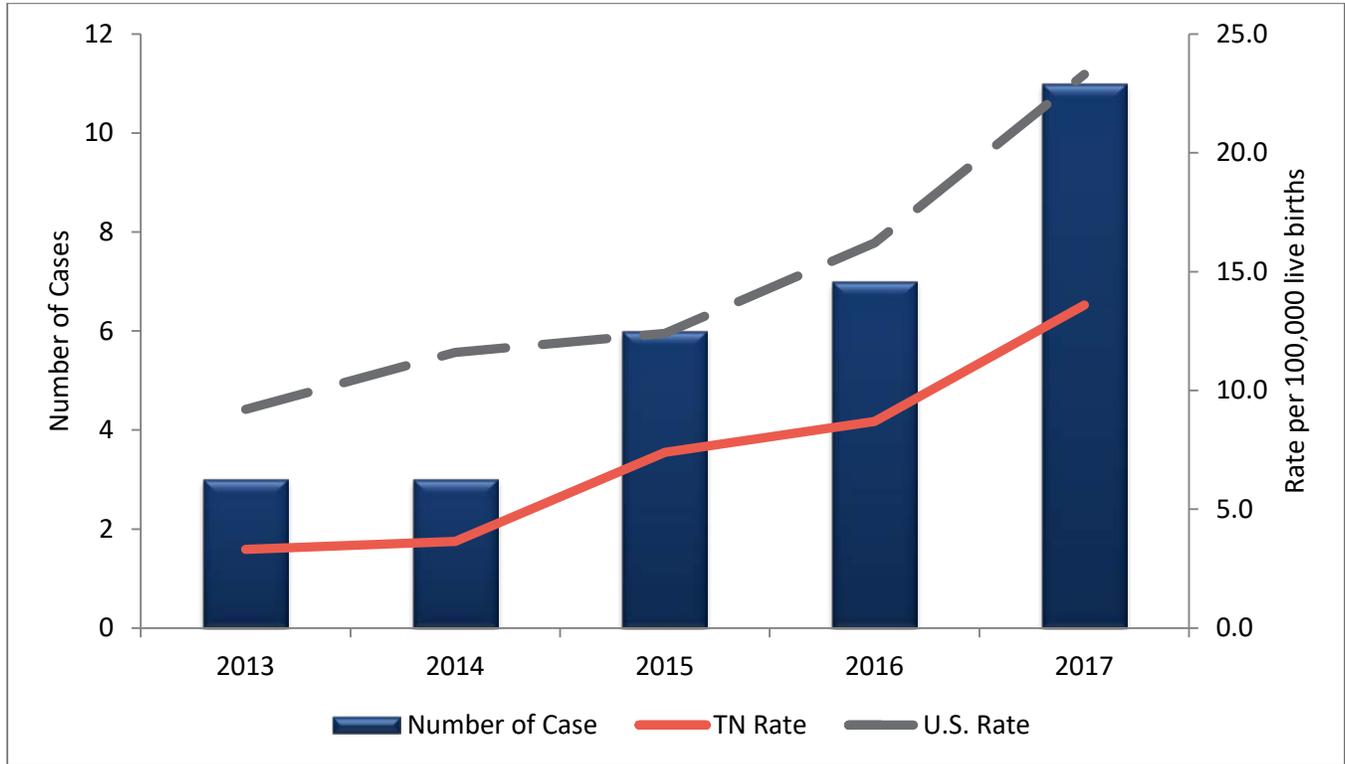


Table 20: Congenital Syphilis - Number and Rate of Reported Cases, Tennessee and U.S., 2013-2017

	2013	2014	2015	2016	2017
Number of cases	3	3	6	7	11
TN rate	3.3	3.7	7.4	8.7	13.6
U.S. rate*	9.2	11.6	12.4	16.2	23.3

All rates per 100,000 live births.

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

*United States (U.S.) rates are from the CDC STD Surveillance 2017 report.

In 2017, there were 11 reported cases of congenital Syphilis, yielding a rate of 13.6 cases per 100,000 live births in the state. During 2013-2017 Tennessee's congenital syphilis rate remained lower than the national rate.

