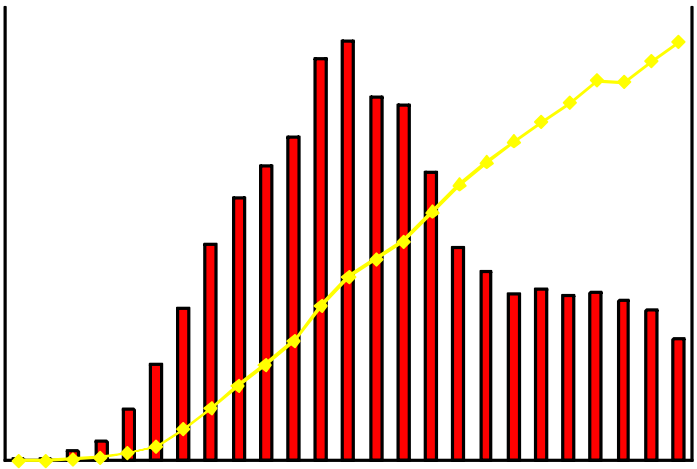
2015

HIV/AIDS Epidemiology Report



COUNTY OF SAN DIEGO
HHSA
HEALTH AND HUMAN SERVICES AGENCY

LIVE WELL SAN DIEGO

San Diego County

County of San Diego
Health and Human Services Agency
Public Health Services

HIV/AIDS Epidemiology Report 2015

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This report is available on the web at:
www.sdhivaids.org
(click on 'Reports and Statistics')

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I. Summary

California has the second largest number of Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS) cases in the United States; San Diego County has the third largest number of HIV and AIDS cases in California (after Los Angeles and San Francisco).

This report describes AIDS cases reported to the County of San Diego Health and Human Services Agency (HHSA) from the first cases in 1981 through December 31, 2014, as well as HIV cases diagnosed from April 17, 2006 through December 31, 2014. Since the beginning of the epidemic, 21,389 individuals with HIV disease (either HIV only, or AIDS) have been reported to HHSA. Of those reported, 13,200 are living.

As part of the effort to meet the goals and objectives of the National HIV/AIDS Strategy (increasing access to care/improving health outcomes and reducing new cases/disparities), this report presents detailed information on People Living with HIV and AIDS (PLWHA) and recent HIV diagnoses (2010-2014). Unless otherwise stated, the year of diagnosis given is the first year in which a diagnosis was made. Where ever possible, the HIV diagnosis year is used as this is the earliest indication of infection.

National Comparisons

Table 1 shows the comparison of 2013 HIV diagnoses and PLWHA in San Diego County to 2012 national estimates from the Centers for Disease Control and Prevention (CDC). For both HIV diagnoses and PLWHA, San Diego County has greater percentages of males, whites and Hispanics than in the national estimates, and lower percentage of blacks and females. San Diego County also varies in modes of transmission; the county has a much greater percentage of cases that are men who have sex with men (MSM), and much smaller percentage resulting from heterosexual transmission.

Table 2 provides a comparison of the number of cases with HIV diagnosis and AIDS diagnosis in 2013, as well as the number of cumulative AIDS cases. San Diego County has about 1% of the cases in the US, and about 9% of cases in California. Cases from 2013 are used to make comparisons more appropriate to years of data available from the state and US.

People Living with HIV/AIDS

A total of 13,200 PLWHA were diagnosed while living in San Diego County and reported through December 31, 2014. PLWHA in San Diego County are most commonly white, male, aged 30 to 39 years, and have male sex partners (see Tables 3, 5 and 10).

The majority of PLWHA were living in the Central Region at the time of diagnosis. However, since 1987 the percent of cases in the Central Region has declined while it has doubled in the South Region, and remained stable in other regions (see Table 7). The majority of PLWHA diagnosed in the Central Region were in whites (55%), followed by Hispanics (27%), and blacks (14%) (see Table 8). The South Region has been the second most frequent area of residence at time of diagnosis since 1997 (see Table 7). Most PLWHA diagnosed in the South Region are Hispanic (68%) with smaller proportion of whites

(19%) and blacks (10%) (see Table 8). The Central and North Central Regions have had the smallest percent (6% and 7%) of female PLWHA over time, while in the other regions, 10-23% of PLWHA are female (see Table 9). It should be noted that only the area of residence at the time of diagnosis is known. It is probable that some PLWHA have moved since their diagnosis, both within the county and out of the county.

For men, the predominant mode of transmission is MSM (81%), followed by MSM who inject drugs (MSM+IDU) (9%) (see Table 10 and Figure 5). Over time, heterosexual contact and Injection Drug Use (IDU) have become somewhat more frequent modes of transmission in men, but MSM remains the primary risk for transmission. Differences are seen in male cases across races/ethnicities, with blacks having a significantly greater proportion of IDU and heterosexual than either whites or Hispanics (see Table 11).

In women, heterosexual contact (71%) is the primary mode of transmission, followed by IDU (21%) (see Table 10 and Figure 6).

Recent HIV Diagnoses

Since 1990, the average age at time of diagnosis (HIV diagnosis for most cases) has increased slightly for white and Hispanic PLWHA (see Table 5). In the five-year period from 2010 to 2014, the average age at the time of diagnosis was 36 years, with whites slightly older (39 years of age) than other race/ethnic groups. This increase in age in whites and Hispanics may be due to later age at infection or testing later in the course of infection.

Blacks have had the third largest number of cases per year, but the highest rate of HIV (see Table 4 and Figure 3). The annual HIV case rate among blacks is almost three times that seen in whites (see Table 4 and Figure 3). Hispanics have the second highest number of cases per year and a rate that is about one half higher than that seen in whites, but about half of that recently seen in blacks. There have been modest reductions in rates across races/ethnicities from 2005 to 2014 (see Table 4 and Figure 3).

Because of delays in reporting, some 2014 cases are expected to be reported in 2015. This delay may make the 2014 rates appear artificially low, requiring caution in interpretation.

Over the course of the epidemic there have been slow increases in the proportion of HIV diagnoses in blacks and Hispanics. In recent years, (2010-2014) however, these proportions have been more stable for whites and blacks while still increasing for Hispanics (see Table 4).

Most recent HIV diagnoses are in residents of the Central Region. In this region, the proportion of whites has declined to 43% while the proportion of Hispanics has increased to 36%, compared to PLWHA (see Table 8).

Although mode of transmission has not changed much for males over time, there have been changes for females. Heterosexual contact has been increasing in frequency while IDU generally has been decreasing (see Table 10). Heterosexual contact with a male “known to be HIV positive”, accounts for 66% of female HIV diagnoses in recent years, while IDU partners account for 7% and MSM partners account for 4% (see Figure 4). It should be noted that the

known HIV-positive partners of female PLWHA may be IDU, MSM, or have other HIV acquisition risks which they may or may not disclose to their female partners.

AIDS Cases

The time between HIV diagnosis and AIDS diagnosis is an important measure of success in getting individuals tested and treated for HIV. A longer time period between these two diagnoses generally indicates that a patient was identified and appropriately treated earlier in the course of his or her infection. Those cases with less than 12 months between HIV and AIDS diagnosis are referred to as late testers. Unfortunately, there has been no decrease in percent of late testers since 2001. There is some difference between races/ethnicities in that the percent of Hispanics cases with less than a year between diagnoses has been consistently greater than that seen in whites and blacks (see Figure 5). This presents an opportunity to get more persons tested and linked to care.

Those cases with less than 30 days between HIV and AIDS diagnoses are said to have simultaneous diagnoses. The 30 day window occurs when there is a delay between the results of initial HIV testing and CD4 counts which may be AIDS-defining or when a patient presents with an AIDS-defining condition with no previous HIV testing. About one-third of AIDS diagnoses in recent years have been simultaneous diagnoses (see Figure 6). Overall, the percent of simultaneous diagnoses has been consistent, although Hispanics have consistently had higher percentages with simultaneous diagnosis than other race/ethnicities.

Engagement in Care—The Continuum of Care

In recent years, the level of engagement in care for HIV cases has been measured by determining the percent of cases who are regularly seeing a health care provider (i.e., retained in care) and who are virally suppressed. (see Figure 7). In cases living in fiscal year 2012/2013, 35% were retained in care and 39% were virally suppressed. Although this is not as high a percent as called for by the National HIV Strategy (i.e., 80%), it is similar to that seen in California as a whole, and in the United States. When recently diagnosed cases were examined 44% were retained in care and 46% were virally suppressed. The smaller percentage of patients retained in care than virally suppressed may result from patients having a prescription for antiretroviral drugs not known to the County, leaving them virally suppressed, but not counted as retained in care.

