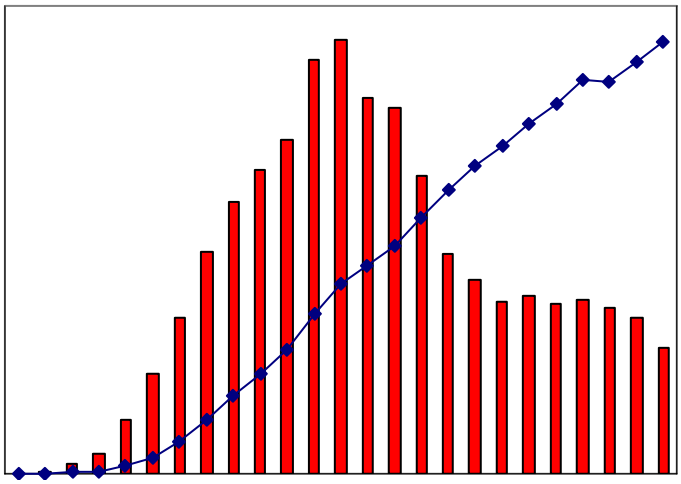


2007

HIV/AIDS Epidemiology Report

County of San Diego
Health and Human Services Agency

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

HIV/AIDS Epidemiology Report 2007

Contact us for more information at:

Community Epidemiology
1700 Pacific Highway, P511C-A
San Diego, CA 92101

(619) 515-6620
(619) 515-6675

This report is available on the web at:

www.sdhivaids.org

(click on 'Reports and Statistics')

Jean Shepard, Director
Wilma Wooten, M.D., M.P.H.,
Acting Public Health Officer
Michele Ginsberg, M.D.,
Chief, Community Epidemiology Branch

Michael Bursaw, M.P.H., (619) 515-6672
Ernie Awa, (619) 531-4818
Leticia Browning (619) 531-4921
Lyn Cardoza, (619) 515-6675
Lorri Freitas, M.P.H, (619) 515-6764
Lorena Gonzalez-Fabiny, (619) 515-6757
Minda Johnson, (619) 515-6762
Francisco McGann, (619) 515-6763
Samantha Tweeten, Ph.D., (619) 515-6673

Table of Contents

I. Executive Summary

Overall, the state of California has the second largest number of Acquired Immunodeficiency Syndrome (AIDS) cases in the United States; San Diego County has the third highest number of AIDS cases in the state of California.

AIDS Cases

Since the beginning of the epidemic 13,015 AIDS cases have been reported in San Diego County as of December 31, 2006. Cumulative AIDS cases in San Diego County differ from those seen in the United States; the proportion of female cases in the County is less than half that seen in the US (see Table 1) and San Diego County has a smaller proportion of black cases and a greater proportion of men who have sex with men (MSM) transmission. In the County, the number of new cases has been decreasing each year since 1993, but has been relatively level from 1998-2002 at about 440 cases per year. There has been a slight decline in cases per year since 2002 (see Figure 1). It is anticipated that cases diagnosed in 2005 and 2006 will continue to be reported in 2007.

Individuals diagnosed with AIDS in San Diego County are most commonly white, male, aged 30 to 39 years, and have male sex partners. Over the course of the epidemic there have been slow increases in the proportion of diagnoses in blacks, Hispanics, women, people aged 40 or older, and those having used injected drugs.

The decrease in the annual number of AIDS diagnoses has not been uniform across racial/ethnic groups. The largest decrease has been in whites; the proportion of persons of color, including blacks, Hispanics, Asians, Pacific Islanders, and Native Americans has increased (see Figure 4). Blacks have had the third highest number of cases per year, but the highest rate of AIDS since the mid-1980s. Persons of color have comprised the majority of cases since 2000. The annual rate among blacks is twice that seen in whites. Hispanics have the second highest number of cases per year and a rate that is about 1½ times that seen in whites, but less than half that seen in blacks (see Table 4 and Figure 5). Over time there has been a reduction in rate across races/ethnicities, but in recent years blacks have had a significant decrease

The average age at time of diagnosis has been slowly increasing over the years across all racial/ethnic groups (see Table 5). From 2002 to 2006, the average age at the time of diagnosis was 40 years of age with Hispanics being slightly younger (38 years of age) and whites slighly older (42 years of age). This increase in age may be due to later age at infection, effective medications, or adherence to medication regimens which allow an Human Immunodeficiency Virus (HIV) infected individual to be healthy longer with increased time before he or she meets the case definition for AIDS. A greater proportion of cases had more time between reported HIV infection and

AIDS in later years of the epidemic.

