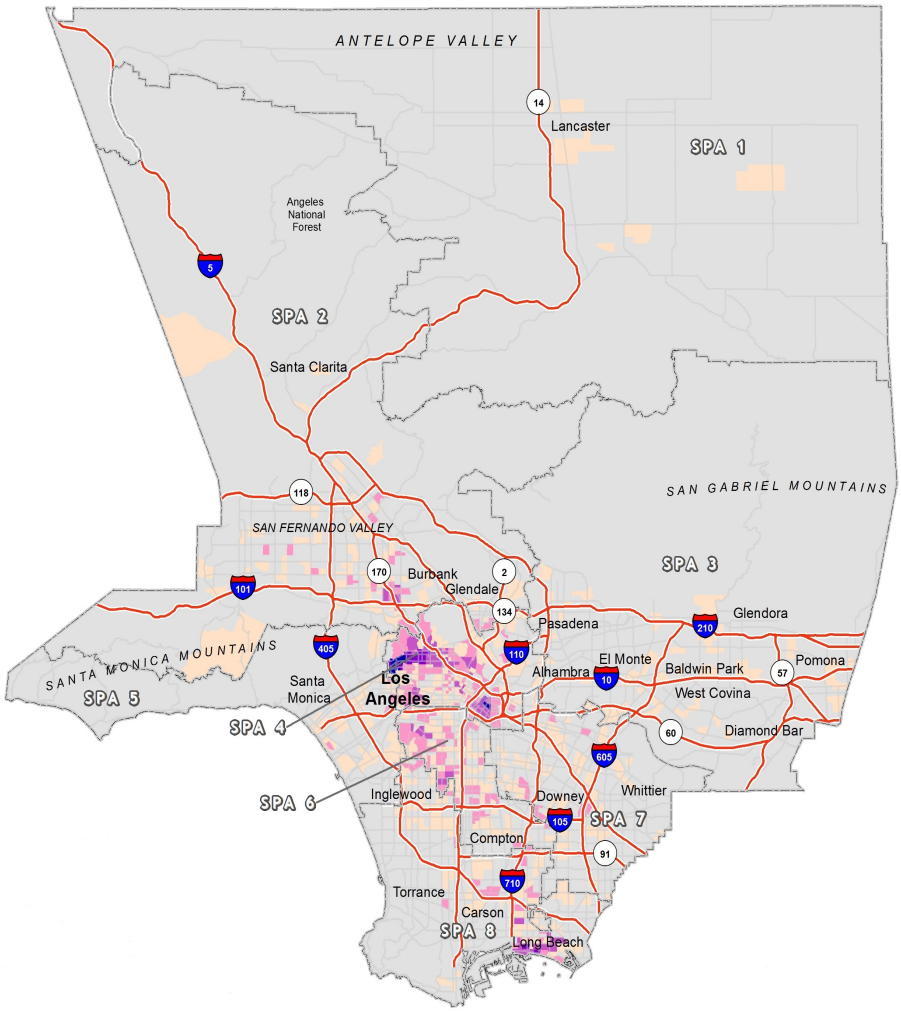
Los Angeles County Department of Public Health

2016 Annual Sexually Transmitted Disease Surveillance Report



COUNTY OF LOS ANGELES
Public Health

The Sexually Transmitted Disease (STD) Surveillance report is published annually by the STD Surveillance Unit, Division of HIV and STD Programs, Los Angeles County Department of Public Health, Los Angeles, California. Data presented in this report includes diagnoses of syphilis, gonorrhea and chlamydia reported for 2016 to the County Department of Public Health through September 20, 2017.

State and National STD Surveillance Data Sources:

Centers for Disease Control and Prevention (CDC) STD Data and Statistics:
https://www.cdc.gov/std/stats/default.htm

California Department of Public Health, STDs Control Branch:
https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/STD-Data.aspx

Acknowledgements

The following Los Angeles County staff contributed to the development of this report: Kacie Blackman, PhD, Yeghishe Nazinyan, MD, MS, Janice Casil, MPP, Jianning Luo, MS, STD Data Operations Unit and STD Quality Assurance Unit.

NOTICE TO HEALTH CARE PROVIDERS, LABORATORIES, AND OTHERS RESPONSIBLE FOR DISEASE REPORTING:

For Reporting Providers

California law (17 CCR §2505) requires health care providers to report chlamydia (including LGV), gonorrhea, and chancroid within 7 calendar days of diagnosis and to report syphilis within 1 working day. The reporting of STDs does not require patient consent and does not contradict the Health Insurance Portability and Accountability Act (HIPAA) Privacy Rule. STDs diagnosed in patients who reside in L.A. County should be reported to the Los Angeles County Department of Public Health, Division of HIV and STD Programs using the STD CMR form located on the DHSP website:
http://publichealth.lacounty.gov/dhsp/ReportCase/STD-CMR(Revised 05.08.2017).pdf

For Reporting Laboratories

California law (17 CCR §2505) requires laboratories to report positive tests for syphilis, gonorrhea, chlamydia trachomatis infections, including lymphogranuloma venereum. STD tests from patients who reside in L.A. County should be sent to the Los Angeles County Department of Public Health, Division of HIV and STD Programs within one working day after the health care provider, or other person authorized to retrieve the report, has been notified. A gonorrhea/chlamydia or syphilis report form should be completed and submitted.

Report a case:

By mail: Division of HIV and STD Programs (DHSP), 600 South Commonwealth Avenue, 10th Floor, Suite 1280, Los Angeles, CA 90005, or

Via fax: (213) 749-9602, or

Call: (213) 368-7441.

2016 Annual STD Surveillance Report

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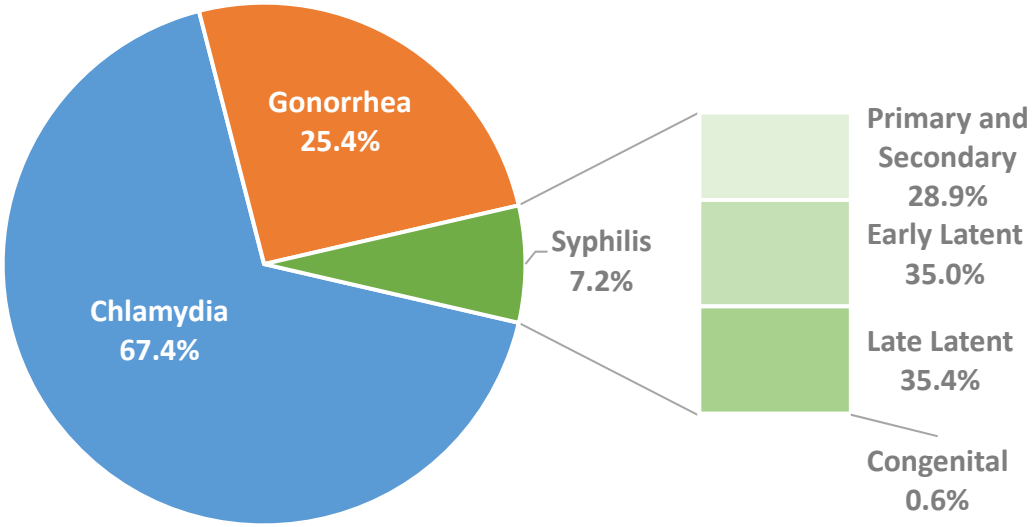
Overview of Sexually Transmitted Diseases (STDs) in Los Angeles County

This overview summarizes case counts, rates and recent trends in Los Angeles County (LAC) for syphilis, gonorrhea and chlamydia (see Table 1.1). As shown in Figure 1.1, there were a total of 86,888 cases of STDs reported in LAC in 2016, which includes data from Long Beach and Pasadena. The majority of reported cases (67.4%) were chlamydia followed by gonorrhea (25.4%) and syphilis (7.2%). Sixty-four percent of syphilis cases were staged as either primary, secondary or early latent (defined as early syphilis). Overall, the rates of all STDs have increased over the past ten years (Figure 1.2). Since 2006, rates for syphilis, gonorrhea and chlamydia have increased by 138%, 93% and 33%, respectively. When compared to other large urban counties in the US, LAC had the highest number of reported primary and secondary (P&S) syphilis, gonorrhea and chlamydia cases in 2016, however, LAC did not have the highest STD rates (see Table 1.2).

Figure 1.1. Reported STD Cases, Los Angeles County, 2016[1]
(N=86,888)



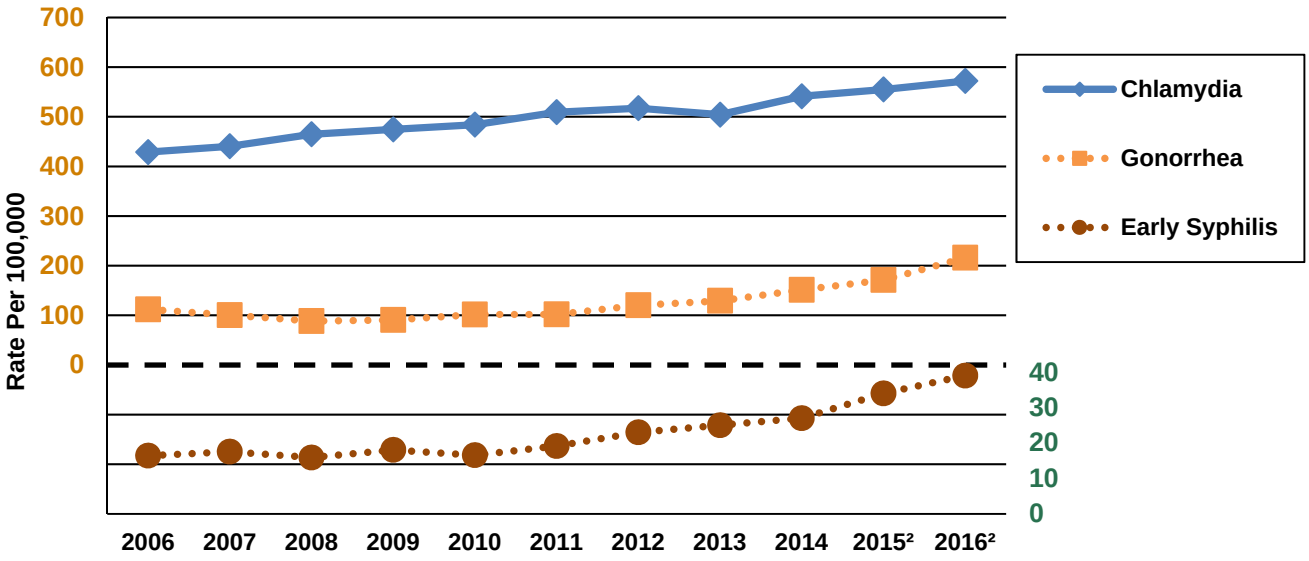
[1]2016 data are provisional due to reporting delay.

Table 1.1. STD Cases and Rates (per 100,000), Los Angeles County, 2012-2016

	2012[1]		2013[1]		2014[1]		2015[1,2]		2016[1,2]	
	N	Rt	N	Rt	N	Rt	N	Rt	N	Rt
Total										
Syphilis										
Early Syphilis[3]	2,264	23	2,465	25	2,683	27	3,446	34	4,010	39
Primary & Secondary	930	9	1,086	11	1,195	12	1,580	16	1,812	18
Early Latent	1,334	13	1,379	14	1,488	15	1,866	18	2,198	21
Late Latent/Late	1,005	10	1,478	15	1,491	15	1,661	16	2,223	22
Congenital[4]	8	12	9	7	33	25	24	19	39	32
Gonorrhea	11,909	120	12,948	129	15,227	151	17,436	171	22,071	216
Chlamydia	51,231	517	50,518	504	54,499	541	56,586	555	58,545	572
Male										
Syphilis										
Early Syphilis[3]	2,146	44	2,313	47	2,479	50	3,213	64	3,692	73
Primary & Secondary	901	18	1,036	21	1,138	23	1,481	29	1,674	33
Early Latent	1,245	25	1,277	26	1,341	27	1,732	34	2,018	40
Late Latent/Late	810	17	1,183	24	1,148	23	1,299	26	1,766	35
Gonorrhea	7,925	162	8,840	179	10,767	217	12,421	247	15,705	311
Chlamydia	17,885	366	17,853	361	20,475	412	21,748	432	23,532	466
Female										
Syphilis										
Early Syphilis[3]	92	2	128	3	164	3	208	4	261	5
Primary & Secondary	23	0	41	1	51	1	93	2	118	2
Early Latent	69	1	87	2	113	2	115	2	143	3
Late Latent/Late	191	4	285	6	317	6	344	7	421	8
Gonorrhea	3,932	78	4,047	80	4,401	86	4,948	96	6,079	117
Chlamydia	33,207	661	32,547	641	33,892	664	34,673	672	34,658	669
Transgender[5,6]										
Syphilis										
Early Syphilis[3]	-[7]	-	24	-	39	-	25	-	56	-
Primary & Secondary	<5	-	9	-	6	-	6	-	19	-
Early Latent	17	-	15	-	33	-	19	-	37	-
Late Latent/Late	<5	-	9	-	25	-	18	-	36	-
Gonorrhea	28	-	44	-	42	-	51	-	64	-
Chlamydia	27	-	38	-	50	-	51	-	38	-

[1] Rates based on observations fewer than 12 may not be reliable (see Technical Notes).
[2] Data are provisional due to reporting delay.
[3] Early syphilis includes primary, secondary and early latent syphilis.
[4] Rate calculated per 100,000 live births. 2015 and 2016 denominators are prelimanary.
[5] Rates cannot be calculated due to a lack of denominator data.
[6] Includes both male-to-female and female-to-male transgender individuals.
[7] Data is not displayed due to data suppresion rules.

Figure 1.2. Rates of Early Syphilis, Gonorrhea, and Chlamydia, Los Angeles County, 2006-2016[1]



[1] Early syphilis includes all cases staged as primary, secondary, or early latent; rates for 2009 are based on smoothed population estimates for the same years prepared by the Office of Health Assessment and Epidemiology, LAC/DPH.
[2] 2015 and 2016 data are provisional due to reporting delay.

Table 1.2. STD Cases and Rates (per 100,000) for Los Angeles County and Other US Counties, 2016[1]

	P&S Syphilis[2]		Gonorrhea		Chlamydia	
County	**N**	**Rt**	**N**	**Rt**	**N**	**Rt**
Los Angeles County	**1,812**	**18**	**17,563**	**174**	**56,968**	**563**
Bronx County, NY	396	27	3,682	253	17,043	1,171
Cook County, IL	1,018	19	13,608	260	41,056	784
Harris County, TX	357	8	8,496	187	27,847	614
King County, WA	293	14	3,355	159	9,422	445
Kings County, NY	497	19	5,840	222	19,900	755
Miami-Dade County, FL	537	20	3,064	114	12,687	471
New York County, NY	719	44	6,329	385	15,216	925
Queens County, NY	287	12	2,808	120	12,904	552
San Francisco County, CA	522	60	5,278	610	8,175	945

[1] Data are provisional due to reporting delay. Data sources: 2016 LAC/DPH STD Surveillance, CDC 2016 STD Surveillance report.

[2] P&S syphilis includes all cases staged as primary and secondary.

Syphilis in Los Angeles County

A total of 6,272 cases of syphilis were reported in LAC in 2016. Twenty-nine percent (n=1,812; 18 per 100,000) of cases were staged as either primary or secondary (P&S), 35% (n=2,198; 21 per 100,000) as early latent (EL) and 35% (n=2,223; 22 per 100,000) as late latent or late syphilis. Since 2012, the number of reported P&S, EL and late cases rose by 95%, 65% and 121%, respectively. There was also an increase of 388% in congenital syphilis cases from eight cases in 2012 to 39 cases in 2016 (see Table 1.1). As shown in Figures 2.1A and 2.1B, from 2012 to 2016 P&S and EL syphilis rates were higher in Los Angeles County (LAC) compared to California and the US. While the 2016 rate of P&S syphilis in LAC was 18 per 100,000, P&S syphilis rates in other large urban jurisdictions in the US ranged from 8 per 100,000 in Harris County, TX to 60 per 100,000 in San Francisco County, CA (see Table 1.2).[1]

Although a few tables and figures in this report present syphilis cases by P&S, EL and late stages, the majority provide data on early syphilis (ES), which includes all cases staged as primary, secondary and early latent. ES represents infectious cases that occurred within the past year and is used to describe the epidemiology of recent syphilis infections in LAC to help plan and direct syphilis control programs. The P&S, EL and late classifications are consistent with those used by the Centers for Disease Control and Prevention (CDC)[2] and most suitable for making comparisons between LAC and state or national data.

Gender: As shown in Table 2.1, most cases of ES in 2016 were among males (92%), followed by females (7%) and individuals who identified as transgender (1%). However, the proportion of cases attributed to transgender individuals may be underreported due to gender misclassification.

Age: ES morbidity occurred over a broad age range; ninety-three percent of cases in 2016 were among individuals aged 15-54 years (see Table 2.1). Among both males and females, ES rates were highest among individuals aged 25-29 years, 178 per 100,000 and 15 per 100,000, respectively (see Figures 2.2A and 2.2B).

Race/Ethnicity: While almost half of all ES cases in 2016 occurred among Latinos (49%), the rate of ES among African Americans (79 per 100,000) was over two times higher than the rate among Latinos (39 per 100,00) and whites (36 per 100,000). Among males, African Americans had a 2016 ES rate (146 per 100,000) that was more than two times higher than for white (69 per 100,000) and Latino males (71 per 100,000) (see Table 2.1 and Figure 2.3A). Among females, African Americans 2016 ES rate (15 per 100,000) was five times higher than white females (3 per 100,000), and 2.5 times higher than Latinas (6 per 100,000) (see Figure 2.3B).