Additional information on HIV/AIDS reporting and statistics in San Diego County can be found at:

www.sdhivaids.org

HIV Diagnoses and People Living with HIV/AIDS (PLWHA)

Table 1:

HIV Diagnoses and PLWHA Comparison Between the United States, California, and San Diego County

	United States 2012*		California 2013		San Diego County 2,013 €	
	HIV dx‡	PLWHA	HIV dx	PLWHA	HIV dx‡	PLWHA**
Male	78%	76%	†	88%	90%	90%
Female	22%	24%	†	12%	10%	10%
White	27%	32%	†	50%	38%	50%
Black	46%	43%	†	18%	13%	13%
Hispanic	21%	20%	†	27%	42%	32%
Asian/Pacific Islander	2%	1%	†	3%	4%	3%
Other¥	2%	4%	†	2%	3%	2%
MSM	64%	52%	†	67%	73%	74%
IDU	6%	15%	†	9%	6%	6%
MSM+IDU	3%	5%	†	9%	3%	8%
Heterosexual	25%	26%	†	7%	13%	10%
Other§	2%	2%	†	8%	5%	2%
Total	47,352	914,826		118,867	461	7,571

*Estimate. Most recent year available.
‡Regardless of stage of disease.
**PLWHA at the end of 2013.
†Not available.
¥Includes Native American, Native Alaskan, multiple race, and unknown.
§Includes blood/tissue exposure, maternal transmission, and no identifiable risk.
€2013 used for comparison to California data.

Table 2:

HIV and AIDS Cases in 2013**, and Cumulative (1981-2013) AIDS Cases in the United States, California, and San Diego County

Diagnoses	United States	California	San Diego County
HIV, 2013*	47,352	5,334	307
AIDS, 2013*	26,688	2,725	245
Cumulative AIDS, 1981-2013	1,194,039	169,734	15,346

*Most recent year available for United States and California; estimate.
**2013 San Diego County data used for closest comparison.

Figure 1:

Number of Persons Diagnosed with HIV Disease and PLWHA, San Diego County, 1981-2014

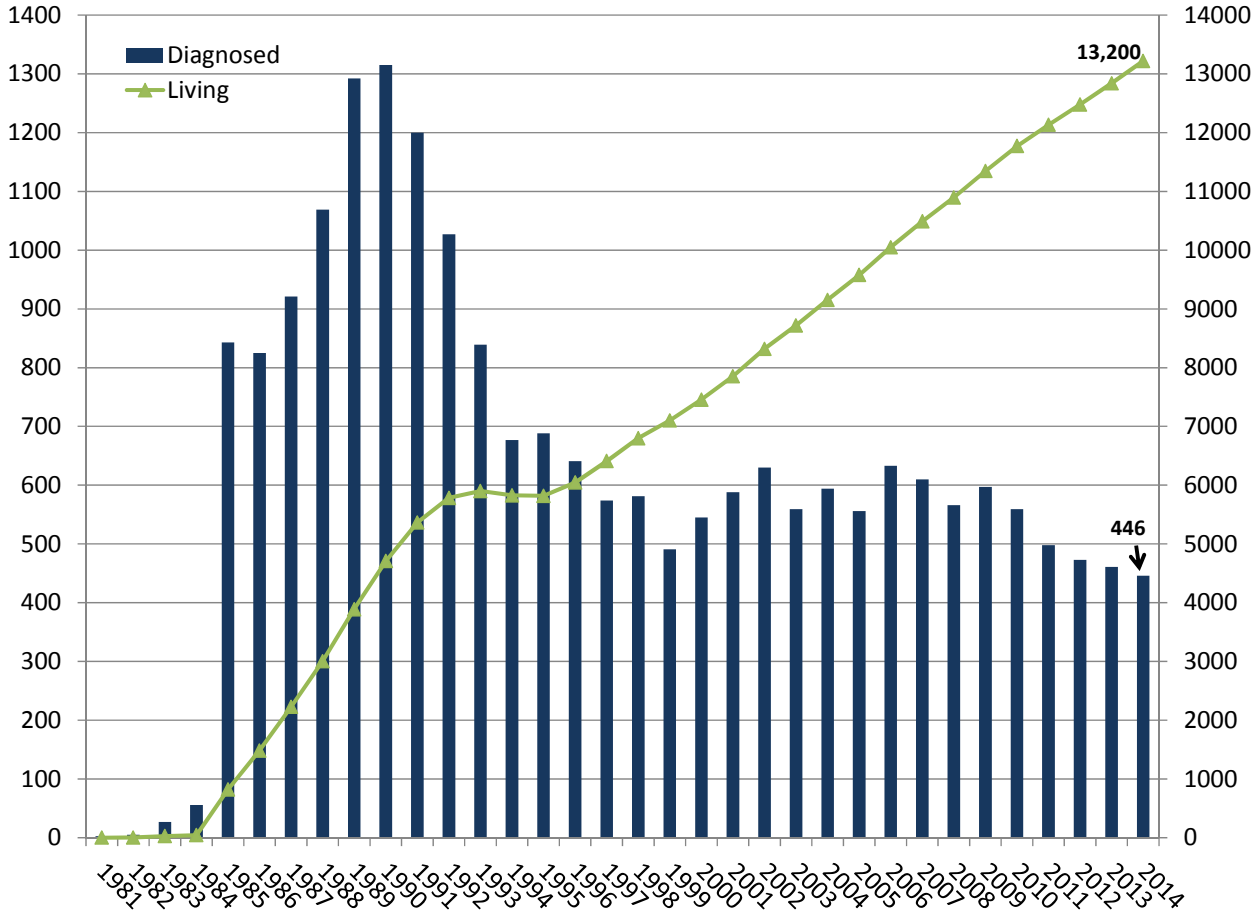


Table 3:

Age Group at Diagnosis of all Cases and Current Age Group in 2014, San Diego County

Age Group,	At Diagnosis*		In 2014**	
Years	Frequency	Percent	Frequency	Percent
Less than 13	133	0.6%	15	0.1%
13-19	393	1.8%	38	30.0%
20-29	6,248	29.2%	883	6.7%
30-39	8,279	38.7%	2,163	16.4%
40-49	4,376	20.5%	3,805	28.8%
More than 49	1,965	9.2%	6,296	47.7%
Total	21,394	100.0%	13,200	100.0%

*HIV diagnosis when known. **Of those living in 2014.

Note: Percents may not total 100 due to rounding.

Figure 2:
HIV Diagnoses and Percent of Cases in Persons of Color, by Time Period, San Diego County, 1981-2014

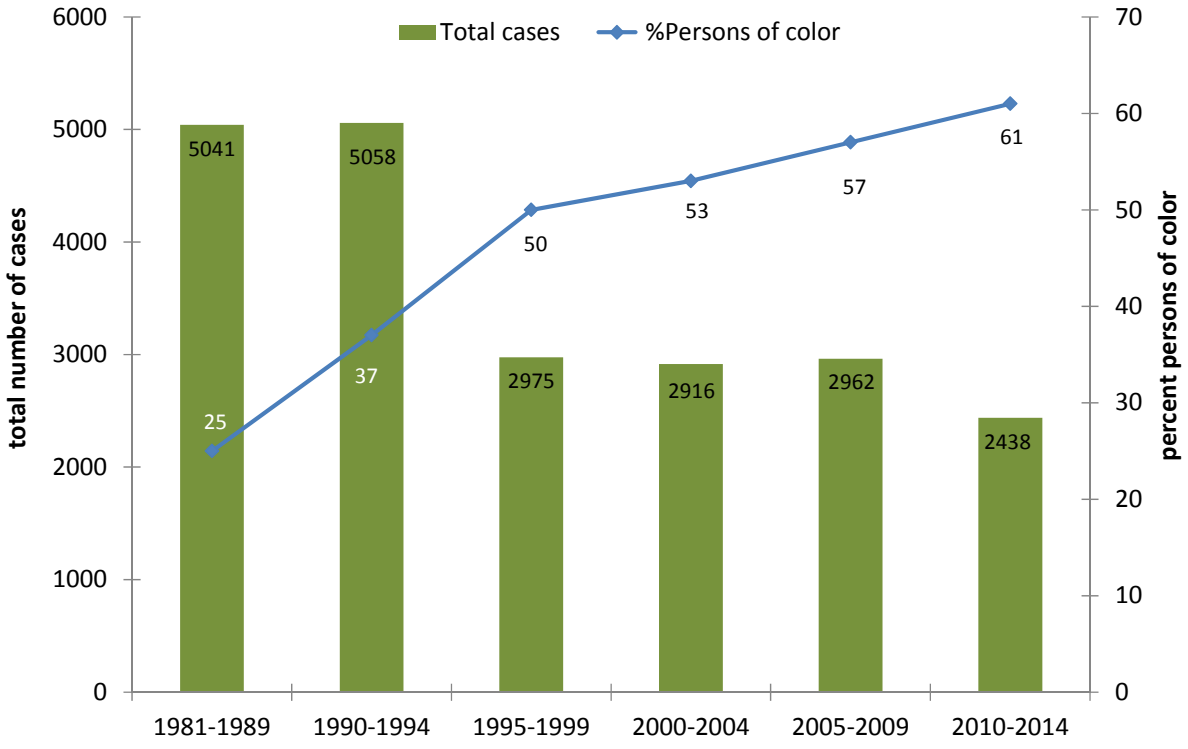


Table 4:

HIV Diagnosis Rates by Race/Ethnicity and Year of Diagnosis, San Diego County, 2000-2014

		Year of Earliest Diagnosis*						
Race/ Ethnicity		2000	2005	2010	2011	2012	2013	2014**
White	Cases	255	269	215	191	185	174	177
	% of Total	47%	48%	39%	38%	39%	38%	40%
	Rate†	16.5	17.4	14.3	12.7	12.4	11.7	11.9
Black	Cases	83	55	82	72	54	60	47
	% of Total	15%	10%	15%	14%	11%	13%	11%
	Rate*	53.7	35.6	55.9	50.4	39.7	45.4	35.5
Hispanic	Cases	189	201	226	205	199	194	192
	% of Total	35%	36%	40%	41%	42%	42%	43%
	Rate*	25.2	23.6	22.8	20.3	19.3	18.4	18.2
Asian/	Cases	8	22	26	25	27	25	26
Pacific Islander	% of Total	2%	4%	5%	5%	6%	5%	6%
	Rate†	§	7.4	7.6	7.2	7.7	7.0	7.2
Native American/	Cases	5	6	6	1	4	3	1
Alaskan Native	% of Total	1%	1%	1%	<1%	1%	1%	<1%
	Rate†	§	§	§	§	§	§	§
All Races/	Cases	545	556	559	499	473	461	446
Ethnicities#	Rate*	19.4	18.7	18.1	16.0	15.1	14.6	14.2

*First diagnosis known; HIV diagnosis when available.