The most frequent area of residence at the time of AIDS diagnosis is the Health and Human Services Agency (HHSA) Central Region. Sixty percent of male cases and 36% of female cases were living in the Central Region at the time of their diagnosis. The majority of all cases diagnosed in this region were in whites (64%) followed by Hispanics (19%) and blacks (15%) (See Table 9). In recent years the proportion has declined in whites (51%) and increased in Hispanics (27%) and blacks (19%). The South Region has been the second most frequent area of residence at time of diagnosis since 1995. The cumulative cases diagnosed in the South region are predominantly Hispanic (59%) and white (28%). It should be noted that only the area of residence at the time of diagnosis is known. It is probable that many cases have moved since their diagnosis, both within the county and leaving the county.

For men, the predominant mode of trasmission is Men who have Sex with Men (MSM) (79%) followed by MSM and Injecting Drug Use (IDU) (MSM+IDU) (11%) (see Table 12). Over the years, heterosexual contact and IDU have become somewhat more frequent modes of transmission in men, but MSM remains the primary risk for transmission.

In women, heterosexual contact is the primary mode of transmission (54%), followed by IDU (35%) (see Table 12). Over the years, heterosexual contact has been increasing in frequency while IDU has been decreasing. Sexual partners to IDU accounts for 21% of all female cases.

Advances in medication and medical treatment have enabled individuals with AIDS to live longer, healthier lives. As the number of individuals newly diagnosed with AIDS has been decreasing, the number of individuals living with an AIDS diagnosis continues to increase. Approximately 6,140 individuals diagnosed with AIDS in San Diego County are currently alive (see Figure 1). In addition, the length of time from reported HIV infection to reported AIDS infection has also generally increased over the course of the epidemic (see Table 14). Whites and Blacks have similar proportion of cases with less than a year between HIV and AIDS diagnosis, but Hispanics have a significantly greater proportion with less than a year between diagnoses in recent years. The proportion of Hispanics with less than a year between HIV and AIDS diagnoses has increased significantly over the last 15 years (see Figure 9). This increase in maybe due to delayed HIV testing or in delayed care seeking after HIV testing.

HIV Reporting

The State of California initiated code-based HIV reporting in July of 2002. On April 17, 2006, Governor Schwarzenegger signed a law requiring names reporting of HIV cases. A names based system is in use for all other reportable condi-

tions, including AIDS. As with some other communicable diseases, this is a dual reporting process in which both heath care providers and laboratories provide data. Because HIV cases previously reported by code can no longer be counted, no comparison can be made to prior annual reports.

Because the HIV reporting system is new, analysis of reported HIV cases will be limited to the distribution of demographic and geographic variables within the cumulative data. No rates will be computed nor will trends be examined at this time. Nationally, published HIV reporting data were limited to the 38 states that had confidential names-based reporting as of 2005. Data from the states that had code-based HIV reporting through 2005, like California, were not included.

All HIV reporting data presented in this report were inclusive of the period April 17, 2006 through December 31, 2006 for a total of 1,326 HIV case reports. In general, the distribution of demographic variables for those HIV cases reported was similar to that of cumulative AIDS cases in San Diego County. The most frequent HIV case demographics were white race, 30-39 age group, and the Central region as residence at diagnosis. Women represented about 11% of all HIV cases (n=139). Due to small numbers the relationship between race and region is less clear in women.

The distribution of HIV cases by gender was different for San Diego and California, when compared to the United States (see Table 19). A smaller proportion of female cases of HIV have been reported in San Diego (11%) and California (13%) than in the United States (30%). However, the distribution by gender in San Diego County is the same for HIV (89% male; 11% female) and more recent AIDS cases (89% male; 11% female).

Through the end of 2006, 56% of reported HIV cases in San Diego County were white, 10% black, and 31% Hispanic in San Diego County (see Table 20). Asian/Pacific Islander and Native American comprise the remaining 3% of cases. When compared to the United States, California and San Diego had fewer black cases, and more white and Hispanic cases of HIV.

Those in the age group 30-39 were most frequently diagnosed with HIV in both the state and county, similar to AIDS case data. At the state and local level, a greater proportion of HIV cases were in the 20-29 year age group at the time of diagnosis (26% in California; 33% in San Diego County) compared to AIDS cases (15% in California; 17% in San Diego County). This is expected given the natural history of the disease and current medical treatment. National data for reported HIV cases by age group is not available.

Age at diagnosis does not change; however, individuals continue to age. The current age of liv-

ing cases (as of 2006) presents a shift in age groups toward older ages: 2.1% of cases were under 20 and 13.1% were 50 or older at current age compared to 3.8% and 4.4% respectively at diagnosis (see Table 21).