Sexual Behavior: Among males with ES in 2016, 72% of cases occurred among men who have sex with men (MSM) or men who have sex with men and women (MSMW) (see Table 2.1).

Geographic Distribution: ES cases were concentrated within specific regions of LAC in 2016 (see Figure 2.5). Among males, the Metro SPA had the highest number (1,236), proportion (33%) and rate of ES (203 per 100,000) among all SPAs in the county. Among females, the South SPA had the highest number (69), proportion (26%) and rate of ES (13 per 100,000) among all SPAs in the county (see Table 2.1). The highest number, proportion and rate of ES cases were reported in Central (Metro SPA), Hollywood-Wilshire (Metro SPA) and Long Beach (South Bay SPA) health districts (see Table 2.2).

HIV Co-infection: Based on self-report during field services interviews and laboratory data, 57% of MSM/MSMW diagnosed with ES in 2016 were co-infected with HIV. From 2015 to 2016, the number of ES cases among MSM/MSMW who were co-infected with HIV increased by 8% from 1,391 to 1,496; the number of ES cases among MSM/MSMW who were not co-infected with HIV increased by 23% from 923 to 1,132 over this same time period (see Figure 2.6).

Field Services: In LAC, attempts are made to follow-up with syphilis cases in order to ensure proper treatment and to elicit sexual partners and other contacts who may also need treatment. In 2016, excluding cases reported from the cities of Long Beach and Pasadena, treatment was verified for 95% of all syphilis cases, 64% were interviewed and 18% provided information on at least one contact (see Figure 2.7). Treatment was verified for 50% of those contacts (see Figure 2.8).

Figure 2.1A. Primary & Secondary Syphilis Rates in the United States, California and Los Angeles County, 2012-2016[1]

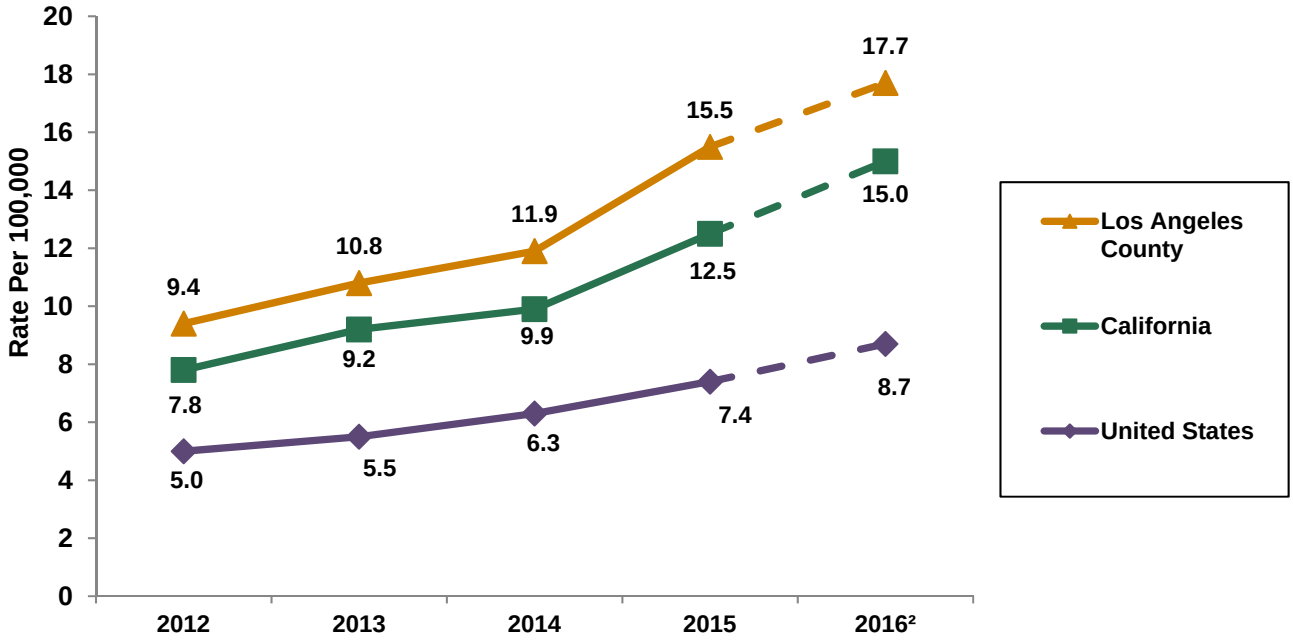
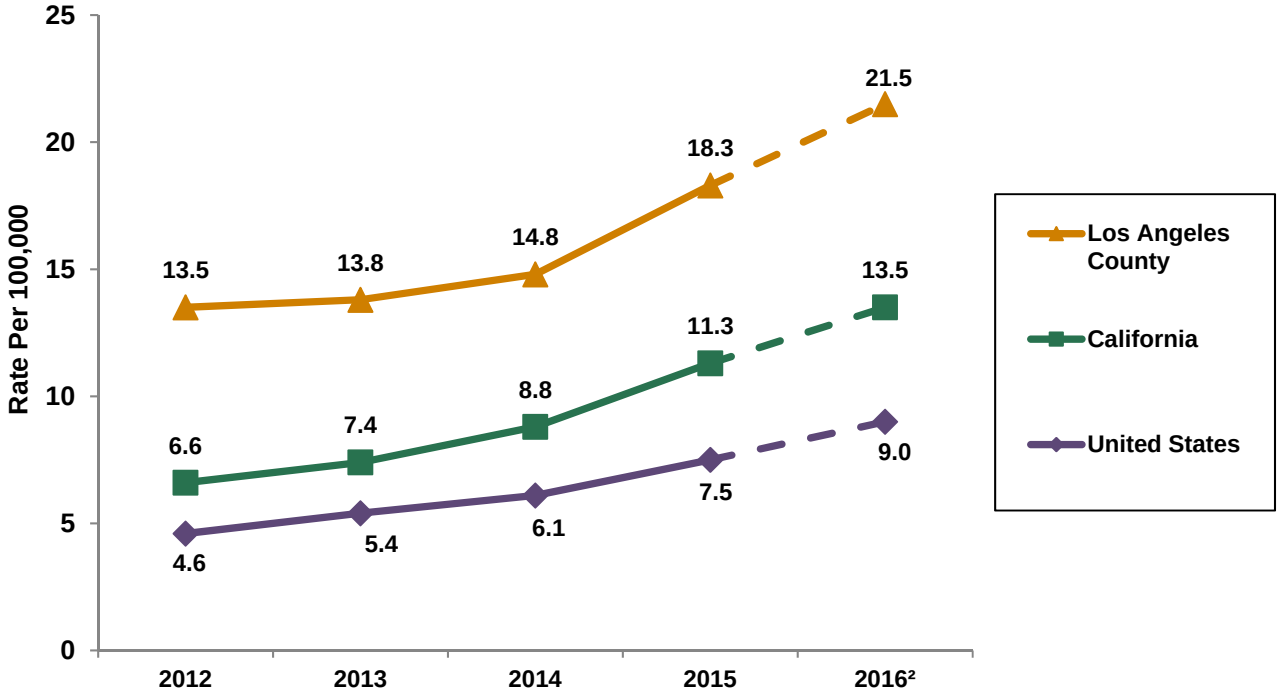


Figure 2.1B. Early Latent Syphilis Rates in the United States, California and Los Angeles County, 2012-2016[1]



[1] Data as of September 20, 2017. Data sources: LAC/DPH STD Surveillance, CDC 2016 STD Surveillance report.
[2] 2016 data are provisional due to reporting delay.

Table 2.1. Early Syphilis Cases and Rates (per 100,000) by Gender, Sexual Behavior, Age Group, Race/Ethnicity, and Service Planning Area (SPA), Los Angeles County, 2016[1]

	Male			Female			Total[2,3]		
	N	(%)	Rt	N	(%)	Rt	N	(%)	Rt
Gender									
Male	3,692	(100)	73	-	-	-	3,692	(92)	73
Female	-	-	-	261	(100)	5	261	(7)	5
Transgender[3]	-	-	-	-	-	-	56	(1)	-
Missing[3]	-	-	-	-	-	-	1	(0)	-
Sexual Behavior (males only)[3]									
MSM	2,545	(69)	-	-	-	-	-	-	-
MSMW	121	(3)	-	-	-	-	-	-	-
MSW	316	(9)	-	-	-	-	-	-	-
Missing	710	(19)	-	-	-	-	-	-	-
Age Group (Yr)									
0-14	<5	-	-	<5	-	-	<5	-	-
15-19	84	(2)	23	20	(8)	6	105	(3)	15
20-24	480	(13)	121	50	(19)	13	539	(13)	70
25-29	689	(19)	178	54	(21)	15	750	(19)	99
30-34	643	(17)	165	41	(16)	11	697	(17)	91
35-39	508	(14)	142	34	(13)	10	552	(14)	77
40-44	356	(10)	103	11	(4)	3	373	(9)	54
45-54	668	(18)	96	31	(12)	4	708	(18)	50
55-64	225	(6)	39	14	(5)	2	241	(6)	20
65+	35	(1)	6	<5	-	-	37	(1)	3
Missing[3]	<5	-	-	<5	-	-	5	(0)	-
Race/Ethnicity									
White	992	(27)	69	38	(15)	3	1,034	(26)	36
African American	594	(16)	146	69	(26)	15	683	(17)	79
Latino	1,775	(48)	71	143	(55)	6	1,947	(49)	39
Asian	159	(4)	23	5	(2)	1	166	(4)	11
Pacific Islander	25	(1)	206	<5	-	-	26	(1)	106
American Indian/Alaskan Native	12	(0)	129	<5	-	-	12	(0)	63
Other/Multi-race[3]	46	(1)	-	<5	-	-	49	(1)	-
Missing[3]	89	(2)	-	<5	-	-	93	(2)	-
Service Planning Area									
Antelope Valley [1]	48	(1)	25	7	(3)	4	55	(1)	14
San Fernando [2]	556	(15)	50	30	(11)	3	594	(15)	27
San Gabriel [3]	330	(9)	38	36	(14)	4	366	(9)	20
Metro [4]	1,236	(33)	203	34	(13)	6	1,294	(32)	109
West [5]	155	(4)	48	10	(4)	3	168	(4)	25
South [6]	458	(12)	88	69	(26)	13	534	(13)	50
East [7]	340	(9)	53	43	(16)	6	387	(10)	29
South Bay [8]	521	(14)	67	24	(9)	3	554	(14)	35
Missing[3]	48	(1)	-	8	(3)	-	58	(1)	-
Total	3,692	(100)	73	261	(100)	5	4,010	(100)	39

[1] Data are provisional due to reporting delay. Rates based on observations fewer than 12 may not be reliable (see technical notes). Early Syphilis includes all cases staged as either primary, secondary, or early latent. Data as of September 20, 2017.

[2] Includes missing gender, male-to-female transgender and female-to-male transgender.

[3] Rates cannot be calculated due to a lack of reliable denominator data.

Figure 2.2A. Early Syphilis Rates among Males by Age Group, Los Angeles County, 2012-2016[1]

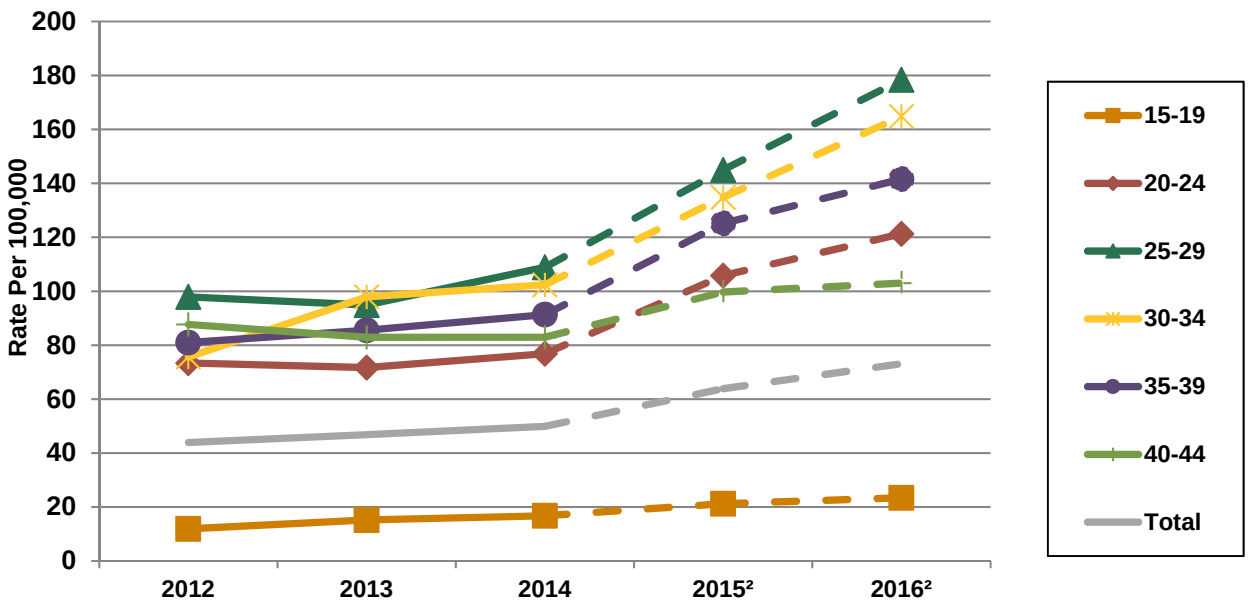
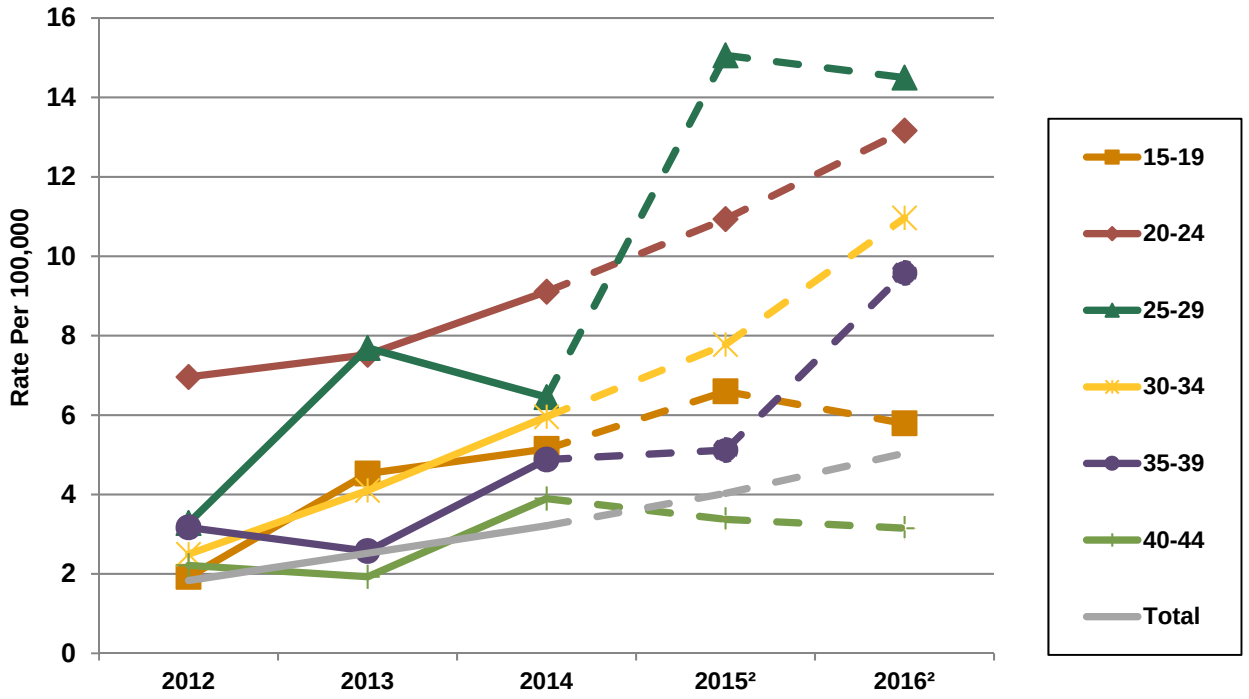


Figure 2.2B. Early Syphilis Rates among Females by Age Group, Los Angeles County, 2012-2016[1]



[1] Early Syphilis includes all cases staged as primary, secondary, or early latent. Data as of September 20, 2017.
[2] 2015-2016 data are provisional due to reporting delay

Figure 2.3A. Early Syphilis Rates among Males by Race/Ethnicity, Los Angeles County, 2012-2016[1]