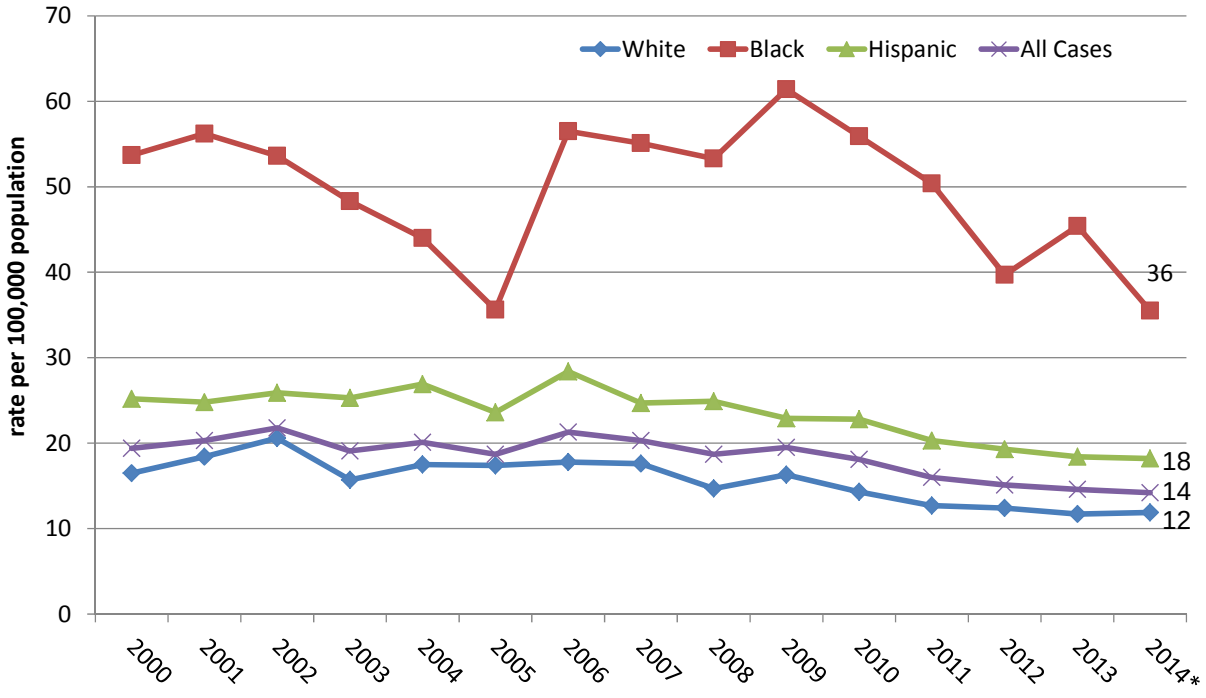
**Additional cases diagnosed in 2011 are expected to be reported in 2012.

†Per 100,000 population. #Includes Mulitple Race.

§Rate not calculated for fewer than 20 cases.

Figure 3:

HIV Diagnosis Rates by Race/Ethnicity, San Diego County, 2000-2014



*Additional cases expected to be reported.

Table 5:

Age-Related Measures at Diagnosis and by Race/Ethnicity Over 5-Year Time Periods, San Diego County, 1990-2014

Time Period*	Age-Related Measure	Race/Ethnic Group				All Cases
		White	Black	Hispanic	Other**	
1990-1994	mean age, years	36	34	32	33	35
	oldest case	80	85	75	69	85
	youngest case	2	<1 year	<1 year	<1 year	<1 year
	total cases	3,178	663	1,061	156	3,290
1995-1999	mean age, years	37	35	34	32	36
	oldest case	88	71	75	38	88
	youngest case	<1 year	<1 year	<1 year	<1 year	<1 year
	total cases	1,494	440	921	120	2,975
2000-2004	mean age, years	38	35	36	35	37
	oldest case	84	67	78	65	84
	youngest case	<1 year	<1 year	<1 year	18	<1 year
	total cases	1,381	403	1,017	117	2,918
2005-2009	mean age, years	39	34	35	34	36
	oldest case	76	71	83	63	83
	youngest case	3	<1 year	<1 year	18	<1 year
	total cases	1,281	388	1,128	167	2,964
2010-2014	mean age, years	39	35	35	34	36
	oldest case	75	75	88	84	88
	youngest case	<1 year	5	<1 year	<1 year	<1 year
	total cases	942	315	1,016	165	2,438

*Time period of earliest diagnosis; HIV diagnosis in all but 170 cumulative cases.

**Includes Asians, Pacific Islanders, Native American, Native Alaskan, and unknown.

Table 6:

Diagnoses in Females by Race/Ethnicity Over 5-Year Time Periods, San Diego County, 1995-2014

	Time Period of Diagnosis									
	1995-1999		2000-2004		2005-2009		2010-2014		PLWHA*	
Race/ Ethnicity	% female	total cases	% female	total cases	% female	total cases	% female	total cases	% female	total cases
White	7%	1,494	6%	1,381	7%	1,281	8%	942	5%	6,606
Black	19%	440	22%	403	20%	388	15%	315	18%	1,688
Hispanic	13%	921	14%	1,017	11%	1,128	8%	1,016	11%	4,317
Other**	26%	120	9%	117	9%	167	14%	165	14%	589
Total	12%	2,975	11%	2,918	10%	2,964	9%	2,438	8%	13,200

Note: Percent of female cases refers to the percent of total cases in group who are female.

*Includes cases diagnosed before the earliest time period provided; living at some time in 2014.

**Includes Asians, Pacific Islanders, Native American, Native Alaskan, and unknown.

Table 7:

Diagnoses by HHSA Region Over 5-Year Time Periods, San Diego County, 1990-2014

Time Period of Diagnosis	HHSA Region							Total in Time Period
	Central	East	South	North Coastal	North Inland	North Central	Unknown	
1990-1994	58%	7%	8%	8%	5%	14%	<1%	5,058
1995-1999	57%	6%	14%	8%	4%	11%	<1%	2,975
2000-2004	54%	8%	15%	7%	5%	11%	<1%	2,916
2005-2009	50%	7%	17%	8%	4%	12%	1%	2,962
2010-2014	46%	9%	20%	9%	4%	13%	<1%	2,438
Total in Region*	8,769	1,201	2,285	1,268	768	2,004	54	16,349

Note: Percentages may not total 100 due to rounding.

*Does not include cases from 1981-1989.

Table 8:

HHSA Region at Recent Diagnosis (2010-2014) and in PLWHA by Race/Ethnicity and HHSA Region, San Diego County

HHSA Region		Race/Ethnicity				Total in Region
		White	Black	Hispanic	Other**	
Central	2010-2014*	43%	15%	36%	7%	1,121
	PLWHA	55%	14%	27%	4%	7,158
East	2010-2014*	53%	15%	27%	4%	208
	PLWHA	55%	15%	27%	4%	905
South	2010-2014*	14%	11%	71%	4%	481
	PLWHA	19%	10%	68%	3%	1,944
North Coastal	2010-2014*	43%	11%	40%	6%	209
	PLWHA	51%	13%	31%	6%	1000
North Inland	2010-2014*	41%	5%	46%	8%	104
	PLWHA	52%	6%	36%	6%	546
North Central	2010-2014*	48%	11%	27%	13%	307
	PLWHA	62%	11%	20%	7%	1,590
All County	2010-2014*	39%	13%	42%	7%	2438#
	PLWHA	54%	13%	33%	5%	13200†

*Time period of HIV diagnosis when known (first AIDS diagnosis if HIV diagnosis year is not known)

**Includes Asian/Pacific Islander, Native American, and unknown.

#Region is not known for 8 cases. †Region is not known for 57 cases.

Note: Percentages may not total 100 due to rounding.

