

Los Angeles County Department of Public Health

# 2014 Annual HIV/STD Surveillance Report



COUNTY OF LOS ANGELES  
**Public Health**



# 2014 Annual HIV/STD Surveillance Report

## TABLE OF CONTENTS

<b>Message from the Division of HIV and STD Programs</b>	6
<b>Executive Summary</b>	7
<b>Overview of Surveillance Data for HIV and STDs, Los Angeles County, 2014</b>	8
Figure 1.1. Reported STD and HIV/AIDS Cases, Los Angeles County, 2013	9
Table 1.1. HIV/STD Cases and Rates (per 100,000), Los Angeles County, 2010-2014	10
Figure 1.2. Rate of HIV Diagnoses, Early Syphilis, Gonorrhea, and Chlamydia, Los Angeles County, 2010-2014	11
Table 1.2. HIV/STD Cases and Rates (per 100,000) for Los Angeles County and Other Large Urban US Counties and Independent Cities, 2013	11
<b>Overview of HIV/AIDS in Los Angeles County</b>	12
Figure 2.1. Annual Diagnoses of HIV Infection, Stage 3 HIV Infection (AIDS), Persons Living with HIV, and Deaths among Persons Diagnosed with HIV Infection, Los Angeles County, 2002-2014	16
Table 2.1. 2013 HIV, Stage 3 (AIDS) Diagnoses and Deaths, Persons Living with HIV (PLWH) as of 2014 by Gender, Age Group, Race/Ethnicity, and Transmission Category, Los Angeles County, Reported by December 31, 2014	17
Table 2.2. HIV Diagnoses and Rates (per 100,000) by Gender, Age Group, Race/Ethnicity, Transmission Category, and Service Planning Area (SPA), Los Angeles County, 2008-2013, Reported by December 31, 2014	18
Figure 2.2A. Rates of HIV Diagnoses among Males by Age Group, Los Angeles County, 2006-2013	19
Figure 2.2B. Rates of HIV Diagnoses among Females by Age Group, Los Angeles County, 2006-2013	19
Figure 2.3A. Rates of HIV Diagnoses among Adult/Adolescent Males by Race/Ethnicity, Los Angeles County, 2006-2013	20
Figure 2.3B. Rates of HIV Diagnoses among Adult/Adolescent Females by Race/Ethnicity, Los Angeles County, 2006-2013	20
Figure 2.4A. Transmission Risk Category among Males Living with HIV at Year-end 2014 and HIV Diagnoses in 2013, Los Angeles County	21
Figure 2.4B. Transmission Risk Category among Females Living with HIV at Year-end 2014 and HIV Diagnoses in 2013, Los Angeles County	21
Table 2.3. HIV Diagnoses from 2009-2013 and Persons Living with HIV (PLWH) as of 2014, by Service Planning Area (SPA) and Health District (HD) of Residence, Los Angeles County, Reported by December 31, 2014	22
Figure 2.5. Rates of HIV Diagnoses by Service Planning Area, Los Angeles County, 2008-2013	23
Figure 2.6. New HIV Diagnoses by Census Tract and Service Planning Area (SPA), Los Angeles County, 2011-2013	24
Figure 2.7. Persons Living with a Diagnosis of HIV Infection as of 12/31/2014 by Census Tract and Service Planning Area (SPA), Los Angeles County	25

Table 2.4.	Linkage to Care among Persons ≥18 years old with an HIV Diagnosis in 2013 and Retention in Care and Viral Suppression among Persons ≥ 18 years old Diagnosed with HIV Infection through 12/31/2012 and Living with HIV in Los Angeles County as of 2013, by Selected Characteristics, Reported by December 31, 2014	26
Figure 2.8A.	HIV Care Continuum, Los Angeles County, 2013	27
Figure 2.8B.	HIV Care Continuum by Gender, Los Angeles County, 2013	27
Figure 2.8C.	HIV Care Continuum by Age Group, Los Angeles County, 2013	28
Figure 2.8D.	HIV Care Continuum by Race/Ethnicity, Los Angeles County, 2013	28
Figure 2.9.	Linkage to Care for Persons Reported with HIV in Los Angeles County, 2006-2013	29
Figure 2.10.	Engagement, Retention and Viral Load Suppression for Persons Living with HIV, Los Angeles County, 2007-2013	29
<b>Overview of Syphilis in Los Angeles County</b>		30
Figure 3.1A.	Primary & Secondary Syphilis Rates in the United States, California and Los Angeles County, 2009-2013	31
Figure 3.1B.	Early Latent Syphilis Rates in the United States, California and Los Angeles County, 2009-2013	31
Table 3.1.	Early Syphilis Cases and Rates (per 100,000) by Gender, Sexual Orientation, Age Group, Race/Ethnicity, and Service Planning Area (SPA), Los Angeles County, 2014	32
Figure 3.2A.	Early Syphilis Rates among Males by Age Group, Los Angeles County, 2010-2014	33
Figure 3.2B.	Early Syphilis Rates among Females by Age Group, Los Angeles County, 2010-2014	33
Figure 3.3A.	Early Syphilis Rates among Males by Race/Ethnicity, Los Angeles County, 2010-2014	34
Figure 3.3B.	Early Syphilis Rates among Females by Race/Ethnicity, Los Angeles County, 2010-2014	34
Table 3.2.	Early Syphilis Cases and Rates (per 100,000) by Service Planning Area (SPA) and Health District (HD), Los Angeles County, 2010-2014	35
Figure 3.4.	Early Syphilis Rates by Service Planning Area (SPA), Los Angeles County, 2010-2014	36
Figure 3.5.	Early Syphilis Cases by Census Tract and Service Planning Area (SPA), Los Angeles County, 2014	37
Figure 3.6.	Number of Cases of Early Syphilis among MSM/MSMW by HIV Status, Los Angeles County, 2010-2014	38
Figure 3.7.	Syphilis Index Case Continuum, Los Angeles County, 2013	39
Figure 3.8.	Syphilis Elicited Contact Continuum, Los Angeles County, 2013	39
<b>Overview of Gonorrhea in Los Angeles County</b>		40
Figure 4.1.	Gonorrhea Rates in the United States, California and Los Angeles County, 2009-2013	41
Table 4.1.	Gonorrhea Cases and Rates (per 100,000) by Gender, Age Group, Race/Ethnicity, and Service Planning Area (SPA), Los Angeles County, 2014	42
Figure 4.2A.	Gonorrhea Rates among Males by Age Group, Los Angeles County, 2010-2014	43
Figure 4.2B.	Gonorrhea Rates among Females by Age Group, Los Angeles County, 2010-2014	43
Figure 4.3A.	Gonorrhea Rates among Males by Race/Ethnicity, Los Angeles County, 2010-2014	44
Figure 4.3B.	Gonorrhea Rates among Females by Race/Ethnicity, Los Angeles County, 2010-2014	44
Figure 4.4A.	Gonorrhea Rates among Males by Age Group and Race/Ethnicity, Los Angeles County, 2014	45
Figure 4.4B.	Gonorrhea Rates among Females by Age Group and Race/Ethnicity, Los Angeles County, 2014	45

Table 4.2.	Gonorrhea Cases and Rates (per 100,000) by Service Planning Area (SPA) and Health District (HD), Los Angeles County, 2010-2014	46
Figure 4.5.	Gonorrhea Rates by Service Planning Area (SPA), Los Angeles County, 2010-2014	47
Figure 4.6.	Gonorrhea Cases by Census Tract and Service Planning Area (SPA), Los Angeles County, 2014	48
Figure 4.7.	Gonorrhea Index Case Continuum, Los Angeles County, 2013	49
Figure 4.8.	Gonorrhea Elicited Contact Continuum, Los Angeles County, 2013	49
<b>Overview of Chlamydia in Los Angeles County</b>		50
Figure 5.1.	Chlamydia Rates in the United States, California and Los Angeles County, 2009-2013	51
Table 5.1.	Chlamydia Cases and Rates (per 100,000) by Gender, Age Group, Race/Ethnicity, and Service Planning Area (SPA), Los Angeles County, 2014	52
Figure 5.2A.	Chlamydia Rates among Males by Age Group, Los Angeles County, 2010-2014	53
Figure 5.2B.	Chlamydia Rates among Females by Age Group, Los Angeles County, 2010-2014	53
Figure 5.3A.	Chlamydia Rates among Males by Race/Ethnicity, Los Angeles County, 2010-2014	54
Figure 5.3B.	Chlamydia Rates among Females by Race/Ethnicity, Los Angeles County, 2010-2014	54
Figure 5.4A.	Chlamydia Rates among Males by Age Group and Race/Ethnicity, Los Angeles County, 2014	55
Figure 5.4B.	Chlamydia Rates among Females by Age Group and Race/Ethnicity, Los Angeles County, 2014	55
Table 5.2.	Chlamydia Cases and Rates (per 100,000) by Service Planning Area (SPA) and Health District (HD), Los Angeles County, 2010-2014	56
Figure 5.5.	Chlamydia Rates by Service Planning Area (SPA), Los Angeles County, 2010-2014	57
Figure 5.6.	Chlamydia Cases by Census Tract and Service Planning Area (SPA), Los Angeles County, 2014	58
<b>References</b>		59
<b>Appendix 1: Technical Notes</b>		60

## Message from the Division of HIV and STD Programs

Dear Colleague:

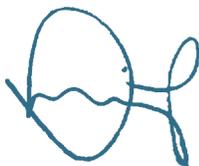
Enclosed please find the *2014 Annual HIV/STD Surveillance Report* for Los Angeles County (LAC). This report replaces two previous reports: the Annual HIV Surveillance Report and the Annual Sexually Transmitted Disease Morbidity Report. While many of the tables and figures presented in the past reports have been retained, the new single report includes an expanded narrative at the beginning of each disease section that highlights key points from the tables and figures that follow. In addition, more data are presented in graphical form. To provide timely data, measures for persons living with HIV (PLWH), syphilis, gonorrhea and chlamydia are for the 2014 calendar year. Due to reporting delay, data on HIV diagnoses, Stage 3 HIV diagnoses (AIDS) and deaths among PLWH are for the 2013 calendar year.

From 2010 to 2013, the number of persons diagnosed with HIV in LAC decreased nearly 16% from 2,161 to 1,820. While HIV diagnoses rates began decreasing in LAC in 2008, syphilis and chlamydia rates have been increasing for over a decade. After decreasing from 2005 to 2008, gonorrhea rates have risen in subsequent years. Possible explanations for these and similar trends seen in other US urban areas include changes to screening practices, disparities in access and utilization of STD-related healthcare, and decreased STD risk perception.

DHSP continues to support and enhance programs to reduce new HIV and STD infections including biomedical interventions such as pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP) to prevent HIV; widespread HIV/STD testing to promote timely diagnosis and linkage to care; HIV re-engagement and retention programs to support treatment, improve individual health and reduce forward transmission; HIV/STD partner services to facilitate timely testing, treatment and contact tracing; and medical and ancillary services to promote individual and public health.

The Annual HIV/STD Surveillance Report is available online at the DHSP website, <http://publichealth.lacounty.gov/dhsp> at the Reports link. In an effort to improve this report, please complete the "Feedback and Suggestion" form attached to the end of the document. We look forward to continued collaboration with our community partners to reduce new HIV and STD infections in LAC.

Sincerely yours,



**Mario J. Pérez, MPH,**  
Director  
Division of HIV and STD Programs



**Amy Rock Wohl, MPH, PhD**  
Chief, Research and Innovation  
Acting Chief, HIV/STD Surveillance

## Executive Summary

The following are data highlights associated with this report:

### *All infections*

- A total of 66,276 cases of HIV and STDs were reported to the Los Angeles County (LAC) Department of Public Health (DPH) in 2013 (see Figure 1.1); this corresponds to a 1.5% increase from 2012 (see Table 1.1).
- HIV diagnoses rates began decreasing in LAC in 2008, while syphilis and chlamydia rates have been increasing for over a decade (see Figure 1.2). As shown in Table 1.2, LAC HIV/STD rates are similar or lower than rates for other large urban jurisdictions in the US.

### **HIV**

- A total of 1,820 LAC residents were reported as newly diagnosed with HIV infection in 2013 (see Table 1.1). The highest rates of HIV diagnoses, although generally decreasing, are among African American males and females (see Figures 2.3A and 2.3B). As shown in Figures 2.6 and 2.7, HIV diagnoses and persons living with HIV (PLWH) are concentrated in the Metro, South and South Bay Service Planning Areas (SPAs).
- Time trends show a steady increase in the proportion of persons with HIV who received timely linkage to care, were engaged in care, were retained in care and in the proportion of PLWH who were virally suppressed. In 2013, 79% of all estimated persons with HIV were linked to care within 3 months of diagnosis, 61% were engaged in care, 51% were retained in care and 50% were virally suppressed (see Figures 2.9 and 2.10).

### **Syphilis**

- A total of 3,841 cases of syphilis were reported in LAC in 2014. From 2010 to 2014, the number of syphilis cases (all stages) increased 52% for males and 14% for females. Over the same time period there has also been a 343% increase in congenital syphilis, which rose from 7 cases in 2010 to 31 cases in 2014 (see Table 1.1).
- Fifty-nine percent of men who have sex with men (MSM) or men who have sex with men and women (MSMW) with early syphilis (ES) in 2014 were co-infected with HIV (see Figure 3.6).

### **Gonorrhea**

- A total of 14,555 cases of gonorrhea were reported in LAC in 2014, with the majority (75%) occurring in persons 15-34 years of age. The number of reported cases has risen in each of the past 5 years, which has resulted in a 51% increase from 2010 to 2014 (see Table 1.1).
- In 2014, the highest rates of gonorrhea were among African American males ages 20-29 and African American females ages 15-24 (see Figures 4.4A and 4.4B). The rate among African American females was over 11 times higher than the rate among white females and nearly 6 times higher than Latinas (see Table 4.1).

### **Chlamydia**

- A total of 52,098 cases of chlamydia were reported in LAC in 2014. From 2010 to 2014, the number of reported cases increased by 17% (see Table 1.1).
- While chlamydia rates have risen in both males and females, from 2010 to 2014, there was a 27% increase in the rate among males compared to a 7% increase in the rate among females (see Table 1.1). In addition, the highest rates were among African American males ages 20-29 and African American females ages 15-24 (see Figures 5.4A and 5.4B).

## Overview of Surveillance Data for HIV and STDs, Los Angeles County, 2014

This overview summarizes case counts, rates and recent trends in Los Angeles County (LAC) for HIV, syphilis, gonorrhea and chlamydia (see Table 1.1). As shown in Figure 1.1, there were a total of 66,276 cases of HIV and STDs reported in LAC in 2013.

Data for persons living with HIV (PLWH), syphilis, gonorrhea and chlamydia pertain to the 2014 calendar year. Due to a longer reporting delay, data for diagnoses of HIV infection and diagnoses of Stage 3 HIV infection (AIDS) pertain to the 2013 calendar year. More detailed information can be found in the respective disease-specific sections of the report. Data from 2013 and 2014 are provisional and should be interpreted with caution.

### Diagnoses of HIV infection in 2013

The rate of HIV diagnoses in LAC has been decreasing since 2008 (see Figure 1.2) and a total of 1,820 (18 per 100,000) LAC residents were reported as newly diagnosed with HIV infection in 2013. From 2010-2012 there were roughly 2,000 HIV diagnoses per year. In 2012, the HIV diagnosis rate in LAC was 20 per 100,000.

### Persons Living with HIV (PLWH)

There were a total of 48,908 reported PLWH in LAC as of December 31, 2014. Additionally, there are 2,400 persons with lab results that are pending investigation and likely to result in unduplicated cases of HIV, and an estimated 8,352 persons who are unaware of their infection (based on CDC's estimate of 14% unaware).<sup>1</sup> If both pending labs and the estimate of persons who are unaware of their infection are added to reported cases, approximately 59,660 persons were living with HIV in LAC at the end of 2014.

### Annual Diagnoses of Stage 3 HIV Infection (AIDS)

Stage 3 HIV infection is also known as Acquired Immunodeficiency Syndrome, or AIDS. The annual number of Stage 3 diagnoses in LAC has decreased substantially from a high of approximately 4,137 in 1992 to 1,098 in 2012. A total of 943 Stage 3 diagnoses were reported in 2013. Of these cases, 29% were diagnosed as Stage 3 less than one month after HIV diagnosis.

### Syphilis

Syphilis rates have been rising in LAC for over a decade (see Figure 1.2) and a total of 3,841 cases of syphilis were reported in LAC in 2014. Twenty-nine percent (n=1,097; 12 per 100,000) of these cases were staged as primary or secondary (P&S), 35% (n=1,365; 14 per 100,000) as early latent (EL) and 36% (n=1,379; 15 per 100,000) as Late Latent or Late (LL/L). Since 2010, the number of reported P&S, EL and LL/L cases has risen by 74%, 50% and 31%, respectively. There has also been a 343% increase in congenital syphilis cases, which rose from 7 cases in 2010 to 31 cases in 2014.

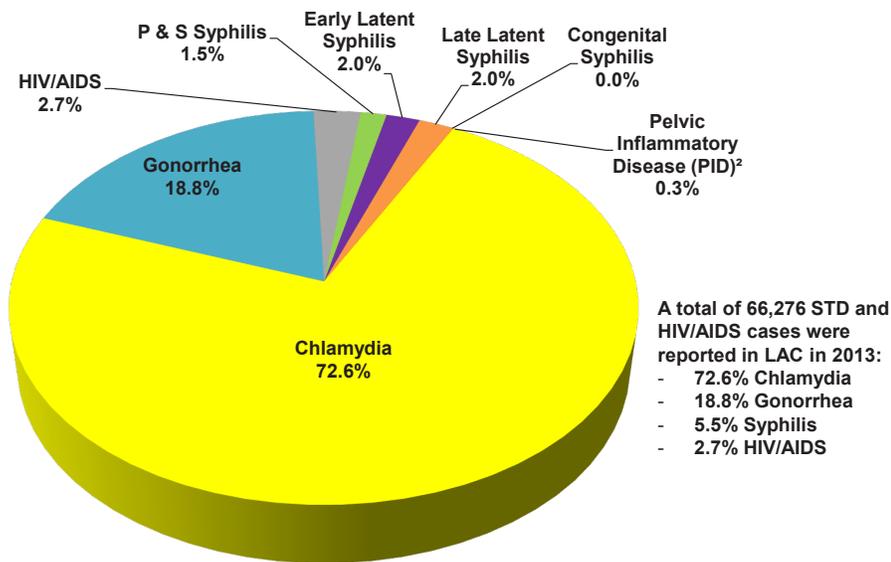
### Gonorrhea

After decreasing from 2005 to 2008, gonorrhea rates have risen in LAC in subsequent years (see Figure 1.2). A total of 14,555 cases of gonorrhea were reported in LAC in 2014 (154 per 100,000), resulting in a 51% increase in the number of reported cases from 2010 to 2014.

## Chlamydia

After decreasing from 48,507 in 2012 to 48,096 in 2013, the number of chlamydia cases reported in LAC rose to 52,098 in 2014 (551 per 100,000). Chlamydia cases and rates have been increasing in LAC for over a decade (see Figure 1.2) and from 2010 to 2014 there has been a 17% increase in the number of chlamydia cases reported in LAC.

**Figure 1.1.** Reported STD and HIV/AIDS Cases, Los Angeles County, 2013<sup>1</sup>



<sup>1</sup> 2013 data are provisional due to reporting delay. Data exclude cases of Chlamydia, Gonorrhea, Syphilis, and PID in Long Beach and Pasadena.

<sup>2</sup> PID includes Chlamydia, Non-Chlamydia, Gonococcal, and Non-Gonococcal.

**Table 1.1. HIV/STD Cases and Rates (per 100,000), Los Angeles County, 2010-2014**

	2010 <sup>1</sup>		2011 <sup>1</sup>		2012 <sup>1</sup>		2013 <sup>1,2</sup>		2014 <sup>1,2</sup>	
	N	Rt	N	Rt	N	Rt	N	Rt	N	Rt
<b>Total</b>										
<b>HIV</b>										
Diagnoses of HIV Infection	2,161	22	1,997	20	2,012	20	1,820	18	-	-
Diagnoses of Stage 3 (AIDS)	1,215	12	1,003	10	1,098	11	943	9	-	-
Persons Living with HIV	43,391	442	44,797	454	46,216	465	47,547	475	48,908	486
Deaths in Persons with HIV Infection	602	6	592	6	593	6	489	5	-	-
<b>Syphilis<sup>4</sup></b>										
Primary & Secondary	632	7	746	8	870	9	1,001	11	1,097	12
Early Latent	907	10	1,031	11	1,262	14	1,300	14	1,365	14
Late Latent/Late	1,052	11	960	10	959	10	1,355	14	1,379	15
Congenital <sup>5</sup>	7	6	15	12	6	5	8	7	31	25
<b>Gonorrhea<sup>4</sup></b>	9,496	103	9,572	103	11,430	123	12,479	133	14,555	154
<b>Chlamydia<sup>4</sup></b>	44,618	484	47,469	513	48,507	522	48,096	511	52,098	551
<b>Male</b>										
<b>HIV</b>										
Diagnoses of HIV Infection	1,889	39	1,764	36	1,777	36	1,587	32	-	-
Diagnoses of Stage 3 (AIDS)	1,060	22	867	18	962	20	836	17	-	-
Persons Living with HIV	37,866	782	39,134	804	40,407	824	41,569	842	42,792	862
Deaths in Persons with HIV Infection	525	11	497	10	504	10	425	9	-	-
<b>Syphilis<sup>4</sup></b>										
Primary & Secondary	618	14	732	16	843	18	955	21	1,041	22
Early Latent	839	18	969	21	1,176	26	1,202	26	1,227	26
Late Latent/Late	724	16	692	15	770	17	1,086	23	1,056	23
<b>Gonorrhea<sup>4</sup></b>	6,038	133	6,104	134	7,633	166	8,551	184	10,315	221
<b>Chlamydia<sup>4</sup></b>	15,069	331	16,197	355	17,033	371	17,072	368	19,690	422
<b>Female</b>										
<b>HIV</b>										
Diagnoses of HIV Infection	252	5	202	4	195	4	208	4	-	-
Diagnoses of Stage 3 (AIDS)	145	3	121	2	114	2	95	2	-	-
Persons Living with HIV	5,001	100	5,112	102	5,229	104	5,380	106	5,501	108
Deaths in Persons with HIV Infection	72	1	91	2	78	2	57	1	-	-
<b>Syphilis<sup>4</sup></b>										
Primary & Secondary	13	0	13	0	23	0	38	1	50	1
Early Latent	64	1	57	1	67	1	83	2	104	2
Late Latent/Late	320	7	260	6	185	4	260	5	297	6
<b>Gonorrhea<sup>4</sup></b>	3,400	73	3,432	73	3,748	80	3,869	81	4,187	87
<b>Chlamydia<sup>4</sup></b>	29,390	629	31,129	663	31,341	666	30,911	649	32,289	674
<b>Pelvic Inflammatory Disease (PID)<sup>4</sup></b>	205	4	212	5	226	5	217	5	211	4
<b>Transgender<sup>3,6</sup></b>										
<b>HIV</b>										
Diagnoses of HIV Infection	20	-	31	-	40	-	25	-	-	-
Diagnoses of Stage 3 (AIDS)	10	-	15	-	22	-	12	-	-	-
Persons Living with HIV	524	-	551	-	580	-	598	-	615	-
Deaths in Persons with HIV Infection	5	-	<5	-	11	-	7	-	-	-
<b>Syphilis<sup>4</sup></b>										
Primary & Secondary	<5	-	<5	-	<5	-	8	-	6	-
Early Latent	<5	-	5	-	17	-	15	-	33	-
Late Latent/Late	8	-	6	-	<5	-	8	-	25	-
<b>Gonorrhea<sup>4</sup></b>	10	-	7	-	26	-	40	-	39	-
<b>Chlamydia<sup>4</sup></b>	13	-	12	-	24	-	36	-	41	-

<sup>1</sup> Rates based on observations fewer than 12 may not be reliable (see technical notes).

<sup>2</sup> Data are provisional due to reporting delay.

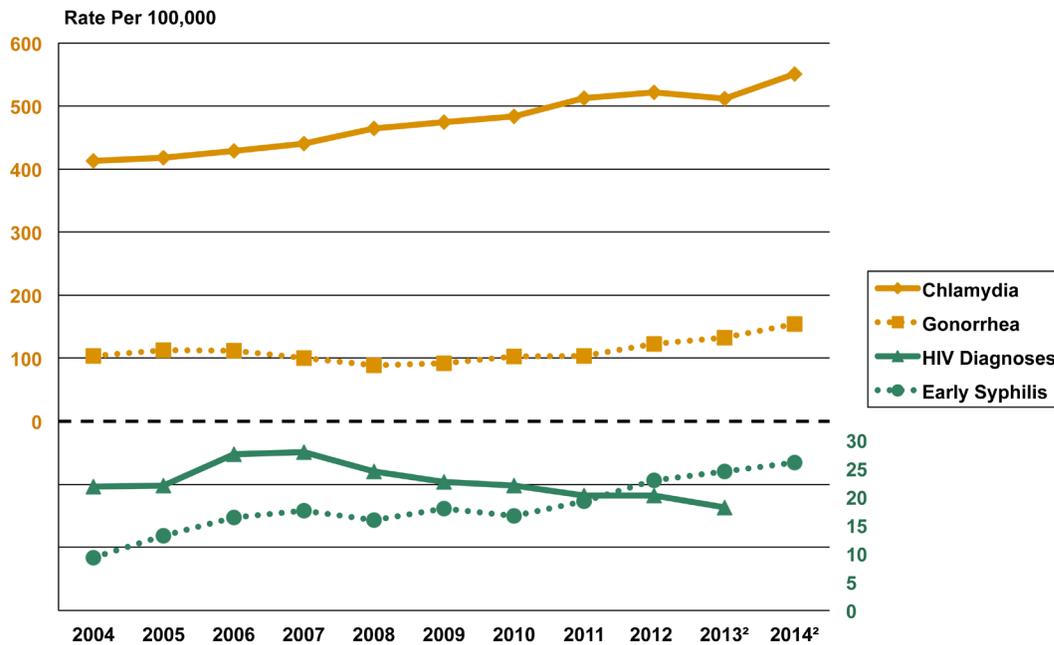
<sup>3</sup> Rates cannot be calculated due to a lack of denominator data.

<sup>4</sup> Does not include cases reported in the cities of Long Beach and Pasadena.

<sup>5</sup> Rate calculated per 100,000 live births. 2012 denominators are used for 2013 and 2014 (not available).

<sup>6</sup> Includes both male-to-female and female-to-male transgender individuals.

**Figure 1.2.** Rate of HIV Diagnoses, Early Syphilis, Gonorrhea, and Chlamydia, Los Angeles County, 2010-2014<sup>1</sup>



<sup>1</sup> Chlamydia, gonorrhea, and early syphilis data excludes cases in the cities of Long Beach and Pasadena; early syphilis includes all cases staged as primary, secondary, or early latent; rates for 2004-2009 are based on smoothed population estimates for the same years prepared by the Office of Health Assessment and Epidemiology, LAC/DPH.  
<sup>2</sup> 2013 and 2014 data are provisional due to reporting delay; data for HIV diagnoses in 2014 are not available due to reporting delay.

**Table 1.2.** HIV/STD Cases and Rates (per 100,000) for Los Angeles County and Other Large Urban US Counties and Independent Cities, 2013<sup>1</sup>

County/Independent City	HIV <sup>2</sup>		P&S Syphilis <sup>3,4</sup>		Gonorrhea <sup>3</sup>		Chlamydia <sup>3</sup>	
	N	Rt	N	Rt	N	Rt	N	Rt
<b>Los Angeles County<sup>5</sup></b>	<b>1,820</b>	<b>18</b>	<b>1,001</b>	<b>11</b>	<b>12,479</b>	<b>133</b>	<b>48,096</b>	<b>511</b>
Bronx County, NY	565	41	235	17	3,496	248	16,116	1,144
Cook County, IL	1,145	26	694	13	10,551	202	34,589	661
Harris County, TX	1,235	29	319	8	6,561	154	23,698	557
King County, WA <sup>6</sup>	259	15	171	9	1,776	89	6,792	338
Kings County, NY	723	29	287	11	3,892	152	17,808	694
Miami-Dade County, FL	1,368	--	413	16	2,391	92	10,287	397
New York County, NY	741	47	484	30	3,796	235	11,426	706
Queens County, NY	471	21	147	7	1,964	86	11,092	488
San Francisco County, CA	378	47	503	61	2,526	306	5,112	619
Washington, D.C.	497	--	168	27	2,478	392	6,414	1,014

<sup>1</sup> Data are provisional due to reporting delay.

<sup>2</sup> Data for non-Los Angeles County areas are based on reports and/or data requests available from the respective jurisdictions. Rate calculations may have been conducted at different points in time between jurisdictions.

<sup>3</sup> Data for non-Los Angeles County areas are based on Tables 9, 20, and 33 of the CDC 2013 Sexually Transmitted Disease Surveillance report, which presents case counts and rates for counties and independent cities reporting the highest numbers of cases in the United States. The report can be found at <http://www.cdc.gov/std/stats13/surv2013-print.pdf>.

<sup>4</sup> P&S syphilis includes all cases staged and primary and secondary.

<sup>5</sup> Los Angeles County data for P&S syphilis, gonorrhea, and chlamydia does not include cases reported in the cities of Long Beach or Pasadena.

<sup>6</sup> Rate presented is a 2009-2013 average rate.

-- rate is not available at the time of this report.

## Overview of HIV/AIDS in Los Angeles County

In this report, HIV infections are classified into stages of disease based on guidelines set forth by the Centers for Disease Control and Prevention (CDC).<sup>2</sup> In particular, HIV diagnosis refers to all diagnoses of HIV regardless of the stage of disease (stage 0 [Acute], 1, 2, 3 [AIDS], or unknown). Readers are encouraged to review the CDC “Revised Surveillance Case Definition for HIV Infection – United States, 2014” for further information on case classification.<sup>2</sup>

Included in this summary are reported HIV diagnoses, Stage 3 diagnoses (AIDS), persons living with HIV (PLWH) and data pertaining to recommended indicators from the National HIV/AIDS Strategy.<sup>3</sup> In order to provide timely data, measures for persons living with HIV (PLWH) are as of December 31, 2014. Due to a longer reporting delay, measures for HIV diagnoses, Stage 3 HIV diagnoses (AIDS) and indicators from the National HIV/AIDS Strategy are for the 2013 calendar year. Data presented in this report are still preliminary and should be interpreted with caution, particularly for estimates of trends over time. While comparisons of HIV cases counts, proportions and rates between demographic groups will utilize the most recent data available, trends over time will interpret data through 2012.