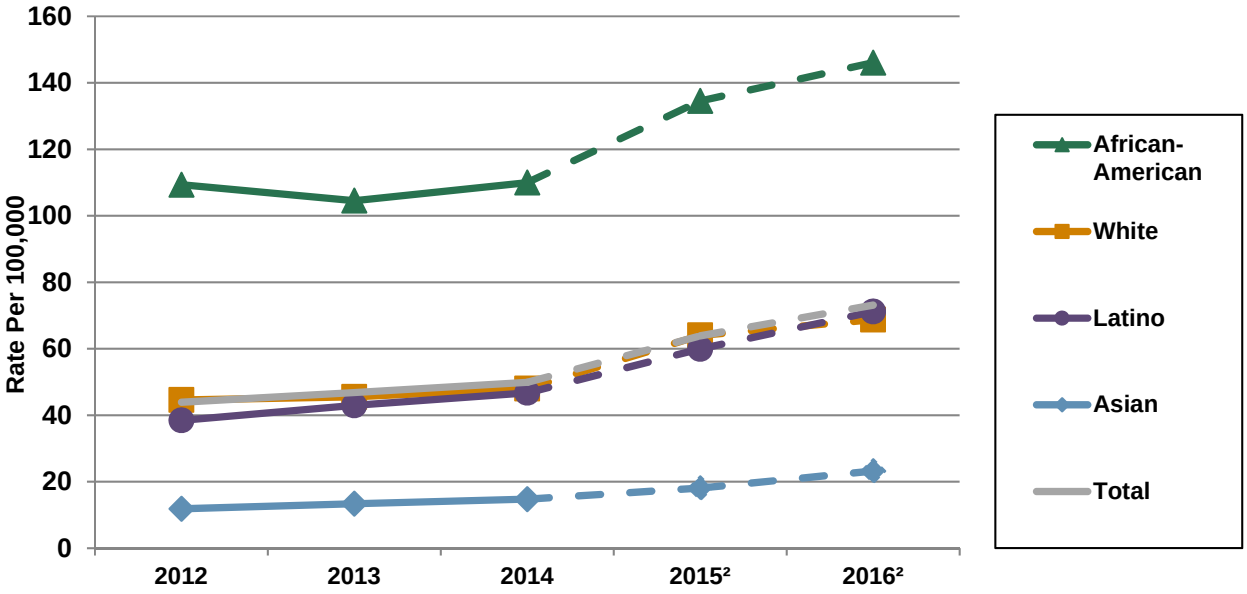
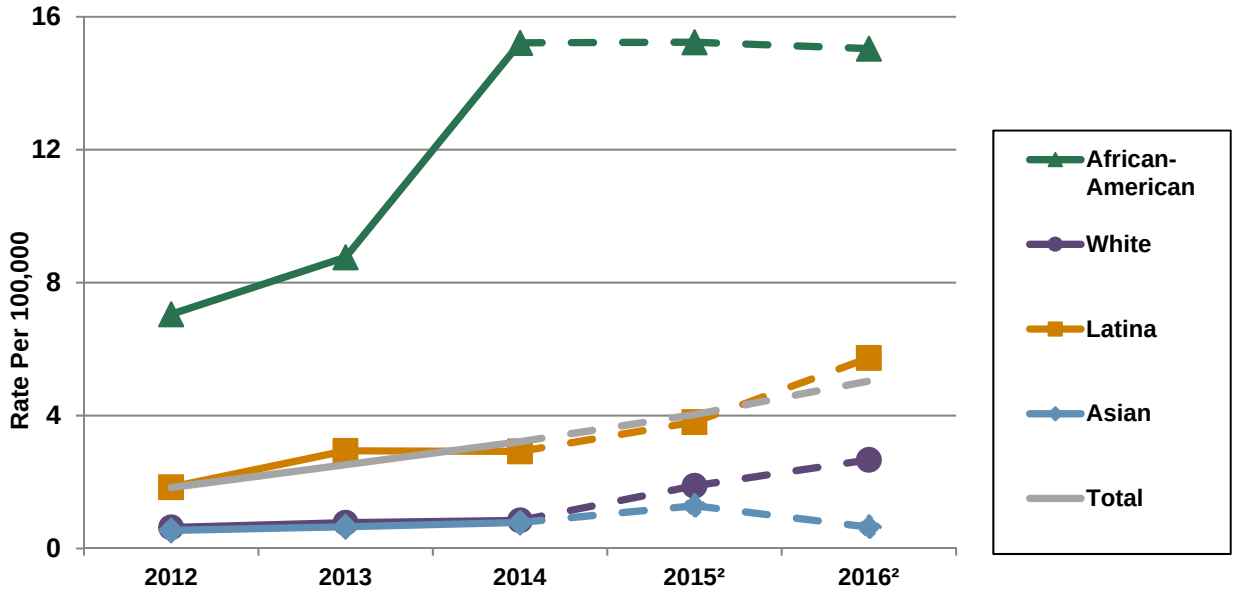


Figure 2.3B. Early Syphilis Rates among Females by Race/Ethnicity, Los Angeles County, 2012-2016[1]



[1] Data excludes cases with unknown race/ethnicity; Early Syphilis includes all cases staged as primary, secondary, or early latent; rates for Pacific Islanders and American Indians/Alaskan Natives are not presented due to small numbers that may cause unstable estimates. Data as of September 20, 2017.
[2] 2015-2016 data are provisional due to reporting delay.

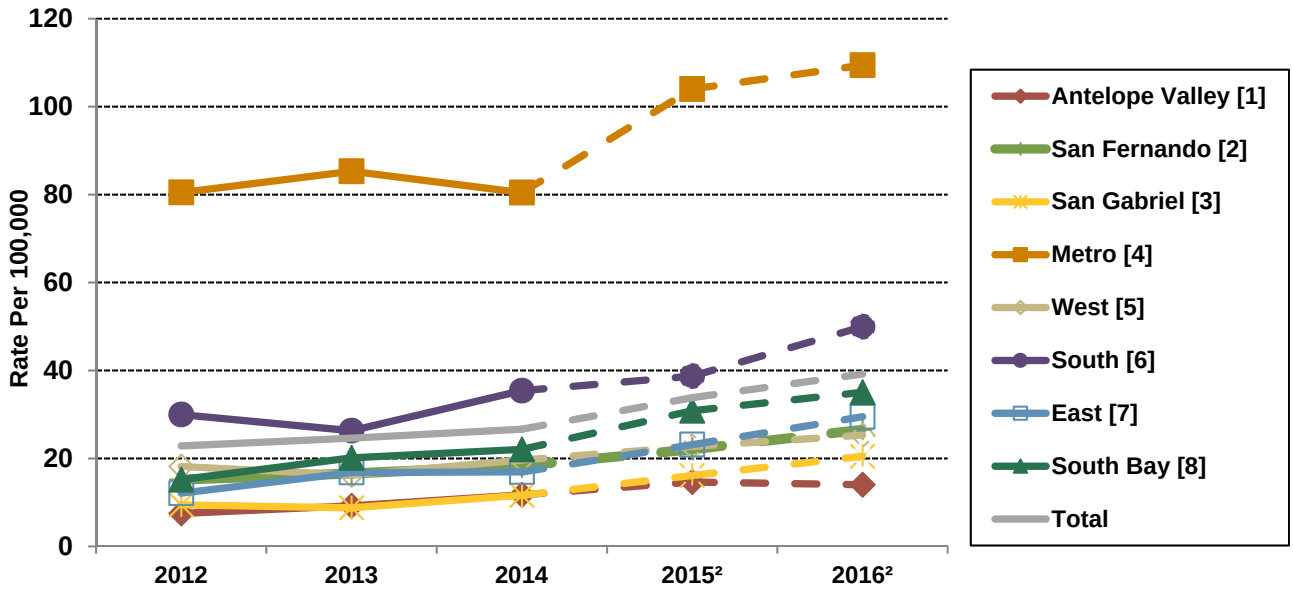
Table 2.2. Early Syphilis Cases and Rates (per 100,000) by Service Planning Area (SPA) and Health District (HD), Los Angeles County, 2012-2016[1]

	2012			2013			2014			2015[2]			2016[2]		
SPA/HD	**N**	**(%)**	**Rt**	**N**	**(%)**	**Rt**	**N**	**(%)**	**Rt**	**N**	**(%)**	**Rt**	**N**	**(%)**	**Rt**
Antelope Valley [1]	**29**	**(1)**	**7**	**36**	**(1)**	**9**	**46**	**(2)**	**12**	**58**	**(2)**	**15**	**55**	**(1)**	**14**
Antelope Valley	29	(1)	7	36	(1)	9	46	(2)	12	58	(2)	15	55	(1)	14
San Fernando [2]	**326**	**(14)**	**15**	**360**	**(15)**	**17**	**402**	**(15)**	**18**	**492**	**(14)**	**22**	**594**	**(15)**	**27**
East Valley	119	(5)	27	124	(5)	28	140	(5)	31	174	(5)	38	205	(5)	44
Glendale	51	(2)	15	47	(2)	14	62	(2)	18	78	(2)	22	93	(2)	27
San Fernando	40	(2)	8	54	(2)	11	57	(2)	11	64	(2)	12	80	(2)	15
West Valley	116	(5)	13	135	(5)	15	143	(5)	16	176	(5)	20	216	(5)	24
San Gabriel [3]	**166**	**(7)**	**9**	**156**	**(6)**	**9**	**207**	**(8)**	**12**	**290**	**(8)**	**16**	**366**	**(9)**	**20**
Alhambra	31	(1)	9	24	(1)	7	38	(1)	11	44	(1)	13	42	(1)	12
El Monte	34	(2)	8	47	(2)	11	60	(2)	14	87	(3)	20	113	(3)	26
Foothill	36	(2)	12	20	(1)	7	28	(1)	9	43	(1)	14	65	(2)	21
Pomona	37	(2)	7	54	(2)	10	66	(2)	12	85	(2)	15	111	(3)	20
Pasadena	28	(1)	20	11	(0)	8	15	(1)	11	31	(1)	22	35	(1)	25
Metro [4]	**904**	**(40)**	**80**	**973**	**(39)**	**85**	**925**	**(34)**	**80**	**1,214**	**(35)**	**104**	**1294**	**(32)**	**109**
Central	253	(11)	75	261	(11)	76	273	(10)	79	339	(10)	97	380	(9)	107
Hollywood-Wilshire	547	(24)	114	630	(26)	129	564	(21)	114	746	(22)	149	799	(20)	158
Northeast	104	(5)	34	82	(3)	27	88	(3)	28	129	(4)	41	115	(3)	36
West [5]	**116**	**(5)**	**18**	**105**	**(4)**	**16**	**128**	**(5)**	**20**	**150**	**(4)**	**23**	**168**	**(4)**	**25**
West	116	(5)	18	105	(4)	16	128	(5)	20	150	(4)	23	168	(4)	25
South [6]	**305**	**(13)**	**30**	**271**	**(11)**	**26**	**366**	**(14)**	**35**	**406**	**(12)**	**39**	**534**	**(13)**	**50**
Compton	52	(2)	19	52	(2)	18	64	(2)	23	65	(2)	23	109	(3)	38
South	65	(3)	34	55	(2)	29	68	(3)	35	71	(2)	36	106	(3)	52
Southeast	40	(2)	23	40	(2)	23	67	(2)	38	53	(2)	30	90	(2)	49
Southwest	148	(7)	39	124	(5)	33	167	(6)	44	217	(6)	56	229	(6)	58
East [7]	**157**	**(7)**	**12**	**220**	**(9)**	**17**	**222**	**(8)**	**17**	**306**	**(9)**	**23**	**387**	**(10)**	**29**
Bellflower	25	(1)	7	61	(2)	17	48	(2)	13	73	(2)	20	100	(2)	28
East Los Angeles	34	(2)	17	46	(2)	22	37	(1)	18	64	(2)	31	73	(2)	36
San Antonio	72	(3)	17	63	(3)	15	84	(3)	20	107	(3)	25	145	(4)	34
Whittier	26	(1)	8	50	(2)	16	53	(2)	16	62	(2)	19	69	(2)	21
South Bay [8]	**233**	**(10)**	**15**	**312**	**(13)**	**20**	**343**	**(13)**	**22**	**484**	**(14)**	**31**	**554**	**(14)**	**35**
Harbor	19	(1)	9	30	(1)	15	25	(1)	12	35	(1)	17	43	(1)	20
Inglewood	86	(4)	21	99	(4)	24	95	(4)	23	121	(4)	29	147	(4)	35
Torrance	28	(1)	6	36	(1)	8	42	(2)	9	58	(2)	13	59	(1)	13
Long Beach	100	(4)	21	147	(6)	31	181	(7)	38	270	(8)	57	305	(8)	63
Missing	**28**	**(1)**	**-**	**32**	**(1)**	**-**	**44**	**(2)**	**-**	**46**	**(1)**	**-**	**58**	**(1)**	**-**
Total	2,264	(100)	23	2,465	(100)	25	2,683	(100)	27	3,446	(100)	34	4010	(100)	39

[1] Rates based on observations fewer than 12 may not be reliable (see technical notes). Early Syphilis includes all cases staged as primary, secondary, or early latent
Data as of September 20, 2017.

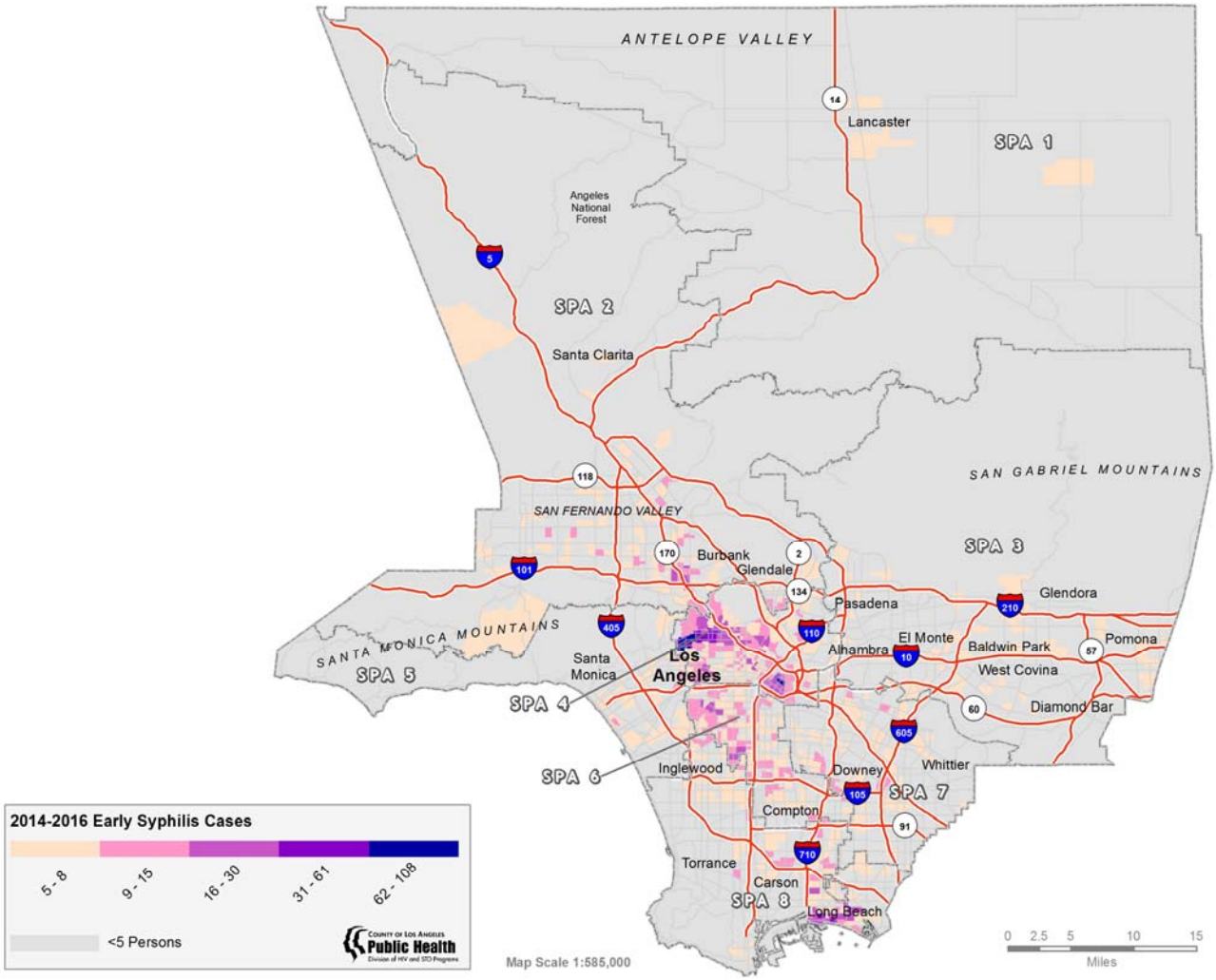
[2] Data are provisional due to reporting delay.