Table 9:

Female Diagnoses by HHSA Region Over 5-Year Time Periods, San Diego County, 1995-2014

	Time Period of Diagnosis									
	1995-1999		2000-2004		2005-2009		2010-2014		PLWHA#	
HHSA Region	% female	all cases*	% female	all cases*	% female	all cases*	% female	all cases*	% female	all cases*
Central	9%	1,684	9%	1,569	8%	1,488	7%	1,120	6%	7,158
East	17%	188	23%	218	17%	219	15%	208	17%	905
South	15%	414	13%	448	13%	516	10%	481	13%	1,944
North Coastal	20%	241	12%	201	15%	236	12%	209	15%	1,000
North Inland	17%	122	17%	140	13%	128	17%	104	16%	546
North Central	12%	322	9%	329	7%	354	8%	307	7%	1,590
Unknown	0%	4	8%	13	13%	23	8%	9	7%	57
Total	12%	2,975	11%	2,918	10%	2,964	9%	2,438	10%	13,200

*Male and female.

#Living for some part of 2014.

Table 10:

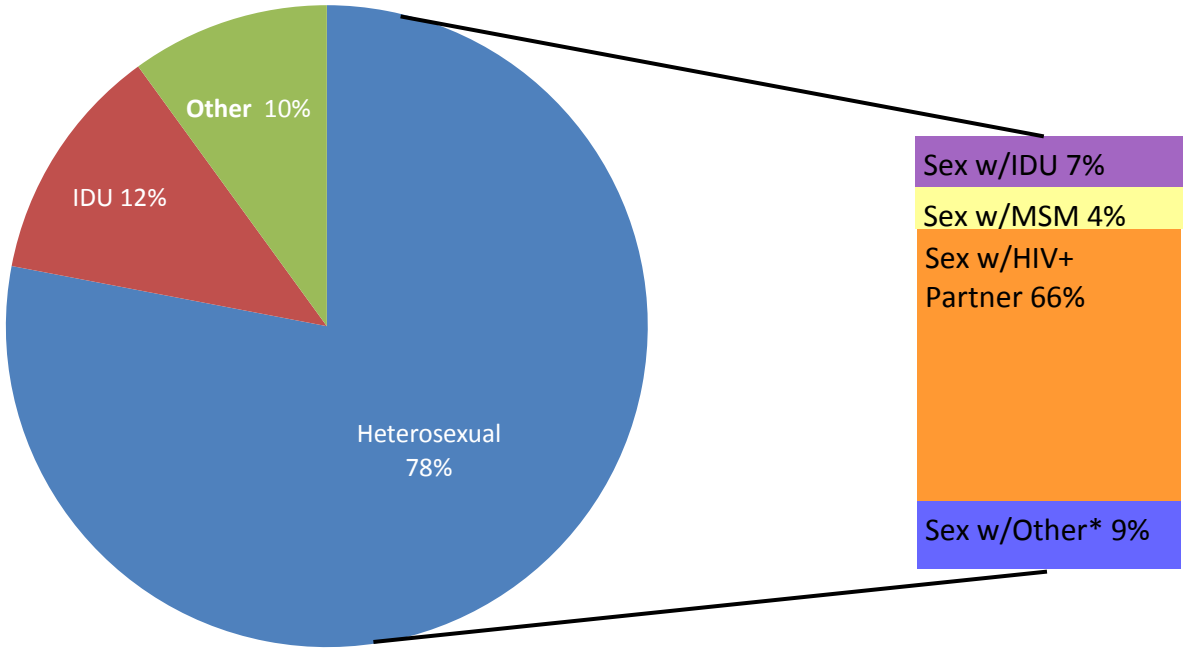
Mode of Transmission for Diagnoses and PLWHA by Gender and 5-year Time Periods, and PLWHA, San Diego County, 1990-2014

Gender	Mode of Transmission	Time Period of Diagnosis* 1990-1994	1995-1999	2000-2004	2005-2009	2010-2014	PLWHA**
Male	**Adolescent/Adult:**						
	MSM	80%	76%	78%	81%	81%	81%
	IDU	7%	7%	7%	5%	5%	5%
	MSM+IDU	11%	13%	10%	7%	4%	9%
	Heterosexual	1%	2%	4%	5%	8%	4%
	Blood Products	1%	<1%	<1%	0%	0%	<1%
	Risk not specified/other	<1%	<1%	<1%	2%	3%	1%
	Pediatric (0-12 years):						
	All modes	<1%	<1%	<1%	<1%	<1%	<1%
	Number in Group	4,630	2,633	2,597	2,662	2,209	11,920
Female	**Adolescent/Adult:**						
	IDU	38%	33%	26%	19%	12%	21%
	Heterosexual	50%	60%	69%	72%	78%	71%
	Blood products	6%	1%	<1%	0%	0%	1%
	Risk not specified/other	2%	2%	2%	6%	9%	4%
	Pediatric (0-12 years):						
	All modes	4%	4%	3%	3%	1%	3%
	Number in Group	428	342	321	302	229	1,280

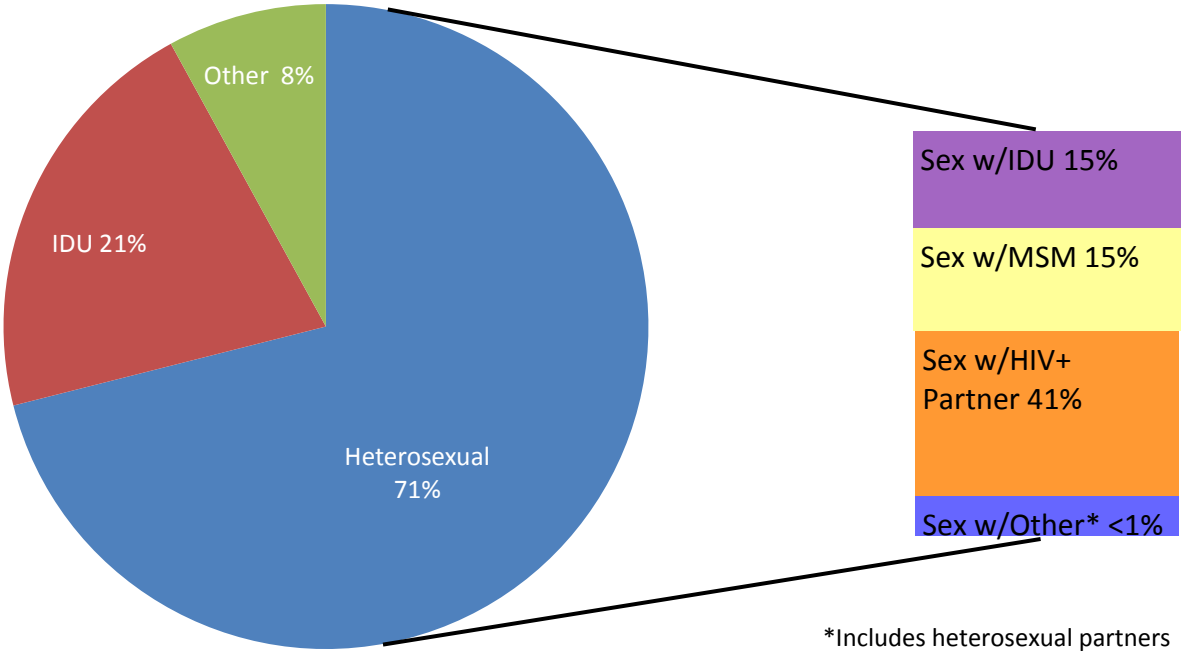
*Based on year of first diagnosis; HIV diagnosis year when known. **Living in 2014.

Note: Percentages may not total 100 due to rounding.

Figure 4:
Mode of Transmission for Female Recent (2010-2014) HIV Diagnoses and PLWHA, San Diego County



Recent (2010-2014)



PLWHA

*Includes heterosexual partners with maternal transmission, blood product/tissue exposure, and no identifiable risk.

Table 11:

Recent Diagnoses (2010-2014) in Males and Male PLWHA by Mode of Transmission and Race/ Ethnicity, San Diego County

Mode of Transmission	Racial/Ethnic Group						All Racial/ Ethnic Groups*	
	White		Black		Hispanic			
	2010-2014**	PLWHA†	2010-2014**	PLWHA†	2010-2014**	PLWHA†	2010-2014**	PLWHA†
MSM	80%	83%	72%	71%	82%	82%	81%	82%
IDU	5%	4%	5%	8%	4%	5%	5%	5%
MSM+IDU	6%	10%	3%	10%	3%	6%	4%	9%
Heterosexual	6%	2%	15%	9%	7%	5%	8%	4%
Blood products	0%	<1%	0%	<1%	0%	<1%	0%	<1%
Not specified/Other‡	3%	1%	6%	3%	3%	2%	3%	1%
Number in Group	867	6,201	267	1,378	933	3,836	2,209	11,920

Note: Percentages may not total 100 due to rounding.

*Includes Asian, Pacific Islander, Native American, Native Alaskan, and unknown.

**Year of first known diagnosis; HIV diagnosis when available.

†Alive in 2014.

‡Includes maternal transmission and no identified risk.