### Diagnosis of HIV Infection in 2013

HIV diagnosis rates have been decreasing in Los Angeles County (LAC) since 2007 and a total of 1,820 residents were reported as newly diagnosed with HIV in LAC in 2013, corresponding to a rate of 18 per 100,000. However, 2013 case counts and rates should be interpreted with caution as additional HIV diagnoses over that time period are still being identified.

From 2010-2012 there were roughly 2,000 HIV diagnoses per year and disease rates ranged from 20 per 100,000 to 22 per 100,000 (see Table 1.1). The LAC HIV diagnosis rate is similar to or lower than that of other large urban jurisdictions in the US (see Table 1.2).

**Gender:** Among persons reported with a new HIV diagnoses in 2013, 1,587 (87%) were male, 208 (11%) were female, and 25 (1%) were transgender. Since 2010, there has been a steady decline in the number and rate of HIV diagnoses reported among males and females (see Table 2.2).

**Age:** Most cases of HIV were diagnosed among persons 20-29 years of age (33%), followed by persons 30-39 years of age (28%), persons 40-49 years of age (21%), and persons 50 years or older (14%). Males had a younger age distribution than females; thirty-five percent of cases among males were reported among individuals aged 20-29 years compared to 22% among females (see Table 2.1).

### Race/Ethnicity:

While the largest proportion of HIV diagnoses reported in 2013 occurred among Latinos (45%), African Americans had the highest rate of disease (see Table 2.1). This is especially true for African American females whose rate of HIV diagnosis in 2013 (19 per 100,000) was 9.5 times higher than white females (2 per 100,000) and over 6 times higher than Latinas (3 per 100,000). From 2010 to 2012, the rate of HIV diagnosis among adult/adolescent females decreased 31% for Latinas, 22% for whites and remained fairly stable for Asians. After decreasing from 2007 to 2011, the rate of HIV diagnosis among African American females increased 15% from 2011 to 2012 (see Figure 2.3B). Among males in 2013, the rate of HIV diagnosis for African Americans (89 per 100,000) was roughly three times the rate for whites (29 per 100,000) and Latinos (30 per 100,000). From 2010 to 2012, the rate of HIV

diagnosis among adult/adolescent males decreased 15% for African Americans, decreased 14% for whites, remained stable for Latinos and increased nearly 20% for Asians (see Figure 2.3A).

**Transmission Category:** The transmission category for HIV infection describes how HIV was reportedly transmitted. Due to substantial proportion of persons with HIV infection being reported without an identified risk factor, CDC-recommended multiple imputation methods are used to assign a risk factor for these cases (see Appendix 1: Technical Notes). With this adjustment, it is estimated that 83% of HIV diagnoses in 2013 were among men who have sex with men (MSM), 10% among heterosexuals (mostly females), 5% among heterosexual injection drug users, and 2% among MSM who also inject drugs (MSM/IDU). Separate breakdowns of transmission categories for males and females can be seen in Figures 2.4A and 2.4B, respectively.

**Geographic Distribution:**

New HIV diagnoses in 2013 were heavily concentrated within specific regions of LAC (see Figure 2.6). The highest HIV rate in 2013 was reported among persons living in the Metro SPA (54 per 100,000) at the time of diagnosis, followed by the South (24 per 100,000) and South Bay (18 per 100,000) SPAs. From 2011 to 2012, the rate of HIV diagnosis decreased in the Antelope Valley, East, San Fernando and South SPAs. Over the same time period, the rate of HIV diagnosis increased in the Metro, San Gabriel, South Bay and West SPAs (see Table 2.2 and Figure 2.5).

**Persons Living with HIV (PLWH)**

As of December 31, 2014, an estimated 59,660 persons were living with an HIV infection (PLWH) in LAC, including 48,908 persons who had been reported with an HIV diagnosis in LAC, 2,400 persons who had lab reports pending investigation likely to result in an unduplicated case and an additional 8,352 (14%)<sup>1</sup> who are estimated to be unaware of their infection. Data on the demographics of PLWH in LAC presented below are for the 48,908 PLWH as of December 31, 2014 (see Table 2.1).

**Gender:** The number of PLWH in LAC has increased steadily since 2002, when mandatory HIV reporting began (see Figure 2.1). This increase can be seen for males, females and transgender persons, resulting in 42,792 male, 5,501 female and 615 transgender PLWH in LAC as of December 31, 2014 (see Table 1.1). Data on transgender persons should be interpreted with caution since there is likely to be underreporting of PLWH in this population. Males currently represent 89% of PLWH in LAC.

**Age:** The PLWH population is aging. Unlike new HIV diagnoses in 2013 which occurred primarily among persons younger than 40 years of age, almost three-quarters (74%) of PLWH are 40 or older (see Table 2.1). The median age of PLWH in LAC increased from 41 years in 2002 to 48 years in 2014. Less than 1% of PLWH are under 20 years of age, while 14% are 60 years or older.

**Race/Ethnicity:** As seen in Table 2.1, 42% of PLWH in LAC are Latino, 32% are white, 20% are African American, 3% are Asian/Pacific Islander, 2% are multi-race/unknown, and <1% are American Indian/Alaskan Native. The racial/ethnic distribution of PLWH differs by gender: Among female PLWH, 45% are Latina, 35% are African American, 15% are white, 3% are Asian/Pacific Islander, 2% are multi-race/unknown, and <1% are American Indian/Alaskan Native; among male PLWH, 41% are Latino, 35% are white, 18% are African American, 4% are Asian/Pacific Islander, 2% are multi-race/unknown, and <1% are American Indian/Alaskan Native.

**Transmission Category:** Using multiple imputation methods to adjust for persons with an undetermined risk factor for HIV infection (see Appendix 1: Technical Notes), we estimate that 78% of PLWH are MSM, and 6% are MSM who also inject drugs (MSM/IDU). Other major transmission categories include heterosexual injection drug users (5%) and individuals who had heterosexual contact with a person at high risk for having HIV (10%). Separate breakdowns of transmission category for males and females can be seen in Figures 2.4A and 2.4B, respectively.

**Geographic Distribution:** PLWH as of December 31, 2014 were heavily concentrated within specific regions of the county (see Figure 2.7). The Metro SPA had the highest number (18,480), proportion (38%) and rate (1,607 per 100,000) of PLWH among all SPAs in LAC, followed by the South Bay SPA with 8,042 PLWH (16%) and a rate of 517 per 100,000).

### **Annual Diagnoses of Stage 3 HIV Infection (AIDS)**

Stage 3 HIV Infection is also known as Acquired Immunodeficiency Syndrome, or AIDS. The annual number of stage 3 diagnoses in LAC has decreased substantially from a high of approximately 4,137 cases in 1992 to 1,098 cases in 2012. A total of 943 stage 3 diagnoses were reported in 2013 (see Table 2.1). However, this number should be interpreted with caution as additional stage 3 HIV diagnoses in 2013 are still being identified.

**Gender:** Eighty-nine percent of Stage 3 diagnoses in 2013 were among males, 10% were among females and 1% were among transgender individuals. These proportions are roughly similar to the respective proportions by gender for HIV diagnoses in 2013 and PLWH as of December 31, 2013 (See Table 1.1).

**Age:** Ninety-three percent of Stage 3 diagnoses in 2013 occurred among persons aged 20-59 years. Males had a younger age distribution than females; fifty percent of Stage 3 diagnoses among males occurred among persons below 40 years of age compared to 32% among females (see Table 2.1). The introduction of improved HIV treatment beginning in 1996 has contributed to a significant delay in the progression of HIV to Stage 3 HIV infection for many individuals. Between 1995 and 2012, the proportion of Stage 3 cases diagnosed among persons over the age of 40 increased from 38% to 51%.

**Race/Ethnicity:** While almost half of Stage 3 diagnoses in 2013 occurred among Latinos, the highest rate of Stage 3 diagnosis was among African Americans (see Table 2.1). The rate of Stage 3 diagnosis for African American females (8 per 100,000) was 8 times higher than the rate for white females (1 per 100,000) or Latinas (1 per 100,000). Among males, the rate of Stage 3 diagnosis for African Americans (42 per 100,000) was 3 times higher than the rate for whites (14 per 100,000) and 2.5 times higher than the rate for Latinos (17 per 100,000). The annual number of persons with a Stage 3 diagnosis has decreased for all races/ethnicities in the last 10 years; from 2002 to 2012, the number of Stage 3 diagnoses decreased 56% among whites, 37% among African Americans and 36% among Latinos.

### **National HIV/AIDS Strategy (NHAS) Recommended Care Indicators**

On July 13, 2010 the White House released the National HIV/AIDS Strategy (NHAS).<sup>3</sup> This plan is the nation's first-ever comprehensive coordinated HIV/AIDS roadmap with clear and measurable targets to be achieved by the end of 2015. Key targets from the NHAS include: 1) increase the proportion of newly diagnosed patients linked to clinical care within three months of their HIV diagnosis from 65 percent to 85 percent; 2) increase the proportion of Ryan White HIV Program clients who are in continuous care (at least 2 visits for routine HIV medical care in

12 months at least 3 months apart) from 73 percent to 80 percent by 2015 and 3) increase by 20% (each) the percentage of persons with HIV with undetectable HIV viral load results among men who have sex with men, African Americans and Latinos.

HIV viral load (VL) and T-Cell (CD4) testing are considered important clinical markers of successful treatment. Since the start of mandatory name-based HIV reporting in California in April 2006, laboratories have been required to report all VL tests to their local health department. In 2008, the reporting of all CD4 tests was mandated in California. The LAC Department of Public Health (DPH) uses the laboratory surveillance system to monitor initial engagement in care for newly diagnosed HIV-infected patients, ongoing care and degree of viral load suppression among PLWH in the county.

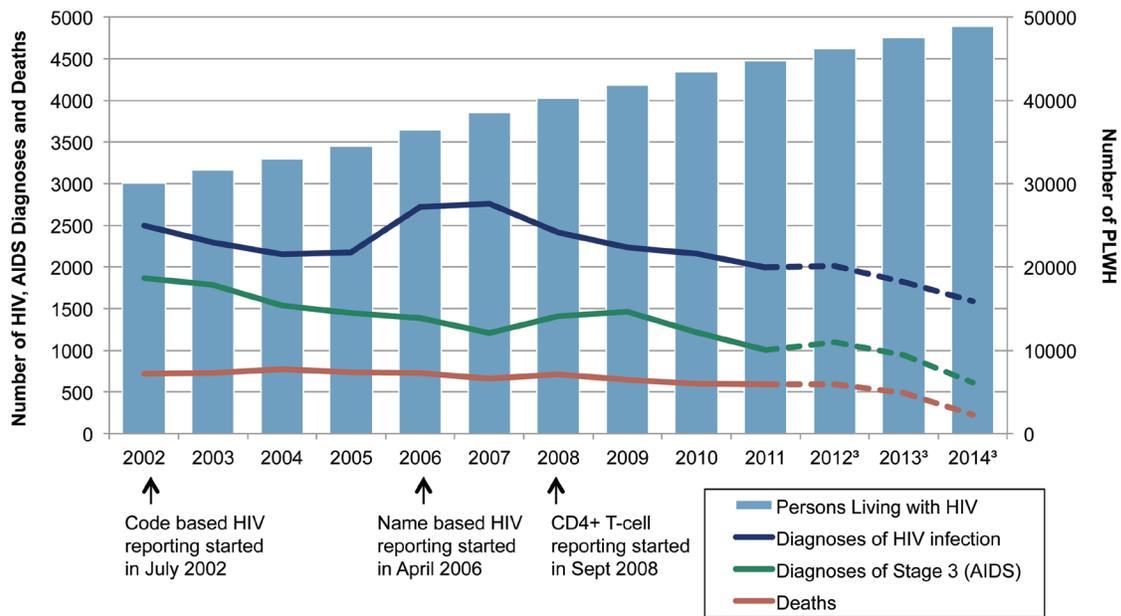
**Linkage to Care (LTC):** In this report, timely LTC is defined as having a VL, CD4, or HIV genotype test performed within three months of HIV diagnosis. Trends in LTC show a steady increase since 2006 in the proportion of persons with HIV who were linked to care within 3, 6 and 12 months - 79%, 81% and 83% in 2013, respectively (see Figure 2.9). Crude estimates for LTC within 3 months can be found in Table 2.4. In a multivariate regression model that controlled for age, gender, HIV transmission category, country of birth, type of diagnostic facility, lifetime homelessness and number of years living with HIV, African Americans were less likely than whites to be linked-to-care within 3 months of HIV diagnosis in 2013.

**Engagement in Care:** In this report, engagement in care is defined as at least one VL, CD4, or HIV genotype test performed in 2013. Of the estimated 53,321 persons aged 18 or older who were diagnosed with HIV on or before January 1, 2013 and living with HIV as of December 31, 2013, 61% were engaged in care in 2013. Crude estimates for engaged in care among reported PLWH can be found in Table 2.4, while estimates based on the total number of PLWH, including those who are unaware of their infection, can be found in Figures 2.8A-2.8D. In a multivariate regression model that controlled for HIV transmission category, country of birth, type of diagnostic facility, lifetime homelessness and number of years living with HIV, differences in engaged in care were observed by race/ethnicity, gender, and age in 2013. Compared to whites, African Americans were less likely to be engaged in care while Latinos, Asians/Pacific Islanders and individuals who were multi-race/unknown race were more likely to be engaged in care. Females were more likely to be engaged in care than males. Persons 18-29 and 30-49 were less likely to be engaged in care than persons aged 50 or older.

**Retention in Care:** In this report, retention in care is defined as two or more VL, CD4, or HIV genotype tests performed at least 3 months apart during a 12 month period. Of the estimated 53,321 persons aged 18 or older who were living with HIV prior to January 1, 2014, 51% were retained in care in 2013. Crude estimates for retention in care among reported PLWH can be found in Table 2.4, while estimates based on the total number of PLWH, including those who are unaware of their infection, can be found in Figures 2.8A-2.8D. In a multivariate regression model that controlled for HIV transmission category, country of birth, type of diagnostic facility, lifetime homelessness and number of years living with HIV, differences in retention in care were observed by race/ethnicity, gender, and age in 2013. Compared to whites, Latinos, Asians/Pacific Islanders, and individuals who were multi-race/unknown race were more likely to be retained in care. Females were more likely to be retained in care than males. Persons 18-29 and 30-49 were less likely to be retained in care than persons aged 50 or older.

**HIV Viral Load Suppression:** In this report, viral load suppression is defined as one or more VL tests performed in 2013 with a result indicating  $\leq 200$  viral copies per milliliter of blood plasma. Of the estimated 53,321 persons aged 18 or older who were living with HIV prior to January 1, 2014, 50% were virally suppressed. Crude estimates for viral suppression among reported PLWH can be found in Table 2.4, while estimates based on the total number of PLWH, including those who are unaware of their infection, can be found in Figures 2.8A-2.8D. In a multivariate regression model that controlled for HIV transmission category, county of birth, type of diagnostic facility, lifetime homelessness and number of years living with HIV, differences in viral load suppression were observed by race/ethnicity, gender, and age in 2013. Compared to whites, Asians/Pacific Islanders were more likely to be virally suppressed while African Americans and American Indians/Alaskan Natives were less likely to be virally suppressed. Transgender individuals were less likely to be virally suppressed than males. Persons 18-29 and 30-49 were less likely to be virally suppressed than persons aged 50 or older.

**Figure 2.1.** Annual Diagnoses of HIV Infection<sup>1</sup>, Stage 3 HIV Infection (AIDS), Persons Living with HIV, and Deaths<sup>2</sup> among Persons Diagnosed with HIV Infection, Los Angeles County, 2002-2014



<sup>1</sup> Based on named reports for persons with a diagnosis of HIV infection regardless of the disease stage at time of diagnosis.  
<sup>2</sup> The number of deaths among persons with HIV infection is based on the date of death report when the actual year of death is unknown.  
<sup>3</sup> Data are provisional due to reporting delay.

**Table 2.1. 2013 HIV, Stage 3 (AIDS) Diagnoses and Deaths, Persons Living with HIV (PLWH) as of 2014, by Gender, Age Group, Race/Ethnicity, and Transmission Category, Los Angeles County, Reported by December 31, 2014**

Age Group (Yr) <sup>3</sup>	Male <sup>1</sup>						Female <sup>1</sup>						Total											
	2013 HIV Diagnoses <sup>2</sup>		2013 AIDS Diagnoses <sup>2</sup>		PLWH as of 2014 <sup>2</sup>		2013 HIV Diagnoses <sup>2</sup>		2013 AIDS Diagnoses <sup>2</sup>		PLWH as of 2014 <sup>2</sup>		2013 HIV Diagnoses <sup>2</sup>		2013 AIDS Diagnoses <sup>2</sup>		PLWH as of 2014 <sup>2</sup>		2013 Deaths <sup>2</sup>					
	No. (%)	Rt (%)	No. (%)	Rt (%)	No. (%)	Rt (%)	No. (%)	Rt (%)	No. (%)	Rt (%)	No. (%)	Rt (%)	No. (%)	Rt (%)	No. (%)	Rt (%)	No. (%)	Rt (%)	No. (%)	Rt (%)				
<13	<5 (-)	-	<5 (-)	-	15 (<1)	2	<5 (-)	-	<5 (-)	-	19 (<1)	2	<5 (-)	-	<5 (-)	-	34 (<1)	2	<5 (-)	-				
13-19	56 (3)	11	9 (1)	2	91 (<1)	18	7 (2)	1	9 (4)	2	49 (1)	10	<5 (-)	-	65 (4)	7	11 (1)	1	140 (<1)	14	7 (1)	1		
20-29	562 (35)	71	161 (19)	20	3,516 (8)	446	96 (22)	12	46 (22)	6	10 (11)	1	438 (8)	58	10 (17)	1	608 (33)	39	171 (18)	11	3,954 (8)	256	106 (22)	7
30-39	449 (28)	62	258 (30)	36	7,615 (18)	1,046	132 (31)	18	58 (27)	8	20 (21)	3	1,056 (19)	147	14 (24)	2	507 (28)	35	278 (29)	19	8,671 (18)	600	146 (30)	10
40-49	333 (21)	47	237 (28)	34	12,672 (29)	1,806	105 (24)	15	51 (24)	7	34 (36)	5	1,635 (30)	231	18 (31)	3	384 (21)	27	271 (29)	19	14,307 (29)	1,014	123 (25)	9
50-59	157 (10)	25	142 (17)	23	13,540 (31)	2,124	54 (13)	9	37 (18)	6	21 (22)	3	1,522 (28)	227	13 (22)	2	194 (11)	15	163 (17)	13	15,062 (31)	1,151	67 (14)	5
60+	51 (3)	7	41 (5)	6	5,933 (14)	781	35 (8)	5	8 (4)	1	8 (8)	1	807 (15)	85	<5 (-)	-	59 (3)	4	49 (5)	3	6,740 (14)	394	38 (8)	2
<b>Race/Ethnicity</b>																								
White	409 (25)	29	199 (23)	14	15,066 (35)	1,050	138 (32)	10	31 (15)	2	14 (15)	1	825 (15)	58	9 (16)	1	440 (24)	15	213 (23)	7	15,891 (32)	556	147 (30)	5
African American	360 (22)	89	168 (20)	42	7,921 (18)	1,945	107 (25)	27	85 (40)	19	37 (39)	8	1,954 (35)	425	27 (47)	6	445 (24)	52	205 (22)	24	9,875 (20)	1,139	134 (27)	16
Latino	734 (46)	30	409 (48)	17	17,977 (41)	742	147 (34)	6	79 (37)	3	36 (38)	1	2,477 (45)	102	15 (26)	1	813 (45)	17	445 (47)	9	20,454 (42)	421	162 (33)	3
Asian/Pi <sup>4</sup>	66 (4)	10	42 (5)	6	1,525 (4)	221	11 (3)	2	13 (6)	2	<5 (-)	-	162 (3)	21	<5 (-)	-	79 (4)	5	46 (5)	3	1,687 (3)	115	11 (2)	1
Asian	60 (4)	9	37 (4)	6	1,383 (3)	204	10 (2)	1	12 (6)	2	<5 (-)	-	149 (3)	19	<5 (-)	-	72 (4)	5	41 (4)	3	1,532 (3)	106	10 (2)	1
Pacific Islander	<5 (-)	-	<5 (-)	-	55 (<1)	452	<5 (-)	-	<5 (-)	-	<5 (-)	-	6 (<1)	48	<5 (-)	-	5 (<1)	-	<5 (-)	-	61 (<1)	248	<5 (-)	-
Unspecified	<5 (-)	-	<5 (-)	-	87 (<1)	-	<5 (-)	-	<5 (-)	-	<5 (-)	-	7 (<1)	-	<5 (-)	-	5 (<1)	-	<5 (-)	-	94 (<1)	-	<5 (-)	-
American Indian/Alaskan Native	7 (<1)	74	6 (1)	63	214 (<1)	2,188	<5 (-)	-	<5 (-)	-	<5 (-)	-	25 (<1)	243	<5 (-)	-	7 (<1)	36	6 (1)	31	239 (<1)	1,192	7 (1)	36
Multi-race/Unknown	33 (2)	-	24 (3)	-	679 (2)	-	25 (6)	-	<5 (-)	-	<5 (-)	-	83 (2)	-	<5 (-)	-	36 (2)	-	28 (3)	-	762 (2)	-	28 (6)	-
<b>Transmission Category<sup>5</sup></b>																								
MSM	1,511 (94)	-	759 (90)	-	38,009 (88)	-	328 (76)	-	-	-	-	-	-	-	-	-	1,511 (83)	-	759 (81)	-	38,009 (78)	-	328 (67)	-
IDU	41 (3)	-	25 (3)	-	1,324 (3)	-	35 (8)	-	41 (20)	-	26 (27)	-	1,146 (21)	-	26 (46)	-	82 (5)	-	51 (5)	-	2,471 (5)	-	61 (12)	-
MSM/IDU	43 (3)	-	51 (6)	-	2,935 (7)	-	57 (13)	-	-	-	-	-	-	-	-	-	43 (2)	-	51 (5)	-	2,935 (6)	-	57 (12)	-
Hemophi/Transfusion	<5 (-)	-	<5 (-)	-	79 (<1)	-	<5 (-)	-	<5 (-)	-	<5 (-)	-	54 (1)	-	<5 (-)	-	5 (<1)	-	<5 (-)	-	133 (<1)	-	<5 (-)	-
Heterosexual contact	12 (1)	-	9 (1)	-	891 (2)	-	7 (2)	-	168 (79)	-	67 (71)	-	4,181 (76)	-	32 (54)	-	180 (10)	-	76 (8)	-	5,072 (10)	-	38 (8)	-
Perinatal exposure	<5 (-)	-	<5 (-)	-	136 (<1)	-	<5 (-)	-	<5 (-)	-	<5 (-)	-	139 (3)	-	<5 (-)	-	<5 (-)	-	<5 (-)	-	275 (1)	-	<5 (-)	-
Other/Undetermined	<5 (-)	-	<5 (-)	-	8 (<1)	-	<5 (-)	-	<5 (-)	-	<5 (-)	-	6 (<1)	-	<5 (-)	-	<5 (-)	-	<5 (-)	-	14 (<1)	-	<5 (-)	-
<b>Total<sup>6</sup></b>	1,609 [88]	33	848 [90]	17	43,382 [89]	874	431 [88]	9	211 [12]	4	95 [10]	2	5,526 [11]	108	58 [12]	1	1,820 [100]	18	943 [100]	9	48,908 [100]	486	489 [100]	5

<sup>1</sup> Male and female categories are based on biological sex at birth.  
<sup>2</sup> Data are provisional due to reporting delay. Rates based on fewer than 12 observations may not be reliable (see technical notes).  
<sup>3</sup> Age distributions for year 2013 are based on age at the time of HIV diagnosis while the age distribution for persons living with diagnosed HIV infection is based on age as of December 31, 2014.  
<sup>4</sup> Percentages for Asian, Pacific Islander (PI) and unspecified races are calculated based on total cases.  
<sup>5</sup> Persons without an identified risk factor are assigned a risk factor using multiple imputation (MI) methods (see technical notes). Rate for transmission category is not calculated because of the lack of denominator data.  
<sup>6</sup> Percent of total cases that are male and female is shown in this row.

**Table 2.2.** HIV Diagnoses and Rates<sup>1</sup> (per 100,000) by Gender, Age Group, Race/Ethnicity, Transmission Category, and Service Planning Area (SPA), Los Angeles County, 2008-2013, Reported by December 31, 2014

	Year of Diagnosis																	
	2008			2009			2010			2011			2012 <sup>2</sup>			2013 <sup>2</sup>		
	No.	(%)	Rt	No.	(%)	Rt	No.	(%)	Rt	No.	(%)	Rt	No.	(%)	Rt	No.	(%)	Rt
<b>Gender</b>																		
Male	2,110	(88)	43	1,941	(87)	40	1,889	(87)	39	1,764	(88)	36	1,777	(88)	36	1,587	(87)	32
Female	280	(12)	6	262	(12)	5	252	(12)	5	202	(10)	4	195	(10)	4	208	(11)	4
Transgender <sup>3</sup>	21	(1)	-	30	(1)	-	20	(1)	-	31	(2)	-	40	(2)	-	25	(1)	-
<b>Age Group (Yr)</b>																		
<13	<5	(-)	-	<5	(-)	-	9	(<1)	1	<5	(-)	-	<5	(-)	-	<5	(-)	-
13-19	71	(3)	7	78	(3)	8	80	(4)	8	54	(3)	5	73	(4)	7	65	(4)	7
20-29	719	(30)	47	680	(30)	45	683	(32)	45	669	(34)	45	693	(34)	46	608	(33)	39
30-39	697	(29)	47	657	(29)	45	615	(28)	43	586	(29)	41	565	(28)	40	507	(28)	35
40-49	592	(25)	42	522	(23)	37	498	(23)	35	422	(21)	30	430	(21)	30	384	(21)	27
50-59	255	(11)	22	231	(10)	19	220	(10)	18	214	(11)	17	195	(10)	15	194	(11)	15
60+	74	(3)	5	65	(3)	4	56	(3)	4	50	(3)	3	53	(3)	3	59	(3)	4
<b>Race/Ethnicity</b>																		
White	648	(27)	22	560	(25)	19	543	(25)	19	472	(24)	17	463	(23)	16	440	(24)	15
African American	587	(24)	68	511	(23)	59	499	(23)	59	438	(22)	51	433	(22)	51	445	(24)	52
Latino	1,010	(42)	22	1,022	(46)	22	974	(45)	21	937	(47)	20	974	(48)	20	813	(45)	17
Asian/PI <sup>4</sup>	109	(5)	8	94	(4)	7	84	(4)	6	92	(5)	7	95	(5)	7	79	(4)	5
Asian	99	(4)	7	89	(4)	7	76	(4)	6	82	(4)	6	91	(5)	6	72	(4)	5
Pacific Islander	<5	(-)	-	<5	(-)	-	<5	(-)	-	<5	(-)	-	<5	(-)	-	<5	(-)	-
Unspecified	6	(<1)	-	<5	(-)	-	5	(<1)	-	8	(<1)	-	<5	(-)	-	5	(<1)	-
American Indian/Alaskan Native	12	(<1)	55	14	(1)	70	13	(1)	68	18	(1)	93	10	(<1)	52	7	(<1)	36
Multi-race <sup>3</sup>	45	(2)	-	32	(1)	-	48	(2)	-	40	(2)	-	37	(2)	-	36	(2)	-
<b>Transmission Category<sup>3,5</sup></b>																		
MSM	1,937	(80)	-	1,830	(82)	-	1,765	(82)	-	1,687	(84)	-	1,695	(84)	-	1,511	(83)	-
IDU	109	(5)	-	79	(4)	-	91	(4)	-	65	(3)	-	75	(4)	-	82	(5)	-
MSM/IDU	106	(4)	-	87	(4)	-	68	(3)	-	61	(3)	-	67	(3)	-	43	(2)	-
Heterosexual contact	255	(11)	-	236	(11)	-	227	(11)	-	181	(9)	-	171	(9)	-	180	(10)	-
Perinatal exposure	<5	(-)	-	<5	(-)	-	9	(<1)	-	<5	(-)	-	<5	(-)	-	<5	(-)	-
Other/Undetermined	<5	(-)	-	<5	(-)	-	<5	(-)	-	<5	(-)	-	<5	(-)	-	<5	(-)	-
<b>Service Planning Area</b>																		
Antelope Valley [1]	62	(3)	17	61	(3)	16	51	(2)	13	38	(2)	10	36	(2)	9	32	(2)	8
San Fernando [2]	353	(15)	17	301	(13)	14	263	(12)	12	274	(14)	13	263	(13)	12	246	(14)	11
San Gabriel [3]	178	(7)	10	174	(8)	10	151	(7)	9	153	(8)	9	176	(9)	10	155	(9)	9
Metro [4]	861	(36)	76	796	(36)	71	784	(36)	70	652	(33)	58	680	(34)	60	617	(34)	54
West [5]	96	(4)	15	95	(4)	15	117	(5)	18	102	(5)	16	106	(5)	17	82	(5)	13
South [6]	320	(13)	32	283	(13)	29	264	(12)	26	279	(14)	28	233	(12)	23	244	(13)	24
East [7]	176	(7)	13	156	(7)	12	170	(8)	13	178	(9)	14	159	(8)	12	148	(8)	11
South Bay/LB [8]	355	(15)	23	346	(15)	23	342	(16)	22	308	(15)	20	340	(17)	22	283	(16)	18
Unknown	10	(<1)	-	21	(1)	-	19	(1)	-	13	(1)	-	19	(1)	-	13	(1)	-
<b>Total</b>	<b>2,411</b>	<b>[100]</b>	<b>24</b>	<b>2,233</b>	<b>[100]</b>	<b>23</b>	<b>2,161</b>	<b>[100]</b>	<b>22</b>	<b>1,997</b>	<b>[100]</b>	<b>20</b>	<b>2,012</b>	<b>[100]</b>	<b>20</b>	<b>1,820</b>	<b>[100]</b>	<b>18</b>

<sup>1</sup> Rates for 2008-2009 are based on smoothed population estimates for the same years prepared by the Office of Health Assessment and Epidemiology, LAC/DPH. Rates for 2010-2013 are based on census 2010 population estimates for 2010-2013. Rates based on fewer than 12 observations may not be reliable (see Technical Notes).