Table 21: Congenital Syphilis — Number and Rate of Reported Congenital Cases by Year of Birth and P&S Syphilis among Women Aged 15–44 Years, Tennessee and U.S., 2013–2017

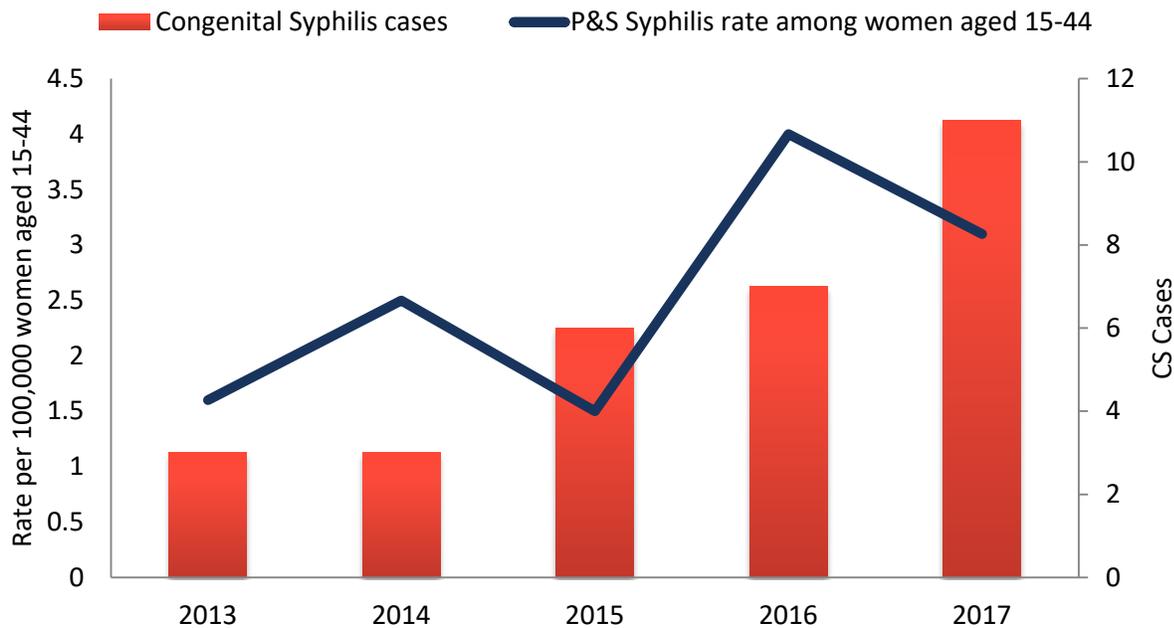
	2013		2014		2015		2016		2017	
	Cases	Rate								
Total P&S Syphilis among Women*	22	0.7	34	1.0	23	0.7	55	1.6	48	1.4
P&S Syphilis among Women 15-44 years old *	21	1.6	32	2.5	20	1.5	52	4.0	41	3.1
Congenital Syphilis **	3	3.8	3	3.7	6	7.4	7	8.7	11	13.6

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 21: Congenital Syphilis — Number of Reported Congenital Cases and Rate of P&S Syphilis among Women Aged 15–44 Years, Tennessee, 2013–2017



From 2013-2017, the increase in congenital syphilis cases paralleled an increases in P&S syphilis among reproductive-aged women.

Technical notes

About this Report:

This report provides an overview of the reported STD cases in Tennessee, using current surveillance data, and presents statistics and trends from the reporting period based on core surveillance activities in the state. The figures and tables in this edition supersede those in earlier publication of the data.

The surveillance information in this report is based on data stored in the Patient Reporting Investigation Surveillance Manager (PRISM) from 2013-2017. The case definitions used are those defined by the Council of State and Territorial Epidemiologists (CSTE). Case definitions are periodically revised using 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 STD infection is diagnosed and the time the infection is reported to TDH. As a result, case number for the most recent years of diagnoses may not be complete. Data from recent years should be considered provisional. The data presented in this report have been adjusted for reporting delay. The data in this report represent all information reported to TDH through June 30, 2018.