Figure 2.4. Early Syphilis Rates by Service Planning Area (SPA), Los Angeles County, 2012-2016[1]



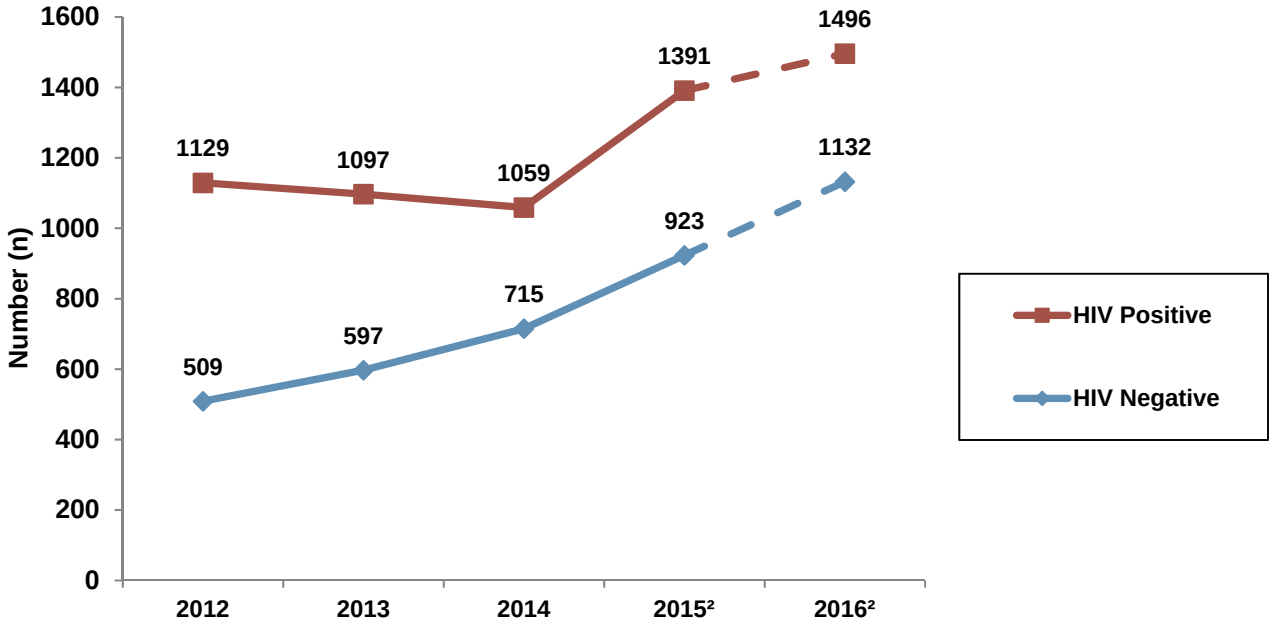
[1] Early syphilis includes all cases staged as primary, secondary, or early latent. Data excludes cases with unknown/missing SPA. Data as of September 20, 2017.
[2] 2015-2016 data are provisional due to reporting delay.

Figure 2.5. Early Syphilis Cases By Census Tract and Service Planning Area (SPA) Los Angeles County, 2014-2016[1]



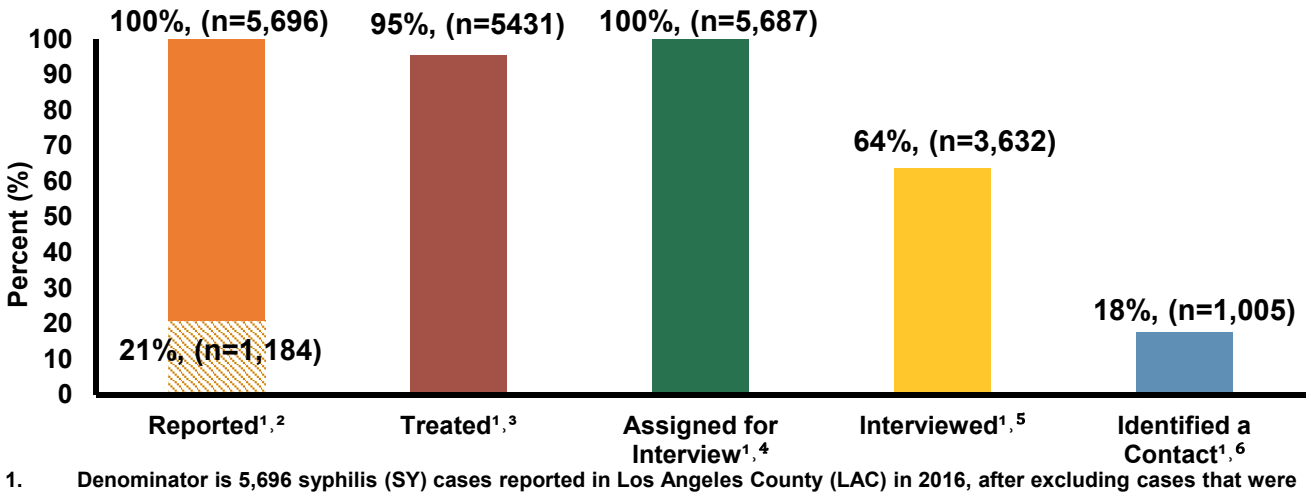
[1] 2015-2016 data are provisional due to reporting delay and suppressed for census tracts with <5 cases or population <100. Data as of September 20, 2017.
Total geocoded records within LA County borders: 9,719.
Data sources: LAC/DPH STD Surveillance, Long Beach Health and Human Services STD Surveillance, Pasadena Health Department STD Surveillance.

Figure 2.6. Number of Cases of Early Syphilis among MSM/MSMW by HIV Status, Los Angeles County, 2012-2016[1]



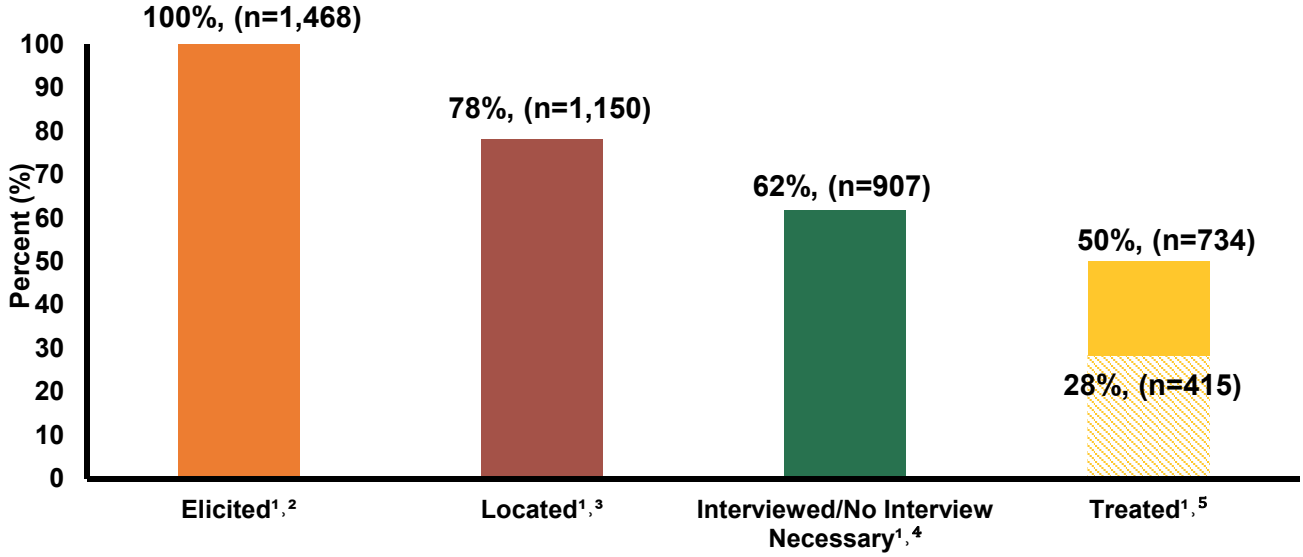
[1] MSM/MSMW=men who have sex with men/men who have sex with men and women; based on self-reported gender and gender of sex partners; HIV positive status includes cases that were either self-reported and/or laboratory confirmed. Data as of September 20, 2017.
[2] 2015-2016 data are provisional due to reporting delay.

Figure 2.7. Syphilis Index Case Continuum, Los Angeles County, 2016



1. Denominator is 5,696 syphilis (SY) cases reported in Los Angeles County (LAC) in 2016, after excluding cases that were out of jurisdiction (OOJ). These cases were staged as: primary or secondary (n=1,639), early latent (n=2,000), and late latent/late (n=2,057).
2. Numerator is # SY cases reported in LAC in 2016 after excluding cases that were OOJ; 15% were reported by county-run STD clinics and 6% were reported by county-run hospitals.
3. Numerator is # SY cases with documented treatment information.
4. Numerator is # SY cases assigned to a field services staff member for investigation.
5. Numerator is # SY cases interviewed by field services.
6. Numerator is # SY cases who identified at least one sexual and/or cluster contact; does not include cases that notified contacts themselves or that received provider-delivered partner services.

Figure 2.8. Syphilis Elicited Contact Continuum, Los Angeles County, 2016



1. Denominator is 1,468 contacts elicited from 1,005 syphilis (SY) index cases in 2016. Of these contacts: 1,321 were sexual partners, 106 were clusters, and 41 were missing information on contact type.
2. Numerator is # of contacts identified by index cases in 2016.
3. Numerator is # of contacts located by field services; excludes contacts with a disposition of "unable to locate," "insufficient information to begin investigation," "administrative/system closure," or that were missing a disposition.
4. Numerator is # of contacts who were either interviewed or had a disposition which indicated that their infection and/or treatment status was confirmed. A total of 197 new cases of syphilis were identified from these interviews. These new cases were staged as: primary (n=13), secondary (n=38) early latent (n=107), and late latent/late (n=39).
5. Numerator is total # of partners with documented treatment information; 28% of contacts had a disposition of "infected – brought to treatment" (n=199) or "preventative treatment – new" (n=216).

Gonorrhea in Los Angeles County

A total of 22,071 cases of gonorrhea were reported in Los Angeles County (LAC) in 2016. The number of reported cases rose in each of the past five years, resulting in an 85% increase from 2012 to 2016. The overall gonorrhea rate in LAC in 2016 was 216 per 100,000 (see Table 1.1). As shown in Figure 3.1, based on the most recent year for which national data are available, the gonorrhea rate in LAC in 2016 (216 per 100,000) was 31% higher than the rate in California (165 per 100,000) and 48% higher than the rate in the US (146 per 100,000). While the rate of gonorrhea in LAC was 216 per 100,000, gonorrhea rates in other large urban jurisdictions in the US ranged from 114 per 100,000 in Miami-Dade County, FL to 610 per 100,000 in San Francisco County, CA (see Table 1.2).

Gender: Seventy-one percent of gonorrhea cases in 2016 were among males and 28% were among females (see Table 3.1). Although transgender individuals accounted for less than 1% of the overall gonorrhea cases in 2016, there were 64 cases reported. While 64 cases were a substantial increase from the 28 cases reported in 2012, it is unclear to what extent gonorrhea morbidity was underreported in this population due to gender misclassification; caution should therefore be taken when interpreting overall case counts and trends over time among transgender individuals (see Table 1.1).

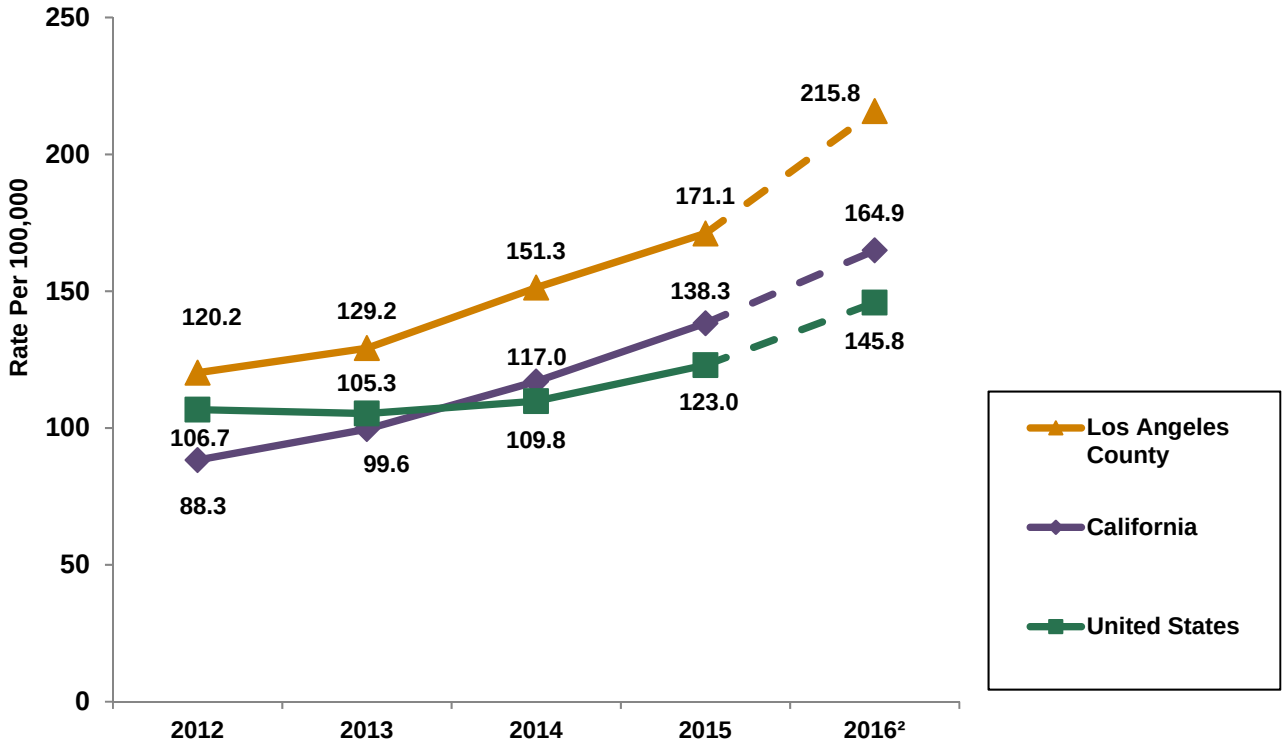
Age: Most cases of gonorrhea in 2016 occurred among individuals aged 15-34 years (72% - see Table 3.1). Females had a younger age distribution than males; fifty-two percent of cases among females were reported among individuals aged 15-24 years compared to 26% among males. Since 2012, the largest increases in gonorrhea rates have occurred among males aged 35-39 years (133%), 30-34 years (120%), and 25-29 years (106%) (see Figure 3.2A). Among females, the largest increases in gonorrhea rates occurred in those aged 35-39 (114%), 30-34 years (103%), and 40-44 (99%) (see Figure 3.2B).

Race/Ethnicity: While the largest proportion of gonorrhea cases in 2016 occurred among Latinos (38%), African Americans had the highest rate of disease (603 per 100,000 - see Table 3.1). This was especially true for African American females whose 2016 gonorrhea rate (376 per 100,000) was over six times higher than that of white females (59 per 100,000) and nearly 3.5 times higher than that of Latinas (108 per 100,000). Since 2012, gonorrhea rates increased by 98% among Latinas, 74% among white females, and 18% among Asian females, while rates among African American females remained fairly stable (see Figure 3.3B). Among males, African Americans had a 2016 gonorrhea rate (852 per 100,000) that was 3.8 times higher than Latinos (222 per 100,000) and 3.2 times higher than whites (266 per 100,000). Since 2012, gonorrhea rates increased by 107% for Asian males, 99% for Latino males, 79% for white males and 59% for African American males (see Figure 3.3A). Similarly, the highest rates of gonorrhea were among young African American males (aged 20-29) and females (aged 15-24) compared to other race/ethnicities (see Figures 3.4A and 3.4B).

Geographic Distribution: Gonorrhea cases were heavily concentrated within specific regions of LAC in 2016 (see Figure 3.6). Among males, the Metro SPA had the highest number (5,027), proportion (32%) and rate of gonorrhea (827 per 100,000) of all SPAs in the county. Among females, the South SPA had the highest number (1,505), proportion (25%) and rate of gonorrhea (275 per 100,000) of all SPAs in the county (see Table 3.1). The highest number, proportion and rates of gonorrhea cases were reported in Central and Hollywood-Wilshire health districts which are part of Metro SPA (see Table 3.2). Countywide, the largest increases in gonorrhea rates from 2015 to 2016 occurred in the East (36% increase), West (36% increase) and San Fernando Valley (29% increase) SPAs (see Figure 3.5).

Field Services: In LAC, attempts are made to follow-up with gonorrhea cases in order to ensure proper treatment and to elicit sexual partners and other contacts who may also need treatment. In 2016, treatment was verified for 92% of cases, 25% were interviewed and 7% provided information on at least one contact (see Figure 3.7). Among the contacts identified, 78% were located and 67% were either interviewed or it was determined that no interview was necessary (e.g. the contact was either not infected or had already received treatment). Treatment was verified for 59% of all elicited contacts (see Figure 3.8).

Figure 3.1. Gonorrhea Rates in the United States, California and Los Angeles County, 2012-2016[1]



[1] Data sources: LAC/DPH STD Surveillance, CDC 2016 STD Surveillance report. Data as of September 20, 2017.
[2] 2016 data are provisional due to reporting delay.