Table 12:

Recent Diagnoses (2010-2014) in Females and Female PLWHA by Mode of Transmission and Race/Ethnicity, San Diego County

Mode of Transmission	Racial/Ethnic Group						All Racial/ Ethnic Groups*	
	White		Black		Hispanic			
	2010-2014**	PLWHA†	2010-2014**	PLWHA†	2010-2014**	PLWHA†	2010-2014**	PLWHA†
IDU	24%	29%	3%	20%	7%	15%	12%	21%
Heterosexual	71%	65%	83%	72%	86%	76%	78%	71%
Blood products	0%	1%	0%	1%	0%	1%	0%	1%
Not specified/Other‡	5%	5%	14%	7%	7%	8%	10%	7%
Number in Group	75	405	48	310	83	481	229	1,280

Note: Percentages may not total 100 due to rounding.

*Includes Asian, Pacific Islander, Native American, Native Alaskan, and unknown.

**Year of first known diagnosis; HIV diagnosis when available.

†Alive in 2014.

‡Includes maternal transmission and no identified risk.

Table 13:

All Male and Female Diagnoses and PLWHA by Place of Birth, and 5-Year Time Period, San Diego County, 1995-2014

Gender	Place of Birth	Time Period of Diagnosis* 1995-1999	2000-2004	2005-2009	2010-2014	PLWHA**
Male	US/US dependency born	77%	74%	74%	77%	79%
	Mexico	18%	21%	19%	16%	16%
	Other foreign	4%	4%	5%	5%	4%
	Unknown	1%	1%	2%	1%	1%
	Number in time period	2,633	2,597	2,662	2,209	11,920
Female	US/US dependency born	68%	56%	57%	69%	64%
	Mexico	20%	29%	25%	15%	22%
	Other foreign	12%	14%	17%	14%	13%
	Unknown	0%	1%	1%	2%	1%
	Number in time period	342	321	302	229	1,280

*Based on first known year of diagnosis; HIV diagnosis when available.

**Living in 2014.

Note: Percents may not total 100 due to rounding.

Table 14:

Proportion of Cases Diagnosed with AIDS in 2004-2009 Surviving Greater than 12, 24, and 36 Months by Race/Ethnicity in the US (CDC Data) and San Diego County

	Survival in Months					
	>12		>24		>36	
Race/ Ethnicity	CDC	San Diego County	CDC	San Diego County	CDC	San Diego County
White	0.89	0.92‡	0.87	0.90**	0.84	0.88‡
Black	0.88	0.94‡	0.84	0.92†	0.81	0.90†
Hispanic	0.91	0.94‡	0.88	0.93†	0.87	0.93†
All Cases*	0.89	0.93†	0.86	0.91†	0.84	0.90†

*Includes Asian, Pacific Islander, Native American, Native Alaskan, and unknown.

†Significantly different from CDC; p<0.001.

‡Significantly different from CDC; p<0.10.

**Significantly different from CDC; p<0.05.

Figure 5:
Percent of HIV Cases Progressing from HIV to AIDS in Less than 12 Months by Race/Ethnicity, San Diego County, 2001-2014

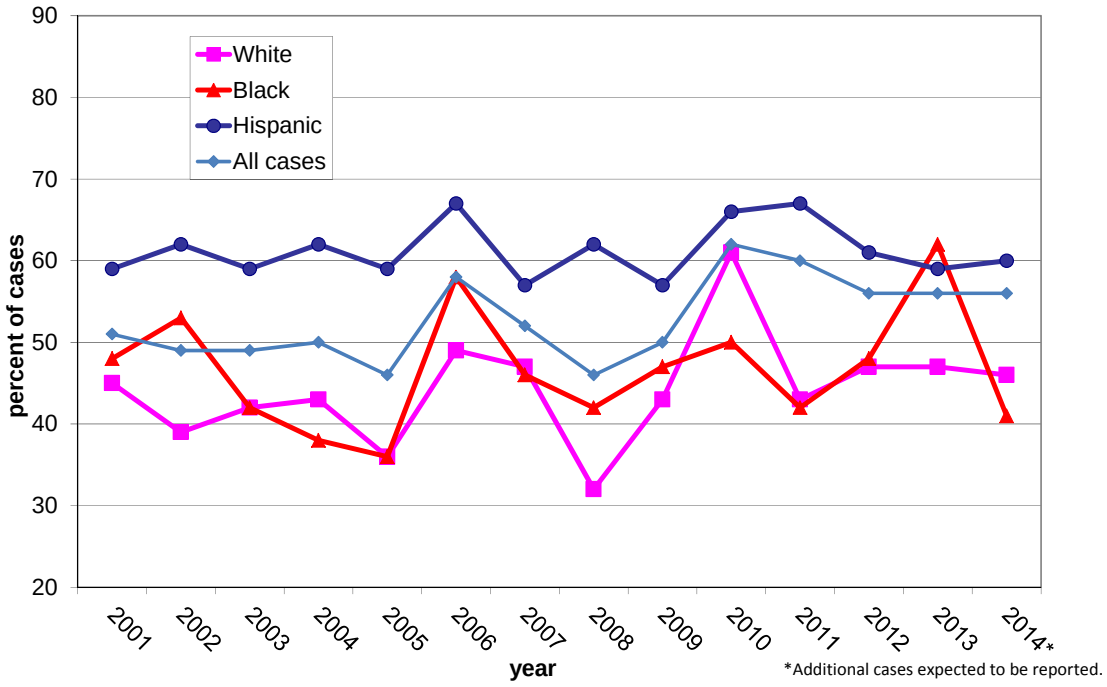


Figure 6:
Percent of AIDS Cases Progressing to AIDS Less than 30 days from HIV Diagnosis by Race/Ethnicity and 5-Year Time Period, San Diego County, 1995-2014

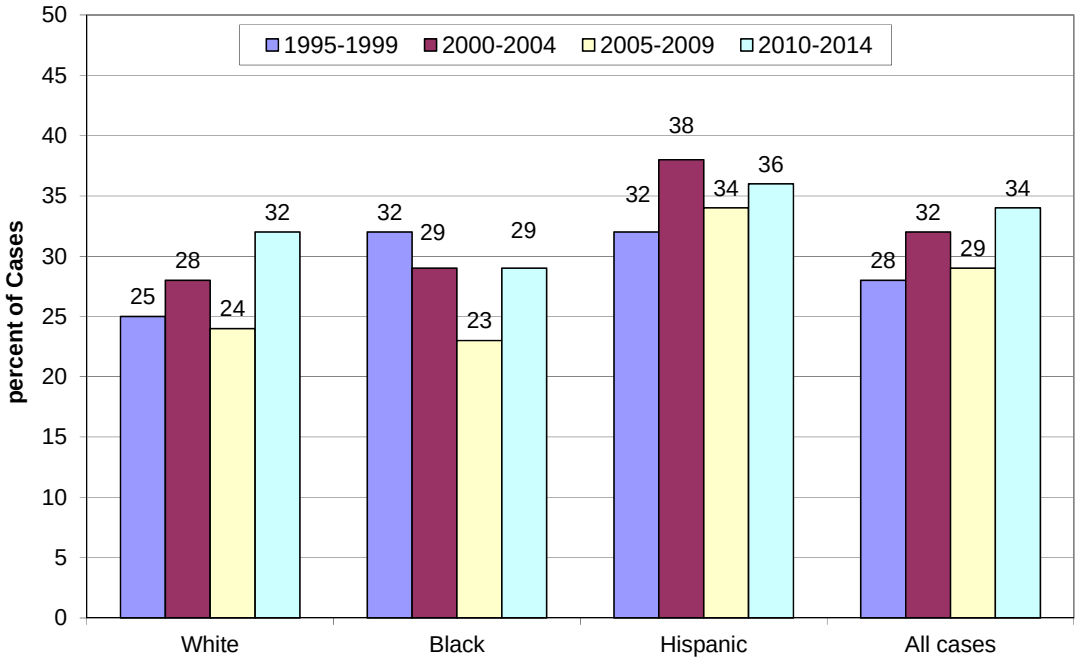


Table 15:

Ethnic Origin of Hispanic Recent HIV Diagnoses and PLWHA, San Diego County

	Diagnosed 2010-2014*		PLWHA**	
Ethnic Origin	Number	Percent	Number	Percent
Mexican	392	38.6	2,198	50.9
Central American	21	2.1	78	1.8
South American	8	0.8	50	1.2
Puerto Rican	2	0.2	33	0.8
Carribean	5	0.5	20	0.5
Spain/Portugal	1	0.1	8	0.2
Hispanic, not specified	587	57.8	1,930	44.7
Total	1,016	100	4,317	100

*First known diagnosis; HIV diagnosis if available. **Living in 2014.

Table 16:

Ethnic Origin of Asian/Pacific Islander Recent HIV Diagnoses and PLWHA, San Diego County

	Diagnosed 2010-2014*		PLWHA**	
Ethnic Origin	Number	Percent	Number	Percent
Filipino	27	20.6	116	26.4
Vietnamese	7	5.3	26	5.9
Chinese	4	3.1	8	1.8
Japanese	§		12	2.7
Guamanian	§		12	2.7
Hawai'in/Pacific Islander†	14	10.7	36	8.2
Indian	3	2.3	11	2.5
Thai	§		9	2.0
Taiwanese	3	2.3	5	1.1
Asian, not specified	54	41.2	179	40.7
Other¥	13‡	9.9	26¥	5.9
Total	131	100	440	100

*First known diagnosis; HIV diagnosis if available. **Living in 2014.