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

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. Six of the most populous counties operate as stand-alone metropolitan public health regions, including Nashville/Davidson (NDR) and Memphis/Shelby (MSR). The remaining 89 counties are divided into 7 rural health regions, including West (WTR), Upper Cumberland (UCR), and Northeast (NER). Public health region data for 2017 is located in Appendix A.

Acknowledgements

The authors would like to thank the central office and public health regional STD surveillance staff throughout the state of Tennessee, without whom, an accurate accounting of the STD epidemic in Tennessee would not be possible. Additionally, we would like to thank Tennessee Department of Health's STD Prevention and HIV Surveillance and Epidemiology programs for providing valuable data collection, guidance, and support.

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Suggested Citation:

STD Prevention Program. STD Surveillance Annual Report, 2017. Tennessee Department of Health: Nashville, TN. December 2018.

Glossary

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 rate is calculated by dividing the number of cases in the population of interest by the total number of people in the population. Then multiply by 100,000 to get the rate per 100,000 people.

Chlamydia: Infection with *Chlamydia trachomatis* may result in urethritis, epididymitis, cervicitis, acute salpingitis, or other syndromes when sexually transmitted; however, the infection is often asymptomatic in women. Perinatal infections may result in inclusion conjunctivitis and pneumonia in newborns. Other syndromes caused by *C. trachomatis* include lymphogranuloma venereum (see Lymphogranuloma Venereum) and trachoma.

Congenital syphilis: A condition caused by infection in utero with *T. pallidum*. A wide spectrum of severity exists, from unapparent 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 (nonviral hepatitis), 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).

Date of diagnosis: The date of diagnoses refers to the date a laboratory makes a diagnosis based on the analysis of a specimen.

Gonorrhea: A sexually transmitted infection commonly manifested by urethritis, cervicitis, proctitis, salpingitis, or pharyngitis. Infection may be asymptomatic.

Syphilis: Syphilis is a complex sexually transmitted disease that has a highly variable clinical course.

Abbreviations

CDC: Centers for Disease Control and Prevention

CS: Congenital Syphilis

CSTE: Council of State and Territorial Epidemiologist

CT: Chlamydia

GC: Gonorrhea

MSM: gay, bisexual and other men who have sex with men

MSMW: men who have sex with both men and women

MSW: men who have sex with women only

P&S: primary and secondary

PLWH: Persons Living with HIV

PWID: Persons Who Inject Drugs

TDH: Tennessee Department of Health

STD: sexually transmitted disease

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Appendix B: Regional data

Table 22: STDs, Nashville (Davidson County), Tennessee, 2017

Gender	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	4,567	660.7	1,656	239.6	236	34.1	107	15.5
Male	1,700	509.9	1,100	330.0	208	62.4	102	30.6
Female	2,866	800.9	556	155.4	28	7.8	5	1.4
≤ 15	30	24.1	12	9.6	0	0.0	0	0.0
15-19	1,126	2,887.8	256	656.6	5	12.8	< 5	2.6
20-24	1,646	3,288.6	445	889.1	48	95.6	26	51.9
25-29	974	1,321.1	370	501.8	66	89.5	32	43.4
30-34	390	603.0	229	354.1	33	51.0	13	20.1
35-39	195	375.8	143	275.6	28	54.0	13	25.1
≥ 40	206	71.7	201	70.0	56	19.5	22	7.7
Non-Hispanic White	1,495	384.7	429	110.4	87	22.4	39	10.0
Non-Hispanic Black	2,592	1,358.3	1,127	597.5	127	67.3	59	31.3
Hispanic	403	567.0	72	101.3	18	25.3	7	9.8

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2017.

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

Hispanics can be any race.

Rates are per 100,000 populations.

Rates were calculated using the U.S. Census Bureau 2016 and 2017 Population Estimates.

Counts < 5 have been suppressed.