Table 3.1. Gonorrhea Cases and Rates (per 100,000) by Gender, Age Group, Race/Ethnicity, and Service Planning Area (SPA), Los Angeles County, 2016[1]

	Male			Female			Total[2]		
	N	(%)	Rt	N	(%)	Rt	N	(%)	Rt
Gender									
Male	15,705	(100)	311	-	-	-	15,705	(71)	311
Female	-	-	-	6,079	(100)	117	6,079	(28)	117
Transgender[3]	-	-	-	-	-	-	64	(0)	-
Missing[3]	-	-	-	-	-	-	223	(1)	-
Sexual Behavior (males only)[3]									
MSM	5,966	(38)	-	-	-	-	-	-	-
MSMW	339	(2)	-	-	-	-	-	-	-
MSW	3,067	(20)	-	-	-	-	-	-	-
Missing	6,333	(40)	-	-	-	-	-	-	-
Age Group (Yr)									
0-14	12	(0)	1	46	(1)	5	59	(0)	3
15-19	977	(6)	273	1,197	(20)	346	2,183	(10)	310
20-24	3,204	(20)	810	1,922	(32)	506	5,182	(23)	668
25-29	3,799	(24)	984	1,326	(22)	356	5,199	(24)	685
30-34	2,704	(17)	693	670	(11)	179	3,437	(16)	450
35-39	1,799	(11)	501	365	(6)	103	2,207	(10)	309
40-44	1,081	(7)	313	223	(4)	64	1,321	(6)	190
45-54	1,577	(10)	226	238	(4)	34	1,834	(8)	130
55-64	453	(3)	78	74	(1)	12	530	(2)	44
65+	93	(1)	16	13	(0)	2	107	(0)	8
Missing[3]	6	(0)	-	5	-	-	12	(0)	-
Race/Ethnicity									
White	3,838	(24)	266	843	(14)	59	4,700	(21)	164
African American	3,463	(22)	852	1,724	(28)	376	5,214	(24)	603
Latino	5,540	(35)	222	2,705	(44)	108	8,286	(38)	166
Asian	549	(3)	80	140	(2)	18	693	(3)	47
Pacific Islander	68	(0)	559	17	(0)	136	85	(0)	345
American Indian/Alaskan Native	47	(0)	504	11	(0)	111	58	(0)	302
Other/Multi-race[3]	609	(4)	-	141	(2)	-	752	(3)	-
Missing[3]	1,591	(10)	-	498	(8)	-	2,283	(10)	-
Service Planning Area									
Antelope Valley [1]	325	(2)	167	276	(5)	140	603	(3)	154
San Fernando [2]	2,190	(14)	197	744	(12)	66	2,956	(13)	132
San Gabriel [3]	1,258	(8)	144	659	(11)	72	1,918	(9)	107
Metro [4]	5,027	(32)	827	777	(13)	135	5,870	(27)	496
West [5]	949	(6)	295	180	(3)	53	1,133	(5)	171
South [6]	2,321	(15)	445	1,505	(25)	275	3,857	(17)	361
East [7]	1,146	(7)	178	731	(12)	110	1,887	(9)	144
South Bay [8]	1,983	(13)	256	1,055	(17)	131	3,054	(14)	193
Missing[3]	506	(3)	-	152	(3)	-	793	(4)	-
Total	15,705	(100)	311	6,079	(100)	117	22,071	(100)	216

[1] Data are provisional due to reporting delay. Rates based on observations fewer than 12 may not be reliable (see technical notes).

[2] Includes missing gender, male-to female-transgender and female-to-male transgender.

[3] Rates cannot be calculated due to a lack of reliable denominator data.

Figure 3.2A. Gonorrhea Rates among Males by Age Group, Los Angeles County, 2012-2016[1]

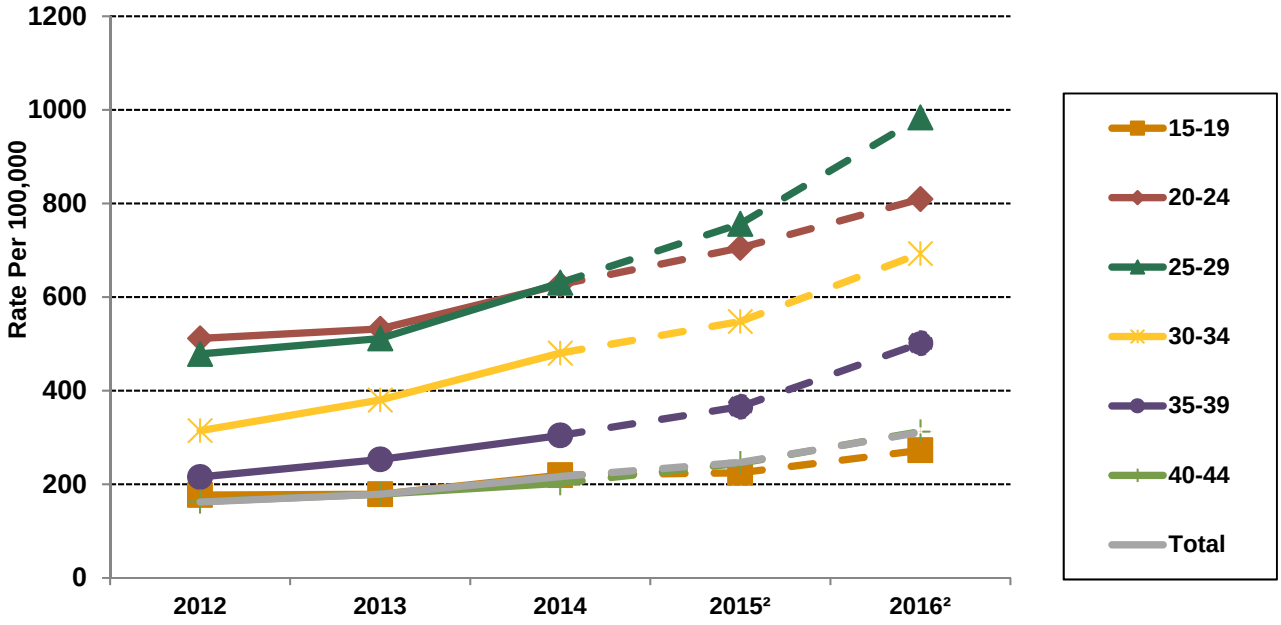
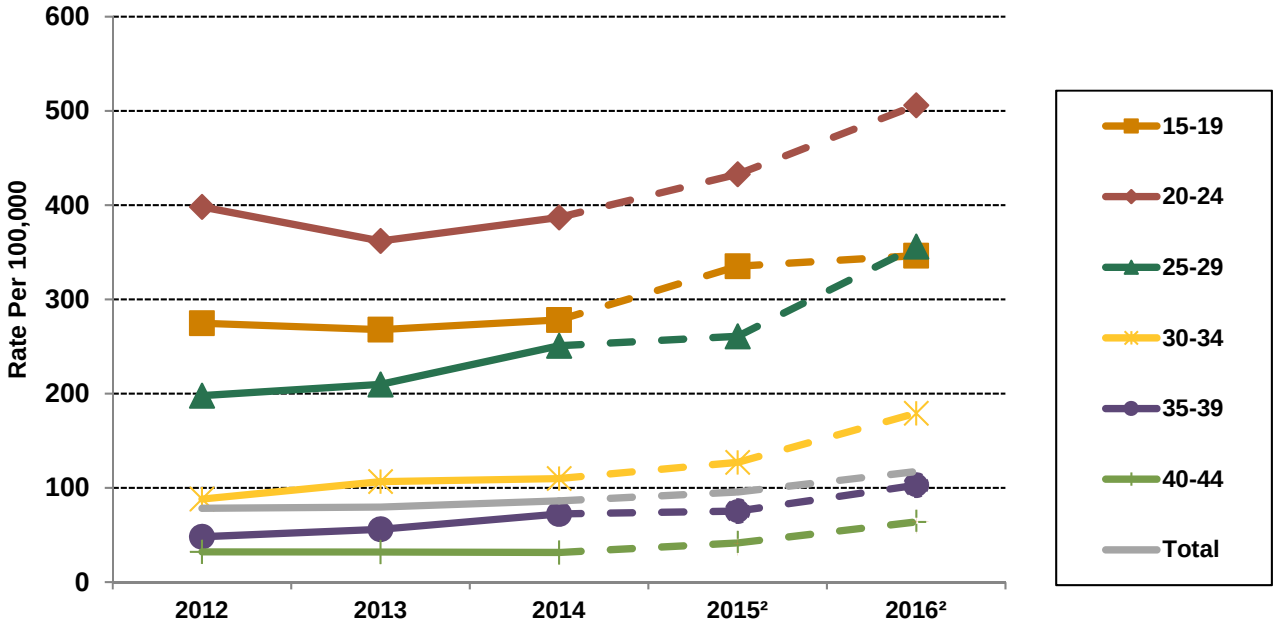


Figure 3.2B. Gonorrhea Rates among Females by Age Group, Los Angeles County, 2012-2016[1]



[1] Data as of September 20, 2017.
[2] 2015-2016 data are provisional due to reporting delay.

Figure 3.3A. Gonorrhea Rates among Males by Race/Ethnicity, Los Angeles County, 2012-2016[1]

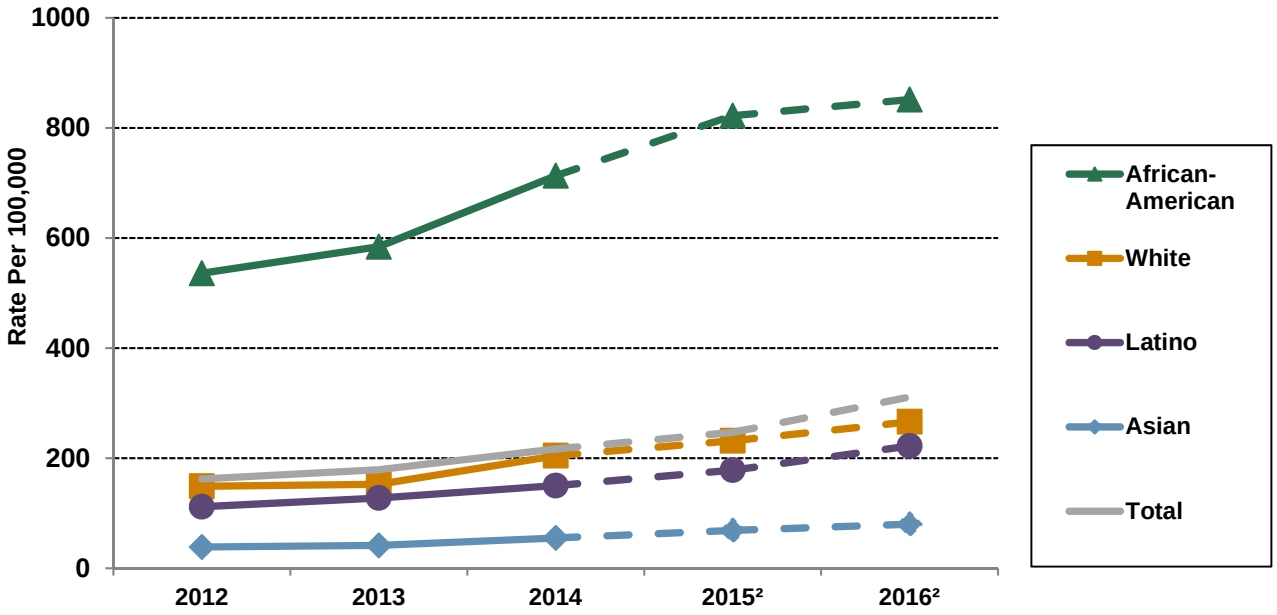
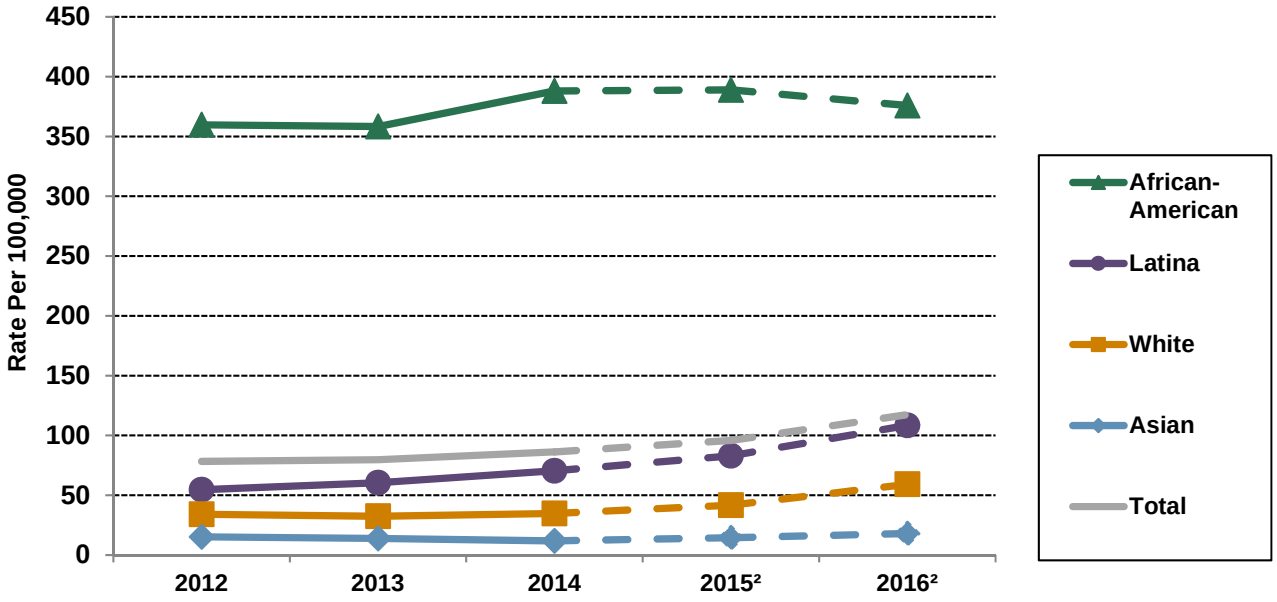


Figure 3.3B. Gonorrhea Rates among Females by Race/Ethnicity, Los Angeles County, 2012-2016[1]



[1] Data excludes cases with unknown race/ethnicity; rates for Pacific Islanders and American Indians/Alaskan Natives are not presented due to small numbers that may cause unstable estimates. Data as of September 20, 2017.
[2] 2015-2016 data are provisional due to reporting delay.

Figure 3.4A. Gonorrhea Rates among Males by Age Group and Race/Ethnicity, Los Angeles County, 2016[1]

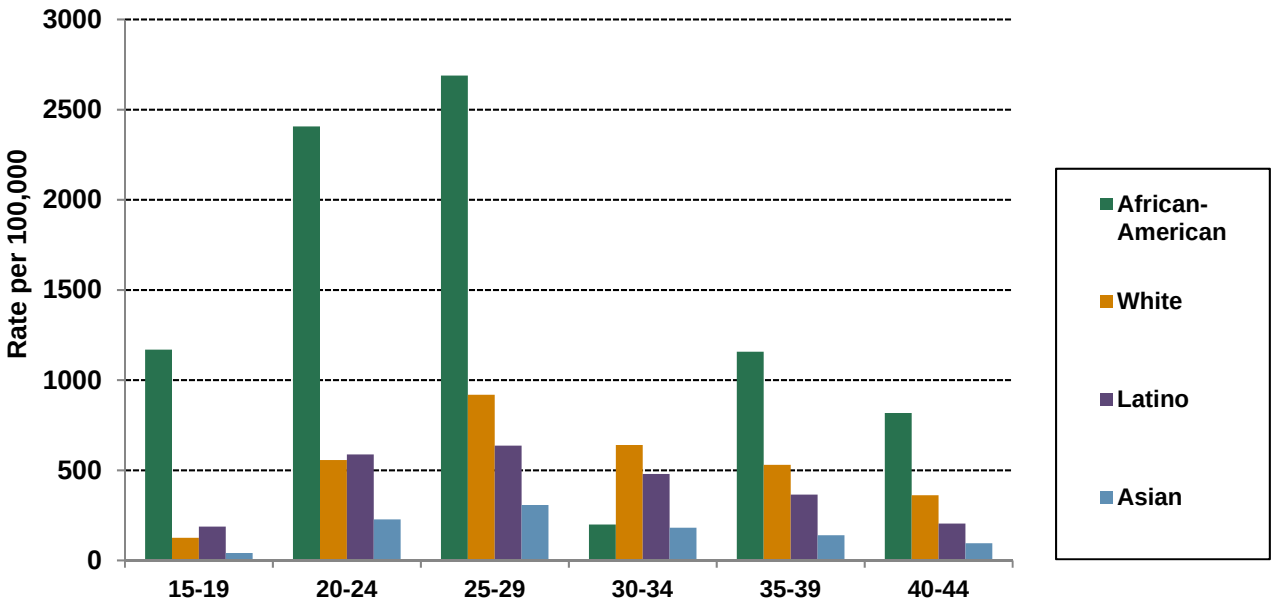
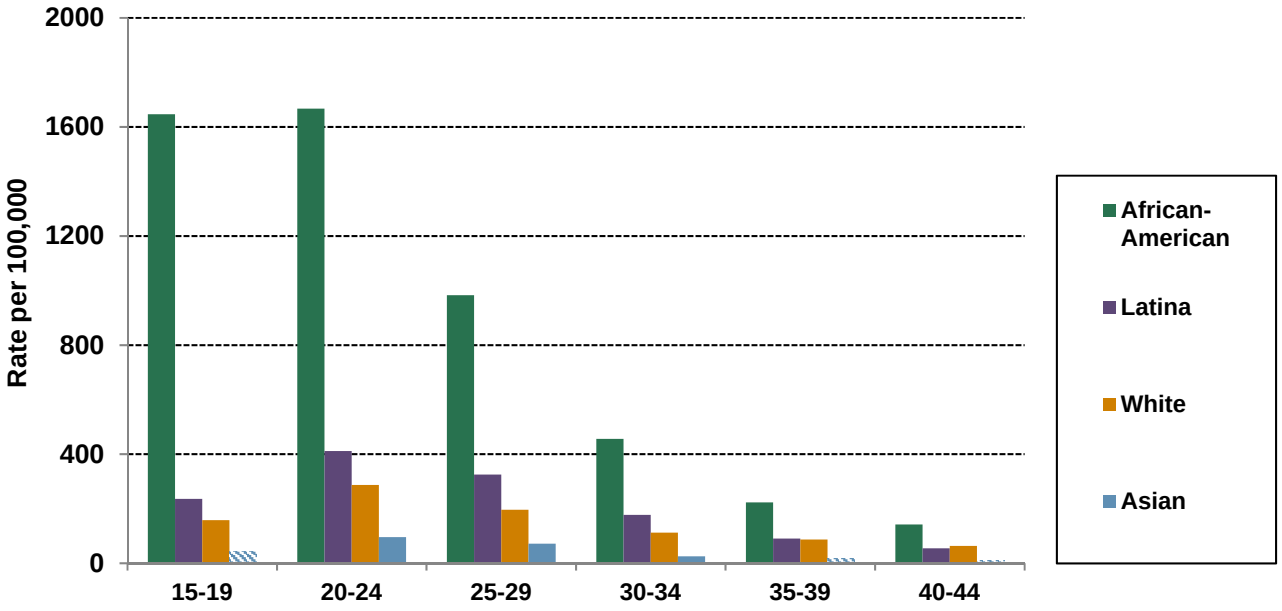