Most of the county's HIV cases, 59%, were residing in the Central Region at the time of diagnosis, with the South and North Central Regions having the next highest proportion of cases (14% and 10% respectively). North Coastal, North Inland, and East Regions shared the remaining 17% of cases (see Table 22).

The distribution of cases differs by gender and transmission. For males, 84% of cases were attributed to MSM, while for females, the majority of cases, 62%, were due to heterosexual contact (see Table 23). For males, the other modes of transmission were MSM+IDU (8%), IDU (3%), heterosexual contact (3%), and not specified/other (2%), while for women, the other modes of transmission are IDU (21%), and not specified/other (10%).

Compared to the nation, San Diego had a larger proportion of MSM among adult male cases (84% versus 49%), and a lower proportion of IDU and not specified/other (3% versus 13% and 2% versus 24%). Among adult females, San Diego had a larger proportion of heterosexual transmission (62% versus 46%) and a lower proportion of not specified/other (10% versus 37%) than the Nation. In general, the differences in mode of transmission between San Diego and California are similar to those with the nation, but were less pronounced.

From April 17, 2006 through December 31, 2006, 15 pediatric cases of HIV were reported in San Diego County, representing about 1% of total cases. Of the 15 cases reported, 10 were under 5 years of age at diagnosis and 5 were between the ages of 5 and 12 at diagnosis.

I. AIDS Cases

Table 1: AIDS Diagnoses in Adults/Adolescents by Gender in the United States, the State of California, and San Diego County

	United States Through 12/31/2005*		California Through 12/31/2006		San Diego County Through 12/31/2006		San Diego County 2004-2006	
Gender	#	%	#	%	#	%	#	%
Male	764,763	81%	130,296	91%	12,008	92%	995	89%
Female	182,822	19%	11,972	9%	1,007	8%	121	11%
Total	947,585		142,268		13,015		1,116	

*Most recent year available

Table 2: AIDS Cases, Deaths, and Cumulative[1] Fatality Rates in San Diego County, the State of California, and the United States

San Diego County	
New cases reported 2006	319
Deaths reported in 2006	92
Cumulative cases	13,015
Cumulative deaths	6,875
Living Cases	6,140
Cumulative[1] case-fatality rate	53%
California[2]	
Cumulative cases	143,042
Cumulative deaths	82,425
Living cases	60,617
Cumulative case-fatality rate	58%
United States[3]	
Cumulative cases	988,376
Cumulative deaths	550,394
Living cases	437,982
Cumulative case-fatality rate	56%

[1]Cumulative case-fatality rate is calculated by dividing the estimated cumulative deaths by the cumulative cases.

[2]California Office of AIDS. AIDS Surveillance Report for California, December 31, 2006.

[3]Centers for Disease Control and Prevention. HIV/AIDS Surveillance Report 2005, Vol.17.

Figure 1: Number of Persons Diagnosed (n=13,015) and Living (n=6,140) With AIDS, San Diego County