§Fewer than 3 cases.

†Includes Fijian, Micronesean, Tongan, and Samoan.

¥Includes Afghani, Burmese, Cambodian, Indonesian, Korean, Malaysian, Pakistani, Singaporean, Sri Lankan, and Uzbek.

Table 17:
Community of Residence at First Known HIV Diagnosis, San Diego County

	Diagnosed 2010-2014*		PLWHA**	
Community	Number	Percent	Number	Percent
San Diego	1,629	66.8	9,416	71.3
Chula Vista	175	7.2	701	5.3
Oceanside	89	3.7	417	3.2
El Cajon	76	3.1	278	2.1
San Ysidro	28	1.1	267	2.0
Escondido	49	2.0	232	1.8
Vista	47	1.9	225	1.7
National City	52	2.1	209	1.6
La Mesa	32	1.3	172	1.3
Spring Valley	42	1.7	170	1.3
Carlsbad	30	1.2	142	1.1
La Jolla	14	0.6	101	0.8
Lemon Grove	20	0.8	92	0.7
Santee	18	0.7	92	0.7
Imperial Beach	15	0.6	94	0.7
Encinitas	12	0.5	76	0.6
San Marcos	15	0.6	74	0.6
Lakeside	14	0.6	57	0.4
Other†	81	3.3	385	2.3
Total	2,438	100.0	13,200	100

*First known diagnosis; HIV diagnosis when available.

**Living in 2014.

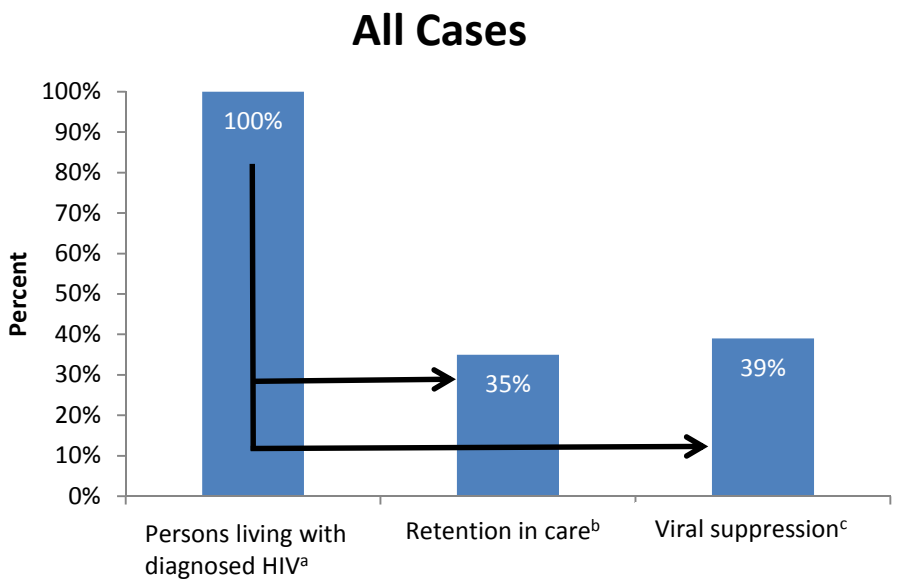
†The following communites had fewer than 0.4% of cases each: Alpine, Bonitas, Bonsall, Borrego Springs, Boulevard, Camp Pendleton, Campo, Cardiff-by-the-Sea, Coronado, Del Mar, Descanso, Dulzura, Fallbrook, Guatay, Jamul, Julian, Leucadia, Mount Laguna, Pauma Valley, Pine Valley, Poway, Ramona, Ranchita, Rancho Santa Fe, San Luis Rey, Santa Ysabel, Solana Beach, and Valley Center.

NOTE: Percents may not total 100 due to rounding.

Figure 7

Continuum of HIV Care/Engagement in Care for All Cases (A) and Recently Diagnosed Cases (B), San Diego County

A

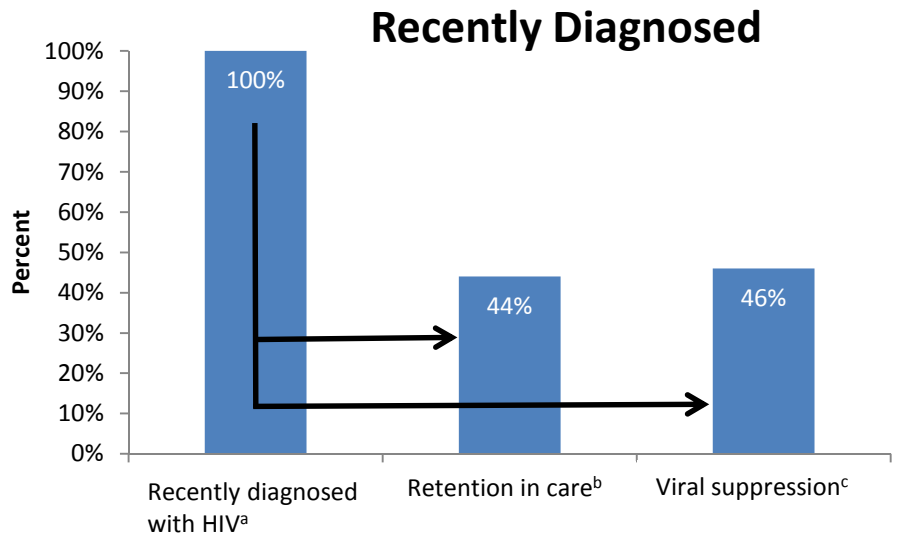


[a]Data source: FY 12/13 unmet need file. Defined as persons diagnosed with HIV infection through 06/30/2012 and living through 06/30/2013, regardless of stage of disease.

[b]Data source: Of those diagnosed with HIV disease, persons who had >=2 CD4 or viral load tests at least 3 months apart during FY 12/13.

[c]Data source: Of those diagnosed with HIV disease, persons wih virologic supression (<=200 copies/mL) at most recent test during FY 12/13.

B



[a]Data source: FY 12/13 unmet need file. Defined as persons diagnosed with HIV infection FY 08/09-12/13 and living through 06/30/2013, regardless of stage of disease.

[b]Data source: Of those diagnosed with HIV disease FY 08/09-12/13, persons who had >=2 CD4 or viral load tests at least 3 months apart during FY 12/13.

[c]Data source: Of those diagnosed with HIV disease, FY 08/09-12/13, persons wih virologic supression (<=200 copies/mL) at most recent test during FY 12/13.

Data Sources

Centers for Disease Control and Prevention. *HIV Surveillance Report, 2013*; vol. 25. http://www.cdc.gov/hiv/pdf/g-l/hiv_surveillance_report_vol_25.pdf . Published February 2015. Accessed March 1, 2015.

California Department of Public Health, Office of AIDS. *HIV/AIDS Surveillance in California, 2013*. http://www.cdph.ca.gov/data/statistics/DocumentsHIVSurveillanceReport2013dxBy2014yrenddata.pdf. Published December 2014. Accessed March 1, 2015.

eHARS—enhanced HIV/AIDS Reporting System—data set; San Diego County data provided by CDPH Office of AIDS, 2015.

IV. Appendices

Appendix 1. Glossary

Adult/Adolescent Cases—HIV and AIDS cases who were at least 13 years of age at time of diagnosis.

Case Fatality Rate—The number of deaths due to a disease within a specified time period divided by the number with that disease in the same time period, multiplied by 100.

Incidence—The total number of new cases of a disease occurring within a specified period of time.

Incidence Rate—The number of cases of a disease per specified time period divided by the population at risk, often expressed per 100,000. Incidence rates are useful for comparison of selected factors to demonstrate severity of the epidemic among different ages, gender, and racial/ethnic groups.

Living Cases—Cases are assumed to be alive if documentation of death has not been received. The lag in reporting of death may result in over stating the number of living cases.

Mode of Transmission—The way in which a communicable disease is passed from one person to another. In describing HIV/AIDS cases it identifies how an individual may have been exposed to HIV, such as having injected drugs, or homosexual or heterosexual contact.

Pediatric Cases—HIV and AIDS cases who were under the age of 13 years at the time of diagnosis.

Prevalence—The number of all living cases (previously and newly diagnosed) of a given disease within a specified time period.

Prevalence Rate—The number of all living cases (previously and newly diagnosed) of a given disease within a specified time period divided by the population at risk, often expressed per 100,000. Prevalence rates are useful for comparison of selected factors to demonstrate the severity of the epidemic among individuals of different ages, gender, and racial/ethnic groups.

Probability—The likelihood of an event (e.g., two variables being related to each other).

Significant—Meaningful. In statistics, this refers to a result that produces a p-value result below some set value (generally 0.05) indicating an outcome/event is unlikely to be due to chance.

Statistics—The science, art, and technique of collecting, summarizing, analyzing, and interpreting numerical information that is subject to chance or systematic variations. Biostatistics is the sub-discipline dealing with biological systems, such as humans.