Figure 3.4B. Gonorrhea Rates among Females by Age Group and Race/Ethnicity, Los Angeles County, 2016[1]



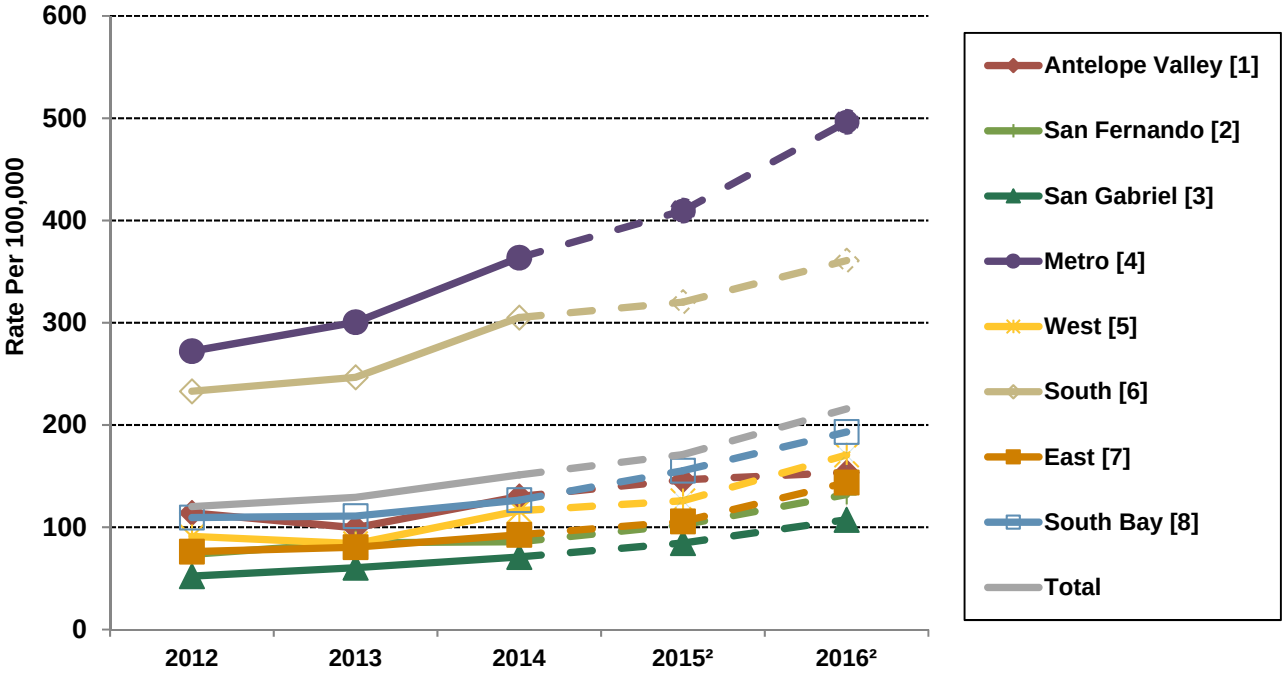
[1] Data excludes cases with unknown race/ethnicity; 2016 data are provisional due to reporting delay; rates with a pattern fill are unstable due to small numbers (<12); rates for groups with fewer than 5 cases are not shown; rates for Pacific Islanders and American Indians/Alaskan Natives are not presented due to small numbers that may cause unstable estimates. Data as of September 20, 2017.

Table 3.2. Gonorrhea Cases and Rates (per 100,000) by Service Planning Area (SPA) and Health District (HD), Los Angeles County, 2012-2016[1]

SPA/HD	2012			2013			2014			2015[2]			2016[2]		
	N	(%)	Rt	N	(%)	Rt	N	(%)	Rt	N	(%)	Rt	N	(%)	Rt
Antelope Valley [1]	**442**	**(4)**	**114**	**389**	**(3)**	**100**	**511**	**(3)**	**130**	**580**	**(3)**	**146**	**603**	**(3)**	**154**
Antelope Valley	442	(4)	114	389	(3)	100	511	(3)	130	580	(3)	146	603	(3)	154
San Fernando [2]	**1,578**	**(13)**	**73**	**1,846**	**(14)**	**85**	**1,880**	**(12)**	**86**	**2,282**	**(13)**	**102**	**2956**	**(13)**	**132**
East Valley	438	(4)	99	546	(4)	121	572	(4)	126	759	(4)	164	916	(4)	197
Glendale	245	(2)	73	263	(2)	77	257	(2)	75	292	(2)	84	399	(2)	115
San Fernando	237	(2)	47	296	(2)	58	288	(2)	56	339	(2)	65	457	(2)	87
West Valley	658	(6)	76	741	(6)	85	763	(5)	86	892	(5)	100	1184	(5)	132
San Gabriel [3]	**919**	**(8)**	**57**	**1,076**	**(8)**	**66**	**1,266**	**(8)**	**77**	**1,522**	**(9)**	**85**	**1918**	**(9)**	**107**
Alhambra	128	(1)	37	146	(1)	42	148	(1)	43	188	(1)	54	243	(1)	69
El Monte	247	(2)	57	276	(2)	63	248	(2)	56	369	(2)	83	432	(2)	99
Foothill	150	(1)	50	184	(1)	60	216	(1)	70	248	(1)	80	295	(1)	95
Pomona	351	(3)	65	423	(3)	78	581	(4)	107	615	(4)	112	805	(4)	147
Pasadena	43	(0)	30	47	(0)	33	73	(0)	51	102	(1)	71	143	(1)	100
Metro [4]	**3,058**	**(26)**	**272**	**3,428**	**(26)**	**301**	**4,181**	**(27)**	**364**	**4,781**	**(27)**	**410**	**5870**	**(27)**	**496**
Central	814	(7)	242	947	(7)	276	1,213	(8)	351	1,357	(8)	387	1728	(8)	486
Hollywood-Wilshire	1,923	(16)	399	2,114	(16)	432	2,578	(17)	522	2,993	(17)	597	3587	(16)	707
Northeast	321	(3)	105	367	(3)	119	390	(3)	126	431	(2)	137	555	(3)	174
West [5]	**582**	**(5)**	**91**	**543**	**(4)**	**84**	**758**	**(5)**	**116**	**831**	**(5)**	**126**	**1133**	**(5)**	**171**
West	582	(5)	91	543	(4)	84	758	(5)	116	831	(5)	126	1133	(5)	171
South [6]	**2,371**	**(20)**	**233**	**2,541**	**(20)**	**247**	**3,154**	**(21)**	**305**	**3,358**	**(19)**	**320**	**3857**	**(17)**	**361**
Compton	467	(4)	166	535	(4)	189	639	(4)	225	664	(4)	232	816	(4)	281
South	585	(5)	308	585	(5)	304	798	(5)	412	808	(5)	409	958	(4)	474
Southeast	254	(2)	149	297	(2)	171	371	(2)	213	408	(2)	228	460	(2)	248
Southwest	1,065	(9)	283	1,124	(9)	296	1,346	(9)	353	1,478	(8)	383	1623	(7)	415
East [7]	**989**	**(8)**	**76**	**1,054**	**(8)**	**80**	**1,216**	**(8)**	**93**	**1,398**	**(8)**	**106**	**1887**	**(9)**	**144**
Bellflower	270	(2)	76	247	(2)	69	300	(2)	84	405	(2)	112	530	(2)	151
East Los Angeles	175	(1)	86	196	(2)	96	186	(1)	91	228	(1)	110	300	(1)	147
San Antonio	325	(3)	77	356	(3)	84	438	(3)	103	444	(3)	103	629	(3)	146
Whittier	219	(2)	69	255	(2)	79	292	(2)	90	321	(2)	99	428	(2)	131
South Bay [8]	**1,680**	**(14)**	**158**	**1,720**	**(13)**	**160**	**1,968**	**(13)**	**182**	**2,437**	**(14)**	**155**	**3054**	**(14)**	**193**
Harbor	187	(2)	93	158	(1)	77	148	(1)	72	206	(1)	99	252	(1)	120
Inglewood	737	(6)	180	825	(6)	199	895	(6)	215	951	(5)	226	1076	(5)	254
Torrance	319	(3)	70	307	(2)	67	335	(2)	73	409	(2)	88	468	(2)	101
Long Beach	437	(4)	93	430	(3)	91	590	(4)	125	871	(5)	183	1258	(6)	259
Missing	**290**	**(2)**	**-**	**351**	**(3)**	**-**	**293**	**(2)**	**-**	**247**	**(1)**	**-**	**793**	**(4)**	**-**
Total	11,909	(100)	128	12,948	(100)	138	15,227	(100)	161	17,436	(100)	171	22071	(100)	216

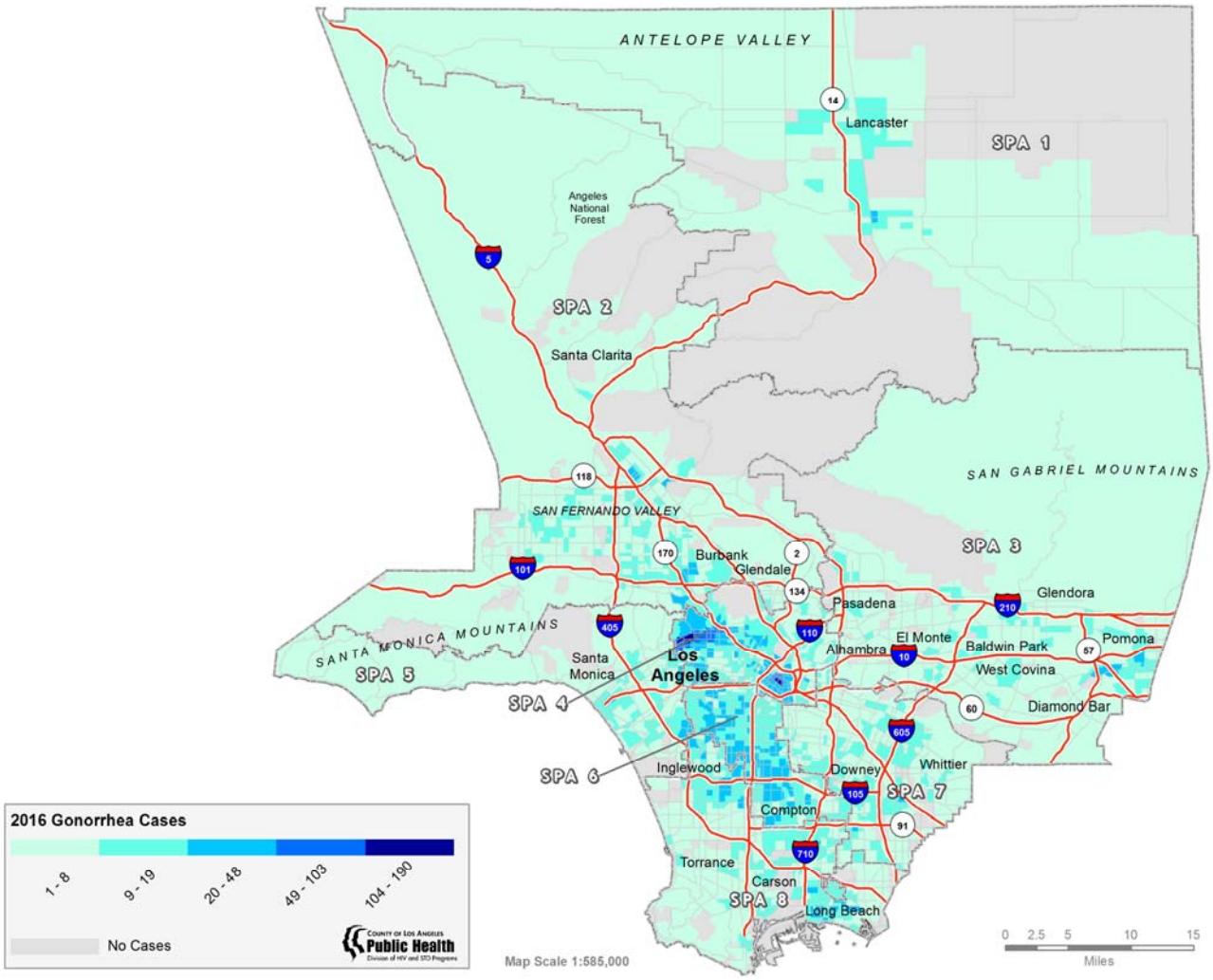
[1] Rates based on observations fewer than 12 may not be reliable (see technical notes). Data as of September 20, 2017.
[2] Data are provisional due to reporting delay.

Figure 3.5. Gonorrhea Rates by Service Planning Area (SPA), Los Angeles County, 2012-2016[1]



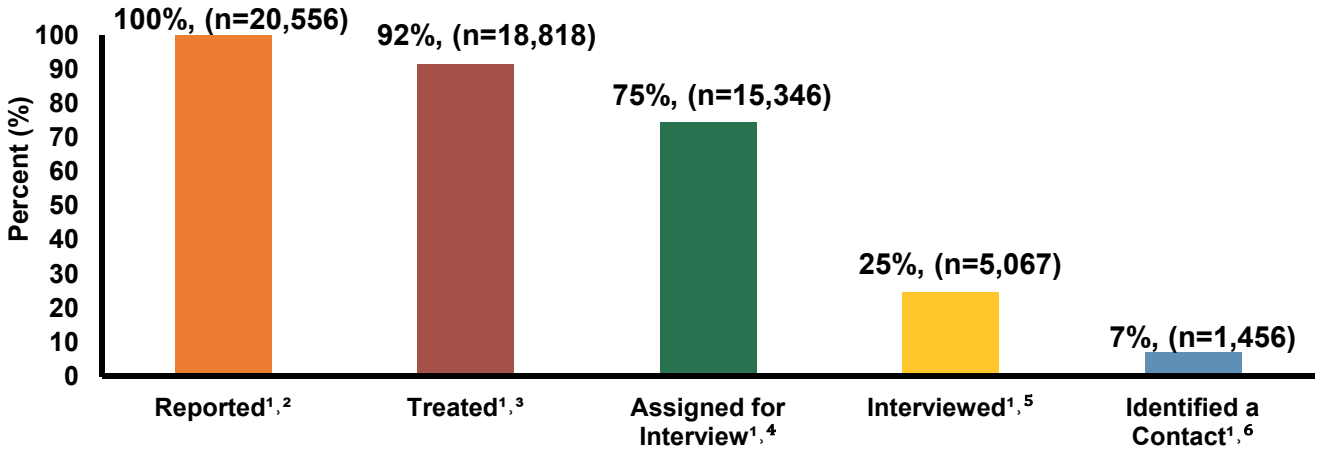
[1] Data excludes cases with unknown/missing SPA. Data as of September 20, 2017.
[2] 2015-2016 data are provisional due to reporting delay.

Figure 3.6. Gonorrhea Cases by Census Tract and Service Planning Area (SPA) Los Angeles County, 2016[1]



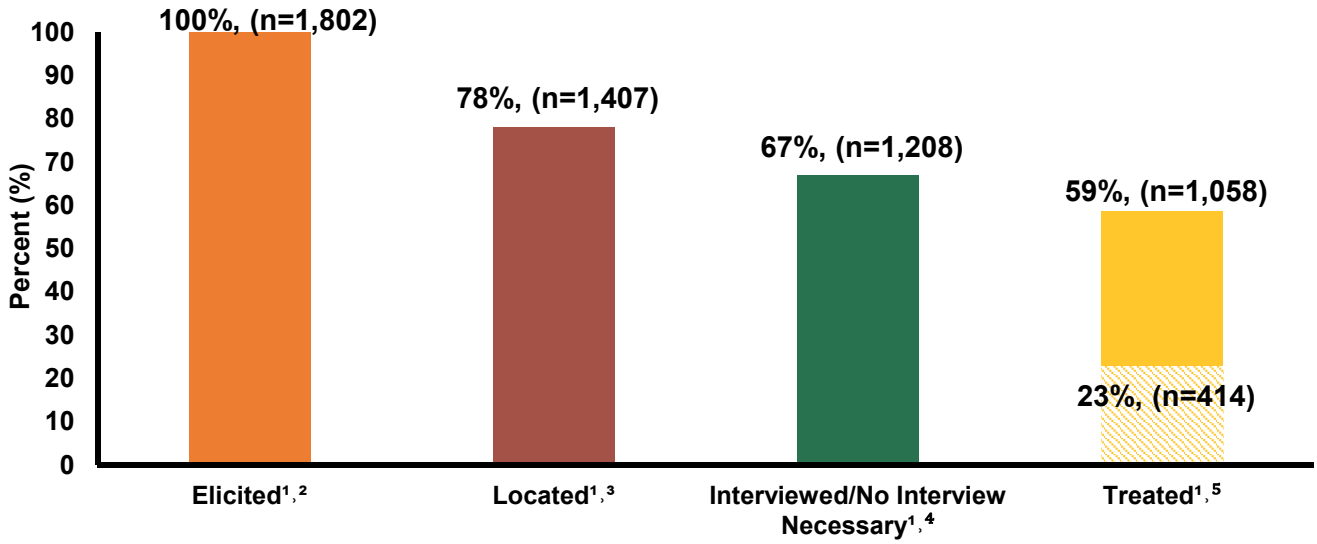
[1] 2016 data are provisional due to reporting delay and suppressed for census tracts with no cases or population <100. Data as of September 20, 2017.
Total geocoded records within LA County borders: 20,266.
Data sources: LAC/DPH STD Surveillance, Long Beach Health and Human Services STD Surveillance, Pasadena Health Department STD Surveillance.