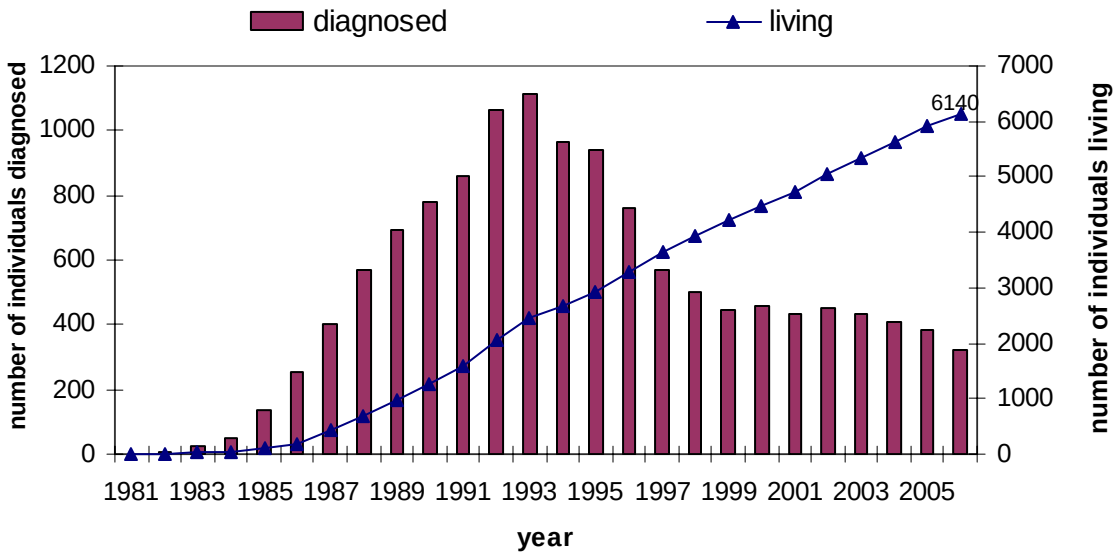


Figure 2: AIDS Cases by Year of Diagnosis and Report, San Diego County

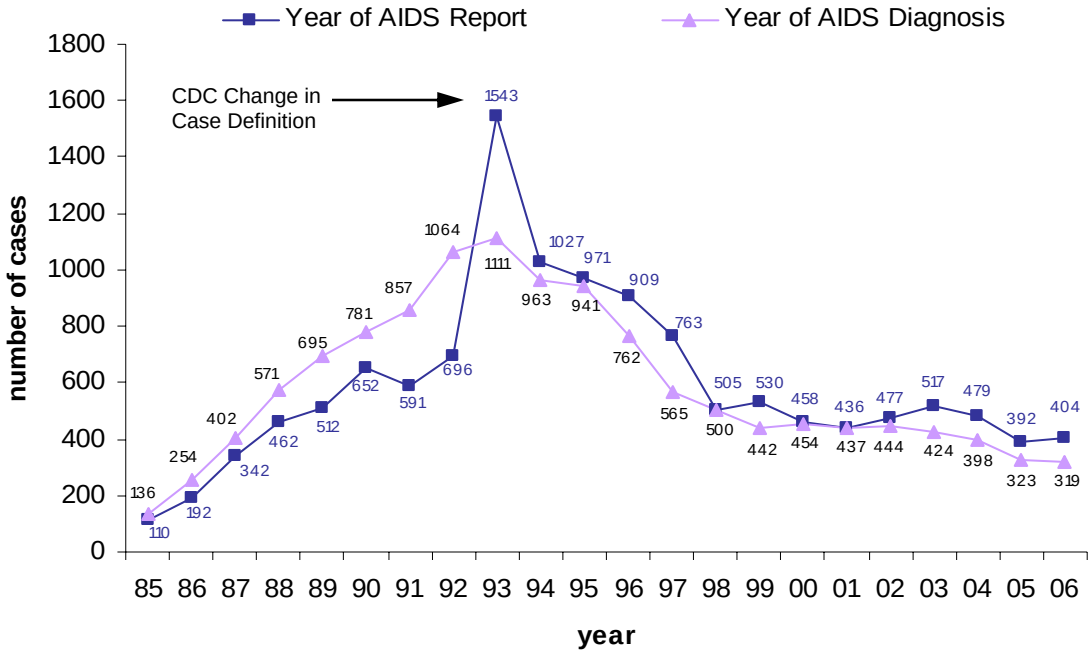


Figure 3: AIDS Cases by Age Group at Time of Diagnosis, San Diego County

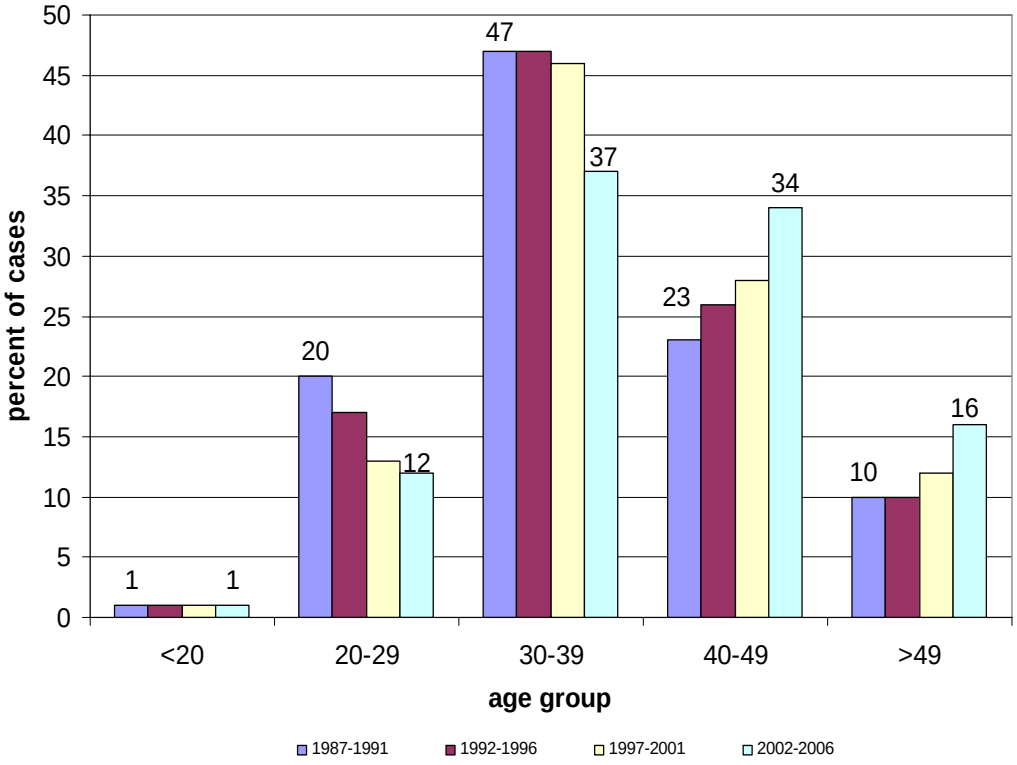


Table 3: Age Group of AIDS Case at Diagnosis and in 2006, San Diego County

	At Diagnosis			In 2006*		
Age Group, Years	Frequency	Percent	Cumulative Percent	Frequency	Percent	Cumulative Percent
Less than 13	61	0.5%	0.5%	10	0.2%	0.2%
13-19	57	0.4%	0.9%	18	0.3%	0.5%
20-29	2,119	16.3%	17.2%	197	3.2%	3.7%
30-39	5,855	45.0%	62.2%	1,236	20.2%	23.9%
40-49	3,479	26.7%	88.9%	2,810	44.7%	68.6%
More than 49	1,444,	11.1%	100.0%	1,869	30.4%	100.0%
Total	13,015	100.0%		6,140	100.0%	

*Of those living in 2006