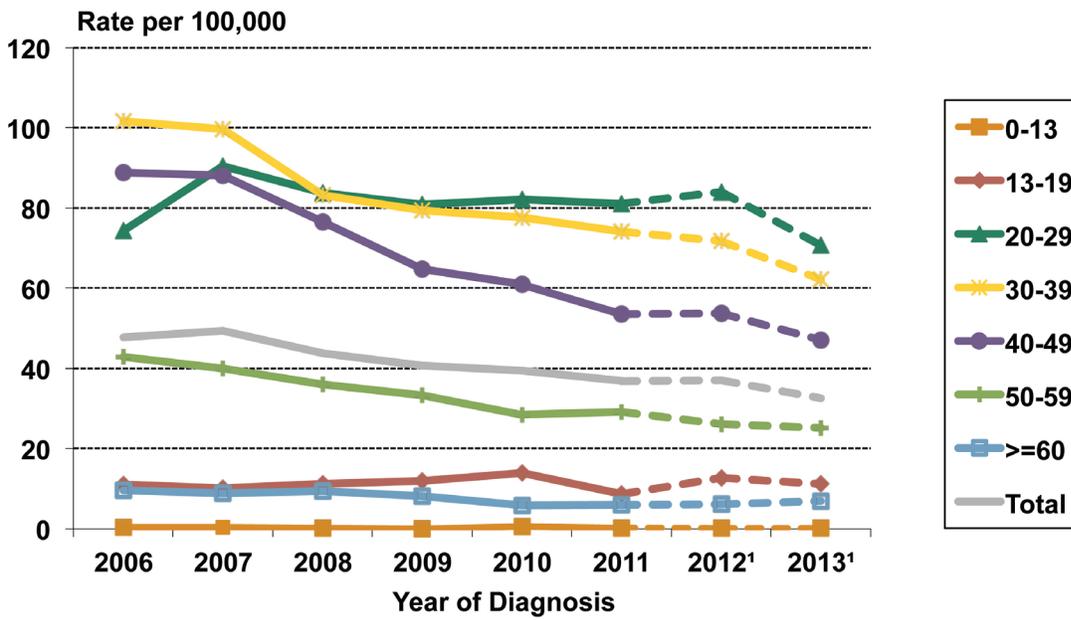
<sup>2</sup> Data are provisional due to reporting delay.

<sup>3</sup> Rates for transgender, transmission category and multi-race are not calculated because of the lack of denominator data.

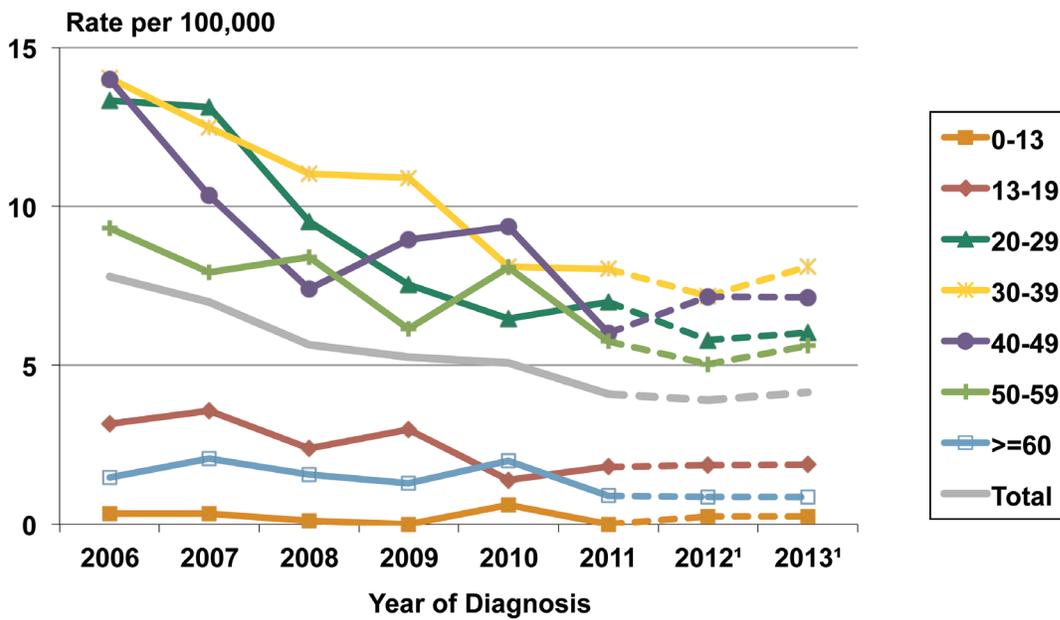
<sup>4</sup> Percentages for Asian, Pacific Islander (PI) and unspecified races are calculated based on the total cases.

<sup>5</sup> Persons without an identified risk factor are assigned a risk factor using multiple imputation (MI) methods (see Technical Notes).

**Figure 2.2A.** Rates of HIV Diagnoses among Males by Age Group, Los Angeles County, 2006-2013

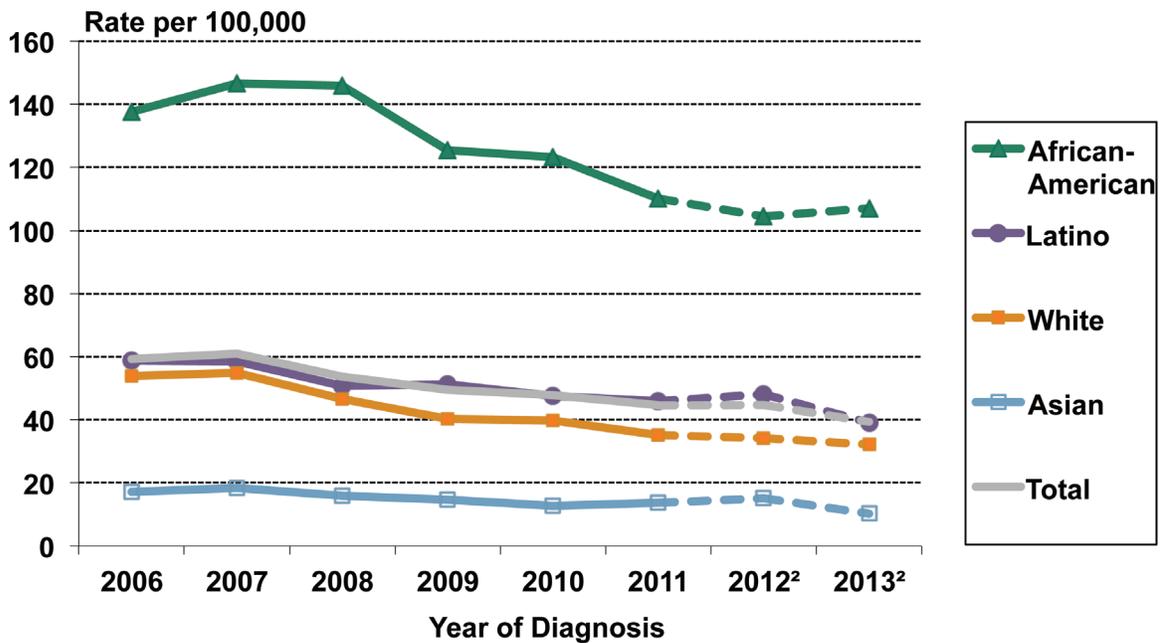


**Figure 2.2B.** Rates of HIV Diagnoses among Females by Age Group, Los Angeles County, 2006-2013

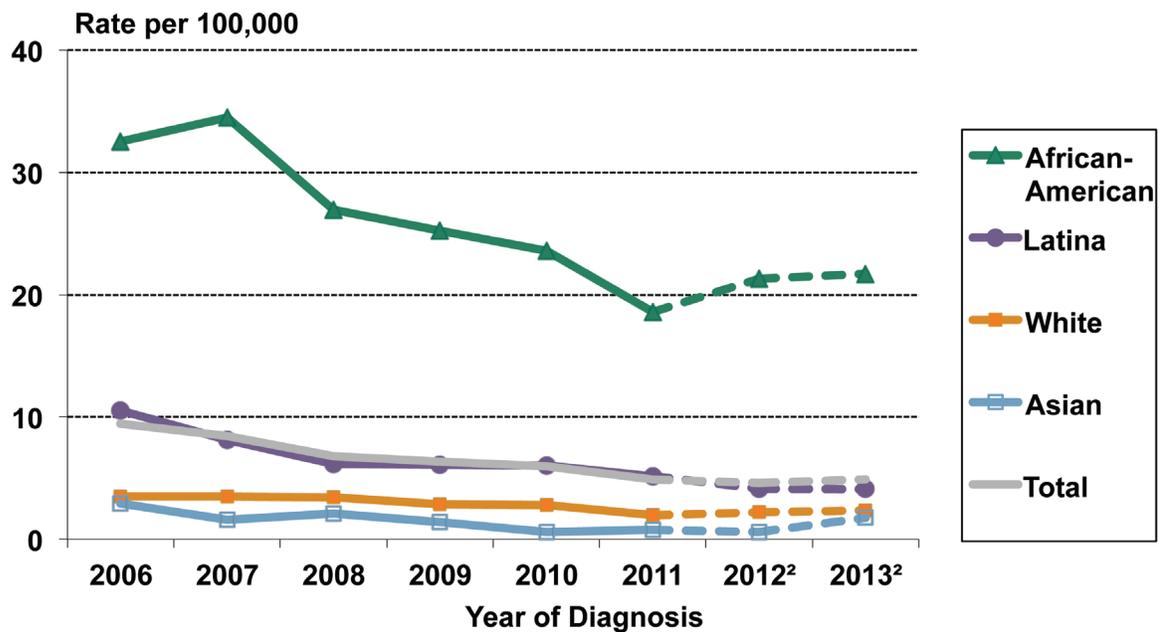


<sup>1</sup> Data are provisional due to reporting delay.

**Figure 2.3A.** Rates of HIV Diagnoses among Adult/Adolescent Males by Race/Ethnicity<sup>1</sup>, Los Angeles County, 2006-2013



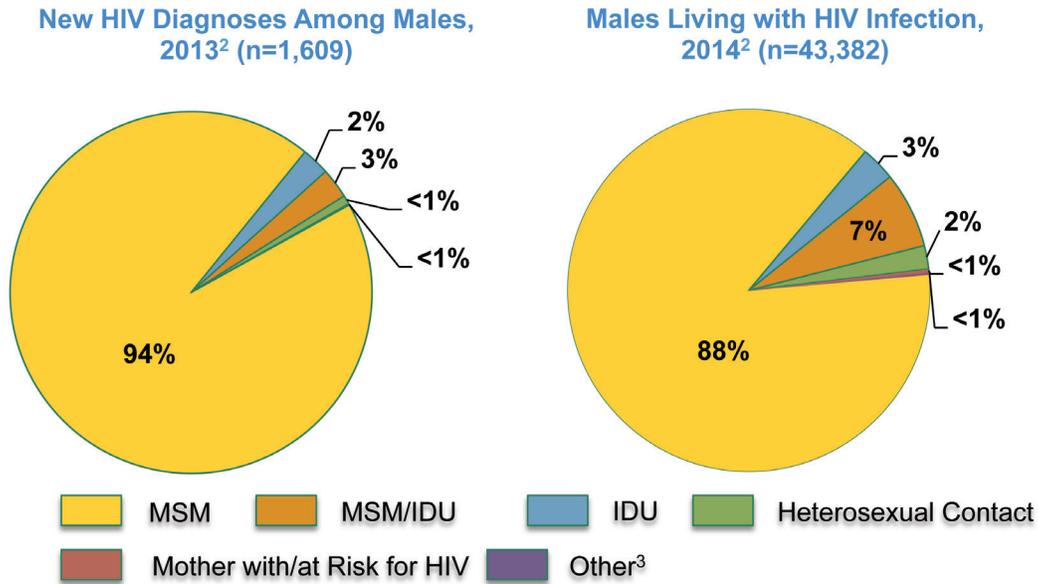
**Figure 2.3B.** Rates of HIV Diagnoses among Adult/Adolescent Females by Race/Ethnicity<sup>1</sup>, Los Angeles County, 2006-2013



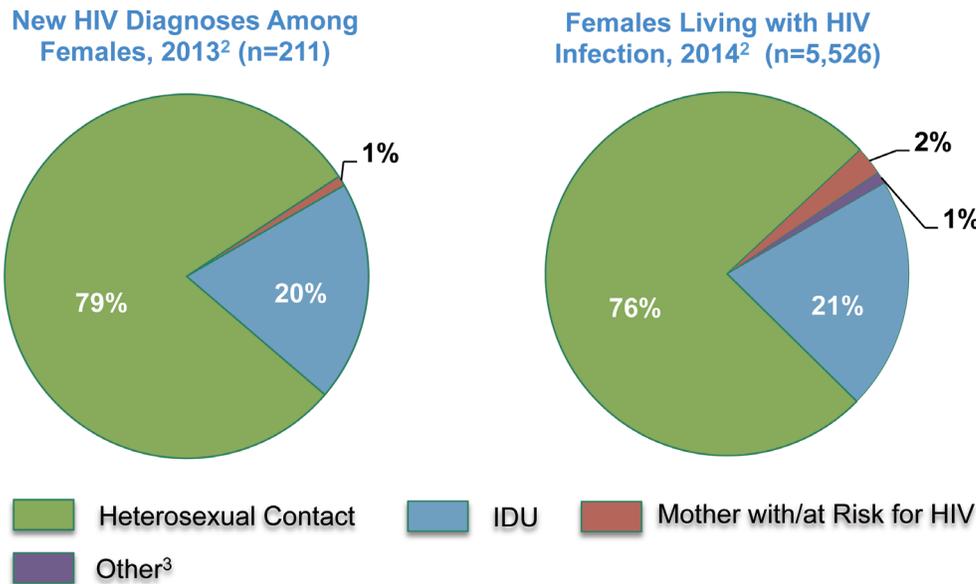
<sup>1</sup> Data for Pacific Islanders and American Indians/Alaskan Natives are not presented due to small numbers that may cause unstable estimates.

<sup>2</sup> Data are provisional due to reporting delay.

**Figure 2.4A.** Transmission Risk Category<sup>1</sup> among Males Living with HIV at Year-end 2014 and HIV Diagnoses in 2013, Los Angeles County



**Figure 2.4B.** Transmission Risk Category<sup>1</sup> among Females Living with HIV at Year-end 2014 and HIV Diagnoses in 2013, Los Angeles County



<sup>1</sup> Persons without an identified risk factor are assigned a risk factor using CDC-recommended multiple imputation (MI) methods.

<sup>2</sup> Data are provisional due to reporting delay.

<sup>3</sup> Other risks include hemophilia, coagulation disorder, blood transfusion, and risk factor not reported/identified.

**Table 2.3.** HIV Diagnoses from 2009-2013 and Persons Living with HIV (PLWH) as of 2014 by Service Planning Area (SPA) and Health District (HD) of Residence, Los Angeles County, Reported by December 31, 2014

SPA/HD <sup>1</sup>	Year of Diagnosis																	
	2009			2010			2011			2012 <sup>2</sup>			2013 <sup>2</sup>			PLWH as of 2014 <sup>2</sup>		
	No.	(%)	Rt <sup>3</sup>	No.	(%)	Rt <sup>3</sup>	No.	(%)	Rt <sup>3</sup>	No.	(%)	Rt <sup>3</sup>	No.	(%)	Rt <sup>3</sup>	No.	(%)	Rt <sup>3</sup>
<b>Antelope Valley[1]</b>	61	( 3)	16	51	( 2)	13	38	( 2)	10	36	( 2)	9	32	( 2)	8	695	( 1)	177
Antelope Valley	61	( 3)	16	51	( 2)	13	38	( 2)	10	36	( 2)	9	32	( 2)	8	695	( 1)	177
<b>San Fernando[2]</b>	301	(13)	14	263	(12)	12	274	(14)	13	263	(13)	12	246	(14)	11	6,861	(14)	313
East Valley	92	( 4)	21	79	( 4)	18	99	( 5)	22	95	( 5)	21	76	( 4)	17	2,385	( 5)	527
Glendale	44	( 2)	13	26	( 1)	8	22	( 1)	7	35	( 2)	10	28	( 2)	8	912	( 2)	266
San Fernando	34	( 2)	7	37	( 2)	7	43	( 2)	9	35	( 2)	7	31	( 2)	6	759	( 2)	148
West Valley	131	( 6)	15	121	( 6)	14	110	( 6)	13	98	( 5)	11	111	( 6)	13	2,805	( 6)	318
<b>San Gabriel[3]</b>	174	( 8)	10	151	( 7)	9	153	( 8)	9	176	( 9)	10	155	( 9)	9	3,418	( 7)	192
Alhambra	23	( 1)	7	27	( 1)	8	30	( 2)	9	33	( 2)	10	23	( 1)	7	539	( 1)	155
El Monte	44	( 2)	10	39	( 2)	9	32	( 2)	7	45	( 2)	10	36	( 2)	8	875	( 2)	199
Foothill	32	( 1)	11	24	( 1)	8	30	( 2)	10	20	( 1)	7	27	( 1)	9	567	( 1)	184
Pasadena	30	( 1)	22	19	( 1)	14	13	( 1)	9	24	( 1)	17	23	( 1)	16	511	( 1)	358
Pomona	45	( 2)	8	42	( 2)	8	48	( 2)	9	54	( 3)	10	46	( 3)	8	926	( 2)	170
<b>Metro[4]</b>	796	(36)	71	784	(36)	70	652	(33)	58	680	(34)	60	617	(34)	54	18,480	(38)	1,607
Central	326	(15)	97	266	(12)	79	211	(11)	63	248	(12)	73	229	(13)	67	6,447	(13)	1,868
Hollywood-Wilshire	388	(17)	81	432	(20)	90	378	(19)	79	363	(18)	75	313	(17)	64	10,222	(21)	2,068
Northeast	82	( 4)	27	86	( 4)	28	63	( 3)	21	69	( 3)	22	75	( 4)	24	1,811	( 4)	584
<b>West[5]</b>	95	( 4)	15	117	( 5)	18	102	( 5)	16	106	( 5)	17	82	( 5)	13	2,693	( 6)	413
West	95	( 4)	15	117	( 5)	18	102	( 5)	16	106	( 5)	17	82	( 5)	13	2,693	( 6)	413
<b>South[6]</b>	283	(13)	29	264	(12)	26	279	(14)	28	233	(12)	23	244	(13)	24	5,216	(11)	505
Compton	44	( 2)	16	52	( 2)	19	64	( 3)	23	34	( 2)	12	50	( 3)	18	951	( 2)	334
South	50	( 2)	27	47	( 2)	25	55	( 3)	29	48	( 2)	25	43	( 2)	22	899	( 2)	465
Southeast	49	( 2)	29	40	( 2)	24	35	( 2)	21	34	( 2)	20	41	( 2)	24	815	( 2)	468
Southwest	140	( 6)	39	125	( 6)	34	125	( 6)	33	117	( 6)	31	110	( 6)	29	2,551	( 5)	668
<b>East[7]</b>	156	( 7)	12	170	( 8)	13	178	( 9)	14	159	( 8)	12	148	( 8)	11	3,202	( 7)	244
Bellflower	34	( 2)	10	44	( 2)	12	38	( 2)	11	31	( 2)	9	44	( 2)	12	645	( 1)	180
East Los Angeles	32	( 1)	15	30	( 1)	15	34	( 2)	17	32	( 2)	16	23	( 1)	11	637	( 1)	311
San Antonio	64	( 3)	15	68	( 3)	16	67	( 3)	16	57	( 3)	14	49	( 3)	12	1,212	( 2)	284
Whittier	26	( 1)	8	28	( 1)	9	39	( 2)	12	39	( 2)	12	32	( 2)	10	708	( 1)	219
<b>South Bay[8]</b>	346	(15)	23	342	(16)	22	308	(15)	20	340	(17)	22	283	(16)	18	8,042	(16)	517
Harbor	20	( 1)	10	38	( 2)	19	21	( 1)	10	21	( 1)	10	19	( 1)	9	519	( 1)	252
Inglewood	86	( 4)	21	105	( 5)	26	88	( 4)	22	90	( 4)	22	88	( 5)	21	1,759	( 4)	422
Long Beach	190	( 9)	41	156	( 7)	34	161	( 8)	35	192	(10)	41	139	( 8)	29	4,938	(10)	1,043
Torrance	50	( 2)	11	43	( 2)	10	38	( 2)	8	37	( 2)	8	37	( 2)	8	826	( 2)	180
<b>Total<sup>4</sup></b>	2,233	[100]	23	2,161	[100]	22	1,997	[100]	20	2,012	[100]	20	1,820	[100]	18	48,908	[100]	486

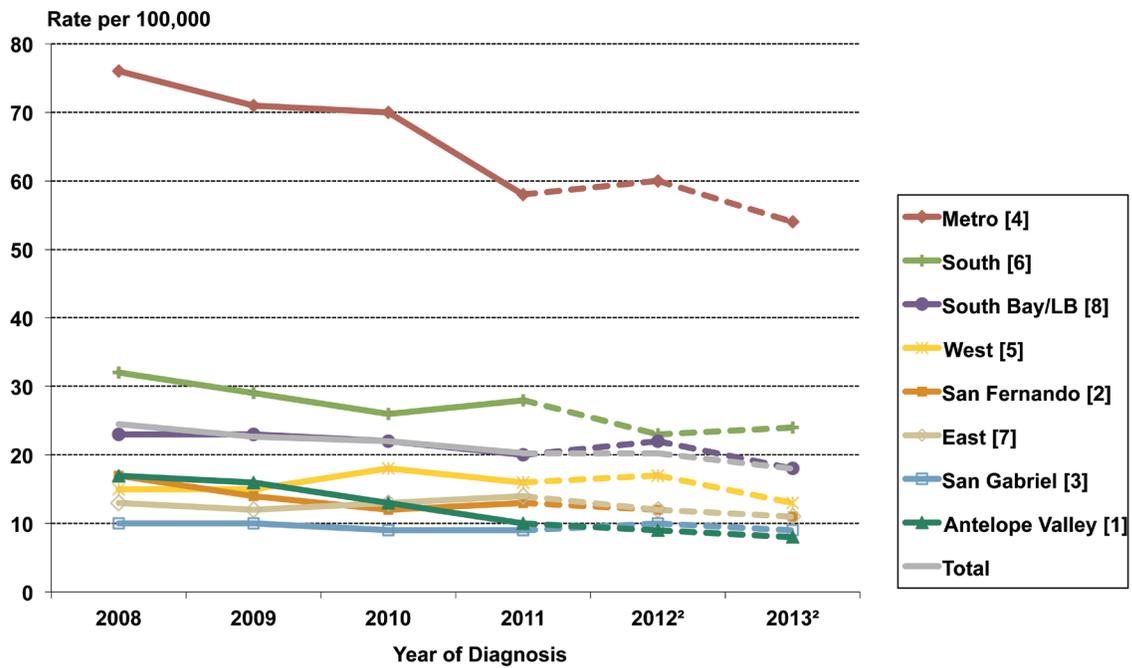
<sup>1</sup> Service Planning Area and Health District are based on 2012 boundaries.

<sup>2</sup> Data are provisional due to reporting delay.

<sup>3</sup> Rate per 100,000. Rate for 2009 is based on smoothed population estimates for 2009 as prepared by the Office of Health Assessment and Epidemiology, LAC/DPH. Rates for 2010-2013 and PLWH as of 2014 are based on Census 2010 population estimate for 2010-2014. Rates based on fewer than 12 observations may not be reliable (see Technical Notes).

<sup>4</sup> Total includes persons with no information on Service Planning Area/Health District.

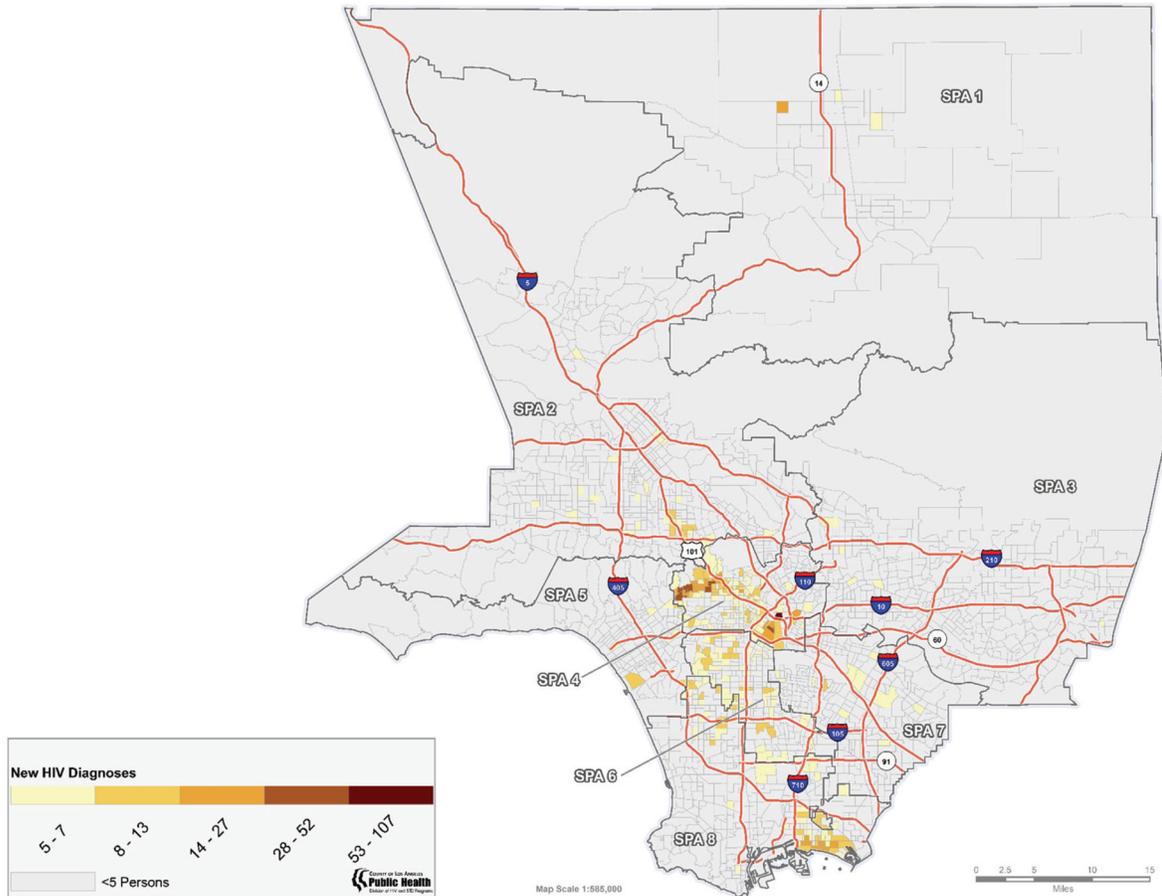
**Figure 2.5.** Rates of HIV Diagnoses by Service Planning Area<sup>1</sup>, Los Angeles County, 2008-2013



<sup>1</sup> Service Planning Areas are based on residence at the time of HIV or AIDS diagnosis.

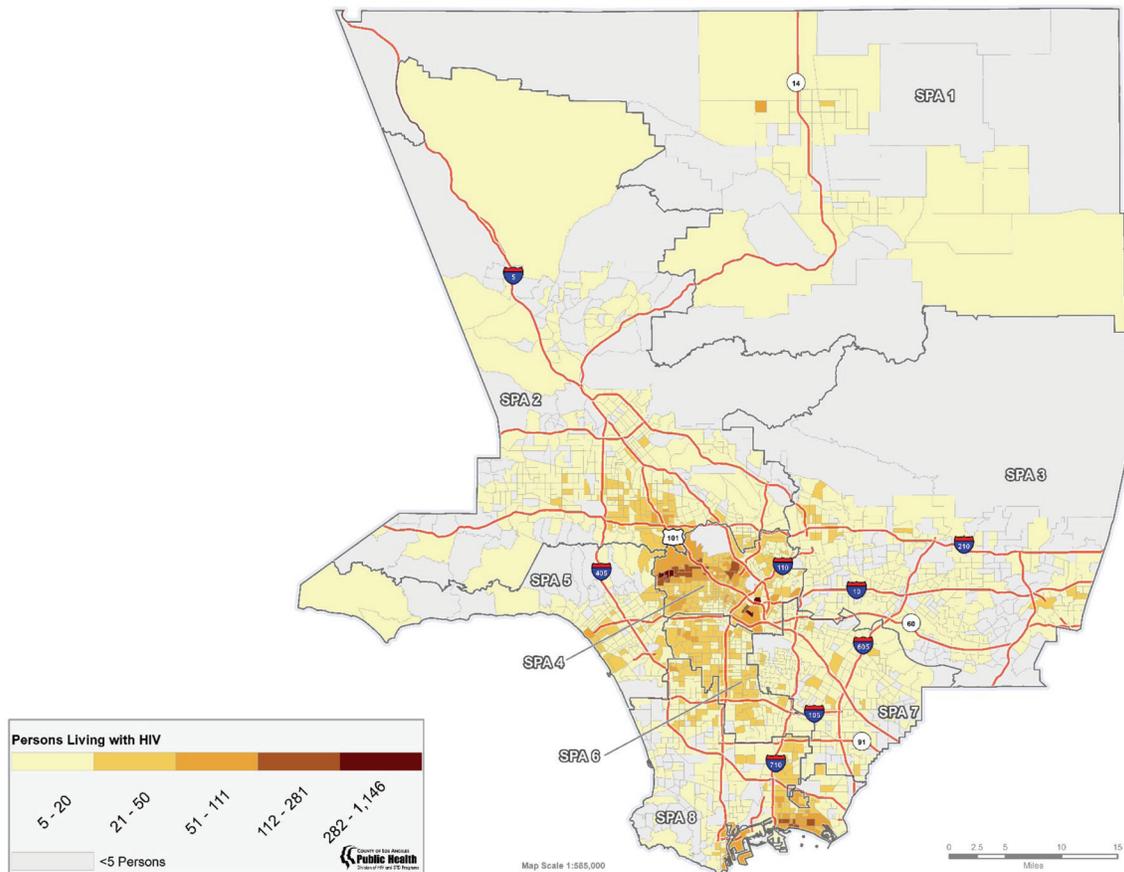
<sup>2</sup> Data are provisional due to reporting delay.

**Figure 2.6.** New HIV Diagnoses by Census Tract & Service Planning Area (SPA), Los Angeles, County, 2011-2013



<sup>1</sup> Map does not include 3.4% of persons with insufficient location information. Census Tract Data, 2010 U.S. Census Tract U.S. Dept. of Commerce. Data are provisional due to reporting delay.

**Figure 2.7.** Persons Living with a Diagnosis of HIV Infection as of 12/31/14 by Census Tract & Service Planning Area (SPA), Los Angeles County



<sup>1</sup> Census tract information is based on person's most recent address as of 12/31/2014. In the case of an unavailable street address, the most recent zip code is used. Map does not include 144 (0.3%) of persons with insufficient location information. Census Tract Data, 2010 U.S. Census Tract U.S. Dept. of Commerce. Data are provisional due to reporting delay.