Figure 3.7. Gonorrhea Index Case Continuum, Los Angeles County, 2016



1. Denominator is 20,556 Gonorrhea (GC) cases reported in Los Angeles County (LAC) in 2016, after excluding cases that were out of jurisdiction (OOJ).
2. Numerator is # GC cases reported in LAC in 2016 after excluding cases that were OOJ; 7% were reported by county-run STD clinics and 1% were reported by county-run hospitals.
3. Numerator is # GC cases with documented treatment information. 77% (n=15,903) received either a CDC-recommended or CDC- alternative treatment regimen
4. Numerator is # GC cases assigned to a field services staff member for investigation.
5. Numerator is # GC cases interviewed by field services.
6. Numerator is # GC cases who identified at least one sexual and/or cluster contact; does not include cases that notified contacts themselves or that received provider-delivered partner services.

Figure 3.8. Gonorrhea Elicited Contact Continuum, Los Angeles County, 2016



1. Denominator is 1,802 contacts elicited from 1456 gonorrhea(GC) index cases in 2016. Of these contacts: 1,682 were sexual partners, 88 were clusters, and 32 were missing information on contact type.
2. Numerator is # of contacts identified by index cases in 2016.
3. Numerator is # of contacts located by field services; excludes contacts with a disposition of "unable to locate," "insufficient information to begin investigation," "administrative/system closure," or that were missing a disposition.
4. Numerator is # of contacts who were either interviewed or had a disposition which indicated that their infection and/or treatment status was confirmed. A total of 211 new cases of gonorrhea were identified from these interviews
5. Numerator is total # of partners with documented treatment information; 23% of contacts had a disposition of "infected – brought to treatment" (n=214) or "preventative treatment – new" (n=200).

Chlamydia in Los Angeles County

A total of 58,545 cases of chlamydia were reported in Los Angeles County (LAC) in 2016. The number of reported cases rose over the past five years, resulting in a 14% increase from 2012 to 2016. The overall chlamydia rate in LAC in 2016 was 572 per 100,000 (see Table 1.1). As shown in Figure 4.1, based on the most recent year for which national data are available, the chlamydia rate in LAC in 2016 (572 per 100,000) was 13% higher than the rate in California (506 per 100,000) and 15% higher than the rate in the US (497 per 100,000). While the rate of chlamydia in LAC was 572 per 100,000, chlamydia rates in other large urban jurisdictions in the US ranged from 445 per 100,000 in King County, WA to 1,171 per 100,000 in Bronx County, NY (see Table 1.2).

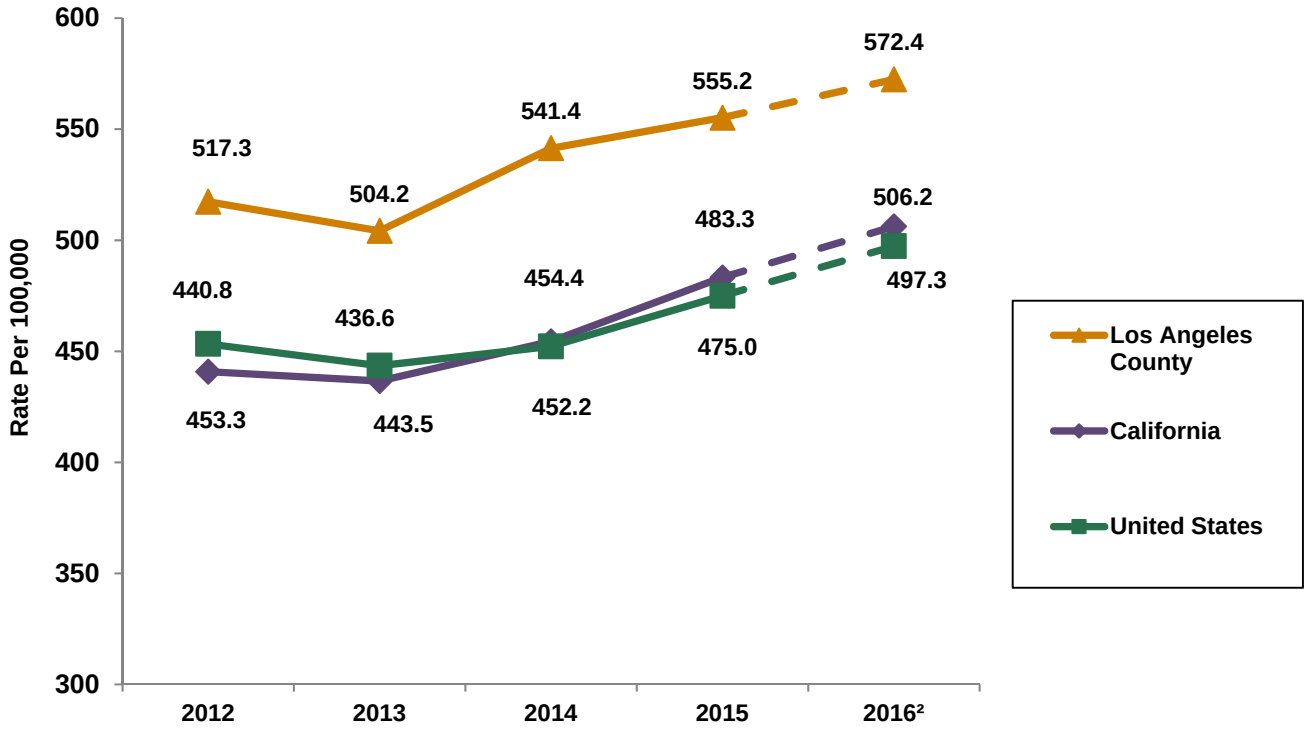
Gender: Fifty-nine percent of chlamydia cases in 2016 were among females and 40% were among males (see Table 4.1). While chlamydia rates rose in both males and females since 2012, there was a 32% increase in the rate among males compared to a four percent increase among females (see Table 1.1). In 2016, there were 38 cases of chlamydia reported among individuals who identified as transgender. While 38 cases was an increase from the 27 cases reported in 2012, it is unclear to what extent chlamydia morbidity is underreported in this population; caution should therefore be taken when interpreting overall case counts and trends over time among transgender individuals.

Age: Chlamydia infections were primarily concentrated among younger populations. In 2016, 90% of reported female cases and 76% of male cases occurred among individuals below the age of 35 (see Table 4.1). In addition, the highest rates of chlamydia were among males (1,596 per 100,000) and females (3,524 per 100,000) aged 20-24 years, however, since 2012, the largest increases in chlamydia rates have occurred among males aged 35-39 years (71%), and among females aged 40-44 years (27%) (see Figures 4.2A and 4.2B).

Race/Ethnicity: The largest proportion of Chlamydia cases in 2016 occurred among Latinos (28%), while African Americans and Whites contributed 13% and 9% (see Table 4.1). Unfortunately, due to incomplete reporting a large proportion of data on race/ethnicity for Chlamydia cases were missing, and rates by race/ethnicity could not be calculated. However, given the racial/ethnic distribution of LAC population and previous trend data, it can be inferred that the rate of Chlamydia was highest among African Americans in 2016.

Geographic Distribution: Compared to syphilis and gonorrhea, chlamydia cases were more evenly distributed throughout LAC (see Figure 4.6). In 2016, the proportion of chlamydia cases reported in each of the eight SPAs were as follows: 16% South, 15% Metro, 15% South Bay, 14% San Fernando, 11% East, 11% San Gabriel, 4% West and 4% Antelope Valley. Among males, the Metro SPA had the highest number (4,711), proportion (20%) and rate of chlamydia (775 per 100,000) of all SPAs in the county. Among females, the South SPA had the highest number (6,190), proportion (18%) and rate of chlamydia (1,132 per 100,000) of all SPAs in the county (see Table 4.1). The highest rate of chlamydia cases was observed in South health district (South SPA), meanwhile the highest chlamydia numbers and proportions were reported in Hollywood-Wilshire (Metro SPA), Southwest (South SPA) and West Valley (San Fernando SPA) health districts (see Table 4.2). Countywide, the largest increase in chlamydia rates from 2015 to 2016 occurred among the South Bay (4% increase), and the largest decreases occurred in Metro (9%), San Gabriel (6% decrease) and South (6% decrease) SPAs (see Figure 4.5).

Figure 4.1. Chlamydia Rates in the United States, California and Los Angeles County, 2012-2016[1]



[1] Data sources: LAC/DPH STD Surveillance, CDC 2016 STD Surveillance report. Data as of September 20, 2017.
[2] 2016 data are provisional due to reporting delay.

Table 4.1. Chlamydia Cases and Rates (per 100,000) by Gender, Age Group, Race/Ethnicity, and Service Planning Area (SPA), Los Angeles County, 2016[1]

	Male			Female			Total[2]		
	N	(%)	Rt	N	(%)	Rt	N	(%)	Rt
Gender									
Male	23,532	(100)	466	-	-	-	23,532	(40)	466
Female	-	-	-	34,658	(100)	669	34,658	(59)	669
Transgender[3]	-	-	-	-	-	-	38	(0)	-
Missing[3]	-	-	-	-	-	-	317	(1)	-
Age Group (Yr)									
0-14	34	(0)	4	166	(0)	18	200	(0)	11
15-19	2,338	(10)	652	7,405	(21)	2,143	9,789	(17)	1,391
20-24	6,316	(27)	1,596	13,384	(39)	3,524	19,791	(34)	2,552
25-29	5,525	(23)	1,431	7,308	(21)	1,962	12,920	(22)	1,703
30-34	3,557	(15)	912	3,065	(9)	820	6,668	(11)	873
35-39	2,198	(9)	613	1,530	(4)	431	3,762	(6)	527
40-44	1,311	(6)	379	813	(2)	233	2,143	(4)	309
45-54	1,667	(7)	239	753	(2)	106	2,445	(4)	174
55-64	496	(2)	86	176	(1)	28	677	(1)	56
65+	78	(0)	14	22	(0)	3	102	(0)	8
Missing[3]	12	(0)	-	36	(0)	-	48	(0)	-
Race/Ethnicity[4]									
White	3,155	(13)	-	2,003	(6)	-	5,166	(9)	-
African American	3,192	(14)	-	4,183	(12)	-	7,404	(13)	-
Latino	5,792	(25)	-	10,550	(30)	-	16,376	(28)	-
Asian	636	(3)	-	959	(3)	-	1,602	(3)	-
Pacific Islander	62	(0)	-	55	(0)	-	117	(0)	-
American Indian/Alaskan Native	29	(0)	-	39	(0)	-	68	(0)	-
Other/Multi-race[3]	780	(3)	-	769	(2)	-	1,553	(3)	-
Missing[3]	9,886	(42)	-	16,100	(46)	-	26,259	(45)	-
Service Planning Area									
Antelope Valley [1]	654	(3)	335	1,575	(5)	798	2,235	(4)	570
San Fernando [2]	3,373	(14)	304	4,988	(14)	442	8,387	(14)	375
San Gabriel [3]	2,132	(9)	244	4,321	(12)	473	6,467	(11)	362
Metro [4]	4,711	(20)	775	3,834	(11)	667	8,601	(15)	727
West [5]	1,222	(5)	379	1,229	(4)	359	2,463	(4)	371
South [6]	3,241	(14)	621	6,190	(18)	1,132	9,489	(16)	888
East [7]	2,108	(9)	327	4,464	(13)	669	6,593	(11)	502
South Bay [8]	3,017	(13)	390	5,548	(16)	688	8,603	(15)	544
Missing[3]	3,074	(13)	-	2,509	(7)	-	5,707	(10)	-
Total	23,532	(100)	466	34,658	(100)	669	58,545	(100)	572

[1] Data are provisional due to reporting delay. Rates based on observations fewer than 12 may not be reliable (see technical notes). Data as of September 20, 2017.

[2] Includes missing gender, male-to-female transgender and female-to-male transgender.

[3] Rates cannot be calculated due to a lack of reliable denominator data.

[4] Rates cannot be calculated due to the number of CT cases missing race/ethnicity. Follow-up on missing data is currently limited.

Figure 4.2A. Chlamydia Rates among Males by Age Group, Los Angeles County, 2012-2016[1]

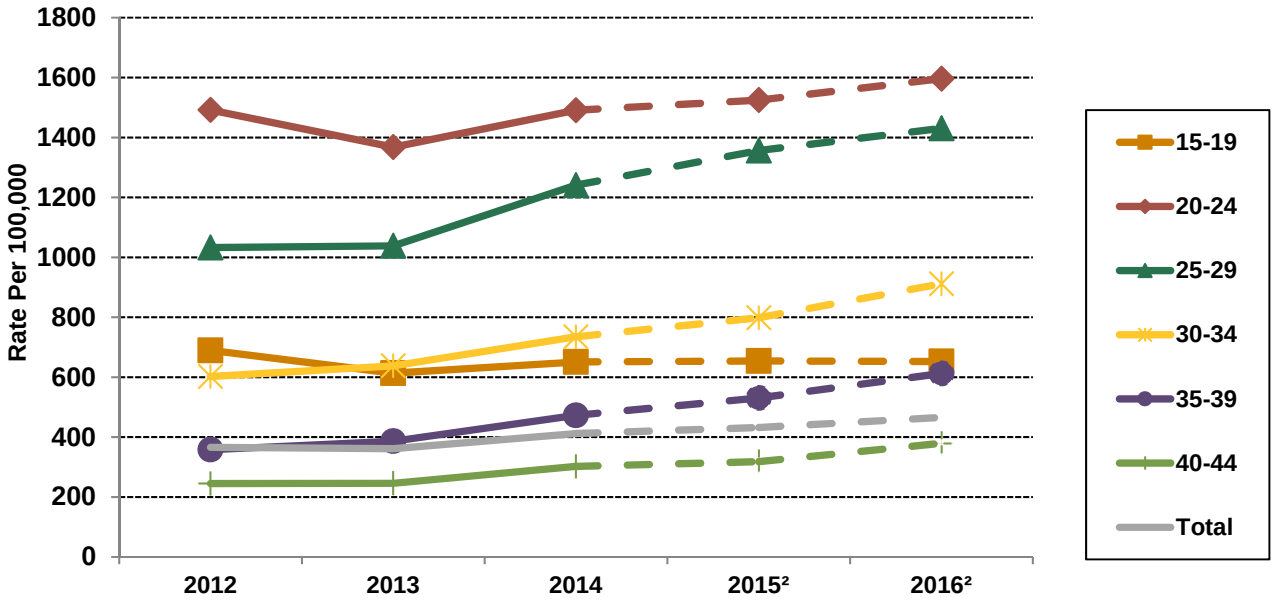
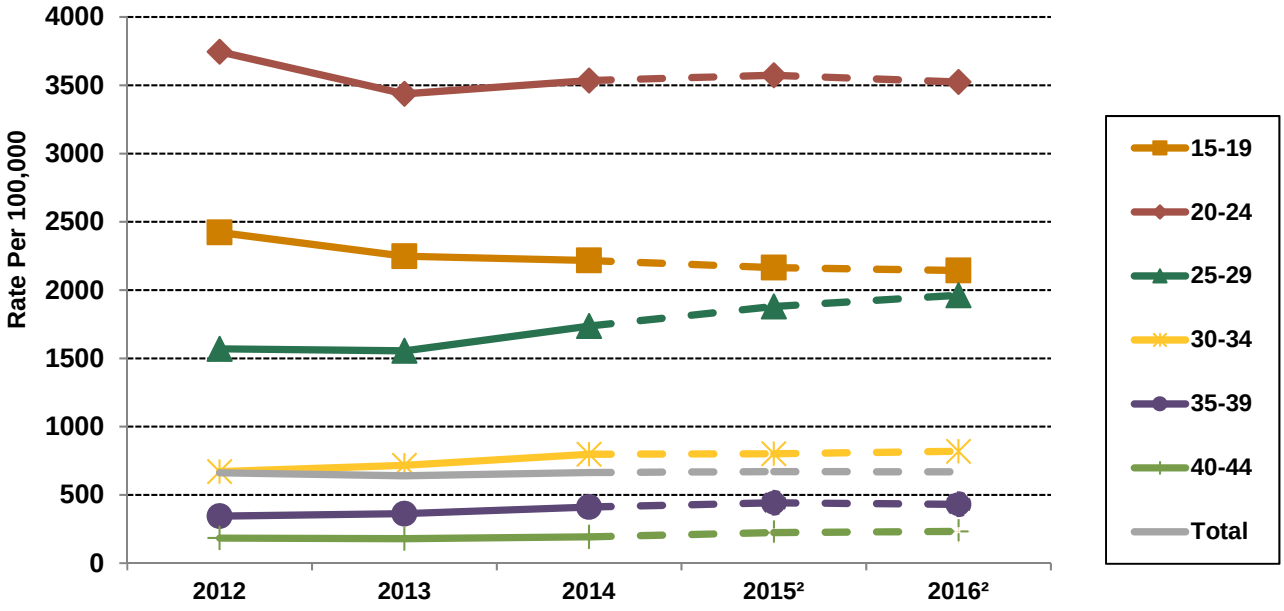