Table 23: STDs, Chattanooga (Hamilton County), Tennessee, 2017

Gender	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	1,922	531.5	928	256.6	104	28.8	43	11.9
Male	691	396.2	493	282.7	77	44.2	40	22.9
Female	1,231	657.5	435	232.4	27	14.4	< 5	1.6
≤ 15	8	12.7	< 5	3.2	< 5	4.8	0	0.0
15-19	487	2,273.6	177	826.3	< 5	4.7	< 5	4.7
20-24	779	3,427.6	307	1,350.8	11	48.4	< 5	17.6
25-29	364	1,303.7	206	737.8	12	43.0	7	25.1
30-34	152	623.3	99	406.0	13	53.3	5	20.5
35-39	75	325.0	57	247.0	9	39.0	< 5	8.7
≥ 40	57	31.8	80	44.7	55	30.7	24	13.4
Non-Hispanic White	669	260.2	247	96.1	48	18.7	26	10.1
Non-Hispanic Black	1,114	1,602.0	647	930.4	48	69.0	17	24.4
Hispanic	85	412.2	18	87.3	< 5	19.4	0	0.0

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2017.

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

Hispanics can be any race.

Rates are per 100,000 populations.

Rates were calculated using the U.S. Census Bureau 2016 and 2017 Population Estimates.

Counts < 5 have been suppressed.

Table 24: STDs, Knoxville (Knox County), Tennessee, 2017

Gender	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	2,600	562.9	1,333	288.6	103	22.3	38	8.2
Male	973	433.6	758	337.8	89	39.7	38	16.9
Female	1,627	685.2	575	242.2	14	5.9	0	0.0
≤ 15	27	33.3	6	7.4	0	0.0	0	0.0
15-19	679	2,217.4	188	614.0	0	0.0	0	0.0
20-24	1,010	2,445.4	349	845.0	15	36.3	7	16.9
25-29	432	1,328.4	274	842.5	22	67.6	9	27.7
30-34	217	714.8	196	645.6	16	52.7	< 5	13.2
35-39	111	373.1	121	406.7	12	40.3	5	16.8
≥ 40	124	57.4	199	92.1	38	17.6	13	6.0
Non-Hispanic White	1,347	353.8	628	165.0	74	19.4	29	7.6
Non-Hispanic Black	955	2,369.9	634	1,573.3	19	47.1	6	14.9
Hispanic	128	648.3	28	141.8	5	25.3	< 5	5.1

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2017.

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

Hispanics can be any race.

Rates are per 100,000 populations.

Rates were calculated using the U.S. Census Bureau 2016 and 2017 Population Estimates.

Counts < 5 have been suppressed.

Table 25: STDs, Jackson (Madison County), Tennessee, 2017

Gender	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	725	742.5	311	318.5	20	20.5	8	8.2
Male	269	582.6	166	359.5	18	39.0	7	15.2
Female	456	886.0	145	281.7	< 5	3.9	< 5	1.9
≤ 15	< 5	10.9	< 5	5.5	0	0.0	0	0.0
15-19	245	3,444.4	69	970.1	< 5	14.1	0	0.0
20-24	292	4,146.0	116	1,647.0	7	99.4	< 5	56.8
25-29	112	1,694.4	64	968.2	< 5	45.4	< 5	15.1
30-34	36	647.5	28	503.6	0	0.0	0	0.0
35-39	24	421.7	17	298.7	< 5	52.7	< 5	17.6
≥ 40	14	29.6	16	33.8	6	12.7	< 5	4.2
Non-Hispanic White	71	130.2	24	44.0	8	14.7	< 5	3.7
Non-Hispanic Black	397	1,085.0	209	571.2	12	32.8	6	16.4
Hispanic	15	397.6	< 5	106.0	0	0.0	0	0.0

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2017.

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

Hispanics can be any race.

Rates are per 100,000 populations.

Rates were calculated using the U.S. Census Bureau 2016 and 2017 Population Estimates.

Counts < 5 have been suppressed.