Glossary—continued

Surveillance—The systematic and ongoing collection, collation, and analysis of health-related information that is used to identify health problems and trends.

Year of Diagnosis—The year in which an individual met the CDC case definition for HIV or AIDS. Where ever possible, the year of HIV diagnosis is used, unless otherwise stated.

Year of Report—The year in which an HIV/AIDS case is reported to Health and Human Services Agency, Epidemiology and Immunization Services Branch.

Appendix 2. HIV/AIDS Reporting—Reliability and Limitations

Individuals with HIV or AIDS are required to be reported to the HHSA pursuant to California Code of Regulations, Health & Safety Statutes, Title 17, Section 2643.5 and 2500. Reports come from physicians, hospitals, clinics, and other health care providers, via HIV/AIDS Case Report forms. A San Diego county case is an individual diagnosed with HIV or AIDS, while residing in San Diego county.

Active verification of cases and internal tests of the data increase the reliability of the data.

The HIV and AIDS case data used to generate reports may have several limitations as listed below:

1. *Under-reporting of cases* - HIV and AIDS cases for which notification to the Epidemiology and Immunization Services Branch is delayed results in "under-reporting." It is likely that cases diagnosed in 2014 will continue to be reported in 2015.

2. *Diagnosis date versus report date* - Reporting delays impact the available data. Those cases diagnosed in 2014, for example, may not have been reported to the Health and Human Services Agency until 2015 or later. See *Appendix 1*, G*lossary* for Year of Diagnosis and Year of Report.

3. *Collection tools* - While information on a variety of variables is collected, the data collected is limited and reflects the quality of data submitted by the reporting facility.
Data on income or specific drug of choice are not collected, for example.

4. *Non-resident cases* - Persons with HIV or AIDS diagnosed while resident outside of the county are not represented in data for the county in this report.

5. *Asian/Other category* - Asian/Pacific Islander and Native American racial/ethnic groups are sometimes grouped into one category, Asian/Other, to allow for adequate case numbers for analysis**.**

6. *Confidentiality* - Charts and graphics with small cell sizes (under 5) may not be described in detail where identification of persons may occur.

7. *Limited time collecting data.* Name-based reporting of HIV infection without an AIDS defining condition was authorized under SB 699, and signed into law by the Governor on April 17. 2006. HIV data may be skewed to primarily represent the patients who have remained in care at those facilities that have been able to more easily adopt to this revision of HIV reporting.

Appendix 3. Reporting HIV and AIDS Cases for Health Care Providers

Who is responsible for reporting HIV and AIDS cases?

Every health care provider knowing of or in attendance on a case or suspected case of HIV or AIDS is required to make a report. (California Code of Regulations, Health & Safety Statutes, Title 17, Section 2641.5-2643.20, 2643.5 and Section 2500).

When is HIV Reported?

A case is reported when a patient has a test result indicative of HIV infection. This includes:

- Confirmed positive HIV antibody test (see Figure 8 for current recommended testing algorithm)
- Any viral load test
- P24 antigen test
- Viral isolation test
- Nucleic Acid test (NAAT)

Providers should report any newly HIV diagnosed individual, as well as well as any patient a health care provider (ordering the test) has never reported when there is no verification that the individual has already been reported. If an individual meets the case definition for AIDS, they are reported again including the AIDS-defining condition.

The provider should report a case even if the patient may have been reported by another provider. This helps ensure complete case capture, which is critical for local prevention and treatment funding. Health care providers are required to complete a report within 7 days of learning of the HIV test.

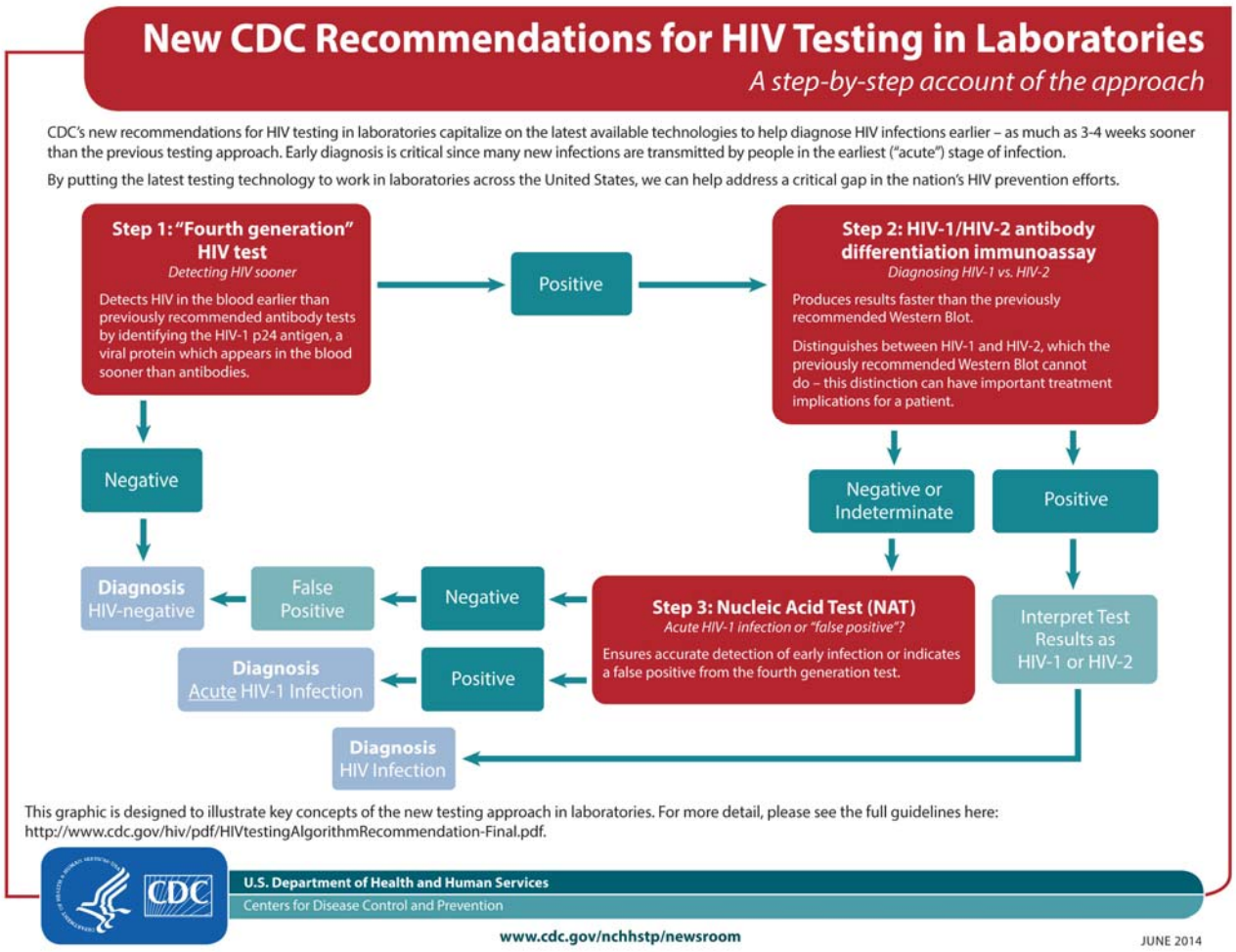
When is AIDS Reported?

When an individual is diagnosed with one or more of the AIDS-defining conditions listed below, his or her health care provider is required to report the case to the local health department within seven (7) days of the diagnosis:

- CD4+ T-lymphocyte count <200mL/mm^3 or N14% of total T-lymphocytes
- Candidiasis of the bronchi, trachea, or lungs
- Candidiasis, esophageal
- Cervical cancer, invasive
- Coccidioidomycosis, disseminated or extrapulmonary
- Cryptococcosis, extra-pulmonary
- Cryptosporidiosis, chronic intestinal
- Cytomegalovirus disease
- Cytomegalovirus retinitis
- Encephalopathy, HIV-related
- Herpes simplex: chronic ulcers or bronctis, pneumonitis or esophagitis
- Histoplasmosis, disseminated or extrapulmonary
- Isosporiasis, chronic intestinal
- Kaposi's Sarcoma
- Lymphoma, Burkitt's
- Lymphoma, immunoblastic
- Lymphoma, primary in the brain
- *Mycobacterium avium* complex or *M kansasii*, disseminated or extrapulmo nary
- *Mycobacterium tuberculosis*, any site
- *Pneumocystis carinii* pneumonia
- Pneumonia, recurrent
- Progressive multifocal leukoencephalo pathy
- Salmonella septicemia, recurrent
- Toxoplasmosis of the brain
- Wasting syndrome due to HIV

The pediatric AIDS case definition (those under 13 years of age) includes all of the above indicator diseases except pulmonary *Mycobacterium tuberculosis*, recurrent pneumonia, cervical cancer, and CD4+ T-lymphocyte counts <200 mL/mm^3. Pediatric HIV cases may be diagnosed with AIDS if recurrent bacterial infections are seen. Re-

Figure 8
CDC Recommended Laboratory HIV Testing Algorithm



cently, age-related CD4 cut-off levels have been specified for pediatric AIDS case definition. See Revised Surveillance Case Definition for HIV Infection — United States, 2014 for these values.