Figure 4.2B. Chlamydia Rates among Females by Age Group, Los Angeles County, 2012-2016[1]



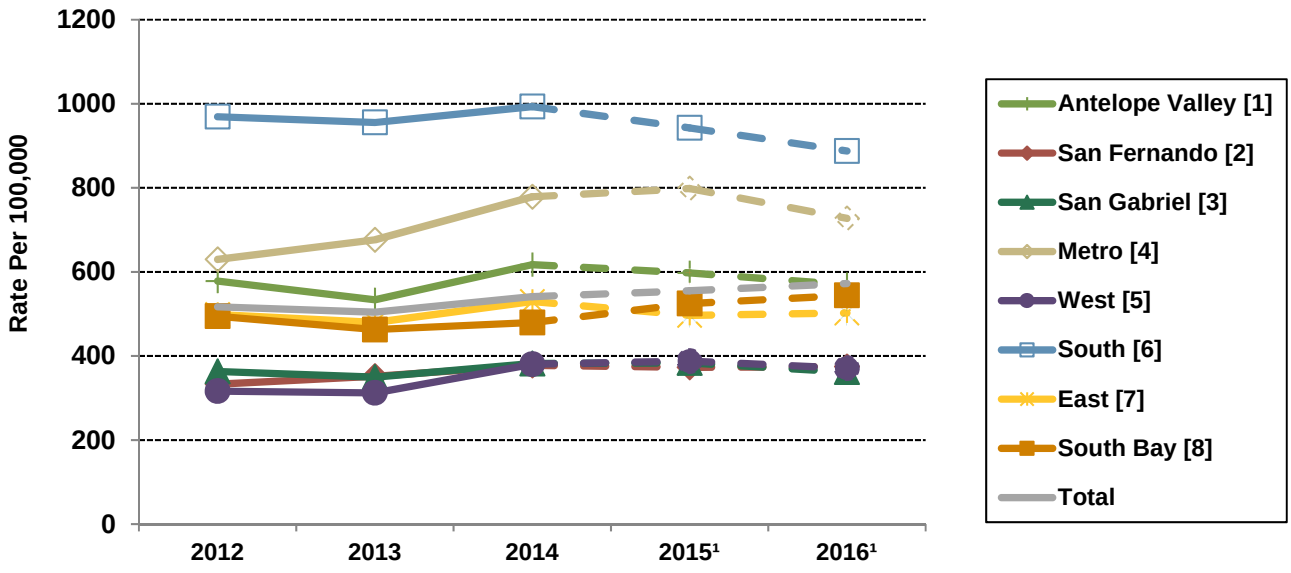
[1] Data as of September 20, 2017.
[2] 2015-2016 data are provisional due to reporting delay.

Table 4.2. Chlamydia Cases and Rates (per 100,000) by Service Planning Area (SPA) and Health District (HD), Los Angeles County, 2012-2016[1]

SPA/HD	2012			2013			2014			2015[2]			2016[2]		
	N	(%)	Rt	N	(%)	Rt	N	(%)	Rt	N	(%)	Rt	N	(%)	Rt
Antelope Valley [1]	**2,240**	**(4)**	**578**	**2,086**	**(4)**	**534**	**2,424**	**(4)**	**617**	**2,369**	**(4)**	**598**	**2,235**	**(4)**	**570**
Antelope Valley	2,240	(4)	578	2,086	(4)	534	2,424	(4)	617	2,369	(4)	598	2,235	(4)	570
San Fernando [2]	**7,145**	**(14)**	**333**	**7,649**	**(15)**	**352**	**8,271**	**(15)**	**378**	**8,313**	**(15)**	**373**	**8,387**	**(14)**	**375**
East Valley	1,809	(4)	407	1,972	(4)	438	2,167	(4)	478	2,250	(4)	487	2,085	(4)	448
Glendale	816	(2)	242	957	(2)	281	1,049	(2)	306	1,088	(2)	312	986	(2)	285
San Fernando	1,446	(3)	289	1,420	(3)	280	1,583	(3)	309	1,591	(3)	305	1,790	(3)	339
West Valley	3,074	(6)	355	3,300	(7)	377	3,472	(6)	394	3,384	(6)	378	3,526	(6)	392
San Gabriel [3]	**6,387**	**(12)**	**395**	**6,215**	**(12)**	**380**	**6,813**	**(13)**	**415**	**6,901**	**(12)**	**384**	**6,467**	**(11)**	**362**
Alhambra	843	(2)	245	823	(2)	237	962	(2)	277	936	(2)	267	928	(2)	265
El Monte	1,953	(4)	449	1,883	(4)	429	2,072	(4)	471	2,041	(4)	460	1,908	(3)	438
Foothill	915	(2)	303	922	(2)	301	1,003	(2)	325	988	(2)	317	930	(2)	300
Pomona	2,300	(4)	429	2,244	(4)	413	2,442	(4)	449	2,404	(4)	438	2,179	(4)	397
Pasadena	376	(1)	266	343	(1)	241	334	(1)	234	532	(1)	370	522	(1)	366
Metro [4]	**7,074**	**(14)**	**630**	**7,715**	**(15)**	**676**	**8,954**	**(16)**	**779**	**9,320**	**(16)**	**798**	**8,601**	**(15)**	**727**
Central	2,209	(4)	656	2,464	(5)	718	2,904	(5)	841	2,918	(5)	833	2,934	(5)	825
Hollywood-Wilshire	3,387	(7)	703	3,657	(7)	747	4,265	(8)	863	4,676	(8)	933	4,129	(7)	814
Northeast	1,478	(3)	485	1,594	(3)	517	1,785	(3)	575	1,726	(3)	547	1,538	(3)	481
West [5]	**2,021**	**(4)**	**316**	**2,018**	**(4)**	**312**	**2,481**	**(5)**	**380**	**2,560**	**(5)**	**388**	**2,463**	**(4)**	**371**
West	2,021	(4)	316	2,018	(4)	312	2,481	(5)	380	2,560	(5)	388	2,463	(4)	371
South [6]	**9,862**	**(19)**	**969**	**9,844**	**(19)**	**956**	**10,268**	**(19)**	**993**	**9,886**	**(17)**	**943**	**9,489**	**(16)**	**888**
Compton	2,444	(5)	870	2,398	(5)	845	2,579	(5)	907	2,353	(4)	822	2,243	(4)	773
South	2,245	(4)	1183	2,356	(5)	1224	2,363	(4)	1221	2,267	(4)	1148	2,167	(4)	1072
Southeast	1,465	(3)	857	1,436	(3)	825	1,502	(3)	862	1,479	(3)	826	1,444	(2)	779
Southwest	3,708	(7)	986	3,654	(7)	962	3,824	(7)	1002	3,787	(7)	982	3,635	(6)	929
East [7]	**6,476**	**(13)**	**499**	**6,283**	**(12)**	**480**	**6,949**	**(13)**	**530**	**6,571**	**(12)**	**497**	**6,593**	**(11)**	**502**
Bellflower	1,595	(3)	450	1,479	(3)	413	1,723	(3)	480	1,581	(3)	438	1,720	(3)	489
East Los Angeles	1,072	(2)	525	1,132	(2)	552	1,247	(2)	610	1,252	(2)	605	1,156	(2)	568
San Antonio	2,405	(5)	572	2,346	(5)	552	2,589	(5)	607	2,370	(4)	552	2,299	(4)	532
Whittier	1,404	(3)	441	1,326	(3)	412	1,390	(3)	431	1,368	(2)	420	1,418	(2)	436
South Bay [8]	**7,588**	**(15)**	**712**	**7,175**	**(14)**	**666**	**7,458**	**(14)**	**689**	**8,231**	**(15)**	**525**	**8,603**	**(15)**	**544**
Harbor	810	(2)	401	720	(1)	351	748	(1)	363	786	(1)	377	904	(2)	430
Inglewood	2,993	(6)	729	2,920	(6)	705	3,093	(6)	743	2,947	(5)	701	2,855	(5)	674
Torrance	1,426	(3)	314	1,420	(3)	310	1,553	(3)	338	1,538	(3)	332	1,473	(3)	319
Long Beach	2,359	(5)	504	2,115	(4)	448	2,064	(4)	436	2,960	(5)	621	3,371	(6)	694
Missing	**2,438**	**(5)**	**-**	**1,533**	**(3)**	**-**	**881**	**(2)**	**-**	**2,435**	**(4)**	**-**	**5,707**	**(10)**	-
Total	51,231	(100)	551	50,518	(100)	537	54,499	(100)	577	56,586	(100)	555	58,545	(100)	572

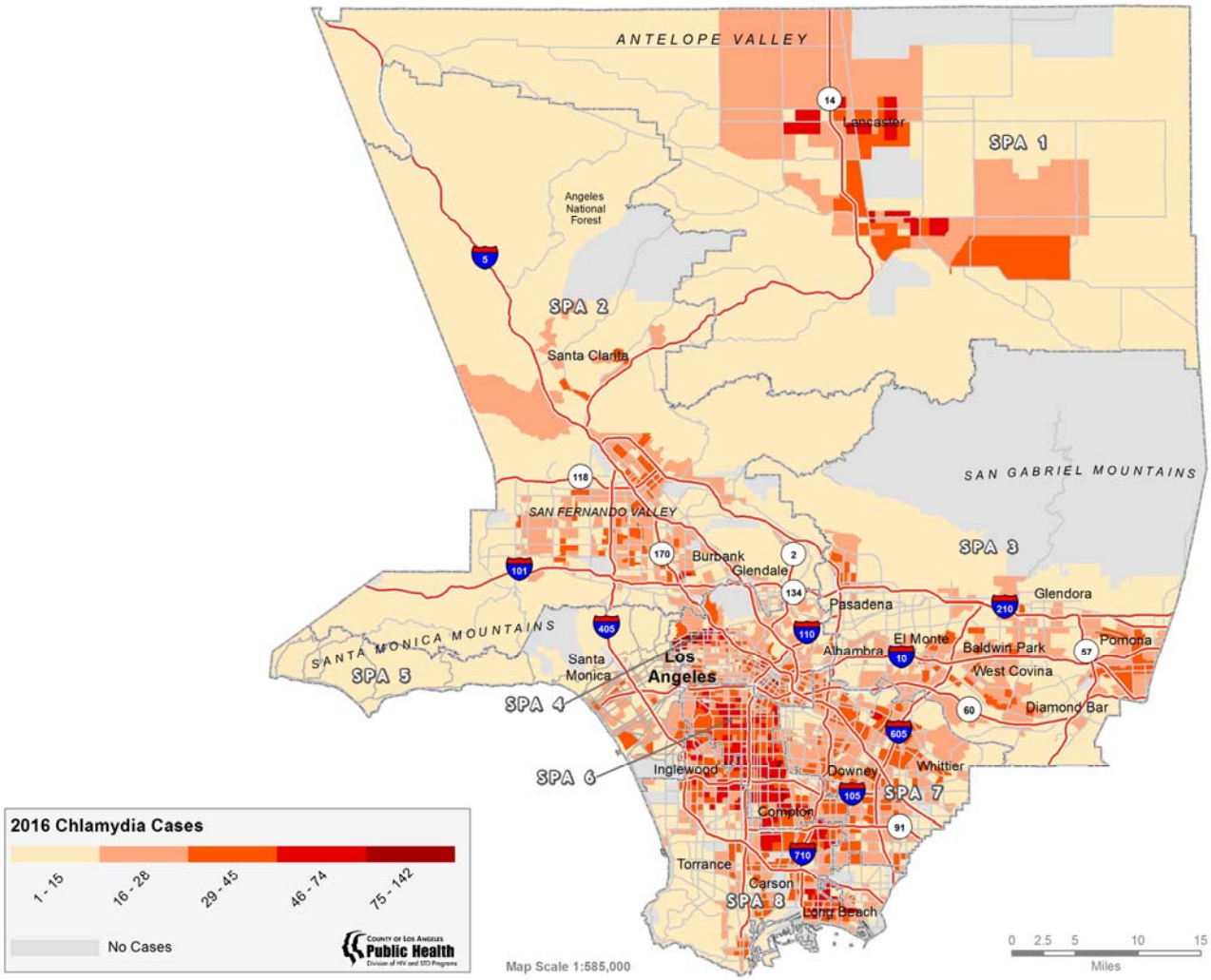
[1] Rates based on observations fewer than 12 may not be reliable (see technical notes). Data as of September 20, 2017
[2] Data are provisional due to reporting delay.

Figure 4.3. Chlamydia Rates by Service Planning Area (SPA), Los Angeles County, 2012-2016[1]



[1]2015-2016 data are provisional due to reporting delay. Data as of September 20, 2017.

Figure 4.4 Chlamydia Cases by Census Tract & Service Planning Area (SPA) Los Angeles County 2016[1]



[1] 2016 data are provisional due to reporting delay and suppressed for census tracts with no cases or population <100. Data as of September 20, 2017.
Total geocoded records within LA County borders: 49,939.
Data sources: LAC/DPH STD Surveillance, Long Beach Health and Human Services STD Surveillance, Pasadena Health Department STD Surveillance.

References:

1. Centers for Disease Control and Prevention. *Sexually Transmitted Disease Surveillance 2016*. Atlanta: U.S. Department of Health and Human Services; 2017.
2. CDC. STD Surveillance Case Definitions. https://www.cdc.gov/std/stats/CaseDefinitions2015.pdf. Accessed 10/30/17.

Appendix 1: Technical Notes

Surveillance of STDs in Los Angeles County

Data on STDs are obtained through passive and active surveillance. Passive STD surveillance relies on physicians, laboratories, and other healthcare providers to report STD diagnoses to DHSP by submitting a Confidential Morbidity Report (CMR) by telephone, fax or online. Active STD surveillance entails staff contacting hospitals, laboratories, physicians, jails, student health centers and other sentinel sites to collect additional case reports. The STD CaseWatch system is used for the collection and management of STD surveillance data. STD surveillance case definitions are based on the CDC publication "STD Surveillance Case Definitions".[2]

Reporting Delay

Reporting delays can impact reliability of trends and rates over time. STD reporting delay is defined as the time interval between the date an STD diagnosis was made and the date the case was reported to DHSP. This delay varies by STD, ranging from 1 day to 1 year or more. Therefore, the impact of reporting delay must be considered when evaluating trends in case numbers and rates over time. Reporting delay is especially important when evaluating early syphilis data as staff often need to interview a case before a syphilis stage can be assigned.

Some STD cases occurring in 2015 and 2016 will not be reported until after the publication of this report. Therefore, differences in numbers of cases and rates may be observed in future presentations of data and reports.

Underreporting

Data on STD diagnoses should be interpreted with caution. The proportion of STD cases that are not reported varies for each disease. Syphilis surveillance includes both passive and active surveillance, with detailed follow-up of cases and their sexual partners. Thus, underreporting of early syphilis cases is minimized. Due to the acuteness of symptoms for gonorrhea infection, individuals are more likely to seek treatment, and therefore cases are more likely to be reported. On the other hand, chlamydia infections are often asymptomatic and therefore are more likely to be undiagnosed and underreported. Screening practices can also affect the number of reported STD cases. Additionally, some healthcare providers may not be aware of the legal requirements to report STDs to DHSP and therefore do not submit a CMR.

Rates

All rates are per 100,000 population. The population denominators used to compute the rates are based on 2010-2017 estimates provided by LAC Internal Services Department and contracted through Hedderson Demographic Services.

All vital statistics are subject to random variation. This variation is inversely related to the number of cases and a small number of cases can result in unstable rates or proportions. Conforming to standard criterion used by the National Center for Health Statistics, STD rates are considered unreliable when the relative standard error of the rate is greater than or equal to 30%, which corresponds to rates based on less than or equal to 12 observations.

Place of Acquisition of HIV/STD

The location where an STD infection is acquired determines the geographic location of an STD case. Some cases of STDs may have been acquired outside of LAC boundaries. In circumstances where the patient's address is missing, disease rates may partially reflect the place of diagnosis rather than the location where

an infection was acquired. However, during case investigations for syphilis and gonorrhea, every effort is made to determine the location where the infection actually occurred.

For STD data, caution should be exercised when interpreting census tract level case counts and rates because these values are inclusive of any correctional populations and may be artificially inflated when an institution is housed within a given census tract.

Race and ethnicity

Race and ethnicity in this report are grouped using the following criteria exclusively: A person is considered to be 'Latino' if so indicated in race or ethnicity field, regardless of any other race information found for the person. When not indicated as 'Latino', a person is considered to be 'American Indian/Alaskan Native (AI/AN)' if the race field contains AI/AN information, regardless of any other race information found for this person. Aside from the above criteria, a person is categorized as 'Multi-race' when two or more races are indicated in the above race fields. All other persons with a single race indicated are placed in the corresponding race category.

Suggested Citation: Division of HIV and STD Programs, Los Angeles County Department of Public Health. 2016 Annual STD Surveillance Report. http://publichealth.lacounty.gov/dhsp/Reports.htm Published February 2019. Accessed [date].

www.publichealth.lacounty.gov