Table 26: STDs, Memphis (Shelby County), Tennessee, 2017

Gender	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	9,004	961.0	3,694	394.3	590	63.0	135	14.4
Male	2,738	614.2	1,873	420.2	455	102.1	119	26.7
Female	6,264	1,275.2	1,821	370.7	135	27.5	16	3.3
≤ 15	87	44.5	35	17.9	8	4.1	0	0.0
15-19	2,703	4,339.6	955	1,533.2	47	75.5	16	25.7
20-24	3,348	5,167.5	1,297	2,001.9	122	188.3	33	50.9
25-29	1,622	2,198.8	689	934.0	129	174.9	30	40.7
30-34	613	958.5	273	426.9	86	134.5	21	32.8
35-39	294	477.3	185	300.3	50	81.2	10	16.2
≥ 40	337	81.2	260	62.7	148	35.7	25	6.0
Non-Hispanic White	635	189.0	174	51.8	67	19.9	21	6.3
Non-Hispanic Black	7,451	1,483.9	3,307	658.6	497	99.0	113	22.5
Hispanic	279	468.3	43	72.2	15	25.2	< 5	1.7

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2017.

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

Hispanics can be any race.

Rates are per 100,000 populations.

Rates were calculated using the U.S. Census Bureau 2016 and 2017 Population Estimates.

Counts < 5 have been suppressed.

Table 27: STDs, Blountville (Sullivan County), Tennessee, 2017

Gender	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	434	276.2	76	48.4	9	5.7	5	3.2
Male	134	175.3	36	47.1	7	9.2	< 5	5.2
Female	300	371.6	40	49.5	< 5	2.5	< 5	1.2
≤ 15	< 5	12.0	0	0.0	0	0.0	0	0.0
15-19	160	1,803.2	15	169.1	< 5	11.3	0	0.0
20-24	156	1,836.6	22	259.0	< 5	11.8	< 5	11.8
25-29	71	740.1	17	177.2	< 5	10.4	< 5	10.4
30-34	25	300.5	8	96.2	< 5	36.1	< 5	24.0
35-39	5	57.9	7	81.0	< 5	11.6	0	0.0
≥ 40	14	15.9	7	7.9	< 5	2.3	< 5	1.1
Non-Hispanic White	351	238.9	51	34.7	6	4.1	< 5	2.0
Non-Hispanic Black	40	1,168.6	17	496.6	< 5	58.4	< 5	58.4
Hispanic	< 5	102.2	0	0.0	< 5	34.1	0	0.0

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2017.

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

Hispanics can be any race.

Rates are per 100,000 populations.

Rates were calculated using the U.S. Census Bureau 2016 and 2017 Population Estimates.

Counts < 5 have been suppressed.

Table 28: STDs, East Public Health Region, Tennessee, 2017

Gender	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	2,242	292.6	583	76.1	60	7.8	24	3.1
Male	673	178.8	299	79.4	45	12.0	22	5.8
Female	1,569	402.4	284	72.8	15	3.8	< 5	0.5
≤ 15	18	13.9	< 5	1.5	0	0.0	0	0.0
15-19	650	1,435.8	70	154.6	0	0.0	0	0.0
20-24	880	2,051.1	159	370.6	5	11.7	< 5	4.7
25-29	412	860.8	150	313.4	12	25.1	7	14.6
30-34	143	348.5	85	207.2	8	19.5	< 5	4.9
35-39	74	171.4	50	115.8	9	20.8	< 5	6.9
≥ 40	65	15.6	67	16.1	26	6.2	10	2.4
Non-Hispanic White	1,814	260.4	460	66.0	53	7.6	20	2.9
Non-Hispanic Black	222	1,331.9	102	612.0	< 5	24.0	< 5	12.0
Hispanic	159	482.9	10	30.4	< 5	9.1	< 5	6.1

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2017.

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

Hispanics can be any race.

Rates are per 100,000 populations.

Rates were calculated using the U.S. Census Bureau 2016 and 2017 Population Estimates.

Counts < 5 have been suppressed.