Figure 4: AIDS Cases Diagnosed in Time Period and Percent of Cases in Persons of Color, San Diego County

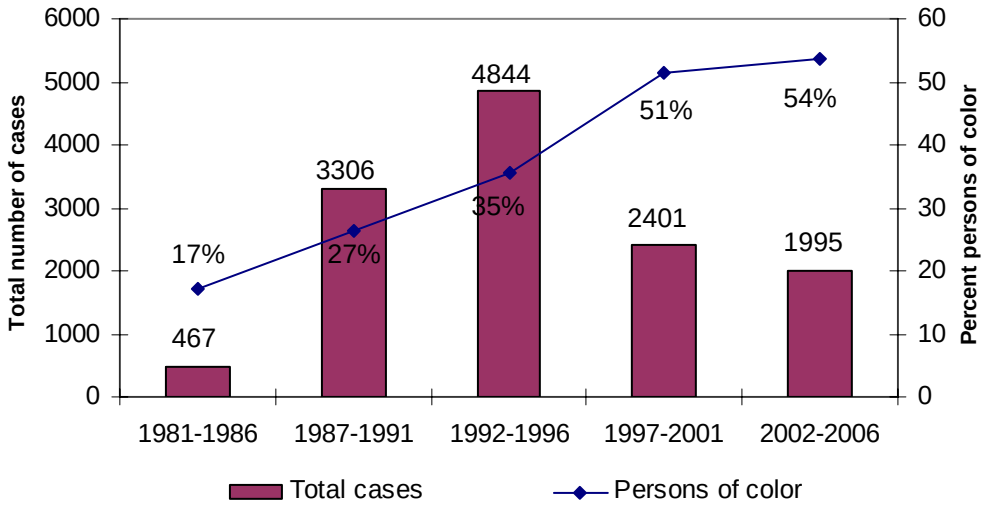


Table 4: AIDS Rate by Race/Ethnicity and Year of Diagnosis, San Diego County

		Year of Diagnosis				
Race/ Ethnicity		2001	2002	2003	2004	2005*
White	Cases in group	200	216	181	196	196
	% of Total cases	46%	48%	42%	48%	51%
	Rate per 100,000	13	13	13	12	12
Black	Cases in group	73	74	78	54	41
	% of Total cases	17%	17%	18%	13%	11%
	Rate per 100,000	47	47	47	34	25
Hispanic	Cases in group	145	144	156	144	137
	% of Total cases	33%	32%	36%	35%	35%
	Rate per 100,000	18	17	18	17	16
All Races/ Ethnicities**	Cases in group	436	449	430	411	386
	Rate per 100,000	15	15	14	14	13

*Most recent year for which population estimates are available.
**Includes Asian, Pacific Islander, Native American, and Native Alaskan.