**Table 2.4.** Linkage to Care<sup>1,2</sup> among Persons ≥18 years old with an HIV Diagnosis in 2013<sup>2</sup> and Retention in Care<sup>1</sup> and Viral Suppression<sup>1</sup> among Persons ≥18 years old Diagnosed with HIV Infection through 12/31/2012 and Living with HIV in Los Angeles County as of 2013<sup>3</sup>, by Selected Characteristics, Reported by December 31, 2014

Characteristics	No. of persons ≥18 years old diagnosed with HIV infection in 2013 <sup>2</sup>			Linked to care in 3 months <sup>1,2</sup>			No. of persons ≥18 years old living with HIV as of 2013 (Overall Population) <sup>3</sup>			Retained in care in 2013 <sup>1</sup>			No. of persons with ≥ 1 VL test in 2013			Viral Suppression <sup>1</sup> (VL ≤ 200)					
	No.	No.	%	No.	No.	%	No.	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
<b>Gender</b>																					
Male	1,617	1,284	79.4	40,134	23,997	59.8	28,197	23,997	59.8	23,997	59.8	23,681	59.0	23,681	59.0	23,681	59.0	23,681	59.0	23,681	59.0
Female	200	143	71.5	5,114	2,971	58.1	3,460	2,971	58.1	2,971	58.1	2,811	55.0	2,811	55.0	2,811	55.0	2,811	55.0	2,811	55.0
Transgender	27	22	81.5	608	384	63.2	436	384	63.2	384	63.2	284	46.7	284	46.7	284	46.7	284	46.7	284	46.7
<b>Age Group (Yr)</b>																					
18-29	679	534	78.7	4,215	2,349	55.7	2,901	2,349	55.7	2,349	55.7	2,109	50.0	2,109	50.0	2,109	50.0	2,109	50.0	2,109	50.0
30-49	916	717	78.3	24,349	14,161	58.2	16,816	14,161	58.2	14,161	58.2	13,696	56.3	13,696	56.3	13,696	56.3	13,696	56.3	13,696	56.3
≥ 50	249	198	79.5	17,292	10,842	62.7	12,376	10,842	62.7	10,842	62.7	10,971	63.5	10,971	63.5	10,971	63.5	10,971	63.5	10,971	63.5
<b>Race/Ethnicity</b>																					
African American	442	311	72.2	9,505	5,320	56.0	6,323	5,320	56.0	5,320	56.0	4,676	49.2	4,676	49.2	4,676	49.2	4,676	49.2	4,676	49.2
Latino	827	746	78.0	18,889	11,517	61.0	13,086	11,517	61.0	11,517	61.0	10,930	57.9	10,930	57.9	10,930	57.9	10,930	57.9	10,930	57.9
White	453	398	83.1	14,953	8,945	59.8	10,809	8,945	59.8	8,945	59.8	9,601	64.2	9,601	64.2	9,601	64.2	9,601	64.2	9,601	64.2
Asian/Pacific Islander	78	86	86.0	1,494	923	61.8	1,099	923	61.8	923	61.8	995	66.6	995	66.6	995	66.6	995	66.6	995	66.6
American Indian/Alaskan Native <sup>4</sup>	10	8	88.9	247	134	54.3	165	134	54.3	134	54.3	109	44.1	109	44.1	109	44.1	109	44.1	109	44.1
Multi-race	34	31	81.6	768	513	66.8	611	513	66.8	513	66.8	465	60.6	465	60.6	465	60.6	465	60.6	465	60.6
<b>Adjusted Transmission Category<sup>5</sup></b>																					
Male-to-male sexual contact (MSM)	1,531	1,220	79.7	35,118	21,080	60.0	24,782	21,080	60.0	21,080	60.0	21,021	59.9	21,021	59.9	21,021	59.9	21,021	59.9	21,021	59.9
Injection drug use (IDU)	91	70	77.6	2,577	1,363	52.9	1,604	1,363	52.9	1,363	52.9	1,263	49.0	1,263	49.0	1,263	49.0	1,263	49.0	1,263	49.0
MSM and IDU	48	35	73.0	3,048	1,895	62.2	2,212	1,895	62.2	1,895	62.2	1,629	53.5	1,629	53.5	1,629	53.5	1,629	53.5	1,629	53.5
Heterosexual contact <sup>6</sup>	174	124	70.9	4,815	2,819	58.5	3,268	2,819	58.5	2,819	58.5	2,701	56.1	2,701	56.1	2,701	56.1	2,701	56.1	2,701	56.1
Other/unknown	--	--	--	298	195	65.4	228	195	65.4	195	65.4	162	54.4	162	54.4	162	54.4	162	54.4	162	54.4
<b>Service Planning Area</b>																					
Antelope Valley [1]	34	26	76.5	901	516	57.3	630	516	57.3	516	57.3	901	56.5	901	56.5	901	56.5	901	56.5	901	56.5
San Fernando [2]	254	212	83.5	6,602	4,180	63.3	4,878	4,180	63.3	4,180	63.3	6,602	63.8	6,602	63.8	6,602	63.8	6,602	63.8	6,602	63.8
San Gabriel [3]	158	122	77.2	3,179	2,028	63.8	2,355	2,028	63.8	2,028	63.8	3,179	64.3	3,179	64.3	3,179	64.3	3,179	64.3	3,179	64.3
Metro [4]	618	469	75.9	17,056	9,739	57.1	11,522	9,739	57.1	9,739	57.1	11,522	56.3	11,522	56.3	11,522	56.3	11,522	56.3	11,522	56.3
West [5]	98	80	81.6	2,359	1,335	56.6	1,621	1,335	56.6	1,335	56.6	2,359	60.6	2,359	60.6	2,359	60.6	2,359	60.6	2,359	60.6
South [6]	242	176	72.7	5,170	3,174	61.4	3,673	3,174	61.4	3,174	61.4	5,170	53.0	5,170	53.0	5,170	53.0	5,170	53.0	5,170	53.0
East [7]	148	130	87.8	3,035	1,979	65.2	2,274	1,979	65.2	1,979	65.2	3,035	63.2	3,035	63.2	3,035	63.2	3,035	63.2	3,035	63.2
South Bay [8]	282	230	81.6	7,386	4,333	58.7	5,055	4,333	58.7	4,333	58.7	7,386	57.7	7,386	57.7	7,386	57.7	7,386	57.7	7,386	57.7
Unknown	10	--	--	168	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Total</b>	1,844	1,449	78.6	45,856	27,352	59.7	32,093	27,352	59.7	27,352	59.7	26,776	58.4	26,776	58.4	26,776	58.4	26,776	58.4	26,776	58.4

<sup>1</sup> Persons are considered linked to care if there is at least one viral load, CD4+ T-cell, or genotype test within 3 months of an HIV diagnosis; persons are considered retained in care if they have ≥ 2 viral load, CD4+ T-cell, or genotype tests between 01/01/2013 through 12/31/2013, at least 3 months apart; persons are considered virally suppressed when last VL test in 2013 was ≤ 200 copies/ml.

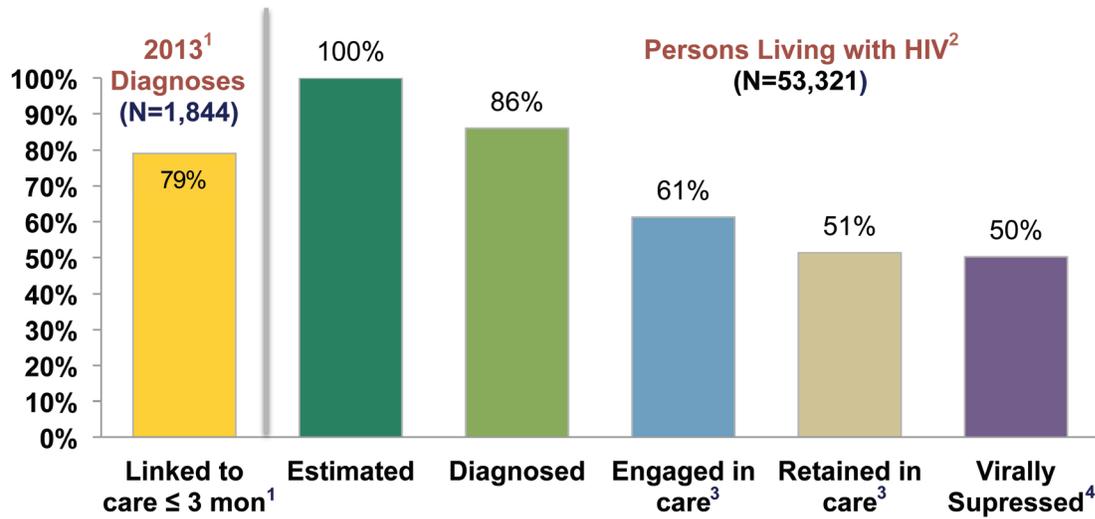
<sup>2</sup> Denominator for linkage to care includes persons who were reported with a new HIV diagnosis in 2013 and were living in LAC as of 12/31/2014; does not include estimated persons unaware of HIV infection.

<sup>3</sup> Includes persons diagnosed through 2012 and living in LAC as of 12/31/2013 based on most recent residence; excludes 4,511 persons who no longer live in LAC and includes 5,677 persons who moved to LAC after their initial diagnosis.

<sup>4</sup> Includes all non-Latino persons who have been reported with American Indian/Alaskan Native race, regardless of whether any other racial/ethnic information is reported.

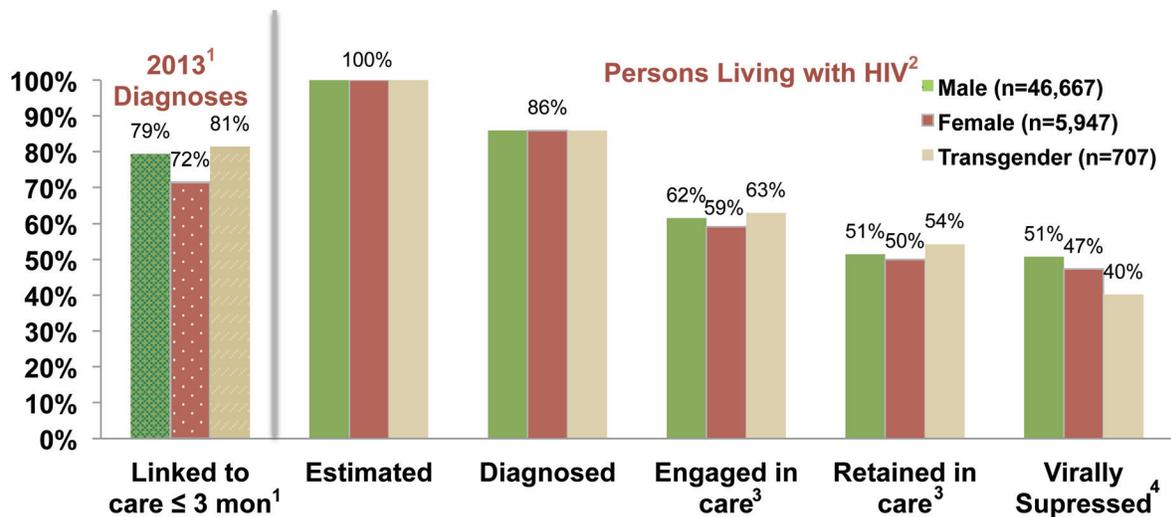
<sup>5</sup> Persons with no reported risk information are re-distributed to a valid risk category using multiple imputation (MI) methods.

Figure 2.8A. HIV Care Continuum, Los Angeles County, 2013



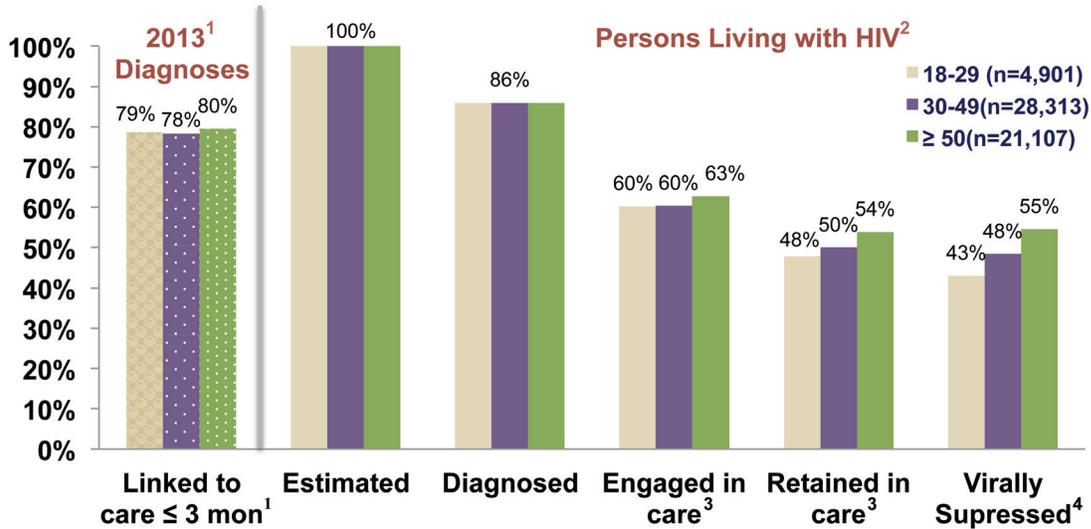
<sup>1</sup> Data for 2013 are provisional due to reporting delay; linked to care within 3 months of HIV diagnosis; denominator includes persons who were reported with a new HIV diagnosis in 2013 and were living in LAC as of 12/31/2014.  
<sup>2</sup> Includes persons diagnosed through 2012 and living in LAC as of 12/31/2013 based on most recent residence plus an additional 14% that CDC estimates are unaware of HIV status; excludes 4,511 persons who no longer live in LAC and includes 5,677 persons who moved to LAC after their initial HIV diagnosis.  
<sup>3</sup> Engaged in care: ≥1 CD4/VL/Geno tests in 2013; retained in care: ≥2 CD4/VL/Geno tests at least 3 months apart in 2013.  
<sup>4</sup> Viral suppression defined as ≤ 200 copies/ml.

Figure 2.8B. HIV Care Continuum by Gender, Los Angeles County, 2013



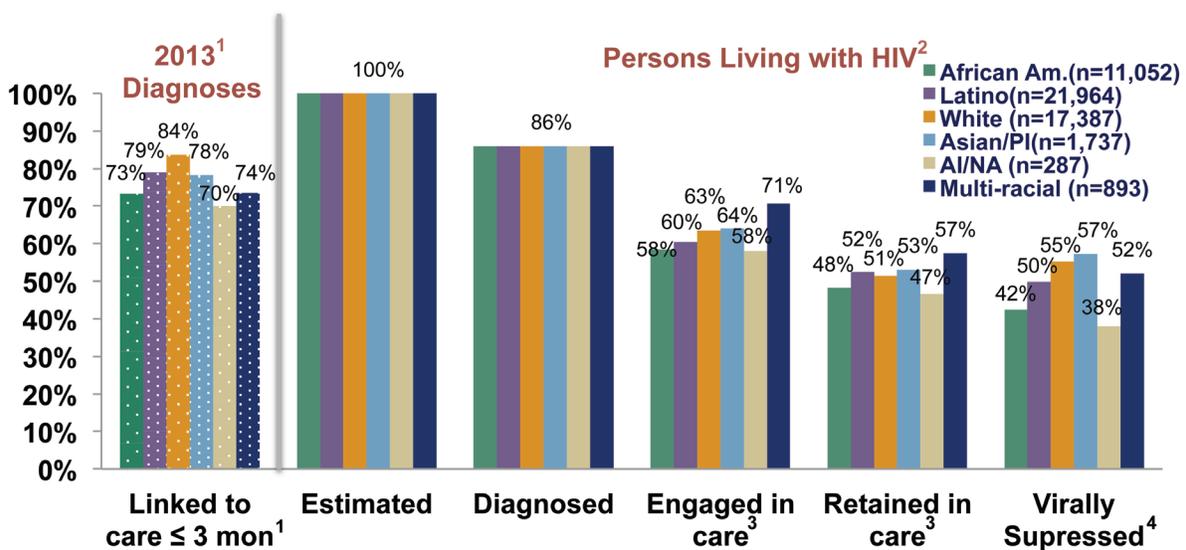
<sup>1</sup> Data for 2013 are provisional; denominator includes 1,617 men, 200 women, and 27 transgender persons who were reported with a new HIV diagnosis in 2013 and were living in LAC as of 12/31/2014.  
<sup>2</sup> Includes persons diagnosed through 2012 and living in LAC as of 12/31/2013 based on most recent residence and an additional 14% that CDC estimates are unaware of HIV status; 4,511 persons who no longer live in LAC are not included and 5,667 persons who moved to LAC were included.  
<sup>3</sup> Engaged in care : ≥1 CD4/VL/Geno test in 2013; Retained in care: ≥2 CD4/VL/Geno test at least 3 months apart.  
<sup>4</sup> Viral suppression defined as VL ≤ 200 copies/ml.

Figure 2.8C. HIV Care Continuum, by Age Group, Los Angeles County, 2013



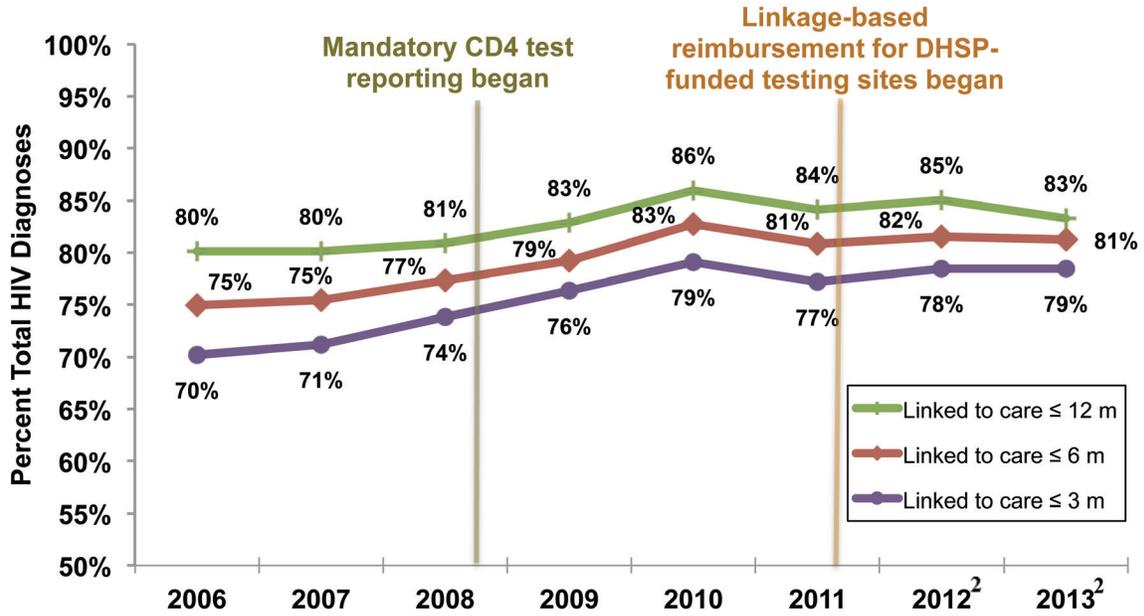
<sup>1</sup> Data for 2013 are provisional; denominators include 679 persons ages 18-29, 916 ages 30-49, and 259 50+ who were reported with a new HIV diagnosis in 2013 and were living in LAC as of 12/31/2014.  
<sup>2</sup> Includes persons diagnosed through 2012 and living in LAC as of 12/31/2013 based on most recent residence and an additional 14% that CDC estimates are unaware of HIV status; 4,511 persons who no longer live in LAC are not included and 5,667 persons who moved to LAC were included.  
<sup>3</sup> Engaged in care: ≥ 1 CD4/VL/Geno test in 2013; Retained in care: ≥ 2 CD4/VL/Geno test at least 3 months apart.  
<sup>4</sup> Viral suppression defined as VL ≤ 200 copies/ml.

Figure 2.8D. HIV Care Continuum by Race/Ethnicity, Los Angeles County, 2013



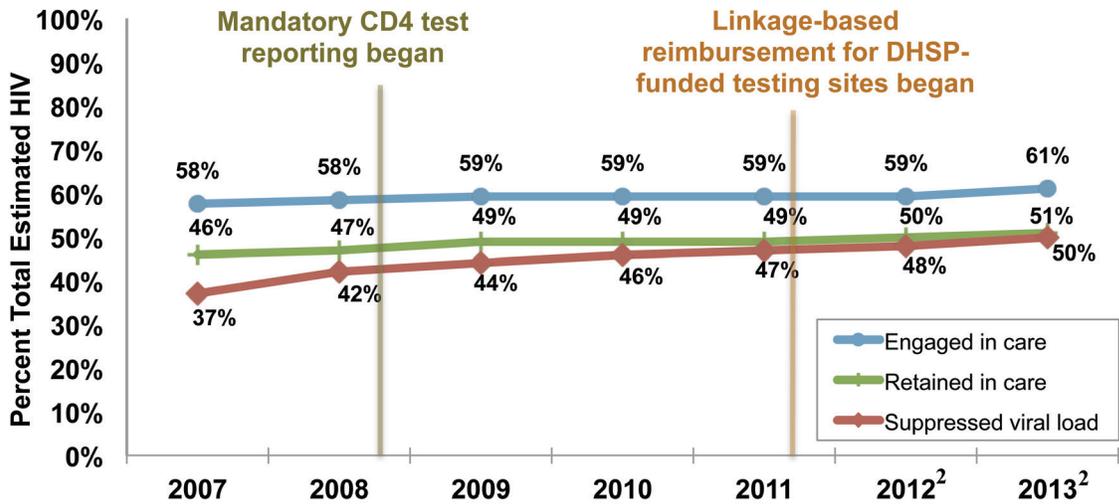
<sup>1</sup> Data for 2013 are provisional. Denominators include 324 African Americans, 658 Latinos, 378 whites, 61 Asians/Pis, 7 American Indian /Alaskan Native, and 25 multi-racial persons who were reported with a new HIV diagnosis in 2013 and were living in LAC as of 2/31/2014.  
<sup>2</sup> Includes persons diagnosed through 2012 and living in LAC as of 12/31/2013 based on most recent residence and an additional 14% that CDC estimates are unaware of HIV status; 4,511 persons who no longer live in LAC were not included and 5,667 persons who moved to LAC were included.  
<sup>3</sup> Engaged in care: ≥ 1 CD4/VL/Geno test in 2013; Retained in Care: ≥ 2 CD4/VL/Geno tests at least 3 months apart.  
<sup>4</sup> Viral suppression defined as VL ≤ 200 copies/ml.

Figure 2.9. Linkage to Care for Persons Reported with HIV<sup>1</sup> in Los Angeles County, 2006-2013



<sup>1</sup> Includes persons diagnosed with HIV infection in each calendar year and living through the following 12 months; as of December 31, 2014.  
<sup>2</sup> 2012 and 2013 data are provisional.

Figure 2.10. Engagement, Retention and Viral Load Suppression for Persons Living with HIV<sup>1</sup>, Los Angeles County, 2007-2013



<sup>1</sup> Includes persons diagnosed with HIV through 2012 and living in LAC as of 12/31/2013 based on most recent residence and an additional 14% that CDC estimates are unaware of HIV status; 5,667 persons who moved into LAC after HIV diagnosis are included and 4,511 persons who no longer live in LAC are excluded.  
<sup>2</sup> 2012 and 2013 data are provisional.

## Overview of Syphilis in Los Angeles County

A total of 3,841 cases of syphilis were reported in LAC in 2014. Twenty-nine percent (n=1,097; 12 per 100,000) of these cases were staged as either primary or secondary (P&S), 35% (n=1,365; 14 per 100,000) as early latent (EL) and 36% (n=1,379; 15 per 100,000) as Late Latent or Late (LL/L). Since 2010, the number of reported P&S, EL and LL/L cases has risen by 74%, 50% and 31%, respectively. There has also been an increase in congenital syphilis which, although based on small numbers, rose 343% from 7 cases in 2010 to 31 cases in 2014 (see Table 1.1). As shown in Figures 3.1A and 3.1B, P&S and EL syphilis rates are higher in Los Angeles County (LAC) compared to California and the US. LAC syphilis rates are similar or lower than rates for other large urban jurisdictions in the US (see Table 1.2).<sup>4</sup>

Although a few tables and figures in this report present syphilis cases by P&S, EL and LL/L stages, the majority of data is reported for 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 LL/L classifications are consistent with those used by the Centers for Disease Control and Prevention (CDC)<sup>5</sup> and are ideal for making comparisons between LAC and state or national data.

**Gender:** As shown in Table 3.1, most cases of ES in 2014 were among males (92%), followed by females (6%) and individuals who identified as transgender (2%).

**Age:** ES morbidity occurred over a broad age range; ninety percent of cases in 2014 were among individuals aged 15-54 years (see Table 3.1).

**Race/Ethnicity:** While almost half of all ES cases in 2014 occurred among Latinos, the rate of ES among African Americans (63 per 100,000) was over 2.5 times higher than the rate among Latinos (25 per 100,000) and whites (24 per 100,000).

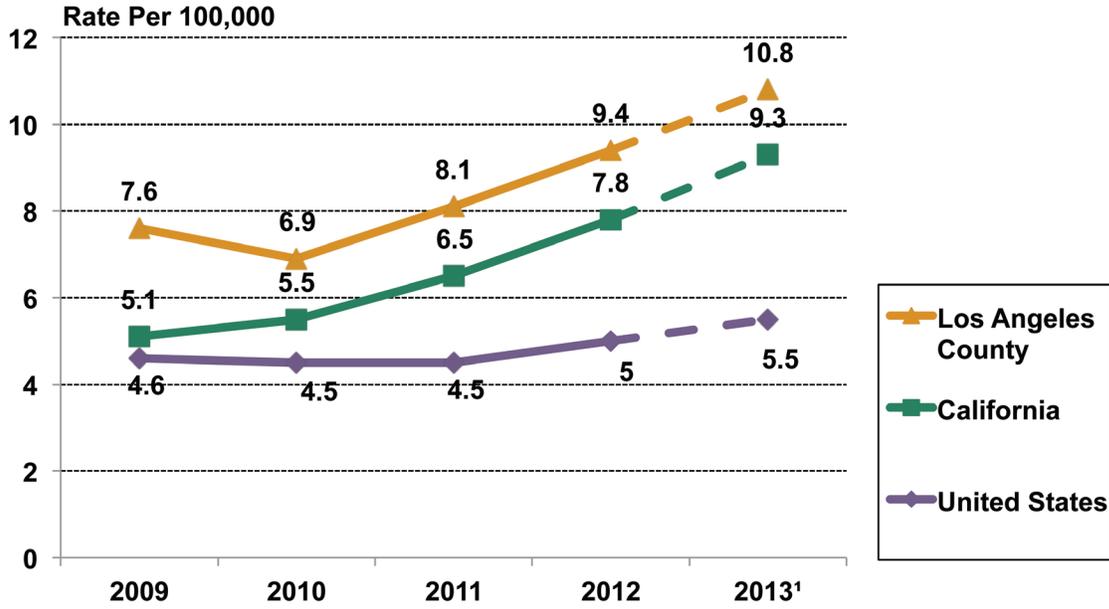
**Sexual Orientation:** Among males with ES in 2014, 89% of cases occurred among men who have sex with men (MSM) or men who have sex with men and women (MSMW), after excluding missing data (see Table 3.1).

**Geographic Distribution:** ES cases were concentrated within specific regions of LAC in 2014 (see Figure 3.5). Among males, the Metro SPA had the highest number (893), proportion (39%) and rate of ES (151 per 100,000) among all SPAs in the county. Among females, the South SPA had the highest number (56), proportion (36%) and rate of ES (11 per 100,000) among all SPAs in the county (see Table 3.2).

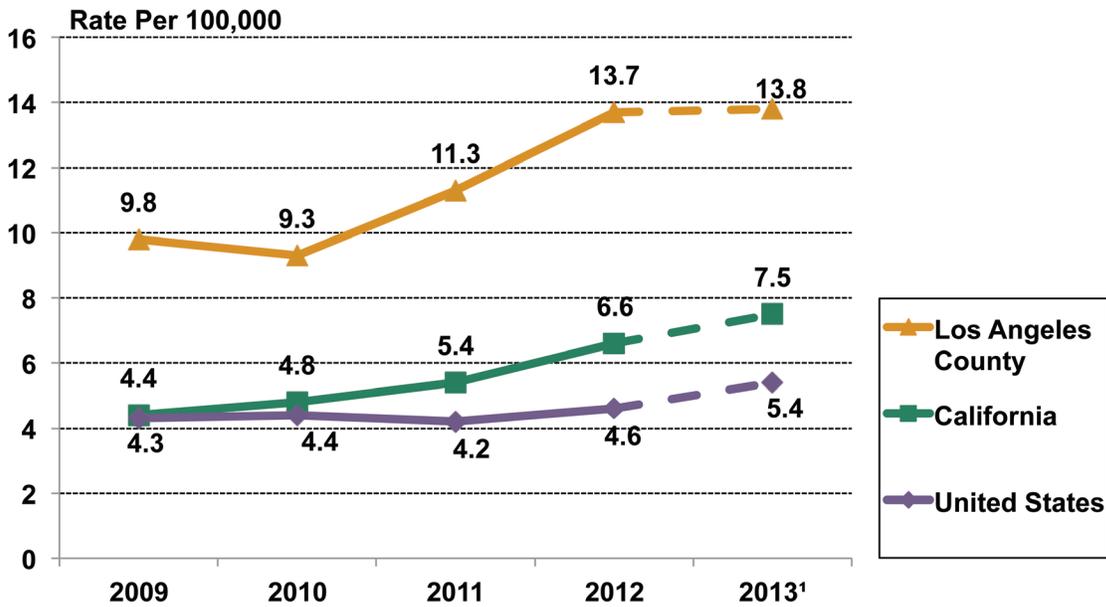
**HIV Co-infection:** Based on self-report during field services interviews and laboratory data, 59% of MSM/MSMW with ES in 2014 were co-infected with HIV. However, the number of ES cases among MSM/MSMW who are co-infected with HIV has decreased 7%, from 1,126 in 2012 to 1,044 in 2014. In contrast, the number of ES cases among MSM/MSMW who are not co-infected with HIV has increased 38%, from 529 to 729 over that same time period (see Figure 3.6).

**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 2013, treatment was verified for 97% of all syphilis cases, 72% were interviewed and 26% provided information on a least one contact (see Figure 3.7). Treatment was verified for 41% of those contacts (see Figure 3.8).

**Figure 3.1 A.** Primary & Secondary Syphilis Rates in the United States, California and Los Angeles County, 2009-2013<sup>1</sup>



**Figure 3.1B.** Early Latent Syphilis Rates in the United States, California and Los Angeles County, 2009-2013<sup>1</sup>



<sup>1</sup> 2013 data are provisional due to reporting delay.