Table 29: STDs, Mid-Cumberland Public Health Region, Tennessee, 2017

Gender	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	5,779	452.5	1,705	133.5	167	13.1	69	5.4
Male	1,914	303.8	925	146.8	138	21.9	59	9.4
Female	3,865	597.4	779	120.4	29	4.5	10	1.5
≤ 15	29	11.0	5	1.9	0	0.0	0	0.0
15-19	1,599	1,826.7	322	367.8	6	6.9	< 5	2.3
20-24	2,502	2,847.5	648	737.5	45	51.2	20	22.8
25-29	992	1,124.1	366	414.8	41	46.5	23	26.1
30-34	326	385.4	172	203.4	24	28.4	5	5.9
35-39	167	187.6	89	100.0	14	15.7	8	9.0
≥ 40	164	28.5	103	17.9	37	6.4	11	1.9
Non-Hispanic White	3,021	301.2	674	67.2	80	8.0	36	3.6
Non-Hispanic Black	2,249	1,740.7	921	712.8	69	53.4	29	22.4
Hispanic	319	395.6	70	86.8	15	18.6	< 5	3.7

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2017.

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

Hispanics can be any race.

Rates are per 100,000 populations.

Rates were calculated using the U.S. Census Bureau 2016 and 2017 Population Estimates.

Counts < 5 have been suppressed.

Table 30: STDs, Northeast Public Health Region, Tennessee, 2017

Gender	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	1,017	289.2	142	40.4	28	8.0	8	2.3
Male	306	176.6	87	50.2	25	14.4	8	4.6
Female	711	398.7	55	30.8	< 5	1.7	0	0.0
≤ 15	5	9.0	< 5	1.8	0	0.0	0	0.0
15-19	304	1,449.3	23	109.7	5	23.8	< 5	9.5
20-24	421	1,792.4	45	191.6	6	25.5	< 5	12.8
25-29	173	781.8	30	135.6	5	22.6	< 5	4.5
30-34	62	322.5	18	93.6	< 5	20.8	< 5	5.2
35-39	30	152.6	12	61.0	< 5	5.1	0	0.0
≥ 40	22	11.5	13	6.8	7	3.7	< 5	0.5
Non-Hispanic White	862	265.9	110	33.9	22	6.8	6	1.9
Non-Hispanic Black	106	1,184.9	22	245.9	5	55.9	< 5	22.4
Hispanic	28	290.0	5	51.8	< 5	10.4	0	0.0

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2017.

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

Hispanics can be any race.

Rates are per 100,000 populations.

Rates were calculated using the U.S. Census Bureau 2016 and 2017 Population Estimates.

Counts < 5 have been suppressed.

Table 31: STDs, South Central Public Health Region, Tennessee, 2017

Gender	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	1,582	392.9	321	79.7	33	8.2	17	4.2
Male	518	260.8	163	82.1	29	14.6	14	7.0
Female	1,064	521.5	158	77.4	< 5	2.0	< 5	1.5
≤ 15	9	11.6	0	0.0	0	0.0	0	0.0
15-19	468	1,901.5	55	223.5	0	0.0	0	0.0
20-24	585	2,583.2	107	472.5	10	44.2	8	35.3
25-29	305	1,140.9	79	295.5	7	26.2	< 5	15.0
30-34	116	480.7	35	145.0	5	20.7	< 5	8.3
35-39	45	181.4	17	68.5	0	0.0	0	0.0
≥ 40	54	26.7	28	13.8	11	5.4	< 5	1.5
Non-Hispanic White	1,091	317.1	194	56.4	18	5.2	8	2.3
Non-Hispanic Black	389	1,418.0	118	430.1	12	43.7	8	29.2
Hispanic	87	443.5	9	45.9	< 5	15.3	< 5	5.1

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2017.

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

Hispanics can be any race.

Rates are per 100,000 populations.

Rates were calculated using the U.S. Census Bureau 2016 and 2017 Population Estimates.

Counts < 5 have been suppressed.