Figure 5: Rate of AIDS Cases by Race/Ethnicity Over Time, San Diego County

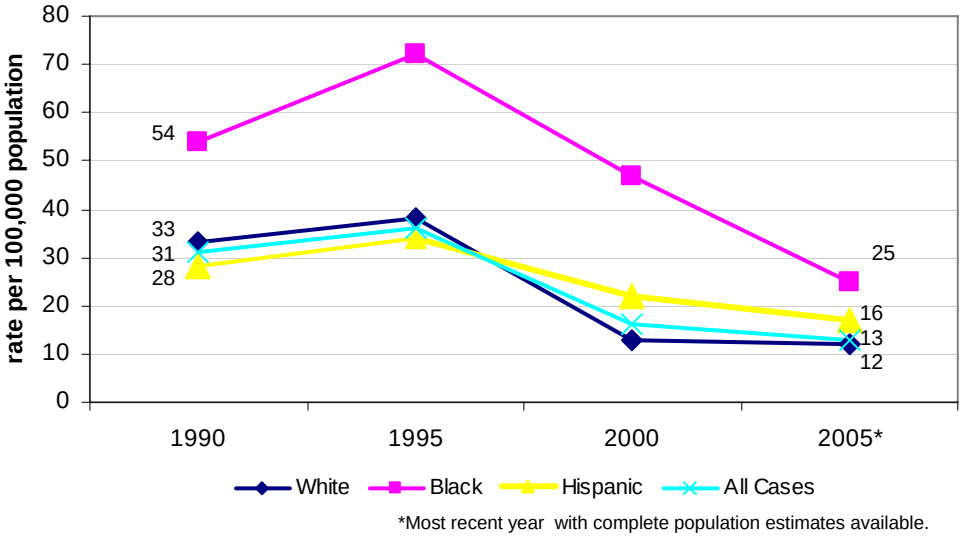


Table 5: AIDS Cases by Age-Related Measurements and Race/Ethnicity Over 5-Year Time Periods, San Diego County

Time Period	Age-Related Measure	Race/Ethnic Group				All Cases
		White	Black	Hispanic	Other*	
1987-1991	mean age, years	38	35	34	35	37
	oldest case	88	71	75	52	88
	youngest case	birth	birth	birth	16	birth
	total cases	2,430	337	479	60	3,306
1992-1996	mean age, years	39	36	35	35	37
	oldest case	79	69	74	69	79
	youngest case	1	birth	birth	birth	birth
	total cases	3,130	583	983	148	4,844
1997-2001	mean age, years	40	39	37	37	39
	oldest case	92	71	78	73	92
	youngest case	18	birth	birth	18	birth
	total cases	1,169	375	781	76	2,401
2002-2006	mean age, years	42	39	38	37	40
	oldest case	84	64	83	65	84
	youngest case	4	5	9	17	4
	total cases	926	288	711	70	1,995
Cummulative (1981-2005)	mean age, years	39	37	36	36	38
	oldest case	92	71	83	73	92
	youngest case	birth	birth	birth	birth	birth
	total cases	8,044	1,613	3,000	358	13,015

*Includes Asian, Pacific Islander, Native American and other races/ethnicities

Table 6: AIDS Case Distribution by HHSA Region Over Time, San Diego County

Time Period of Diagnosis	HHSA Region					
	Central	East	South	North Coastal	North Inland	North Central
1981-1986	59%	6%	3%	7%	5%	20%
1987-1991	61%	8%	7%	6%	4%	15%
1992-1996	59%	6%	8%	8%	5%	14%
1997-2001	55%	8%	14%	7%	4%	12%
2002-2006	53%	7%	18%	7%	5%	11%
Total in Region	7,532	918	1,318	924	589	1,734

Note: Percentages may not total 100 due to rounding.

Table 7: AIDS Case Distribution by Race/Ethnicity and HHSA Region, San Diego County

Race/Ethnicity	HHSA Region					
	Central	East	South	North Coastal	North Inland	North Central
White	64%	65%	28%	64%	67%	75%
Black	15%	12%	10%	9%	5%	8%
Hispanic	19%	20%	60%	23%	24%	14%
Asian/PI	2%	2%	3%	3%	3%	3%
Native American	1%	1%	1%	1%	1%	1%
Total in Region	7,532	918	1,318	924	589	1,734

Note: Percentages may not total 100 due to rounding.

Table 8: Female AIDS Case Distribution by HHSA Region Over Time, San Diego County

HHSA Region	Time Period of Diagnosis									
	1987-1991		1992-1996		1997-2001		2002-2006		Cumulative*	
	% female	total cases	% female	total cases	% female	total cases	% female	total cases	% female	total cases
Central	3%	2,008	5%	2,872	9%	1,328	9%	1,049	6%	7,532
East	9%	254	11%	310	14%	185	15%	141	11%	918
South	12%	214	11%	386	12%	339	15%	363	13%	1,318
North Coastal	9%	208	12%	372	15%	170	17%	142	13%	924
North Inland	15%	138	16%	234	13%	103	12%	91	14%	589
North Central	5%	484	9%	670	11%	276	5%	209	7%	1,734
Total	5%	3,306	7%	4,844	10%	2,401	11%	1,995	8%	13,015

*Includes cases from 1981-2006.