**Table 3.1.** Early Syphilis Cases and Rates (per 100,000) by Gender, Sexual Orientation, Age Group, Race/Ethnicity, and Service Planning Area (SPA), Los Angeles County, 2014<sup>1</sup>

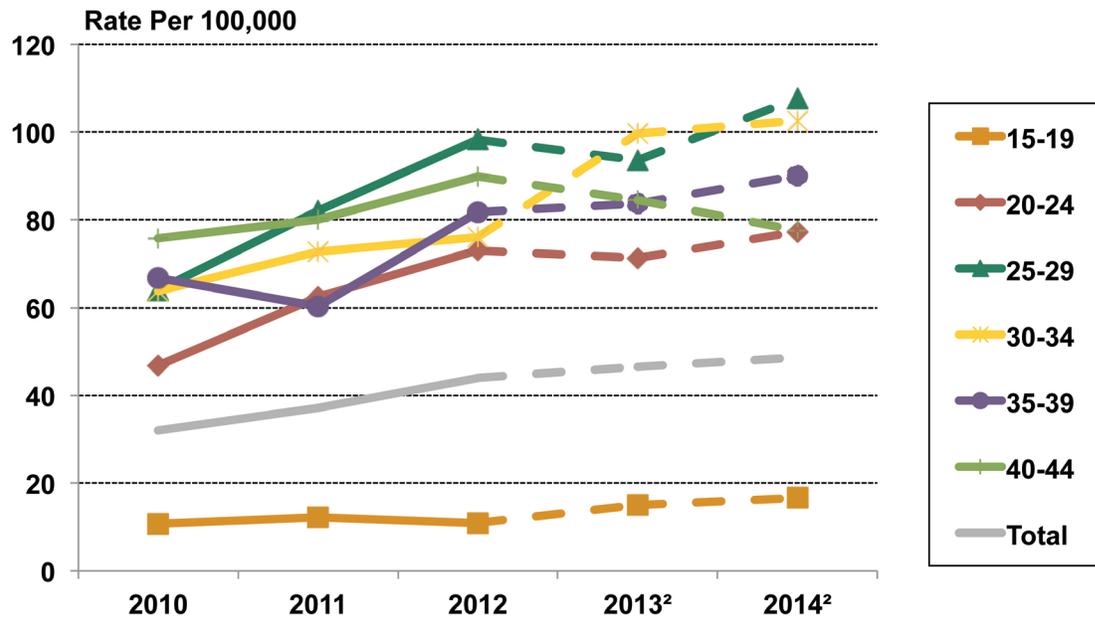
	Male			Female			Total <sup>2,3</sup>		
	N	(%)	Rt	N	(%)	Rt	N	(%)	Rt
<b>Gender</b>									
Male	2,268	(100)	49	-	-	-	2,268	( 92)	49
Female	-	-	-	154	(100)	3	154	( 6)	3
Transgender <sup>3</sup>	-	-	-	-	-	-	39	( 2)	-
Missing <sup>3</sup>	-	-	-	-	-	-	1	( 0)	-
<b>Sexual Orientation (males only)<sup>3</sup></b>									
MSM	1,667	( 74)	-	-	-	-	-	-	-
MSMW	106	( 5)	-	-	-	-	-	-	-
Heterosexual	228	( 10)	-	-	-	-	-	-	-
Missing	267	( 12)	-	-	-	-	-	-	-
<b>Age Group (Yr)</b>									
0-14	<5	-	-	<5	-	-	<5	-	-
15-19	57	( 3)	17	18	( 12)	5	75	( 3)	11
20-24	291	( 13)	77	31	( 20)	9	324	( 13)	44
25-29	391	( 17)	107	25	( 16)	7	421	( 17)	59
30-34	366	( 16)	103	19	( 12)	6	392	( 16)	56
35-39	293	( 13)	90	17	( 11)	5	313	( 13)	48
40-44	260	( 11)	78	14	( 9)	4	282	( 11)	42
45-54	459	( 20)	72	21	( 14)	3	491	( 20)	38
55-64	137	( 6)	27	7	( 5)	1	146	( 6)	14
65+	13	( 1)	3	<5	-	-	16	( 1)	1
Missing <sup>3</sup>	<5	-	-	<5	-	-	<5	-	-
<b>Race/Ethnicity</b>									
White	628	( 28)	47	13	( 8)	1	648	( 26)	24
African American	423	( 19)	114	63	( 41)	15	496	( 20)	63
Latino	1,059	( 47)	46	69	( 45)	3	1,149	( 47)	25
Asian	89	( 4)	14	6	( 4)	1	95	( 4)	7
Pacific Islander	9	( 0)	95	<5	-	-	9	( 0)	47
American Indian/Alaskan Native	<5	-	-	<5	-	-	5	( 0)	27
Other/Multi-race <sup>3</sup>	14	( 1)	-	<5	-	-	15	( 1)	-
Missing <sup>3</sup>	43	( 2)	-	<5	-	-	45	( 2)	-
<b>Service Planning Area</b>									
Antelope Valley [1]	37	( 2)	19	8	( 5)	4	45	( 2)	11
San Fernando [2]	374	( 16)	34	12	( 8)	1	393	( 16)	18
San Gabriel [3]	170	( 7)	21	20	( 13)	2	191	( 8)	12
Metro [4]	893	( 39)	151	24	( 16)	4	938	( 38)	82
West [5]	124	( 5)	39	5	( 3)	1	130	( 5)	20
South [6]	291	( 13)	58	56	( 36)	11	352	( 14)	34
East [7]	205	( 9)	32	11	( 7)	2	216	( 9)	16
South Bay [8]	138	( 6)	26	18	( 12)	3	160	( 6)	15
Missing <sup>3</sup>	36	( 2)	-	<5	-	-	37	( 2)	-
<b>Total</b>	<b>2,268</b>	<b>(100)</b>	<b>49</b>	<b>154</b>	<b>(100)</b>	<b>3</b>	<b>2,462</b>	<b>(100)</b>	<b>26</b>

<sup>1</sup> Data are provisional due to reporting delay and do not include cases reported in the cities of Long Beach and Pasadena. 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.

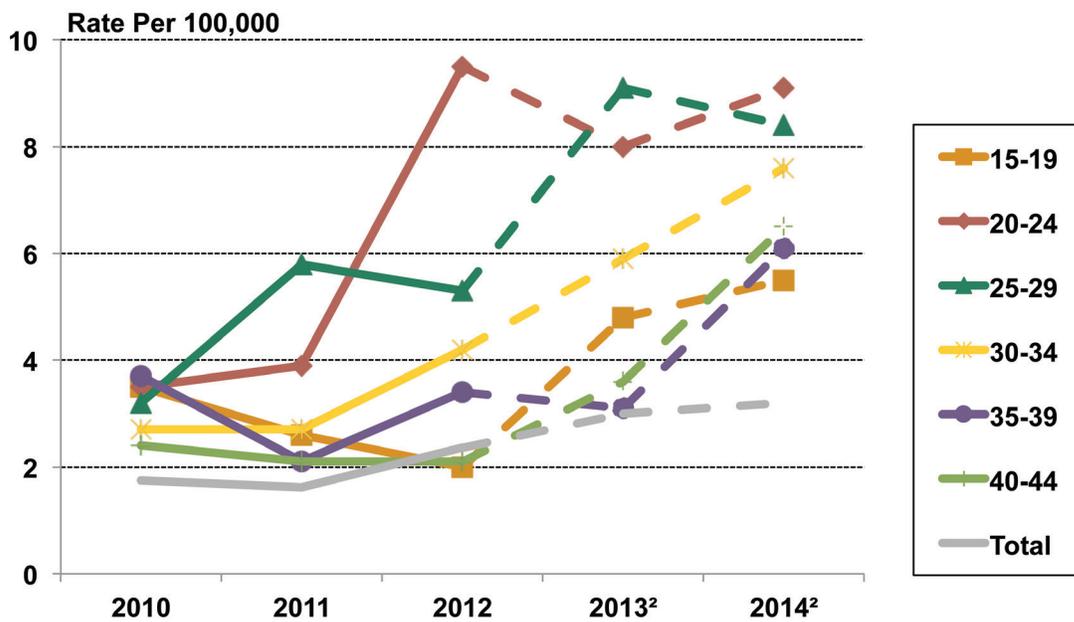
<sup>2</sup> Includes missing gender, male-to-female transgender and female-to-male transgender.

<sup>3</sup> Rates cannot be calculated due to a lack of reliable denominator data.

**Figure 3.2A.** Early Syphilis Rates among Males by Age Group, Los Angeles County, 2010-2014<sup>1</sup>



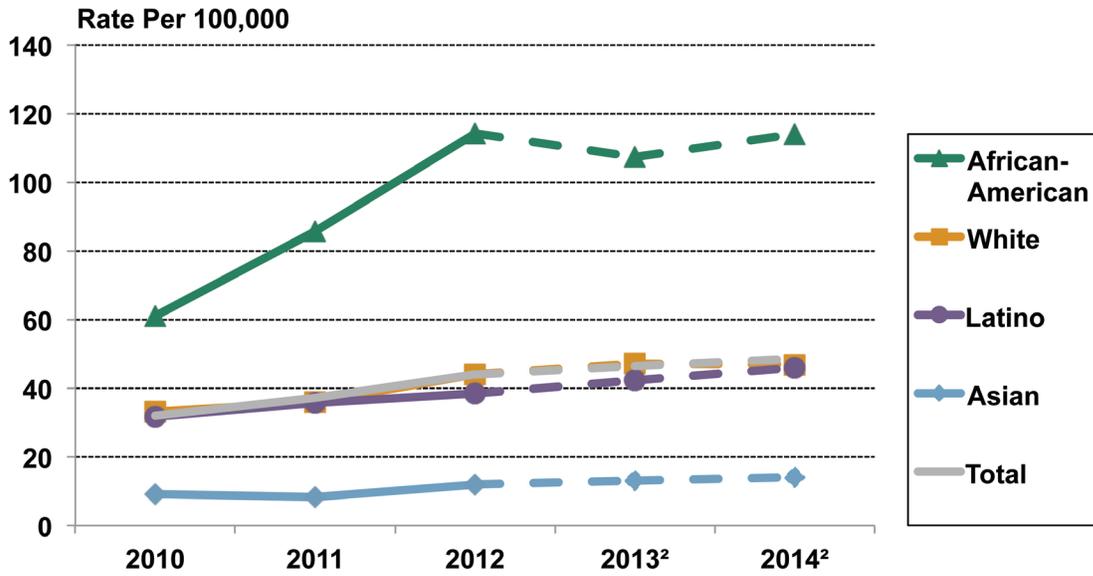
**Figure 3.2B.** Early Syphilis Rates among Females by Age Group, Los Angeles County, 2010-2014<sup>1</sup>



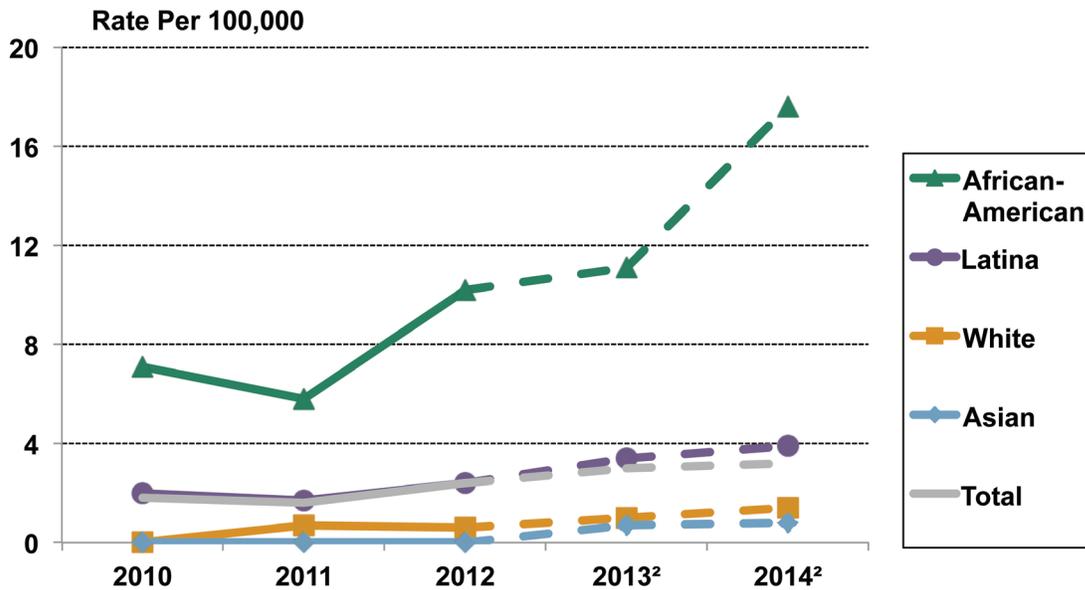
<sup>1</sup> Data excludes cases in Long Beach and Pasadena; Early Syphilis includes all cases staged as primary, secondary, or early latent.

<sup>2</sup> 2013-2014 data are provisional due to reporting delay

**Figure 3.3A.** Early Syphilis Rates among Males by Race/Ethnicity, Los Angeles County, 2010-2014<sup>1</sup>



**Figure 3.3B.** Early Syphilis Rates among Females by Race/Ethnicity, Los Angeles County, 2010-2014<sup>1</sup>



<sup>1</sup> Data excludes cases with unknown race/ethnicity and cases in Long Beach and Pasadena; 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.

<sup>2</sup> 2013-2014 data are provisional due to reporting delay.

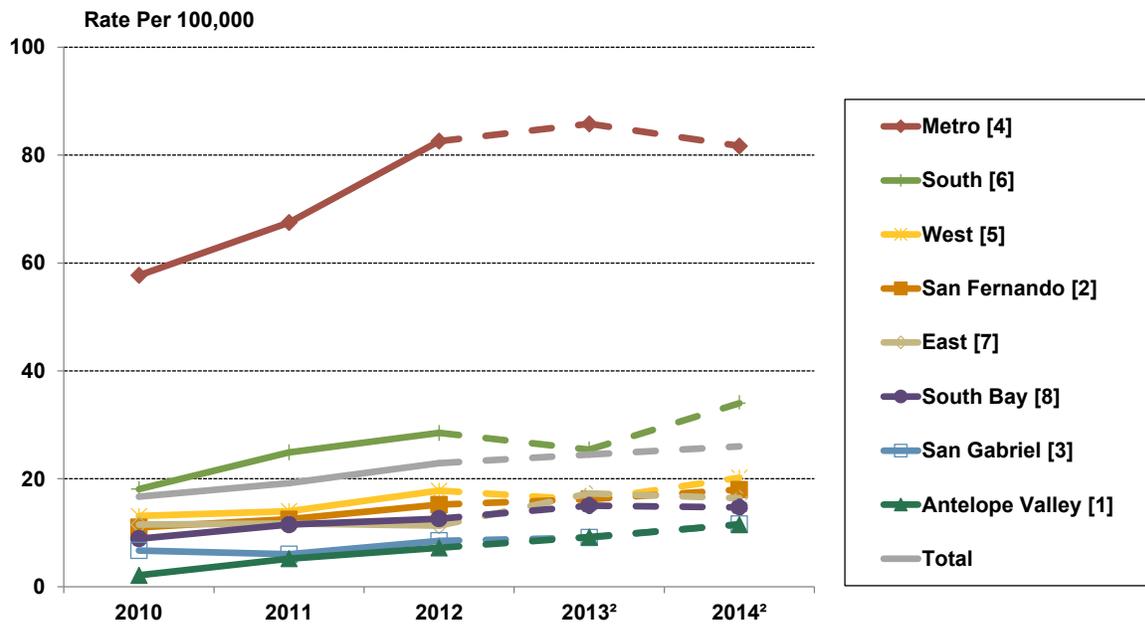
**Table 3.2.** Early Syphilis Cases and Rates (per 100,000), by Service Planning Area (SPA) and Health District (HD), Los Angeles County, 2010–2014<sup>1</sup>

SPA/HD	2010			2011			2012			2013 <sup>2</sup>			2014 <sup>2</sup>		
	N	(%)	Rt	N	(%)	Rt	N	(%)	Rt	N	(%)	Rt	N	(%)	Rt
<b>Antelope Valley [1]</b>	<b>8</b>	<b>( 1)</b>	<b>2</b>	<b>20</b>	<b>( 1)</b>	<b>5</b>	<b>28</b>	<b>( 1)</b>	<b>7</b>	<b>36</b>	<b>( 2)</b>	<b>9</b>	<b>45</b>	<b>( 2)</b>	<b>11</b>
Antelope Valley	8	( 1)	2	20	( 1)	5	28	( 1)	7	36	( 2)	9	45	( 2)	11
<b>San Fernando [2]</b>	<b>233</b>	<b>( 15)</b>	<b>11</b>	<b>267</b>	<b>( 15)</b>	<b>12</b>	<b>326</b>	<b>( 15)</b>	<b>15</b>	<b>352</b>	<b>( 15)</b>	<b>16</b>	<b>393</b>	<b>( 16)</b>	<b>18</b>
East Valley	95	( 6)	22	102	( 6)	23	122	( 6)	27	122	( 5)	27	135	( 5)	30
Glendale	34	( 2)	10	23	( 1)	7	50	( 2)	15	47	( 2)	14	61	( 2)	18
San Fernando	24	( 2)	5	39	( 2)	8	39	( 2)	8	52	( 2)	10	55	( 2)	11
West Valley	80	( 5)	9	103	( 6)	12	115	( 5)	13	131	( 6)	15	142	( 6)	16
<b>San Gabriel [3]</b>	<b>108</b>	<b>( 7)</b>	<b>7</b>	<b>96</b>	<b>( 5)</b>	<b>6</b>	<b>138</b>	<b>( 6)</b>	<b>9</b>	<b>149</b>	<b>( 6)</b>	<b>9</b>	<b>191</b>	<b>( 8)</b>	<b>12</b>
Alhambra	26	( 2)	8	15	( 1)	4	27	( 1)	8	25	( 1)	7	35	( 1)	10
El Monte	21	( 1)	5	24	( 1)	6	36	( 2)	8	46	( 2)	10	58	( 2)	13
Foothill	27	( 2)	9	19	( 1)	6	36	( 2)	12	21	( 1)	7	29	( 1)	9
Pomona	34	( 2)	6	38	( 2)	7	39	( 2)	7	57	( 2)	11	69	( 3)	13
<b>Metro [4]</b>	<b>645</b>	<b>( 42)</b>	<b>58</b>	<b>756</b>	<b>( 43)</b>	<b>67</b>	<b>928</b>	<b>( 44)</b>	<b>83</b>	<b>979</b>	<b>( 43)</b>	<b>86</b>	<b>938</b>	<b>( 38)</b>	<b>82</b>
Central	185	( 12)	55	197	( 11)	59	258	( 12)	77	263	( 11)	77	288	( 12)	83
Hollywood-Wilshire	391	( 25)	82	492	( 28)	102	566	( 27)	117	629	( 27)	128	563	( 23)	114
Northeast	69	( 4)	23	67	( 4)	22	104	( 5)	34	87	( 4)	28	87	( 4)	28
<b>West [5]</b>	<b>83</b>	<b>( 5)</b>	<b>13</b>	<b>89</b>	<b>( 5)</b>	<b>14</b>	<b>114</b>	<b>( 5)</b>	<b>18</b>	<b>104</b>	<b>( 5)</b>	<b>16</b>	<b>130</b>	<b>( 5)</b>	<b>20</b>
West	83	( 5)	13	89	( 5)	14	114	( 5)	18	104	( 5)	16	130	( 5)	20
<b>South [6]</b>	<b>181</b>	<b>( 12)</b>	<b>18</b>	<b>251</b>	<b>( 14)</b>	<b>25</b>	<b>290</b>	<b>( 14)</b>	<b>29</b>	<b>262</b>	<b>( 11)</b>	<b>25</b>	<b>352</b>	<b>( 14)</b>	<b>34</b>
Compton	25	( 2)	9	49	( 3)	18	53	( 2)	19	50	( 2)	18	72	( 3)	25
South	21	( 1)	11	48	( 3)	26	59	( 3)	31	53	( 2)	28	65	( 3)	34
Southeast	37	( 2)	22	34	( 2)	20	41	( 2)	24	39	( 2)	22	60	( 2)	34
Southwest	98	( 6)	26	120	( 7)	32	137	( 6)	36	120	( 5)	32	155	( 6)	41
<b>East [7]</b>	<b>148</b>	<b>( 10)</b>	<b>11</b>	<b>151</b>	<b>( 8)</b>	<b>12</b>	<b>147</b>	<b>( 7)</b>	<b>11</b>	<b>226</b>	<b>( 10)</b>	<b>17</b>	<b>216</b>	<b>( 9)</b>	<b>16</b>
Bellflower	19	( 1)	5	25	( 1)	7	24	( 1)	7	67	( 3)	19	46	( 2)	13
East Los Angeles	40	( 3)	20	24	( 1)	12	32	( 2)	16	44	( 2)	21	36	( 1)	18
San Antonio	53	( 3)	13	66	( 4)	16	69	( 3)	16	65	( 3)	15	83	( 3)	19
Whittier	36	( 2)	11	36	( 2)	11	22	( 1)	7	50	( 2)	16	51	( 2)	16
<b>South Bay [8]</b>	<b>94</b>	<b>( 6)</b>	<b>9</b>	<b>122</b>	<b>( 7)</b>	<b>11</b>	<b>134</b>	<b>( 6)</b>	<b>13</b>	<b>162</b>	<b>( 7)</b>	<b>15</b>	<b>160</b>	<b>( 6)</b>	<b>15</b>
Harbor	15	( 1)	8	13	( 1)	6	16	( 1)	8	28	( 1)	14	25	( 1)	12
Inglewood	60	( 4)	15	79	( 4)	19	90	( 4)	22	95	( 4)	23	94	( 4)	23
Torrance	19	( 1)	4	30	( 2)	7	28	( 1)	6	39	( 2)	9	41	( 2)	9
<b>Missing</b>	<b>39</b>	<b>( 3)</b>	<b>-</b>	<b>25</b>	<b>( 1)</b>	<b>-</b>	<b>27</b>	<b>( 1)</b>	<b>-</b>	<b>31</b>	<b>( 1)</b>	<b>-</b>	<b>37</b>	<b>( 2)</b>	<b>-</b>
<b>Total</b>	<b>1,539</b>	<b>(100)</b>	<b>17</b>	<b>1,777</b>	<b>(100)</b>	<b>19</b>	<b>2,132</b>	<b>(100)</b>	<b>23</b>	<b>2,301</b>	<b>(100)</b>	<b>24</b>	<b>2,462</b>	<b>(100)</b>	<b>26</b>

<sup>1</sup> Data do not include cases reported in the cities of Long Beach and Pasadena. 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.

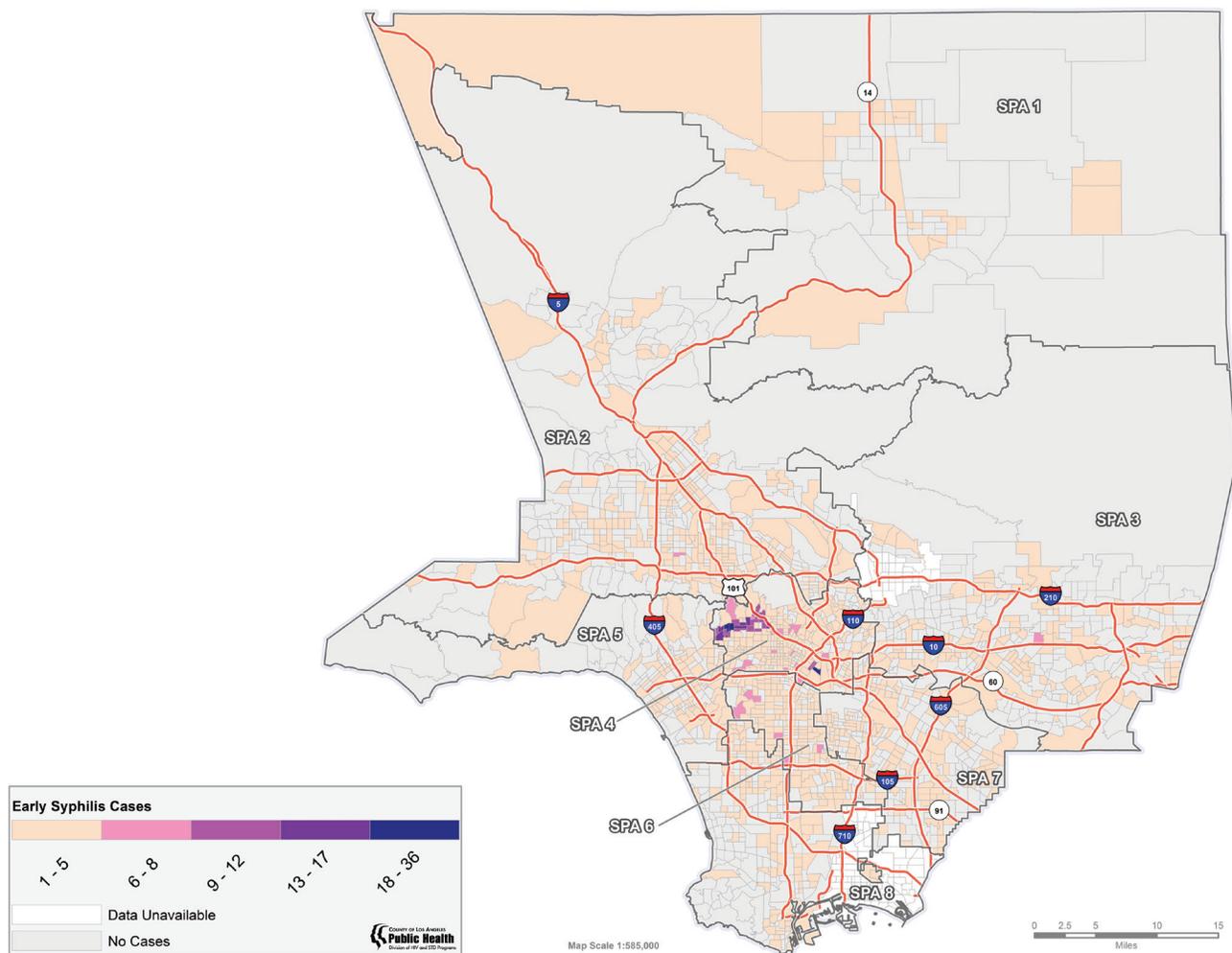
<sup>2</sup> Data are provisional due to reporting delay.

**Figure 3.4. Early Syphilis Rates by Service Planning Area (SPA), Los Angeles County, 2010-2014<sup>1</sup>**



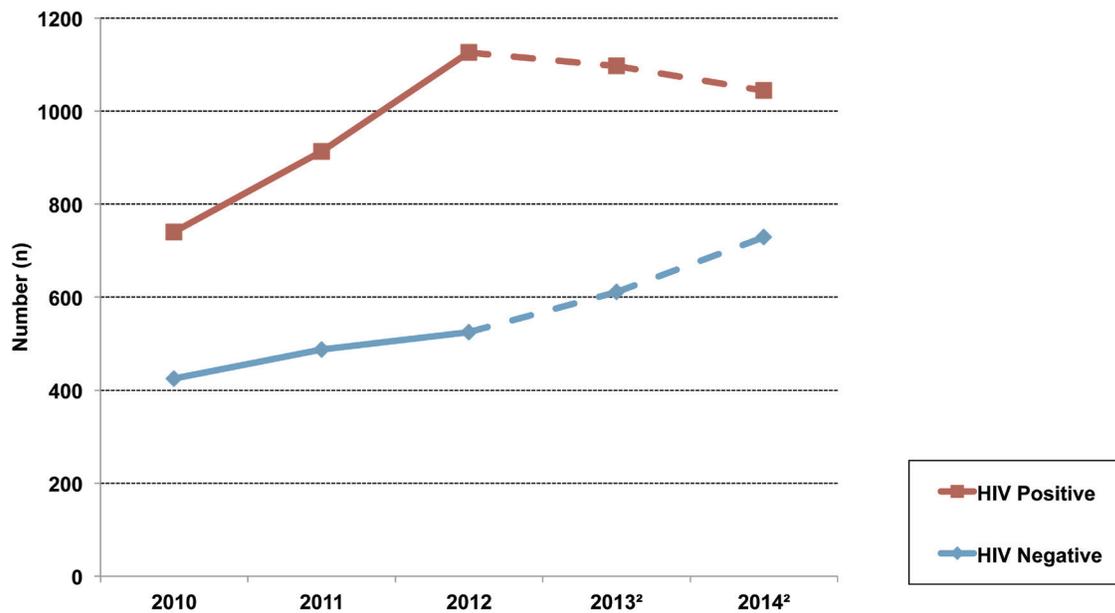
<sup>1</sup> Data excludes cases in Long Beach and Pasadena; Early Syphilis includes all cases staged as primary, secondary, or early latent.  
<sup>2</sup> 2013-2014 data are provisional due to reporting delay.

**Figure 3.5.** Early Syphilis Cases by Census Tract & Service Planning Area (SPA), Los Angeles County, 2014<sup>1</sup>



<sup>1</sup> 2010 U.S. Census Tract Data, U.S. Census Bureau. 2014 data are provisional due to reporting delay. Early Syphilis includes all cases staged as primary, secondary, or early latent.

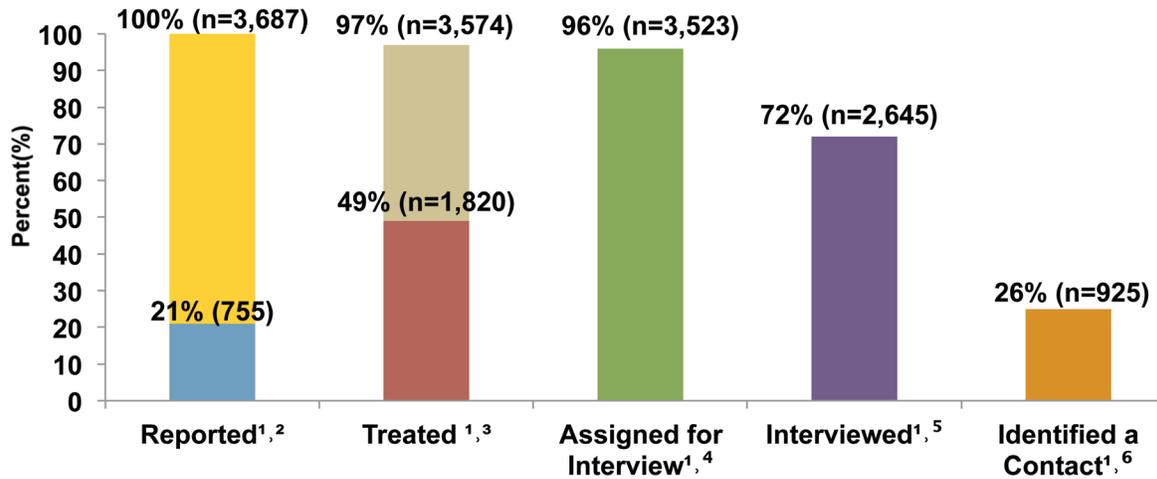
**Figure 3.6.** Number of Cases of Early Syphilis among MSM/MSMW by HIV Status, Los Angeles County, 2010-2014<sup>1</sup>



<sup>1</sup> Data excludes cases in Long Beach and Pasadena; MSM/MSMW=men who have sex with men/men who have sex with men and women; sexual orientation is based on self-report; HIV positive status includes cases that were either self-reported and/or laboratory confirmed.