Table 32: STDs, Southeast Public Health Region, Tennessee, 2017

Gender	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	1,178	353.9	404	121.4	35	10.5	12	3.6
Male	453	275.8	213	129.7	25	15.2	11	6.7
Female	725	430.1	191	113.3	10	5.9	< 5	0.6
≤ 15	< 5	7.0	< 5	1.7	0	0.0	0	0.0
15-19	281	1,283.3	51	232.9	0	0.0	0	0.0
20-24	435	2,096.0	113	544.5	< 5	19.3	< 5	9.6
25-29	259	1,241.1	113	541.5	8	38.3	< 5	4.8
30-34	86	476.7	57	315.9	< 5	22.2	< 5	16.6
35-39	59	301.1	33	168.4	5	25.5	< 5	5.1
≥ 40	54	31.0	36	20.6	14	8.0	5	2.9
Non-Hispanic White	869	292.4	285	95.9	26	8.7	10	3.4
Non-Hispanic Black	228	1,839.9	103	831.2	8	64.6	< 5	8.1
Hispanic	66	470.7	12	85.6	< 5	7.1	< 5	7.1

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2017.

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

Hispanics can be any race.

Rates are per 100,000 populations.

Rates were calculated using the U.S. Census Bureau 2016 and 2017 Population Estimates.

Counts < 5 have been suppressed.

Table 33: STDs, Upper Cumberland Public Health Region, Tennessee, 2017

Gender	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	1,163	330.1	372	105.6	25	7.1	12	3.4
Male	356	204.9	203	116.9	13	7.5	6	3.5
Female	807	451.9	169	94.6	12	6.7	6	3.4
≤ 15	7	11.4	< 5	3.3	0	0.0	0	0.0
15-19	307	1,425.0	36	167.1	< 5	4.6	< 5	4.6
20-24	467	2,076.7	136	604.8	< 5	8.9	< 5	4.4
25-29	212	966.9	76	346.6	< 5	9.1	< 5	4.6
30-34	80	422.8	48	253.7	5	26.4	< 5	15.9
35-39	49	250.2	35	178.7	< 5	10.2	< 5	5.1
≥ 40	41	22.0	39	20.9	13	7.0	5	2.7
Non-Hispanic White	953	295.5	298	92.4	22	6.8	12	3.7
Non-Hispanic Black	48	902.9	33	620.8	< 5	18.8	0	0.0
Hispanic	39	241.2	7	43.3	< 5	12.4	0	0.0

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2017.

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

Hispanics can be any race.

Rates are per 100,000 populations.

Rates were calculated using the U.S. Census Bureau 2016 and 2017 Population Estimates.

Counts < 5 have been suppressed.

Table 34: STDs, West Public Health Region, Tennessee, 2017

Gender	Chlamydia		Gonorrhea		Syphilis -All Stages		P&S Syphilis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total cases	2,875	545.9	900	170.9	45	8.5	11	2.1
Male	1,013	391.0	441	170.2	37	14.3	11	4.2
Female	1,862	695.7	459	171.5	8	3.0	0	0.0
≤ 15	26	27.4	6	6.3	< 5	1.1	0	0.0
15-19	938	2,772.6	186	549.8	< 5	11.8	< 5	3.0
20-24	1,123	3,454.4	319	981.3	14	43.1	6	18.5
25-29	468	1,442.4	203	625.6	6	18.5	< 5	3.1
30-34	175	594.0	98	332.6	5	17.0	< 5	3.4
35-39	80	257.8	45	145.0	< 5	12.9	0	0.0
≥ 40	64	23.9	43	16.1	11	4.1	< 5	0.7
Non-Hispanic White	1,046	253.8	317	76.9	18	4.4	< 5	1.0
Non-Hispanic Black	1,189	1,380.2	438	508.4	26	30.2	7	8.1
Hispanic	35	221.3	15	94.8	< 5	6.3	0	0.0

Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2017.

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

Hispanics can be any race.

Rates are per 100,000 populations.

Rates were calculated using the U.S. Census Bureau 2016 and 2017 Population Estimates.

Counts < 5 have been suppressed.