Table 9: AIDS Case Distribution by Race/Ethnicity and HHSA Region Over Time, San Diego County

HHSA Region	Time Period	Race/Ethnicity				Total in Time Period
		White	Black	Hispanic	Other*	
Central	1987-1991	74%	12%	13%	1%	2,008
	2002-2006	53%	19%	34%	4%	1,046
	cumulative*	64%	15%	19%	2%	7,532
East	1987-1991	78%	9%	10%	3%	254
	2002-2006	43%	19%	34%	4%	141
	cumulative*	65%	12%	20%	3%	918
South	1987-1991	43%	10%	45%	2%	214
	2002-2006	20%	7%	71%	2%	363
	cumulative*	28%	10%	60%	3%	1,318
North Coastal	1987-1991	75%	8%	15%	3%	208
	2002-2006	42%	11%	41%	6%	142
	cumulative*	64%	9%	23%	4%	924
North Inland	1987-1991	75%	4%	17%	4%	138
	2002-2006	54%	9%	35%	2%	91
	cumulative*	67%	5%	24%	4%	589
North Central	1987-1991	83%	6%	10%	2%	484
	2002-2006	66%	13%	18%	4%	209
	cumulative*	75%	8%	14%	3%	1,734

*1981-2006

Note: Percentages may not total 100 due to rounding.

**Includes Asian/Pacific Islander and Native American and other races/ethnicities.

Figure 6: Mode of Transmission for Cumulative (n=12,008) and 2002-2006 (n=1,778) Male AIDS Cases, San Diego County

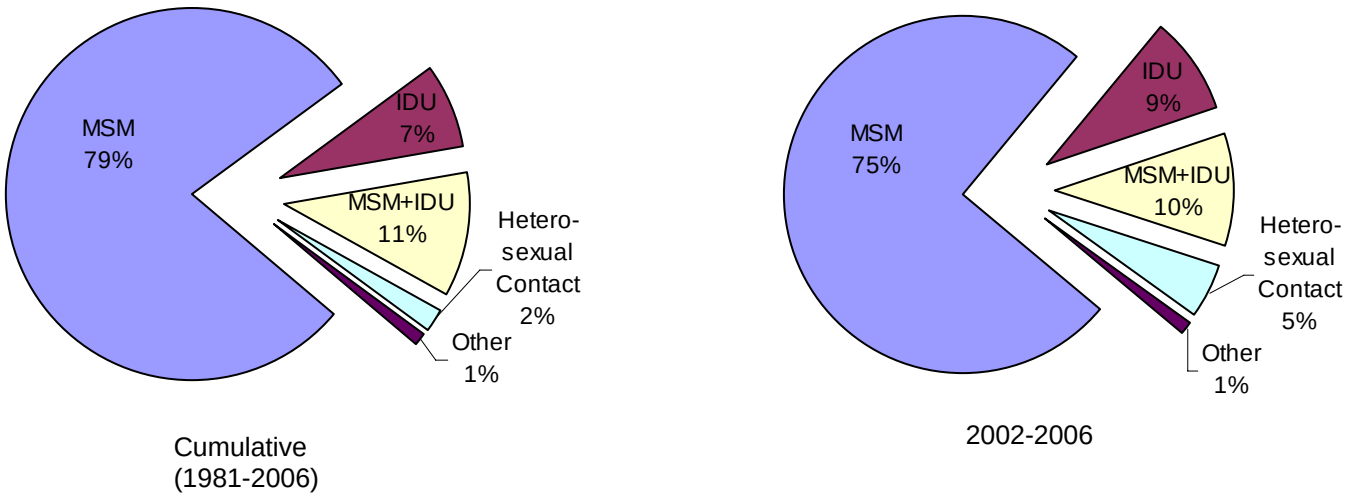


Figure 7: Mode of Transmission for Cumulative (n=1,007) and 2002-2006 (n=217) Female AIDS Cases, San Diego County