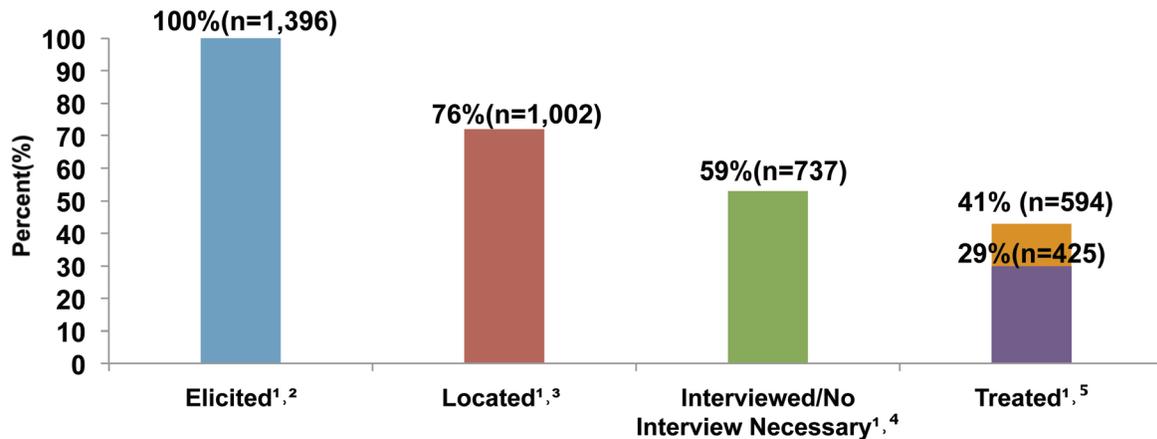
<sup>2</sup> 2013-2014 data are provisional due to reporting delay.

**Figure 3.7. Syphilis Index Case Continuum, Los Angeles County, 2013**



- <sup>1</sup> Denominator is 3,687 syphilis cases reported to LAC in 2013 (at the time of analysis). Of these there were 363, 652, 1,313 and 1,359 cases staged as primary, secondary, early latent and late latent/late, respectively. Analyses were conducted on provisional data and the total number of reported cases may differ slightly from other 2013 data in this report.
- <sup>2</sup> Numerator is # syphilis cases reported to LAC in 2013 (at the time of analysis); 21% reported by county-run STD clinics (17%) and hospitals (4%).
- <sup>3</sup> Numerator is # syphilis cases with treatment information in STD Case Watch (97%) that includes 49% with treatment confirmed as a result of DPH field services activities.
- <sup>4</sup> Numerator is # syphilis cases assigned to a DIS for investigation.
- <sup>5</sup> Numerator is # syphilis cases interviewed by field services; does not include provider-delivered partner services.
- <sup>6</sup> Numerator is # syphilis cases who identified at least one partner; does not include patient- or provider-delivered partner services.

**Figure 3.8. Syphilis Elicited Contact Continuum, Los Angeles County, 2013**



- <sup>1</sup> Denominator is 1,396 contacts elicited from 925 syphilis index cases in 2013. Of these contacts: 1,240 were sexual partners, 133 were clusters and 23 were missing information on contact type.
- <sup>2</sup> Numerator is # partners identified by index cases in 2013.
- <sup>3</sup> Numerator is # partners located by field services; excludes partners with a disposition of "unable to locate", "insufficient information to begin investigation", "administrative/system closure" or that were missing a disposition.
- <sup>4</sup> Numerator is # partners who were either interviewed or had a disposition which indicated that their infection and/or treatment status was confirmed.
- <sup>5</sup> Numerator is # total of partners with treatment information (43%) that includes 30% with treatment confirmed as a result of DPH field services activities. Among the 425 cases that were treated due to field services activities, 234 were treated presumptively and 28,35, 101 and 27 were staged as primary, secondary, early latent and late latent/unknown duration, respectively.

## Overview of Gonorrhea in Los Angeles County

A total of 14,555 cases of gonorrhea were reported in Los Angeles County (LAC) in 2014. The number of reported cases rose in each of the past 5 years, resulting in a 51% increase from 2010 to 2014. The overall gonorrhea rate in LAC in 2014 was 154 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 gonorrhea rate in LAC in 2013 (133 per 100,000) was 33% higher than the rate in California (100 per 100,000) and 25% higher than the rate in the US (106 per 100,000). The LAC gonorrhea rate is similar to or lower than that of other large urban jurisdictions in the US (see Table 1.2).<sup>4</sup>

**Gender:** Seventy-one percent of gonorrhea cases in 2014 were among males and 29% were among females (see Table 4.1). Although they accounted for less than 1% of the overall gonorrhea cases in 2014, there were 39 cases reported among transgender individuals. While 39 cases is a substantial increase from the 10 cases reported in 2010, it is unclear to what extent gonorrhea morbidity is underreported in this population; caution should therefore be taken when interpreting overall case counts and trends over time among transgender individuals.

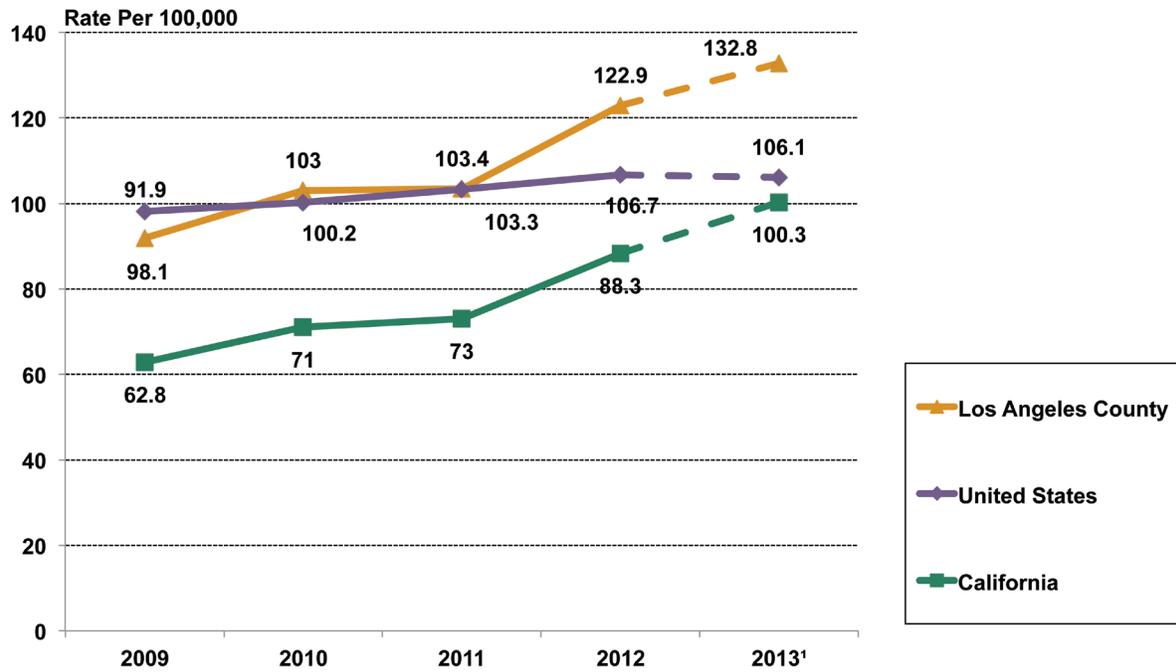
**Age:** Most (75%) cases of gonorrhea in 2014 occurred among individuals aged 15-34 years (see Table 4.1). Females had a younger age distribution than males; fifty-six percent of cases among females were reported among individuals aged 15-24 years compared to 30% among males.

**Race/Ethnicity:** While the largest proportion of gonorrhea cases in 2014 occurred among Latinos (36%), African Americans had the highest rate of disease (see Table 4.1). This is especially true for African American females whose 2014 gonorrhea rate (410 per 100,000) was over 11 times higher than white females (36 per 100,000) and 5.7 times higher than Latinas (72 per 100,000). Since 2010, gonorrhea rates increased by 98% among Latinas, while remaining fairly stable for white, African American and Asian females (see Figure 4.3B). Among males, African Americans had a 2014 gonorrhea rate (742 per 100,000) that was 4.8 times higher than Latinos (154 per 100,000) and 3.6 times higher than whites. Since 2010, gonorrhea rates increased by 92% for Latino and Asian males, 86% for white males and 36% for African American males (see Figure 4.3A).

**Geographic Distribution:** Gonorrhea cases were heavily concentrated within specific regions of LAC in 2014 (see Figure 4.6). Among males, the Metro SPA had the highest number (3,658), proportion (36%) and rate of gonorrhea (625 per 100,000) of all SPAs in the county. Among females, the South SPA had the highest number (1,380), proportion (33%) and rate of gonorrhea (260 per 100,000) of all SPAs in the county (see Table 4.2). Countywide, the largest increases in gonorrhea rates from 2013 to 2014 occurred in the West (38% increase), Antelope Valley (30% increase) and South (23% increase) SPAs (see Figure 4.5).

**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 2013, treatment was verified for 95% of cases, 45% were interviewed and 15% provided information on a least one contact (see Figure 4.7). Among these contacts, 62% were located and 53% were either interviewed or it was determined that no interview was necessary because existing data indicated that the contact was either not infected or had already received treatment. Treatment was verified for 47% of all elicited contacts. (see Figure 4.8).

**Figure 4.1.** Gonorrhea Rates in the United States, California and Los Angeles County, 2009-2013<sup>1</sup>



<sup>1</sup>2013 data are provisional due to reporting delay.

**Table 4.1.** Gonorrhea Cases and Rates (per 100,000) by Gender, Age Group, Race/Ethnicity, and Service Planning Area (SPA), Los Angeles County, 2014<sup>1</sup>

	Male			Female			Total <sup>2</sup>		
	N	(%)	Rt	N	(%)	Rt	N	(%)	Rt
<b>Gender</b>									
Male	10,315	(100)	221	-	-	-	10,315	( 71)	221
Female	-	-	-	4,187	(100)	87	4,187	( 29)	87
Transgender <sup>3</sup>	-	-	-	-	-	-	39	( 0)	-
Missing <sup>3</sup>	-	-	-	-	-	-	14	( 0)	-
<b>Age Group (Yr)</b>									
0-14	8	( 0)	1	37	( 1)	4	45	( 0)	2
15-19	763	( 7)	222	931	( 22)	282	1,697	( 12)	252
20-24	2,398	( 23)	637	1,412	( 34)	391	3,822	( 26)	518
25-29	2,359	( 23)	648	886	( 21)	255	3,254	( 22)	458
30-34	1,762	( 17)	495	387	( 9)	113	2,160	( 15)	309
35-39	1,016	( 10)	312	241	( 6)	74	1,262	( 9)	194
40-44	677	( 7)	202	107	( 3)	32	793	( 5)	118
45-54	1,037	( 10)	162	136	( 3)	21	1,177	( 8)	91
55-64	246	( 2)	48	42	( 1)	8	288	( 2)	27
65+	37	( 0)	8	6	( 0)	1	43	( 0)	4
Missing <sup>3</sup>	12	( 0)	-	<5	-	-	14	( 0)	-
<b>Race/Ethnicity</b>									
White	2,796	( 27)	209	477	( 11)	36	3,276	( 23)	123
African American	2,745	( 27)	742	1,704	( 41)	410	4,461	( 31)	568
Latino	3,539	( 34)	154	1,653	( 39)	72	5,220	( 36)	113
Asian	352	( 3)	55	90	( 2)	12	444	( 3)	33
Pacific Islander	26	( 0)	273	6	( 0)	63	33	( 0)	173
American Indian/Alaskan Native	26	( 0)	289	9	( 0)	95	36	( 0)	195
Other/Multi-race <sup>3</sup>	170	( 2)	-	43	( 1)	-	214	( 1)	-
Missing <sup>3</sup>	661	( 6)	-	205	( 5)	-	871	( 6)	-
<b>Service Planning Area</b>									
Antelope Valley [1]	261	( 3)	134	248	( 6)	126	510	( 4)	130
San Fernando [2]	1,421	( 14)	131	460	( 11)	42	1,885	( 13)	86
San Gabriel [3]	730	( 7)	91	458	( 11)	55	1,192	( 8)	73
Metro [4]	3,685	( 36)	625	468	( 11)	84	4,175	( 29)	363
West [5]	639	( 6)	202	119	( 3)	35	758	( 5)	116
South [6]	1,769	( 17)	351	1,380	( 33)	260	3,154	( 22)	305
East [7]	766	( 7)	119	444	( 11)	67	1,215	( 8)	93
South Bay [8]	867	( 8)	164	501	( 12)	91	1,373	( 9)	127
Missing <sup>3</sup>	177	( 2)	-	109	( 3)	-	293	( 2)	-
<b>Total</b>	<b>10,315</b>	<b>(100)</b>	<b>221</b>	<b>4,187</b>	<b>(100)</b>	<b>87</b>	<b>14,555</b>	<b>(100)</b>	<b>154</b>

<sup>1</sup> Data are provisional due to reporting delay and do not include cases reported in the cities of Long Beach and Pasadena. Rates based on observations fewer than 12 may not be reliable (see technical notes).

<sup>2</sup> Includes missing gender, male-to female-transgender and female-to-male transgender.

<sup>3</sup> Rates cannot be calculated due to a lack of reliable denominator data.

Figure 4.2A. Gonorrhea Rates among Males by Age Group, Los Angeles County, 2010-2014<sup>1</sup>

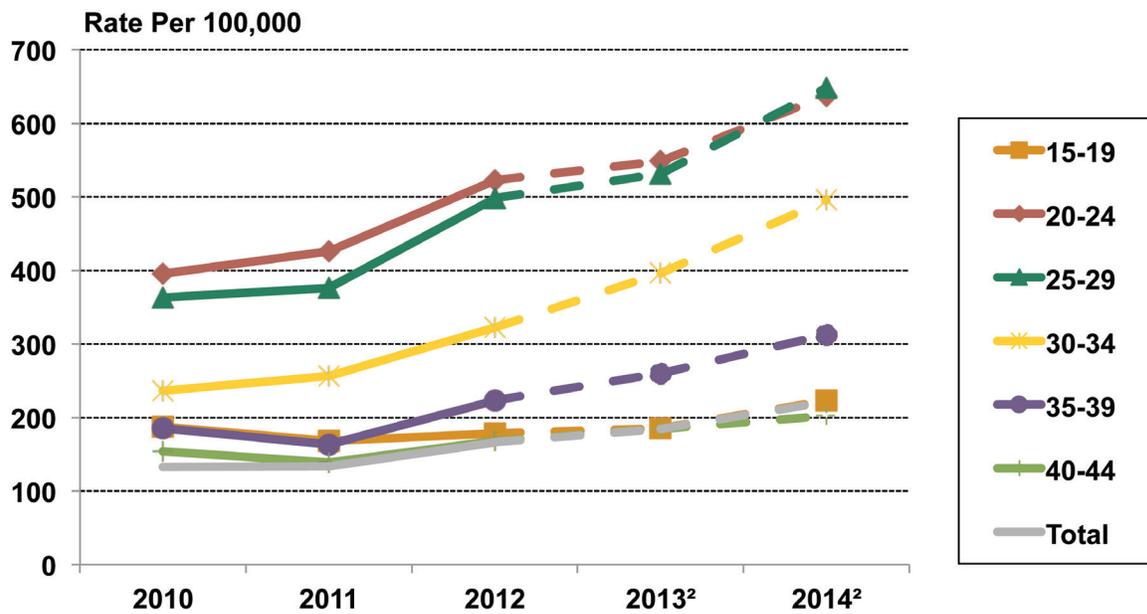
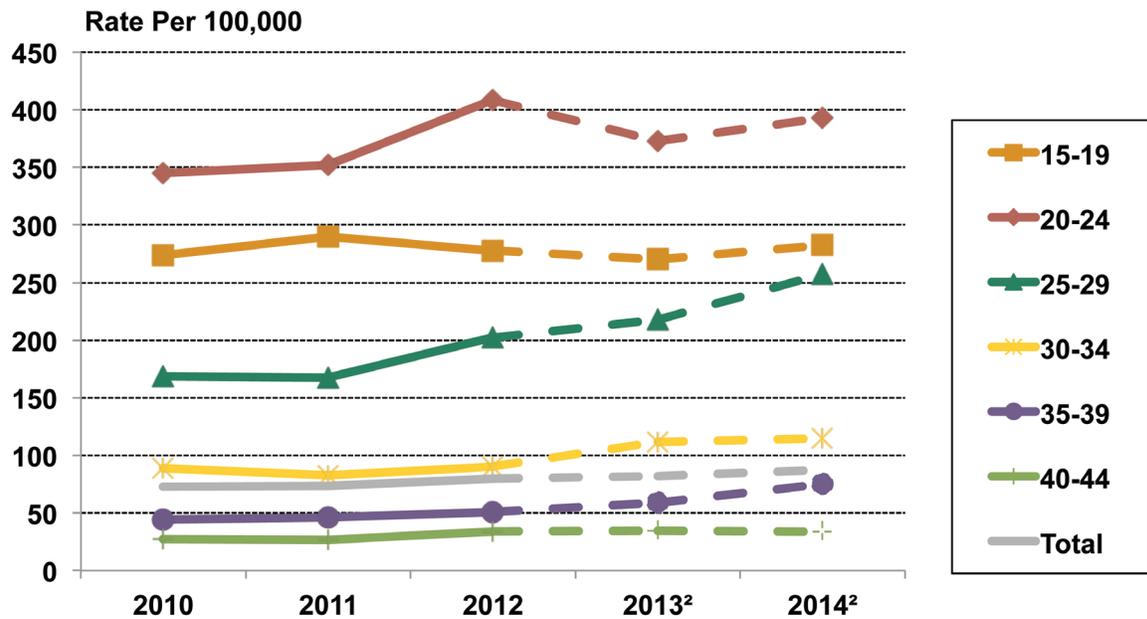
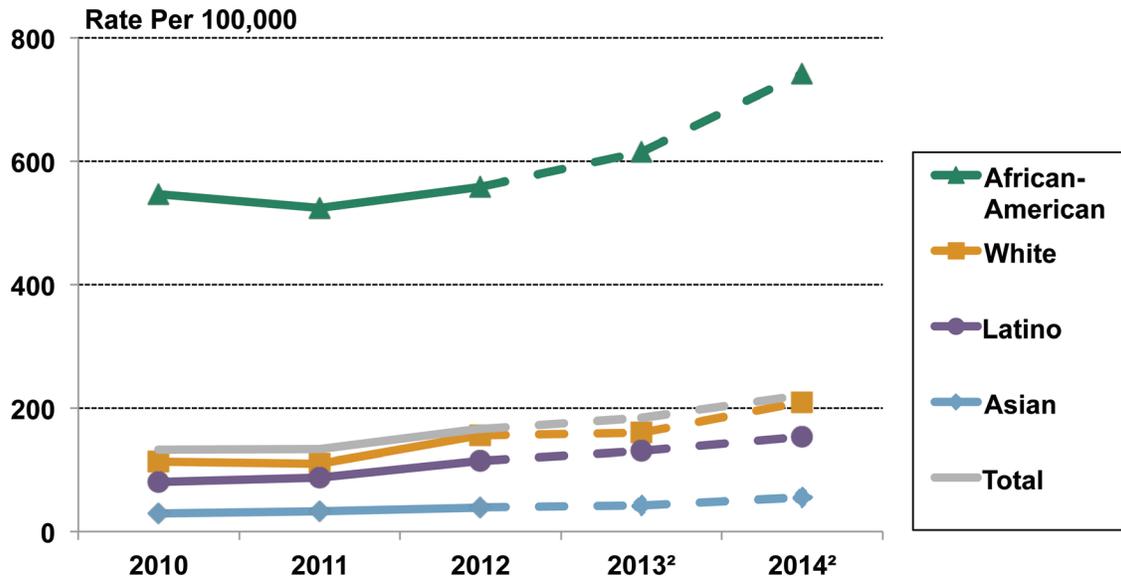


Figure 4.2B. Gonorrhea Rates among Females by Age Group, Los Angeles County, 2010-2014<sup>1</sup>

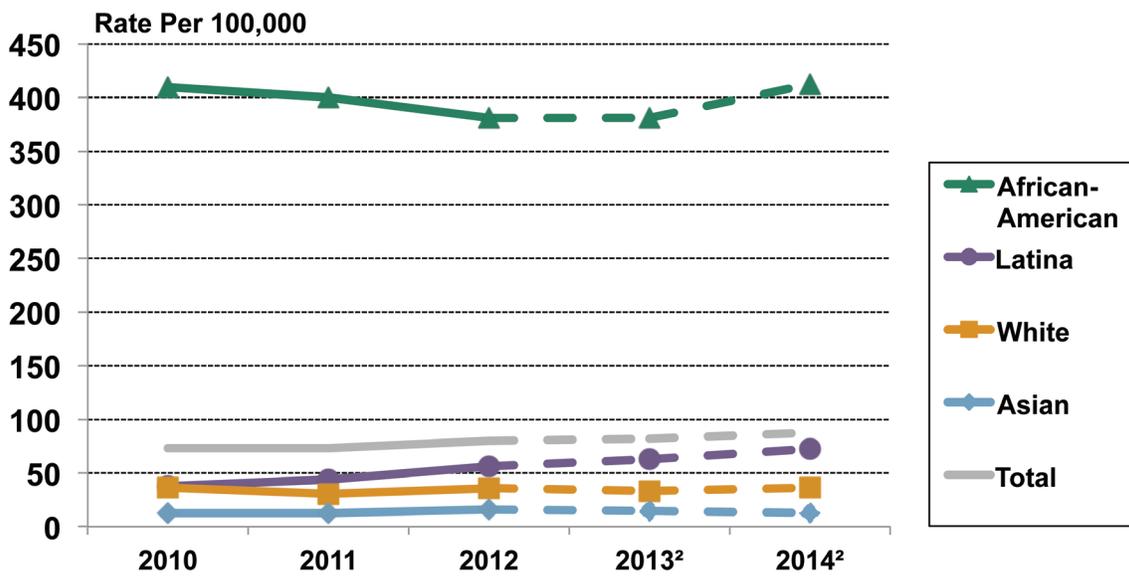


<sup>1</sup> Data excludes cases in Long Beach and Pasadena.  
<sup>2</sup> 2013-2014 data are provisional due to reporting delay.

**Figure 4.3A.** Gonorrhea Rates among Males by Race/Ethnicity, Los Angeles County, 2010-2014<sup>1</sup>

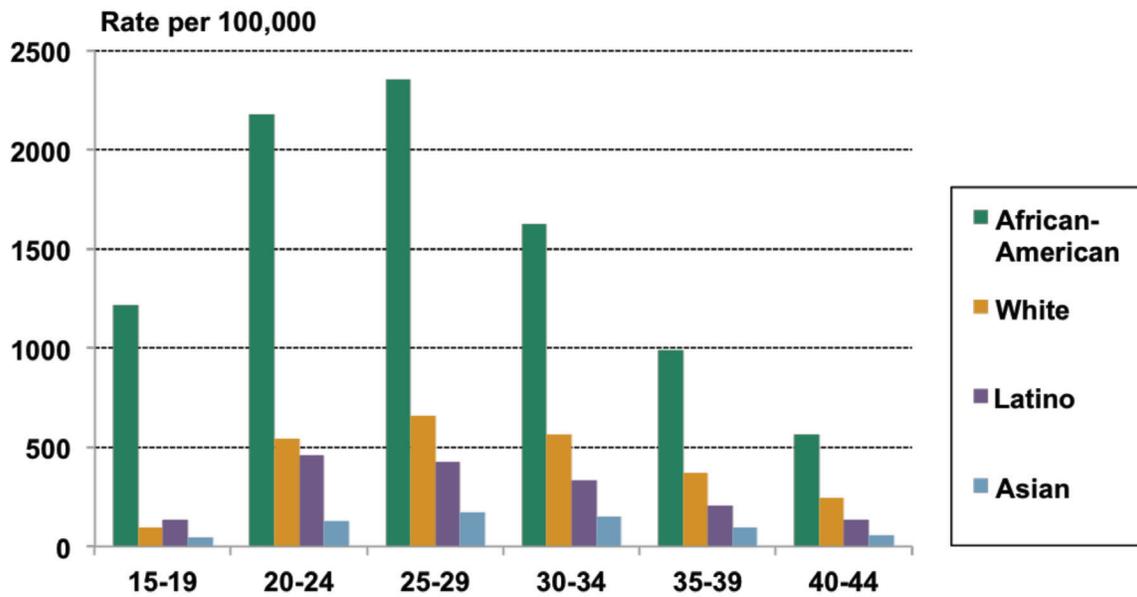


**Figure 4.3B.** Gonorrhea Rates among Females by Race/Ethnicity, Los Angeles County, 2010-2014<sup>1</sup>

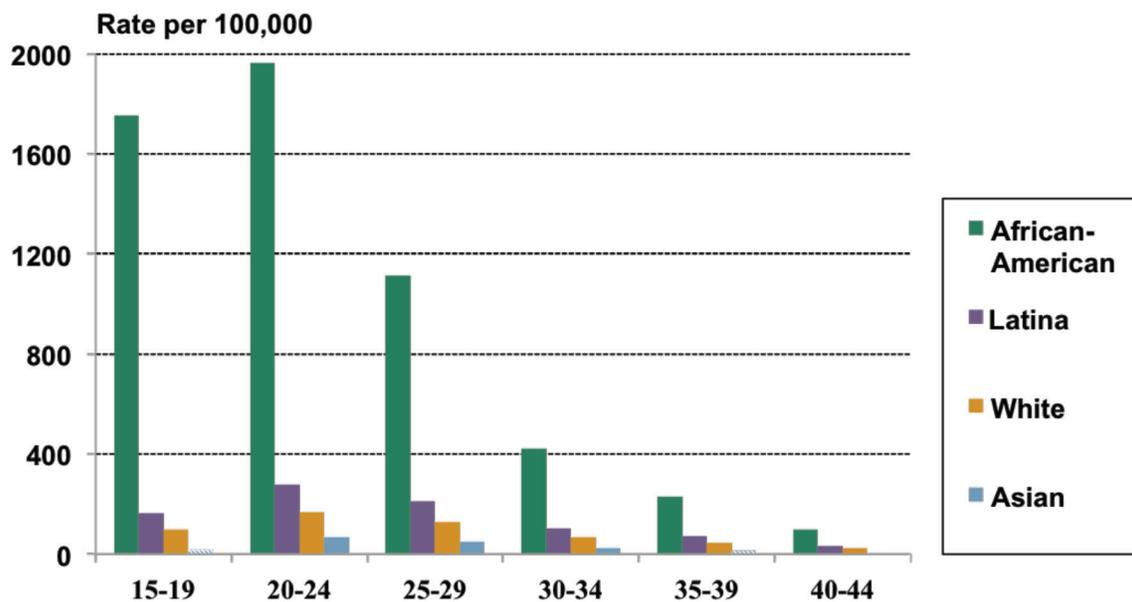


<sup>1</sup> Data excludes cases with unknown race/ethnicity and cases in Long Beach and Pasadena; rates for Pacific Islanders and American Indians/Alaskan Natives are not presented due to small numbers that may cause unstable estimates.  
<sup>2</sup> 2013-2014 data are provisional due to reporting delay.

**Figure 4.4A.** Gonorrhea Rates among Males by Age Group and Race/Ethnicity, Los Angeles County, 2014<sup>1</sup>



**Figure 4.4B.** Gonorrhea Rates among Females by Age Group and Race/Ethnicity, Los Angeles County, 2014<sup>1</sup>



<sup>1</sup> Data excludes cases with unknown race/ethnicity and cases in Long Beach and Pasadena; 2014 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.