The original case definition of AIDS was established by the Centers for Disease Control and Prevention (CDC) in 1981. Additional conditions and diseases were added in 1985, 1987, and 1993. All case definitions and revisions have been published in the CDC publication entitled 'Morbidity and Mortality Weekly Report' (MMWR). For the current case definition please see Revised Surveillance Case Definition for HIV Infection — United States, 2014 .

Recent changes in California Reporting Law (SB 1184) include a provision for reporting of all CD4+ counts to facilitate the timely identification of all AIDS cases. Currently all viral load test results, whether dectectable or not, all CD4+ cell counts and percents, and any other test indicative of HIV are reportable by laboratories to local health jurisdictions.

What information is required to be reported?

Reports of HIV and AIDS cases to the local health department shall minimally in-

clude: name, address, telephone number, full social security number, racial/ethnic group, gender, date of birth, mode of transmission information, diagnosis (HIV or AIDS), and date of diagnosis. In addition, name, address, and phone number of the person or facility making the report should be provided. Laboratory values, the accession number for those labs, and the name of the laboratory performing the tests should be included.

The Epidemiology Program specifically, and the County in general, is required by law to protect the privacy of any individual reported with HIV or AIDS.

How should a report be made?

Providers can submit a confidential case report form available from County of San Diego, Health and Human Services Agency. Forms can be sent to:

Michael Bursaw, MPH
Epidemiology Program
Epidemiology & Immunization
Services Branch
Health and Human Services Agency
3851 Rosecrans Street, MS P577
San Diego, CA 92110
(619) 692-8414

Providers also have the option of reporting cases by phone. For a reporting kit or any additional information, call the Epidemiology Program at **(619) 692-8545**, or visit:

www.sdhivaids.org.

Why is reporting necessary?

The law requires reporting of diagnosed HIV and AIDS cases. California's disease reporting regulations specify what, when, where, and how to report cases.

Timely and accurate HIV/AIDS case reports provide this county with a better understanding of the local epidemic. Epidemiologists can monitor trends in populations being affected by HIV infection, project future numbers of AIDS cases, and provide information to those responsible for planning for future health care needs and prevention activities.

Failure to report in a timely manner may have an impact on current and projected funding needs. Funding formulas using data that under-reports HIV or AIDS cases may translate into under-funded programs and services for those with HIV disease.

A summary of legislation related to the case reporting, confidentiality, and surveillance activities supported in the California Code of Regulations is available by calling the Epidemiology Program at **(619)692-8545.** For a copy of the regulations and more information on HIV/AIDS reporting go to:

www.dhs.ca.gov/AIDS

Additional information about reporting and HIV/AIDS in San Diego County may be found at:

www.sdhivaids.org

Appendix 4. Computing Rates, Rates by Racial/Ethnic Groups and Statistics.

Rates provide a better indication of the burden of disease for a given population than absolute numbers of cases; they allows populations of dissimilar sizes to be compared. Rates may be based on the population at large (for AIDS rates) or a subpopulation utilizing services (clients presenting for HIV Counseling and Testing) or individuals in a research study (sexually transmitted disease [STD] seroprevalence study).

Rate Calculation

A rate is calculated by dividing the number of individuals with a disease/condition in a given time period by the population size and multiplied by 100,000:

$$\frac{\text{Number with disease/condition}}{\text{Number at risk for disease/condition}} \times 100{,}000 = \text{Rate per } 100{,}000$$

For example, 434 individuals were diagnosed with AIDS in 2001. When the number of cases (434) is divided by the 2001 population size (2,868,873) and multiplied by 100,000, the resulting rate is:

$$\frac{434}{2{,}868{,}873} \times 100{,}000 = 15 \text{ AIDS cases per } 100{,}000 \text{ County residents in } 2010$$

Rates by racial/ethnic groups are computed by dividing the number of individuals with AIDS from a particular racial/ethnic group by the number of that same racial/ethnic group in the population at large. For example, 204 whites and 46 blacks were diagnosed with AIDS in 2005. This represented 50% (white) and 11% (blacks) respectively of all cases diagnosed that year. Based only on the absolute numbers (204 and 46) or the percentages (50% and 11%), it would appear that the greater issue is in whites. Using rates allows us to compare the relative burden of disease on each group by taking into account the population size. In 2005, there were 1,574,617 whites and 161,033 African Americans residing in the County. If the population sizes are taken into account and use the calculation above, the AIDS case rate per 100,000 population is 13 for whites and 29 for blacks. So, the relative burden of disease is much higher for blacks than for whites.

Rates are given “per 100,000 population” by convention, to make the calculated number easier to use. Some rates may use other multipliers for the population. For example, infant mortality rate is calculated per 1,000 live births.

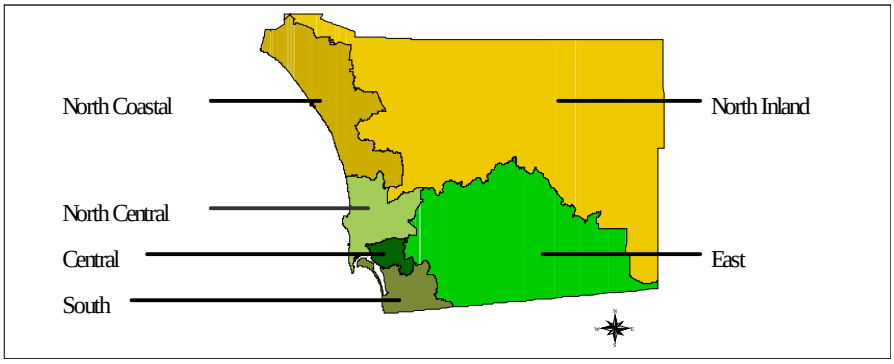
In San Diego County, the rates are generally calculated using population estimates calculated by the San Diego Association of Governments (SANDAG). Because the US Census is only conducted every ten years, and the population of San Diego County is very dynamic, these SANDAG estimates allow for more up-to-date rates for comparison. SANDAG does revise estimates over time, as new information becomes available, so it should be remembered that small differences in rates may be seen, even over the same time period.

Fluctuation in rates occurs over time and between groups. The smaller the number of events (i.e., cases), the greater the fluctuation. Statistical tests are often used to determine when one rate is different from another. When rates are described here ‘statistically significant’ or ‘significant’, the rates can be said to be different from each other with 95% confidence ($p<.05$).

Appendix 5. Health and Human Services Agency Regions of San Diego

San Diego County is divided by zip code into six Health and Human Services Agency (HHSA) regions by zip code. The following list presents the regions and the zip codes contained therein. Please note that some regions may contain additional zip codes that are not listed due to the designation of additional zip codes over time.

Figure 9
HHSA Regions of
San Diego County



Central Area

Zip codes 92101, 92102, 92103, 92104, 92105, 92113, 92114, 92115, 92116, 92132, 92134, 92136, 92139, 92112, 92162, 92163, 92164, 92165, 92170, 92175, 92176, 92186, 92191, 92194, 92186, 92191, 92194, 92199, 92152, 92158, 92181, 92187, 92191, 92194, and 92195.

East Area

Zip codes 91901, 91905, 91906, 91916, 91917, 91931, 91934, 91935, 91941, 91942, 91945, 91948, 91962, 91963, 91977, 91978, 91980, 92019, 92020, 92021, 92040, 92071, 91944, 92090, 91946, and 92090.

South

Zip codes 91902, 91910, 91911, 91913, 91914, 91915, 91932, 91950, 92010, 92011, 92118, 91921, 91990, 92135, 92154, 92155, 92173, 92179, 91909, 91912, 92143, 91951, 91933, 92073, 92050, 92153, 92158, 91921, and 91990.

North Coastal

Zip codes 92007,92008,92009,92013, 92014, 92024, 92051, 92052, 92054, 92055, 92056, 92057, 92067, 92013, 92058, 92068,92075, 92077, 92081, 92083, 92084, 92672, 92092, 92093, 92169, 92161, 92038, 92137, 92078, 92091, 92199, 92096, 92013, 92078, 92091, 92077, 92081, 92008, 92058, and 92096.

North Inland

Zip codes 92003, 92004, 92025, 92026, 92027, 92028, 92029, 92036, 92059, 92060, 92061 , 92064, 92065, 92066, 92069, 92070, 92082, 92086, 92127, 92128, 92129, 92259, 92390 , 92536, 92592, 92046,92198, 92190, and 92079.

North Central

Zip codes 92037, 92106, 92107, 92108, 92109, 92110, 92111, 92117, 92119, 92120, 92121, 92122, 92123, 92124, 92126, 92130, 92131, 92133, 92140, 92142, 92145, 92138, 92147,92166, 92168, 92171, 92172, 91990, 92193, 92196, 92177, and 92147.

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HIV/AIDS Epidemiology Unit

Epidemiology & Immunization Services Branch
3851 Rosecrans Street, MS P577
San Diego CA 92110

COUNTY OF SAN DIEGO
HHSA
HEALTH AND HUMAN SERVICES AGENCY

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