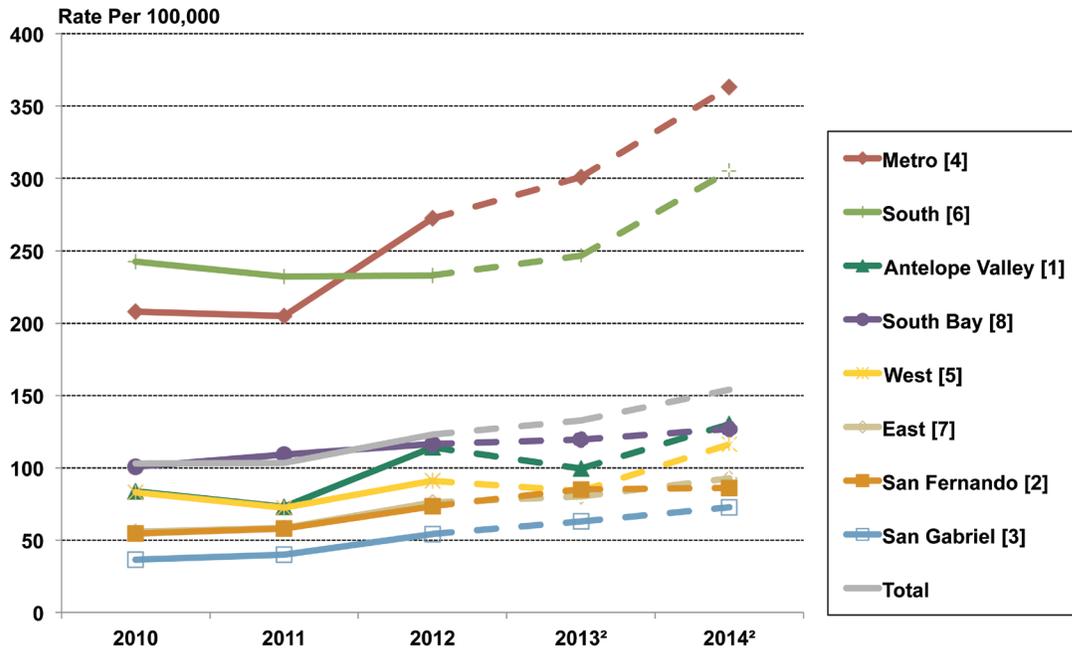
**Table 4.2. Gonorrhea Cases and Rates (per 100,000), by Service Planning Area (SPA) and Health District (HD), Los Angeles County, 2010-2014<sup>1</sup>**

SPA/HD	2010			2011			2012			2013 <sup>2</sup>			2014 <sup>2</sup>		
	N	(%)	Rt	N	(%)	Rt	N	(%)	Rt	N	(%)	Rt	N	(%)	Rt
<b>Antelope Valley [1]</b>	<b>322</b>	<b>( 3)</b>	<b>84</b>	<b>282</b>	<b>( 3)</b>	<b>73</b>	<b>442</b>	<b>( 4)</b>	<b>114</b>	<b>389</b>	<b>( 3)</b>	<b>100</b>	<b>510</b>	<b>( 4)</b>	<b>130</b>
Antelope Valley	322	( 3)	84	282	( 3)	73	442	( 4)	114	389	( 3)	100	510	( 4)	130
<b>San Fernando [2]</b>	<b>1,158</b>	<b>( 12)</b>	<b>54</b>	<b>1,237</b>	<b>( 13)</b>	<b>58</b>	<b>1,578</b>	<b>( 14)</b>	<b>73</b>	<b>1,849</b>	<b>( 15)</b>	<b>85</b>	<b>1,885</b>	<b>( 13)</b>	<b>86</b>
East Valley	346	( 4)	79	355	( 4)	80	439	( 4)	99	546	( 4)	121	572	( 4)	126
Glendale	147	( 2)	44	187	( 2)	56	244	( 2)	72	266	( 2)	78	259	( 2)	76
San Fernando	150	( 2)	30	174	( 2)	35	238	( 2)	48	295	( 2)	58	288	( 2)	56
West Valley	515	( 5)	60	521	( 5)	61	657	( 6)	76	742	( 6)	85	766	( 5)	87
<b>San Gabriel [3]</b>	<b>583</b>	<b>( 6)</b>	<b>36</b>	<b>646</b>	<b>( 7)</b>	<b>40</b>	<b>878</b>	<b>( 8)</b>	<b>54</b>	<b>1,029</b>	<b>( 8)</b>	<b>63</b>	<b>1,192</b>	<b>( 8)</b>	<b>73</b>
Alhambra	93	( 1)	27	84	( 1)	25	128	( 1)	37	146	( 1)	42	148	( 1)	43
El Monte	148	( 2)	34	200	( 2)	46	247	( 2)	57	273	( 2)	62	247	( 2)	56
Foothill	129	( 1)	43	138	( 1)	46	150	( 1)	50	186	( 1)	61	215	( 1)	70
Pomona	213	( 2)	40	224	( 2)	42	353	( 3)	66	424	( 3)	78	582	( 4)	107
<b>Metro [4]</b>	<b>2,324</b>	<b>( 24)</b>	<b>208</b>	<b>2,295</b>	<b>( 24)</b>	<b>205</b>	<b>3,060</b>	<b>( 27)</b>	<b>272</b>	<b>3,434</b>	<b>( 28)</b>	<b>301</b>	<b>4,175</b>	<b>( 29)</b>	<b>363</b>
Central	582	( 6)	173	643	( 7)	191	811	( 7)	241	947	( 8)	276	1,210	( 8)	351
Hollywood-Wilshire	1,530	( 16)	320	1,407	( 15)	293	1,926	( 17)	400	2,118	( 17)	433	2,574	( 18)	521
Northeast	212	( 2)	70	245	( 3)	81	323	( 3)	106	369	( 3)	120	391	( 3)	126
<b>West [5]</b>	<b>527</b>	<b>( 6)</b>	<b>83</b>	<b>461</b>	<b>( 5)</b>	<b>72</b>	<b>581</b>	<b>( 5)</b>	<b>91</b>	<b>543</b>	<b>( 4)</b>	<b>84</b>	<b>758</b>	<b>( 5)</b>	<b>116</b>
West	527	( 6)	83	461	( 5)	72	581	( 5)	91	543	( 4)	84	758	( 5)	116
<b>South [6]</b>	<b>2,432</b>	<b>( 26)</b>	<b>243</b>	<b>2,344</b>	<b>( 24)</b>	<b>232</b>	<b>2,372</b>	<b>( 21)</b>	<b>233</b>	<b>2,540</b>	<b>( 20)</b>	<b>247</b>	<b>3,154</b>	<b>( 22)</b>	<b>305</b>
Compton	482	( 5)	173	473	( 5)	169	466	( 4)	166	535	( 4)	189	640	( 4)	225
South	602	( 6)	325	601	( 6)	321	586	( 5)	309	583	( 5)	303	796	( 5)	411
Southeast	251	( 3)	151	274	( 3)	163	254	( 2)	149	297	( 2)	171	373	( 3)	214
Southwest	1,097	( 12)	295	996	( 10)	266	1,066	( 9)	284	1,125	( 9)	296	1,345	( 9)	352
<b>East [7]</b>	<b>727</b>	<b>( 8)</b>	<b>56</b>	<b>756</b>	<b>( 8)</b>	<b>58</b>	<b>986</b>	<b>( 9)</b>	<b>76</b>	<b>1,050</b>	<b>( 8)</b>	<b>80</b>	<b>1,215</b>	<b>( 8)</b>	<b>93</b>
Bellflower	204	( 2)	58	223	( 2)	63	269	( 2)	76	247	( 2)	69	300	( 2)	84
East Los Angeles	125	( 1)	61	146	( 2)	72	175	( 2)	86	194	( 2)	95	185	( 1)	90
San Antonio	262	( 3)	62	228	( 2)	54	324	( 3)	77	356	( 3)	84	437	( 3)	103
Whittier	136	( 1)	43	159	( 2)	50	218	( 2)	68	253	( 2)	79	293	( 2)	91
<b>South Bay [8]</b>	<b>1,064</b>	<b>( 11)</b>	<b>101</b>	<b>1,158</b>	<b>( 12)</b>	<b>109</b>	<b>1,242</b>	<b>( 11)</b>	<b>116</b>	<b>1,288</b>	<b>( 10)</b>	<b>120</b>	<b>1,373</b>	<b>( 9)</b>	<b>127</b>
Harbor	110	( 1)	55	114	( 1)	57	186	( 2)	92	157	( 1)	77	147	( 1)	71
Inglewood	722	( 8)	177	746	( 8)	183	737	( 6)	180	824	( 7)	199	892	( 6)	214
Torrance	232	( 2)	51	298	( 3)	66	319	( 3)	70	307	( 2)	67	334	( 2)	73
<b>Missing</b>	<b>359</b>	<b>( 4)</b>	<b>-</b>	<b>393</b>	<b>( 4)</b>	<b>-</b>	<b>291</b>	<b>( 3)</b>	<b>-</b>	<b>357</b>	<b>( 3)</b>	<b>-</b>	<b>293</b>	<b>( 2)</b>	<b>-</b>
<b>Total</b>	<b>9,496</b>	<b>(100)</b>	<b>103</b>	<b>9,572</b>	<b>(100)</b>	<b>103</b>	<b>11,430</b>	<b>(100)</b>	<b>123</b>	<b>12,479</b>	<b>(100)</b>	<b>133</b>	<b>14,555</b>	<b>(100)</b>	<b>154</b>

<sup>1</sup> Data do not include cases reported in the cities of Long Beach and Pasadena. Rates based on observations fewer than 12 may not be reliable (see technical notes).

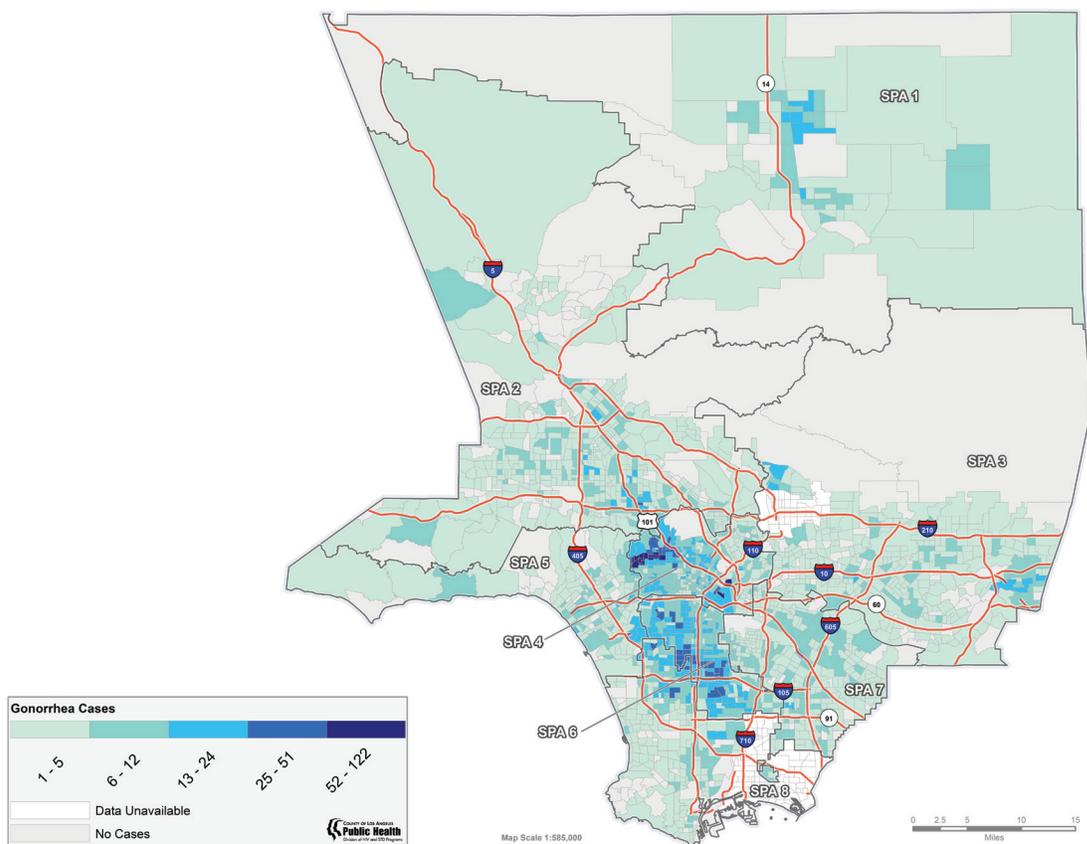
<sup>2</sup> Data are provisional due to reporting delay.

**Figure 4.5. Gonorrhea Rates by Service Planning Area (SPA), Los Angeles County, 2010-2014<sup>1</sup>**



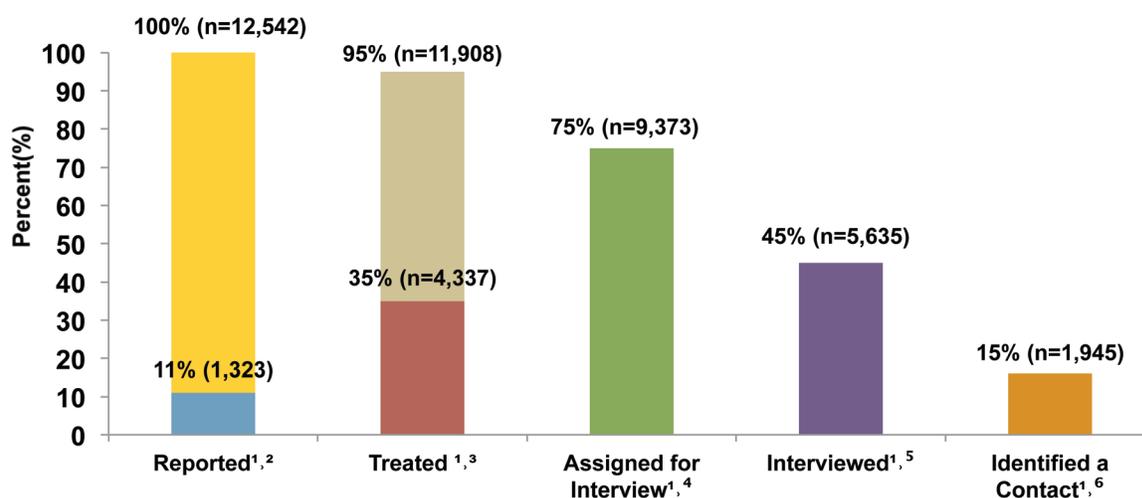
<sup>1</sup> Data excludes cases in Long Beach and Pasadena.  
<sup>2</sup> 2013-2014 data are provisional due to reporting delay.

**Figure 4.6.** Gonorrhea Cases by Census Tract & Service Planning Area (SPA), Los Angeles County, 2014<sup>1</sup>



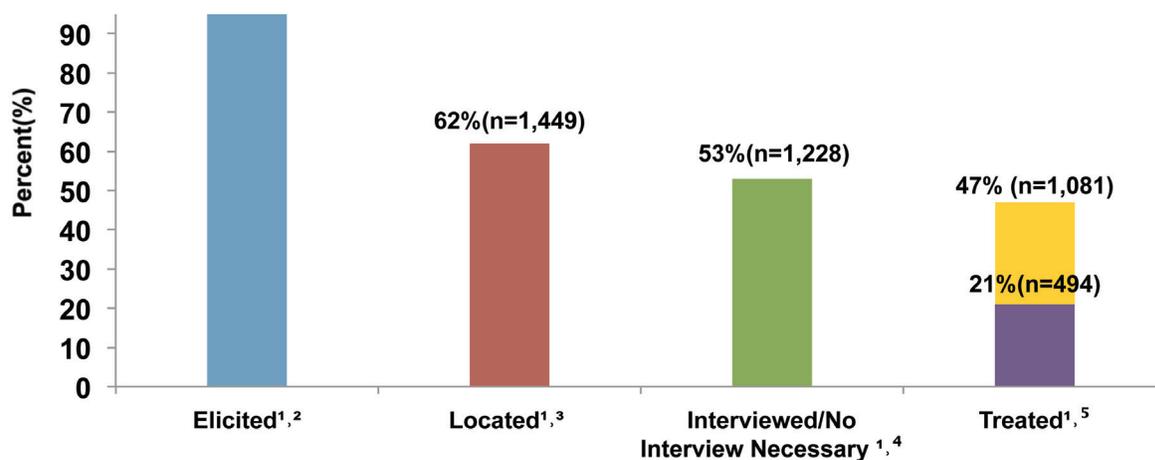
<sup>1</sup> 2010 U.S. Census Tract Data, U.S. Census Bureau. 2014 data are provisional due to reporting delay.

**Figure 4.7. Gonorrhea Index Case Continuum, Los Angeles County, 2013**



- <sup>1</sup> Denominator is 12,542 gonorrhea cases reported to LAC in 2013 (at the time of analysis). Analyses were conducted on provisional data and the total number of reported cases may differ slightly from other 2013 data in this report.
- <sup>2</sup> Numerator is # gonorrhea cases reported to LAC in 2013 (at the time of analysis); 11% reported by county-run STD clinics (10%) and hospitals (1%).
- <sup>3</sup> Numerator is # gonorrhea cases with treatment information in STD Case Watch (90%) that includes 35% with treatment confirmed as a result of DPH field services activities.
- <sup>4</sup> Numerator is # gonorrhea cases assigned to a PHI/PHN/CEDIS/Nurse/Other for investigation.
- <sup>5</sup> Numerator is # gonorrhea cases interviewed by field services; does not include provider-delivered partner services.
- <sup>6</sup> Numerator is # gonorrhea cases who identified at least one partner; does not include provider-delivered partner services.

**Figure 4.8. Gonorrhea Elicited Contact Continuum, Los Angeles County, 2013**



- <sup>1</sup> Denominator is 2,324 contacts elicited from 1,945 gonorrhea index cases in 2013. Of these, 2,199 were sexual partners, 95 were clusters and 30 were missing information of contact type.
- <sup>2</sup> Numerator is # partners identified by index cases in 2013.
- <sup>3</sup> Numerator is # partners located by field services; excludes partners with a disposition of "unable to locate", "insufficient information to begin investigation", "administrative/system closure" or that were missing a disposition.
- <sup>4</sup> Numerator is # partners who were either interviewed or had a disposition which indicated that their infection and/or treatment status was confirmed.
- <sup>5</sup> Numerator is # total of partners with some treatment information (47%) that includes 21% with treatment confirmed as a result of DPH field services activities. Among the 494 cases that were treated due to field services activities, 203 were treated presumptively and 291 were diagnosed with gonorrhea.

## Overview of Chlamydia in Los Angeles County

After decreasing from 48,507 in 2012 to 48,096 in 2013, the number of reported cases of chlamydia in Los Angeles County (LAC) rose to 52,098 in 2014. The overall rate of chlamydia in LAC in 2014 was 551 per 100,000 (see Table 1.1). Since 2010, the number of chlamydia cases increased by nearly 17% in LAC. As shown in Figure 5.1, based on the most recent year for which national data are available, the chlamydia rate in LAC in 2013 (512 per 100,000) was 16% higher than the rate in California (440 per 100,000) and 15% higher than the rate in the US (447 per 100,000). The LAC chlamydia rate is similar to or lower than that of other large urban jurisdictions in the US (see Table 1.2).<sup>4</sup>

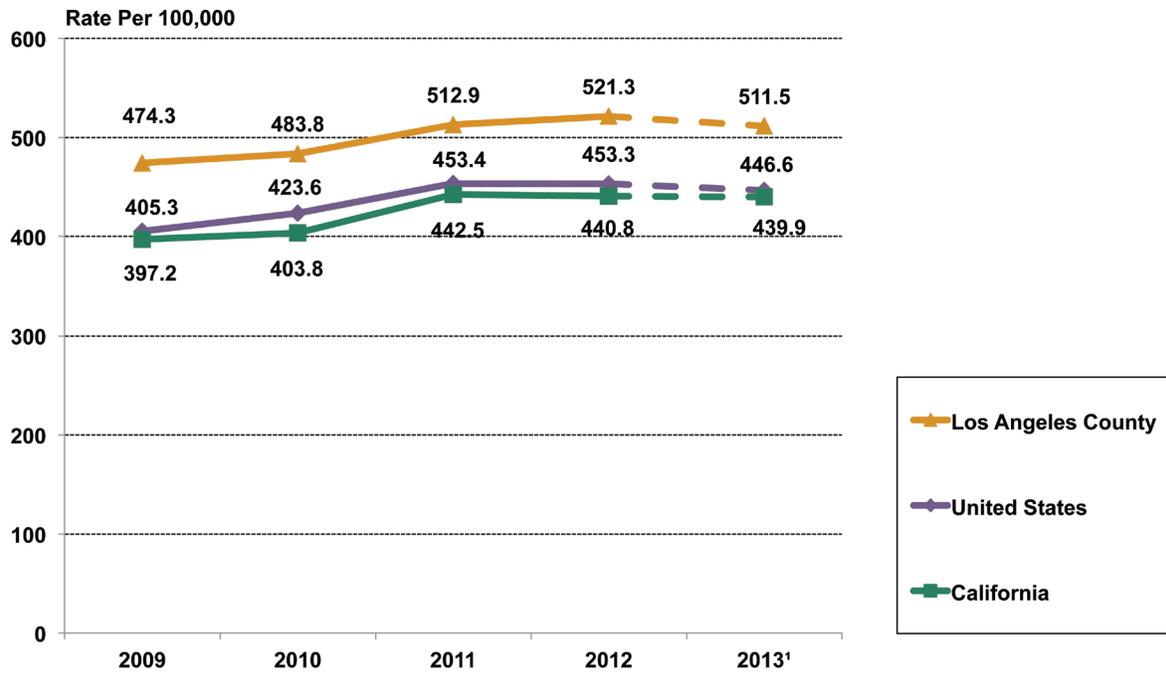
**Gender:** Sixty-two percent of chlamydia cases in 2014 were among females and 38% were among males (see Table 5.1). While chlamydia rates have risen in both males and females since 2010, there has been a 27% increase in the rate among males compared to a 7% increase among females (see Table 1.1). In 2014, there were 41 cases of chlamydia reported among individuals who identified as transgender. While 41 cases is a substantial increase from the 13 cases reported in 2010, 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 are primarily concentrated among younger populations. In 2014, 92% of reported female cases and 79% of male cases occurred among individuals below the age of 35 (see Table 5.1).

**Race/Ethnicity:** While the largest proportion of cases in 2014 occurred among Latinos, African Americans had the highest rate of disease (see Table 5.1). This is especially true for African American females whose 2014 chlamydia rate (1,331 per 100,000) was 5.5 times higher than white females (239 per 100,000) and nearly double that of Latinas (674 per 100,000). Among males, the 2014 chlamydia rate for African Americans (994 per 100,000) was 3.8 times higher than whites (264 per 100,000) and 2.9 times higher than Latinos (340 per 100,000). Since 2010, chlamydia rates have decreased by 26% among African American females and increased by 28%, 22% and 16% for Asian, white and Latina females, respectively (see Figure 5.3B). Among males from 2010-2014, chlamydia rates decreased by 9% among African Americans and increased by 76% for whites, 50% for Asians and 33% for Latinos (see Figure 5.3A).

**Geographic Distribution:** Compared to the other infections presented in this report, chlamydia cases are more evenly distributed throughout LAC (see Figure 5.6). In 2014, the proportion of chlamydia cases reported in each of the 8 SPAs were as follows: 20% South, 17% Metro, 16% San Fernando, 13% East, 12% San Gabriel, 10% South Bay, 5% West and 5% Antelope Valley. Among males, the Metro SPA had the highest number (4,875), proportion (25%) and rate of chlamydia (827 per 100,000) of all SPAs in the county. Among females, the South SPA had the highest number (6,846), proportion (21%) and rate of chlamydia (1,291 per 100,000) of all SPAs in the county (see Table 5.2). Countywide, the largest increases in chlamydia rates from 2013 to 2014 occurred among the West (22% increase), Antelope Valley (16% increase) and Metro (15% increase) SPAs (see Figure 5.5).

**Figure 5.1.** Chlamydia Rates in the United States, California and Los Angeles County, 2009-2013<sup>1</sup>



<sup>1</sup> 2013 data are provisional due to reporting delay.

**Table 5.1.** Chlamydia Cases and Rates (per 100,000) by Gender, Age Group, Race/Ethnicity, and Service Planning Area (SPA), Los Angeles County, 2014<sup>1</sup>

	Male			Female			Total <sup>2</sup>		
	N	(%)	Rt	N	(%)	Rt	N	(%)	Rt
<b>Gender</b>									
Male	19,690	(100)	422	-	-	-	19,690	(38)	422
Female	-	-	-	32,289	(100)	674	32,289	(62)	674
Transgender <sup>3</sup>	-	-	-	-	-	-	41	(0)	-
Missing <sup>3</sup>	-	-	-	-	-	-	78	(0)	-
<b>Age Group (Yr)</b>									
0-14	36	(0)	4	200	(1)	23	238	(0)	13
15-19	2,280	(12)	664	7,362	(23)	2,234	9,656	(19)	1,435
20-24	5,691	(29)	1,512	12,928	(40)	3,582	18,647	(36)	2,529
25-29	4,661	(24)	1,280	6,168	(19)	1,778	10,850	(21)	1,526
30-34	2,707	(14)	761	2,826	(9)	822	5,552	(11)	794
35-39	1,583	(8)	487	1,373	(4)	421	2,967	(6)	456
40-44	1,033	(5)	308	668	(2)	198	1,716	(3)	255
45-54	1,289	(7)	201	560	(2)	85	1,856	(4)	143
55-64	336	(2)	66	150	(0)	27	486	(1)	46
65+	63	(0)	13	28	(0)	4	92	(0)	8
Missing <sup>3</sup>	11	(0)	-	26	(0)	-	38	(0)	-
<b>Race/Ethnicity</b>									
White	3,532	(18)	264	3,159	(10)	239	6,705	(13)	252
African American	3,678	(19)	994	5,538	(17)	1,331	9,229	(18)	1,174
Latino	7,819	(40)	340	15,564	(48)	674	23,423	(45)	508
Asian	681	(3)	107	1,315	(4)	182	2,001	(4)	147
Pacific Islander	51	(0)	536	86	(0)	903	137	(0)	719
American Indian/Alaskan Native	42	(0)	467	55	(0)	583	98	(0)	532
Other/Multi-race <sup>3</sup>	306	(2)	-	479	(1)	-	787	(2)	-
Missing <sup>3</sup>	3,581	(18)	-	6,093	(19)	-	9,718	(19)	-
<b>Service Planning Area</b>									
Antelope Valley [1]	714	(4)	366	1,706	(5)	864	2,423	(5)	617
San Fernando [2]	3,035	(15)	280	5,200	(16)	470	8,260	(16)	377
San Gabriel [3]	2,014	(10)	251	4,434	(14)	529	6,458	(12)	394
Metro [4]	4,875	(25)	827	4,054	(13)	724	8,961	(17)	779
West [5]	1,193	(6)	377	1,288	(4)	383	2,482	(5)	381
South [6]	3,400	(17)	675	6,846	(21)	1,291	10,261	(20)	993
East [7]	2,271	(12)	352	4,665	(14)	699	6,952	(13)	530
South Bay [8]	1,817	(9)	343	3,566	(11)	645	5,391	(10)	498
Missing <sup>3</sup>	371	(2)	-	530	(2)	-	910	(2)	-
<b>Total</b>	<b>19,690</b>	<b>(100)</b>	<b>422</b>	<b>32,289</b>	<b>(100)</b>	<b>674</b>	<b>52,098</b>	<b>(100)</b>	<b>551</b>

<sup>1</sup> Data are provisional due to reporting delay and do not include cases reported in the cities of Long Beach and Pasadena.

Rates based on observations fewer than 12 may not be reliable (see technical notes).

<sup>2</sup> Includes missing gender, male-to-female transgender and female-to-male transgender.

<sup>3</sup> Rates cannot be calculated due to a lack of reliable denominator data.

Figure 5.2A. Chlamydia Rates among Males by Age Group, Los Angeles County, 2010-2014<sup>1</sup>

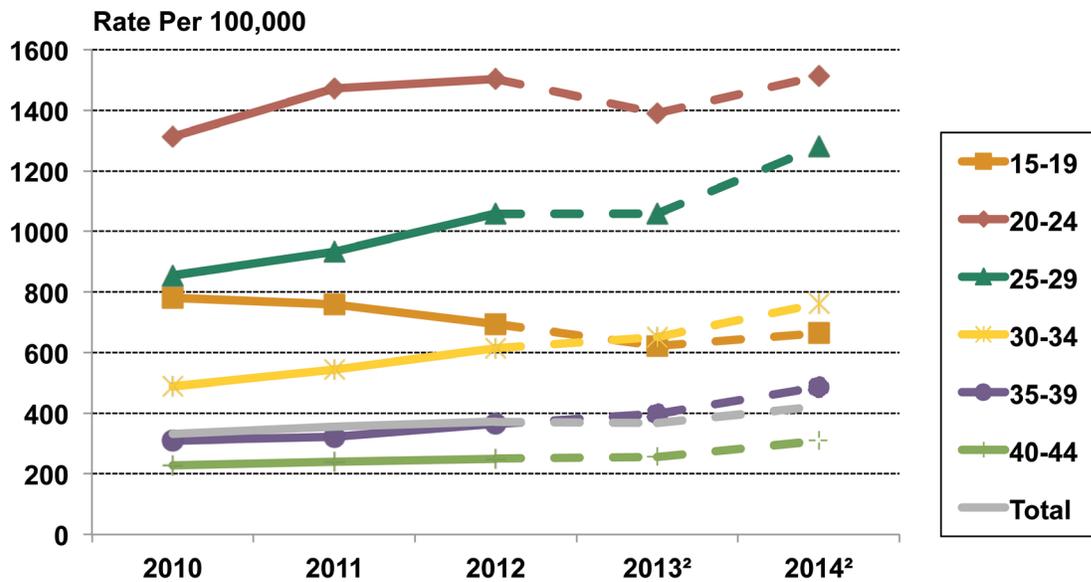
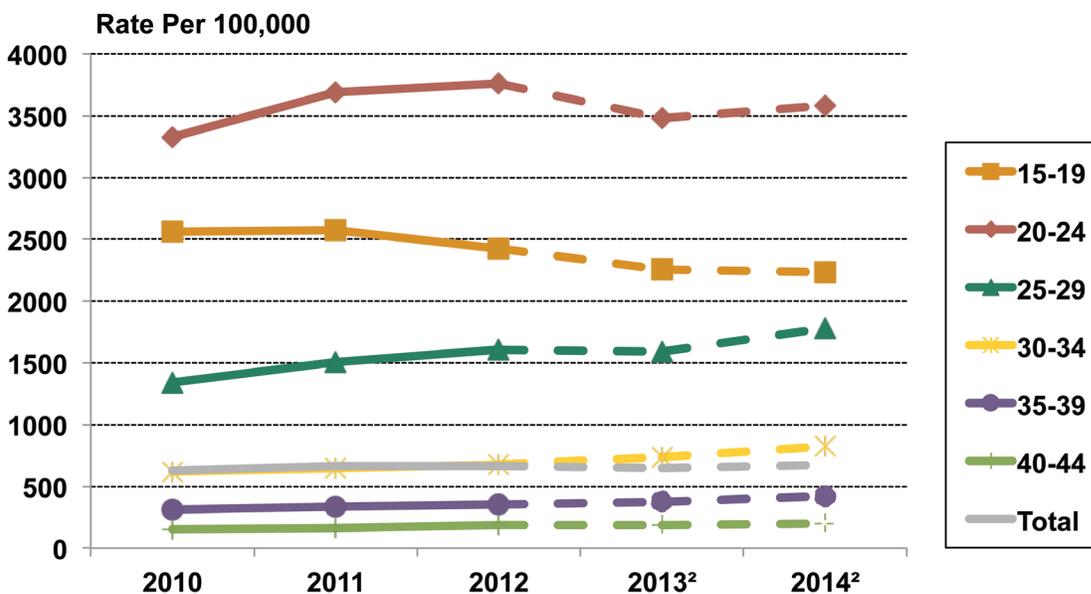


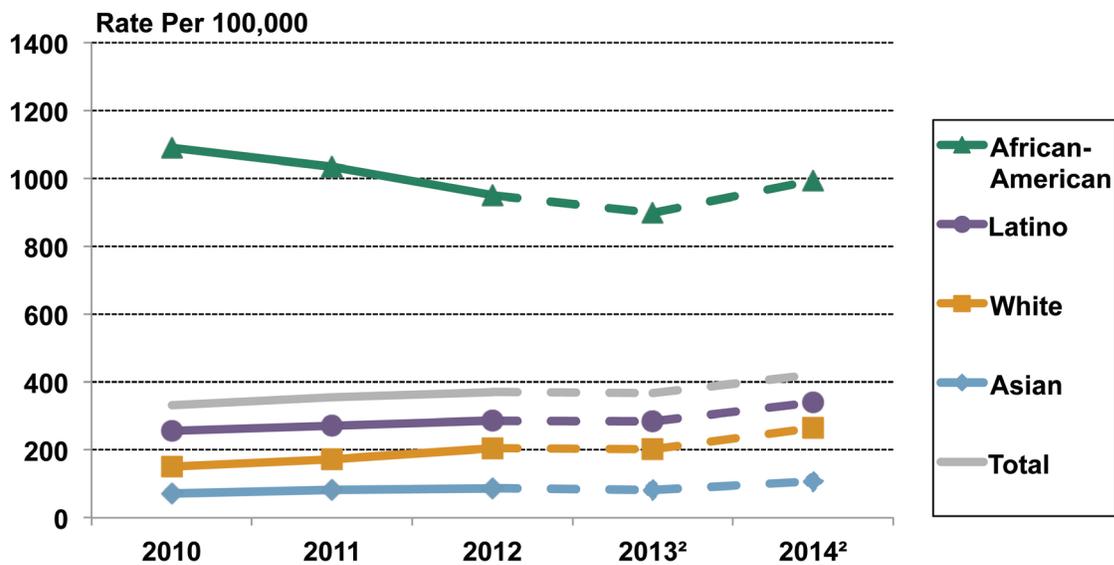
Figure 5.2B. Chlamydia Rates among Females by Age Group, Los Angeles County, 2010-2014<sup>1</sup>



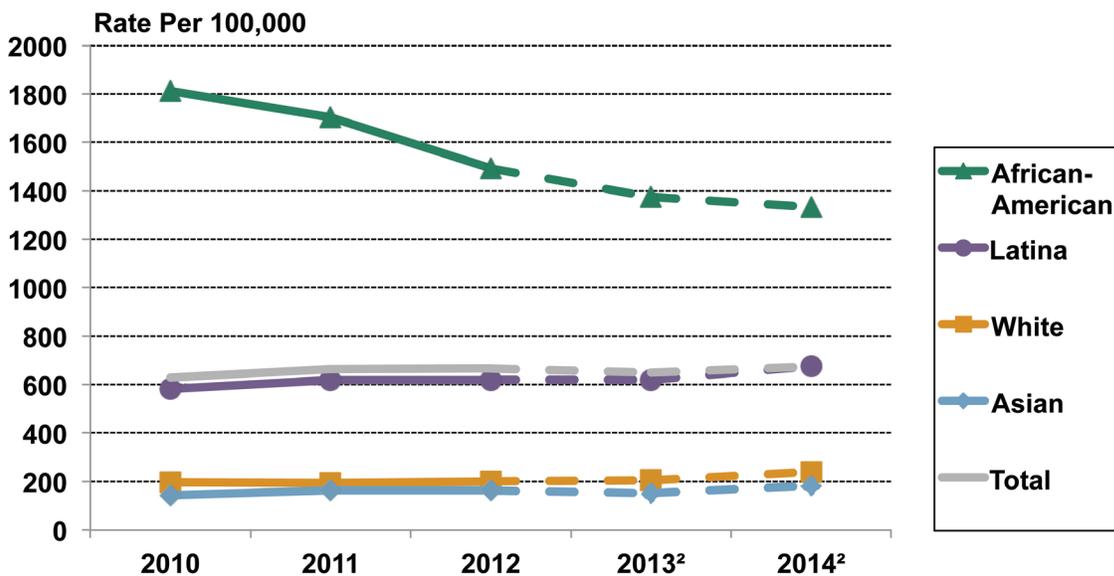
<sup>1</sup> Data excludes cases in Long Beach and Pasadena.

<sup>2</sup> 2013-2014 data are provisional due to reporting delay.

**Figure 5.3A.** Chlamydia Rates among Males by Race/Ethnicity, Los Angeles County, 2010-2014<sup>1</sup>

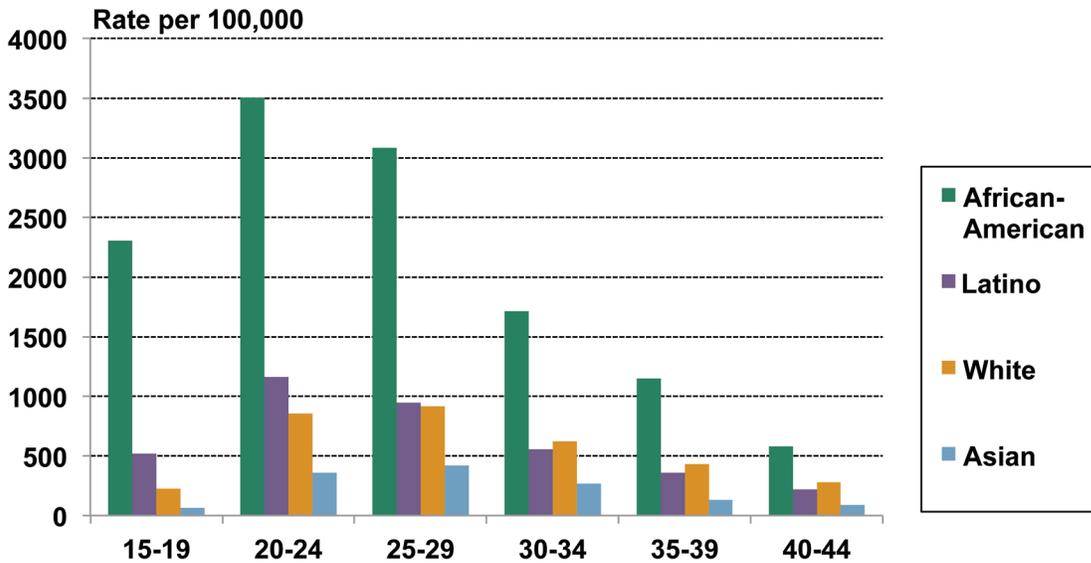


**Figure 5.3B.** Chlamydia Rates among Females by Race/Ethnicity, Los Angeles County, 2010-2014<sup>1</sup>

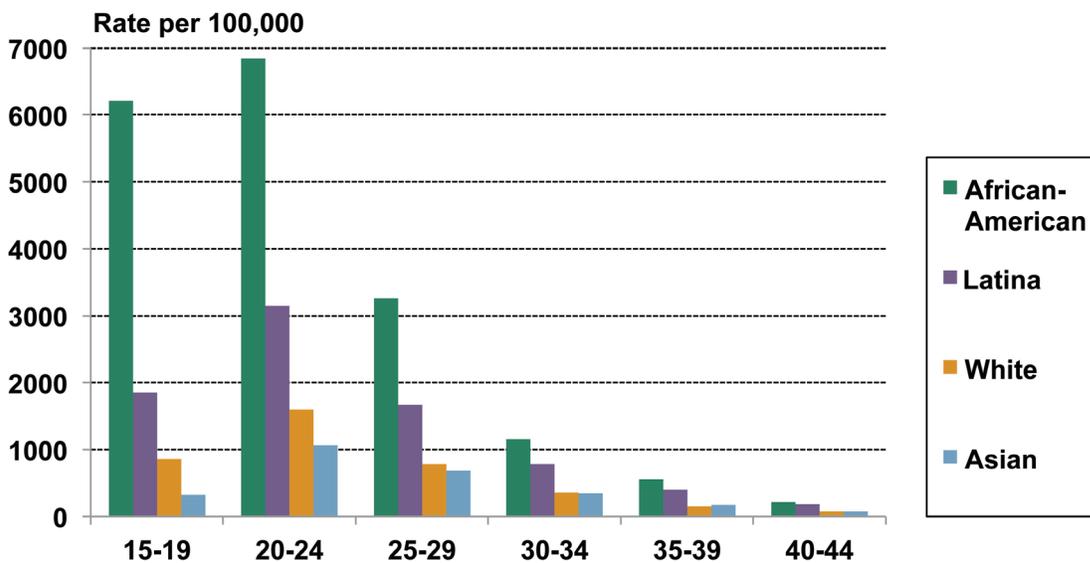


<sup>1</sup> Data excludes cases with unknown race/ethnicity and cases in Long Beach and Pasadena; rates for Pacific Islanders and American Indians/Alaskan Natives are not presented due to small numbers that may cause unstable estimates.  
<sup>2</sup> 2013-2014 data are provisional due to reporting delay.

**Figure 5.4A.** Chlamydia Rates among Males by Age Group and Race/Ethnicity, Los Angeles County, 2014<sup>1</sup>



**Figure 5.4B.** Chlamydia Rates among Females by Age Group and Race/Ethnicity, Los Angeles County, 2014<sup>1</sup>



<sup>1</sup> Data excludes cases with unknown race/ethnicity and cases in Long Beach and Pasadena; 2014 data are provisional due to reporting delay; rates for Pacific Islanders and American Indians/Alaskan Natives are not presented due to small numbers that may cause unstable estimates.

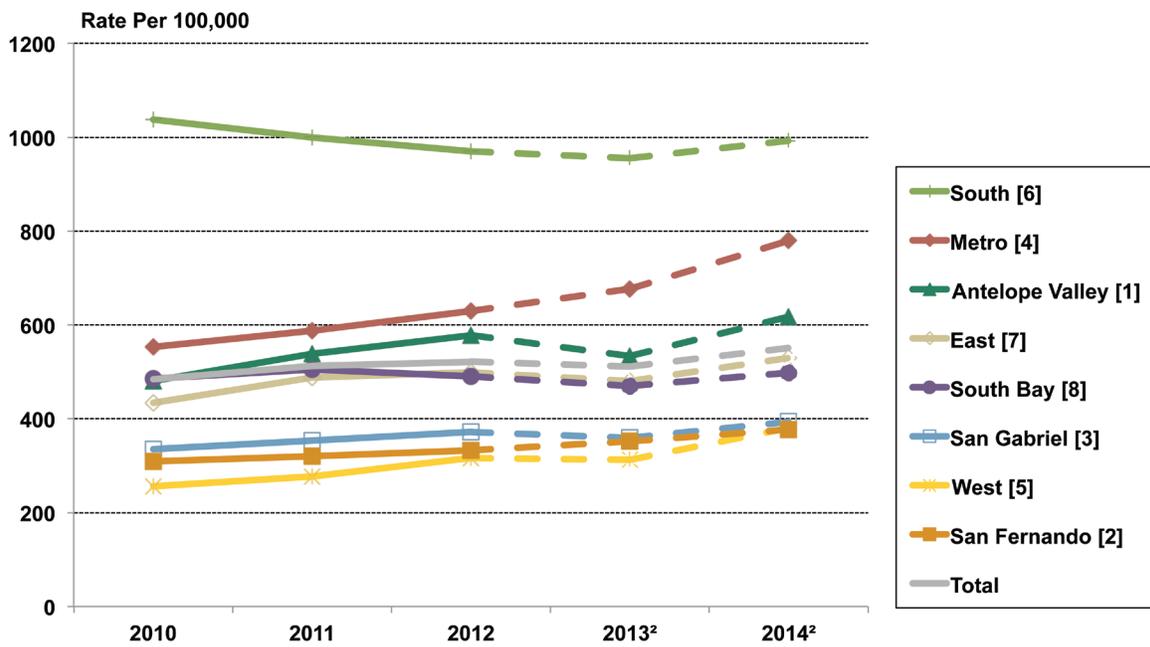
**Table 5.2.** Chlamydia Cases and Rates (per 100,000), by Service Planning Area (SPA) and Health District (HD), Los Angeles County, 2010–2014<sup>1</sup>

SPA/HD	2010			2011			2012			2013 <sup>2</sup>			2014 <sup>2</sup>		
	N	(%)	Rt	N	(%)	Rt	N	(%)	Rt	N	(%)	Rt	N	(%)	Rt
<b>Antelope Valley [1]</b>	<b>1,850</b>	<b>( 4)</b>	<b>481</b>	<b>2,080</b>	<b>( 4)</b>	<b>538</b>	<b>2,241</b>	<b>( 5)</b>	<b>578</b>	<b>2,087</b>	<b>( 4)</b>	<b>534</b>	<b>2,423</b>	<b>( 5)</b>	<b>617</b>
Antelope Valley	1,850	( 4)	481	2,080	( 4)	538	2,241	( 5)	578	2,087	( 4)	534	2,423	( 5)	617
<b>San Fernando [2]</b>	<b>6,569</b>	<b>( 15)</b>	<b>309</b>	<b>6,850</b>	<b>( 14)</b>	<b>321</b>	<b>7,147</b>	<b>( 15)</b>	<b>333</b>	<b>7,651</b>	<b>( 16)</b>	<b>352</b>	<b>8,260</b>	<b>( 16)</b>	<b>377</b>
East Valley	1,720	( 4)	392	1,731	( 4)	392	1,809	( 4)	407	1,976	( 4)	438	2,163	( 4)	478
Glendale	753	( 2)	225	852	( 2)	253	816	( 2)	242	957	( 2)	281	1,047	( 2)	306
San Fernando	1,285	( 3)	259	1,371	( 3)	275	1,446	( 3)	289	1,420	( 3)	280	1,580	( 3)	308
West Valley	2,811	( 6)	328	2,896	( 6)	336	3,076	( 6)	355	3,298	( 7)	376	3,470	( 7)	393
<b>San Gabriel [3]</b>	<b>5,385</b>	<b>( 12)</b>	<b>335</b>	<b>5,689</b>	<b>( 12)</b>	<b>353</b>	<b>6,012</b>	<b>( 12)</b>	<b>372</b>	<b>5,877</b>	<b>( 12)</b>	<b>359</b>	<b>6,458</b>	<b>( 12)</b>	<b>394</b>
Alhambra	757	( 2)	222	747	( 2)	218	842	( 2)	245	823	( 2)	237	962	( 2)	277
El Monte	1,891	( 4)	438	1,874	( 4)	433	1,955	( 4)	450	1,884	( 4)	429	2,057	( 4)	467
Foothill	857	( 2)	284	933	( 2)	309	915	( 2)	303	926	( 2)	302	1,003	( 2)	325
Pomona	1,880	( 4)	353	2,135	( 4)	400	2,300	( 5)	429	2,244	( 5)	413	2,436	( 5)	448
<b>Metro [4]</b>	<b>6,181</b>	<b>( 14)</b>	<b>553</b>	<b>6,589</b>	<b>( 14)</b>	<b>588</b>	<b>7,075</b>	<b>( 15)</b>	<b>630</b>	<b>7,723</b>	<b>( 16)</b>	<b>677</b>	<b>8,961</b>	<b>( 17)</b>	<b>779</b>
Central	1,924	( 4)	573	1,991	( 4)	592	2,209	( 5)	656	2,469	( 5)	720	2,898	( 6)	840
Hollywood-Wilshire	2,815	( 6)	588	3,137	( 7)	653	3,387	( 7)	703	3,659	( 8)	747	4,261	( 8)	862
Northeast	1,442	( 3)	476	1,461	( 3)	481	1,479	( 3)	486	1,595	( 3)	518	1,802	( 3)	581
<b>West [5]</b>	<b>1,628</b>	<b>( 4)</b>	<b>256</b>	<b>1,765</b>	<b>( 4)</b>	<b>277</b>	<b>2,020</b>	<b>( 4)</b>	<b>316</b>	<b>2,021</b>	<b>( 4)</b>	<b>313</b>	<b>2,482</b>	<b>( 5)</b>	<b>381</b>
West	1,628	( 4)	256	1,765	( 4)	277	2,020	( 4)	316	2,021	( 4)	313	2,482	( 5)	381
<b>South [6]</b>	<b>10,405</b>	<b>( 23)</b>	<b>1038</b>	<b>10,092</b>	<b>( 21)</b>	<b>1000</b>	<b>9,870</b>	<b>( 20)</b>	<b>970</b>	<b>9,841</b>	<b>( 20)</b>	<b>955</b>	<b>10,261</b>	<b>( 20)</b>	<b>993</b>
Compton	2,544	( 6)	912	2,510	( 5)	897	2,447	( 5)	872	2,396	( 5)	845	2,580	( 5)	907
South	2,359	( 5)	1273	2,360	( 5)	1259	2,247	( 5)	1184	2,356	( 5)	1224	2,363	( 5)	1221
Southeast	1,423	( 3)	856	1,388	( 3)	823	1,464	( 3)	856	1,435	( 3)	825	1,499	( 3)	861
Southwest	4,079	( 9)	1097	3,834	( 8)	1026	3,712	( 8)	987	3,654	( 8)	962	3,819	( 7)	1000
<b>East [7]</b>	<b>5,614</b>	<b>( 13)</b>	<b>434</b>	<b>6,320</b>	<b>( 13)</b>	<b>488</b>	<b>6,475</b>	<b>( 13)</b>	<b>499</b>	<b>6,289</b>	<b>( 13)</b>	<b>480</b>	<b>6,952</b>	<b>( 13)</b>	<b>530</b>
Bellflower	1,443	( 3)	408	1,621	( 3)	458	1,594	( 3)	449	1,482	( 3)	414	1,726	( 3)	481
East Los Angeles	958	( 2)	471	1,059	( 2)	520	1,071	( 2)	525	1,131	( 2)	552	1,243	( 2)	608
San Antonio	2,110	( 5)	503	2,273	( 5)	541	2,405	( 5)	572	2,350	( 5)	553	2,589	( 5)	607
Whittier	1,103	( 2)	348	1,367	( 3)	430	1,405	( 3)	441	1,326	( 3)	412	1,394	( 3)	432
<b>South Bay [8]</b>	<b>5,138</b>	<b>( 12)</b>	<b>485</b>	<b>5,360</b>	<b>( 11)</b>	<b>505</b>	<b>5,229</b>	<b>( 11)</b>	<b>490</b>	<b>5,064</b>	<b>( 11)</b>	<b>470</b>	<b>5,391</b>	<b>( 10)</b>	<b>498</b>
Harbor	716	( 2)	359	772	( 2)	385	810	( 2)	401	720	( 1)	351	749	( 1)	363
Inglewood	3,031	( 7)	745	3,138	( 7)	768	2,993	( 6)	729	2,922	( 6)	706	3,086	( 6)	741
Torrance	1,391	( 3)	308	1,450	( 3)	320	1,426	( 3)	314	1,422	( 3)	310	1,556	( 3)	339
<b>Missing</b>	<b>1,848</b>	<b>( 4)</b>	<b>-</b>	<b>2,724</b>	<b>( 6)</b>	<b>-</b>	<b>2,438</b>	<b>( 5)</b>	<b>-</b>	<b>1,543</b>	<b>( 3)</b>	<b>-</b>	<b>910</b>	<b>( 2)</b>	<b>-</b>
<b>Total</b>	<b>44,618</b>	<b>(100)</b>	<b>484</b>	<b>47,469</b>	<b>(100)</b>	<b>513</b>	<b>48,507</b>	<b>(100)</b>	<b>522</b>	<b>48,096</b>	<b>(100)</b>	<b>511</b>	<b>52,098</b>	<b>(100)</b>	<b>551</b>

<sup>1</sup> Data do not include cases reported in the cities of Long Beach and Pasadena. Rates based on observations fewer than 12 may not be reliable (see technical notes).

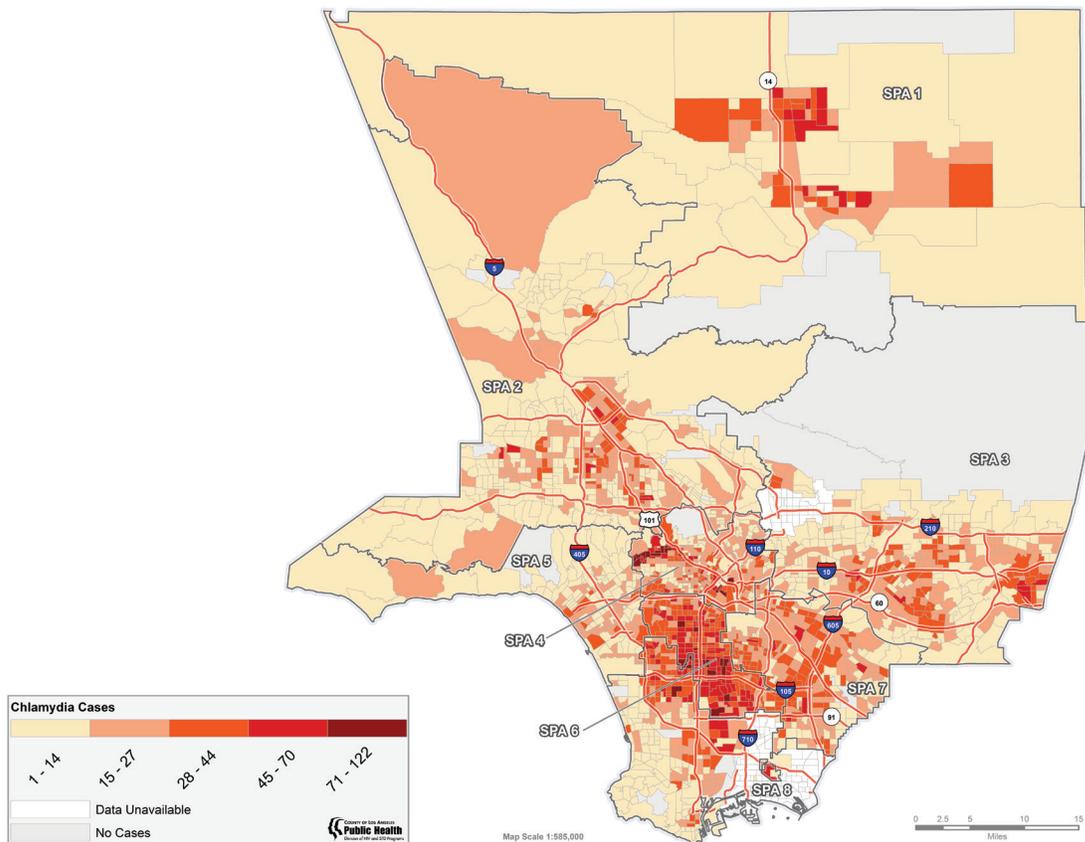
<sup>2</sup> Data are provisional due to reporting delay.

**Figure 5.5.** Chlamydia Rates by Service Planning Area (SPA), Los Angeles County, 2010-2014<sup>1</sup>



<sup>1</sup> Data excludes cases in Long Beach and Pasadena.  
<sup>2</sup> 2013-2014 data are provisional due to reporting delay.

**Figure 5.6.** Chlamydia Cases by Census Tract & Service Planning Area (SPA), Los Angeles County, 2014



<sup>1</sup>2010 U.S. Census Tract Data, U.S. Census Bureau. 2014 data are provisional due to reporting delay.

## References:

1. CDC. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data-United States and 6 dependent areas-2012. HIV Surveillance Supplemental Report 2014; 19(No. 3). <http://www.cdc.gov/hiv/library/reports/surveillance/>. Published November 2014. Accessed 8/14/15.
2. CDC. Revised Surveillance Case Definition for HIV Infection – United States, 2014. *MMWR* 2014; 63(No. RR03):1-10.
3. White House Office of National AIDS Policy National HIV/AIDS Strategy for the United States. Washington, DC: White House Office of National AIDS Policy; 2010.
4. CDC. *Sexually Transmitted Disease Surveillance 2013*. Atlanta: U.S. Department of Health and Human Services; 2014.
5. CDC. STD Surveillance Case Definitions. <http://www.cdc.gov/std/stats/casedefinitions-2014.pdf>. Published December 2013. Accessed 8/14/15.

## Appendix 1: Technical Notes

### Surveillance of HIV/STDs in Los Angeles County

Surveillance of HIV infections, including stage 3 (AIDS) in Los Angeles County (LAC) is conducted through active and passive surveillance to identify and collect information on cases of HIV diagnosed at hospitals, clinics, private physician offices, laboratories, community-based organizations (CBOs), and hospices. Active HIV surveillance requires staff to routinely contact and visit sites to facilitate the completion of HIV case reports. Mandated reporters participating in passive HIV surveillance submit case reports to the LAC Department of Public Health (DPH) Division of HIV and STD Programs (DHSP) without any contact from surveillance staff. In LAC, about 75%-80% of persons reported with a diagnosis of HIV infection are collected through active surveillance activities. The Enhanced HIV/AIDS Reporting System (eHARS) is the information system for collecting, storing and retrieving HIV surveillance data. Case definitions are based on CDC documents "Stage-3-Defining Opportunistic Illnesses in HIV Infection" and "Revised Surveillance Case Definition for HIV Infection — United States, 2014".<sup>2</sup>

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 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".<sup>5</sup>

### Reporting Delay

HIV reporting delay is defined as the time interval between diagnosis or death and the reporting of diagnosis or death to DHSP. The median delay for all HIV cases reported in 2013 was 4 months (range 0 to 397 months). As a result of this delay, data for HIV diagnoses, stage 3 HIV diagnoses (AIDS) and deaths among persons living with HIV (PLWH) pertains to 2013. Data for PLWH is for 2014. The impact of reporting delay must be considered when evaluating trends in case numbers 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 HIV/STD cases occurring in 2013 and 2014 will not be reported until after the publication of this report. Therefore differences in numbers of cases and rates may be observed in the future reports.

## **Underreporting**

Data on diagnoses of HIV infection should be interpreted with caution. HIV surveillance reports may not be representative of all persons infected with HIV because not all infected persons have been tested. Furthermore, the results of anonymous tests are not required to be reported in California. Therefore, reports of confidential test results may not represent all persons with HIV infection. Many factors, including the extent to which testing is routinely offered to specific groups and the availability of, and access to, medical care and testing services, may influence testing patterns. These data only provide a minimum estimate of persons known to be HIV infected.

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. 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**

There is no single data source that provides smoothed population estimates for LAC across two census years, 2000 and 2010. Thus population data from two different sources are used to calculate rates: 1) 2010-2014 population estimates provided by LAC Internal Services Department and contracted through Hedderson Demographic Services; 2) 2001-2009 smoothed population estimates provided by the LAC DPH Office of Health Assessment and Epidemiology. For comparisons over time, rates for certain years may be based on the population estimates before or after that year depending on what is available from the same data source. Caution should be made while comparing the rates over time, especially from 2009 to 2010.

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, HIV and 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**

Residence at earliest diagnosis of HIV is used to determine the geographical location of a case. In tables or maps that present data for stage 3 (AIDS) diagnoses, the residential information at time of stage 3 (AIDS) diagnosis is used to determine the geographical location. For HIV cases or stage 3 (AIDS) cases for whom the specific residential information at time of diagnosis is not available, the residence at time of HIV diagnosis or the most recently reported residential information is used, provided that the address is valid and within the L.A. County jurisdiction.

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. Additionally, this report does not include STD cases identified among

residents of Long Beach or Pasadena as these cities have their own Health Departments. All STD cases from these jurisdictions are reported directly to the California Department of Health Services and to the CDC.

For both HIV and 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**

Mandated collection of race and ethnicity data for HIV was implemented in January 1, 2003 as required by the OMB Statistical Policy Directive 15. A minimum of 5 race categories should be collected including: American Indian or Alaskan Native, Asian, African American, Pacific Islander, and white. Additionally, systems must be able to retain information when multiple racial categories are reported. Two ethnicity categories should be collected regardless of race: Latino and non-Latino.

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. While the 'Asian' and 'Pacific Islander' categories are separated whenever possible in this report, these two groups were collected as a single racial category in HIV surveillance prior to January, 2003. Since persons living with HIV (PLWH) could have been reported to DHSP before this date, tables that present data for PLWH provide information on these groups separately and as a collapsed 'Asian/Pacific Islander' category. 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.

### **HIV Transmission Categories**

Transmission categories are assigned in a hierarchical fashion (listed from highest to lowest in the column headed "Transmission Category"). Persons who have been identified with two or more transmission categories are assigned to the category listed highest in the hierarchy. For example, a man who reports sexual contact with another man and heterosexual contact with an HIV-positive woman would be classified as "male-male sexual contact." The only exception to this rule includes men who report both categories for sexual contact with another man and injection-drug use; a separate transmission category is created for these cases.

The heterosexual contact transmission category is limited to persons who had heterosexual contacts with an HIV-infected or a sexual partner with an increased risk for HIV. Transfusion or hemophilia transmission category is limited to persons who received blood transfusion no later than 1985 or persons who had been investigated and confirmed as having received transfusion of contaminated blood after 1985.

Cases in persons with no reported exposure to HIV through any of the routes listed in the hierarchy of transmission categories are classified as "undetermined" transmission category. These cases include some persons still under investigation; cases in persons whose exposure history is missing because they died; cases that have been followed up but declined to be interviewed, or were lost to follow-up; and cases in persons who were interviewed or for

whom other follow-up information was available but for whom no mode of exposure was identified. If the investigation identifies a mode of exposure, the case is reclassified into the corresponding transmission category.

Due to a substantial proportion of cases of HIV infection being reported without an identified risk factor, we use CDC-recommended multiple imputation methods to assign a risk factor for these cases. Multiple imputation is a statistical approach in which each missing risk factor is replaced with a set of plausible values that represent the uncertainty about the true, but missing value. The plausible values are analyzed using standard procedures, and the results from these analyses are then combined to produce the final results. In this report, multiple imputation has been used in tables showing estimated distribution by HIV transmission category for diagnoses among adults and adolescents.



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## 2014 Annual HIV/STD Surveillance Report Feedback and Suggestion Form

**Which of the following best describes your organization:**

- Health Department       Community Based Organization       Medical Provider  
 Academic Institution       Other: \_\_\_\_\_

**What use do you have for this report? (Check all that apply)**

- General Interest       Service Planning       Grant Application  
 Other: \_\_\_\_\_

**How useful was this report?**

- Very useful       Useful       Neutral       Not useful       Not at all useful

**Please share any additional comments or suggestions you may have for future versions of this report:**

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**DIRECTIONS:** Please complete the feedback form and return via email, fax or mail to the contact person below.

**LOS ANGELES COUNTY  
DIVISION OF HIV AND STD PROGRAMS**  
600 South Commonwealth Avenue, Suite 1920  
Los Angeles, CA 90005  
(213) 351-8654 [phone] (213) 487-6473 [fax]  
[rmurphy@ph.lacounty.gov](mailto:rmurphy@ph.lacounty.gov)  
**ATTN: Ryan Murphy**  
**Thank You for your feedback!**

## Notes

## Notes

## Notes



#### **Los Angeles County Board of Supervisors**

**Hilda L. Solis**, First District  
**Mark Ridley-Thomas**, Second District  
**Sheila Kuehl**, Third District  
**Don Knabe**, Fourth District  
**Michael D. Antonovich**, Fifth District

#### **Los Angeles County Department of Public Health**

**Cynthia A. Harding**, MPH  
Interim Director

**Jeffrey D. Gunzenhauser**, MD, MPH  
Interim Health Officer

#### **Division of HIV and STD Programs**

**Mario J. Pérez**, MPH  
Director

**Amy Rock Wohl**, MPH, PhD  
Chief, Research and Innovation  
Acting Chief, HIV/STD Surveillance

**Mike Janson**, MPH  
Chief, Program Evaluation and Data Management

**Virginia Hu**, MPH  
Supervising Epidemiologist

**Ryan D. Murphy**, MPH, PhD

**Zhijuan Sheng**, MS  
Epidemiologist

**Zhiwei (Waley) Zeng**, MD, MPH  
Information Systems Supervisor

**Frank Ramirez**  
Public Health Investigation Manager

**LaTonya Taylor**, RN, MSN/MPH, CNS  
Assistant Program Specialist, PHN

**Monica Muñoz**, RN, MPH  
Nurse Manager

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