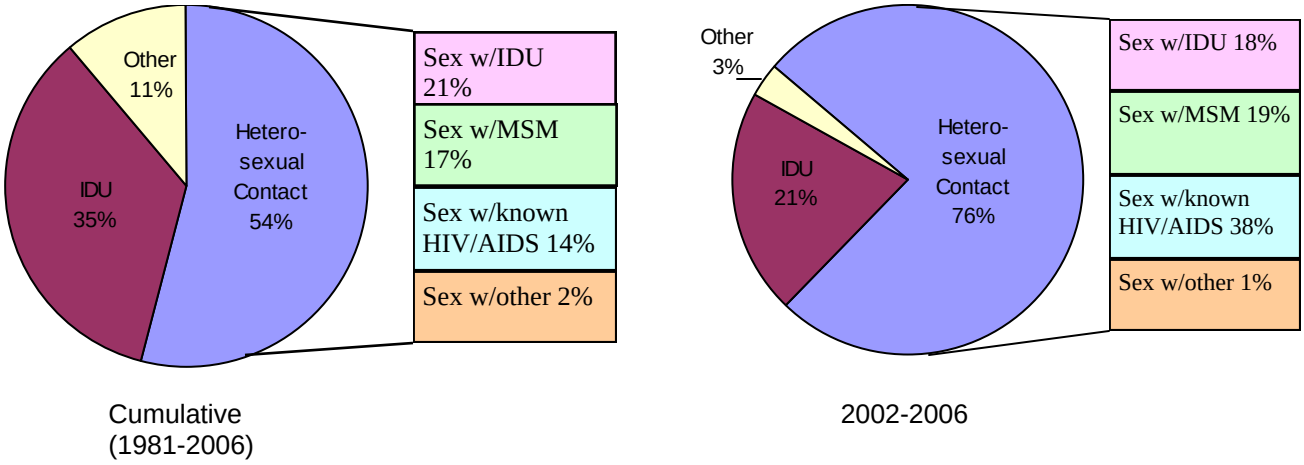


Table 10: Adult/Adolescent Male AIDS Cases by Mode of Transmission, Race/Ethnic Group, and Time Period, San Diego County

	Racial/Ethnic Group						All Racial/ Ethnic Groups	
	White		Black		Hispanic			
Mode of Transmission	1992-1996	2002-2006	1992-1996	2002-2006	1992-1996	2002-2006	1992-1996	2002-2006
MSM	84%	77%	65%	65%	76%	77%	80%	75%
IDU	4%	8%	16%	14%	11%	9%	7%	9%
MSM+IDU	11%	12%	15%	11%	11%	5%	12%	10%
Heterosexual	<1%	3%	<1%	9%	1%	8%	1%	6%
Contaminated blood products	1%	<1%	2%	0%	2%	<1%	1%	<1%
Not specified/Other	<1%	1%	0%	1%	1%	1%	<1%	1%
Number in Group	2,967	872	501	242	894	604	4,484	1,778

Note: Percentages may not total 100 due to rounding.

Table 11: Adult/Adolescent Female AIDS Cases by Mode of Transmission, Race/Ethnic Group, and Time Period, San Diego County

	Racial/Ethnic Group						All Racial/ Ethnic Groups	
	White		Black		Hispanic			
Mode of Transmission	1992-1996	2002-2006	1992-1996	2002-2006	1992-1996	2002-2006	1992-1996	2002-2006
IDU	47%	35%	44%	22%	30%	13%	40%	21%
Heterosexual	42%	63%	49%	76%	55%	83%	48%	76%
Contaminated blood products	8%	0%	5%	2%	6%	1%	7%	1%
Not specified/Other	3%	2%	2%	0%	9%	3%	5%	2%
Number in Group	163	54	82	46	89	107	329	217

Note: Percentages may not total 100 due to rounding.

Table 12: AIDS Cases by Gender, Mode of Transmission and Time Period, San Diego County

Gender	Mode of Transmission	Time Period of Diagnosis					
		1981-1986	1987-1991	1992-1996	1997-2001	2002-2006	Cumulative*
Male	**Adolescent/Adult:**						
	Homosexual/Bisexual (MSM)	86%	83%	80%	75%	75%	79%
	Injecting Drug Use (IDU)	2%	5%	7%	9%	9%	7%
	MSM+IDU	8%	10%	11%	13%	10%	11%
	Heterosexual	<1%	1%	<1%	2%	5%	2%
	Contaminated blood/blood product	4%	2%	1%	<1%	<1%	1%
	Risk not specified/other	<1%	<1%	<1%	<1%	1%	<1%
	Pediatric (0-12 years):						
	All modes	0%	<1%	<1%	<1%	<1%	<1%
	Number in Group	456	3,137	4,484	2,153	1,778	12,008
Female	**Adolescent/Adult:**						
	Injecting Drug Use (IDU)	15%	37%	41%	42%	21%	35%
	Heterosexual	31%	40%	52%	55%	76%	54%
	Contaminated blood/blood product	31%	22%	2%	1%	1%	7%
	Risk not specified/other	0%	1%	2%	2%	3%	2%
	Pediatric (0-12 years):						
	All modes	23%	6%	3%	2%	0%	3%
	Number in Group	13	169	360	248	217	1,007

*1981-2006

Note: Percentages may not total 100 due to rounding.

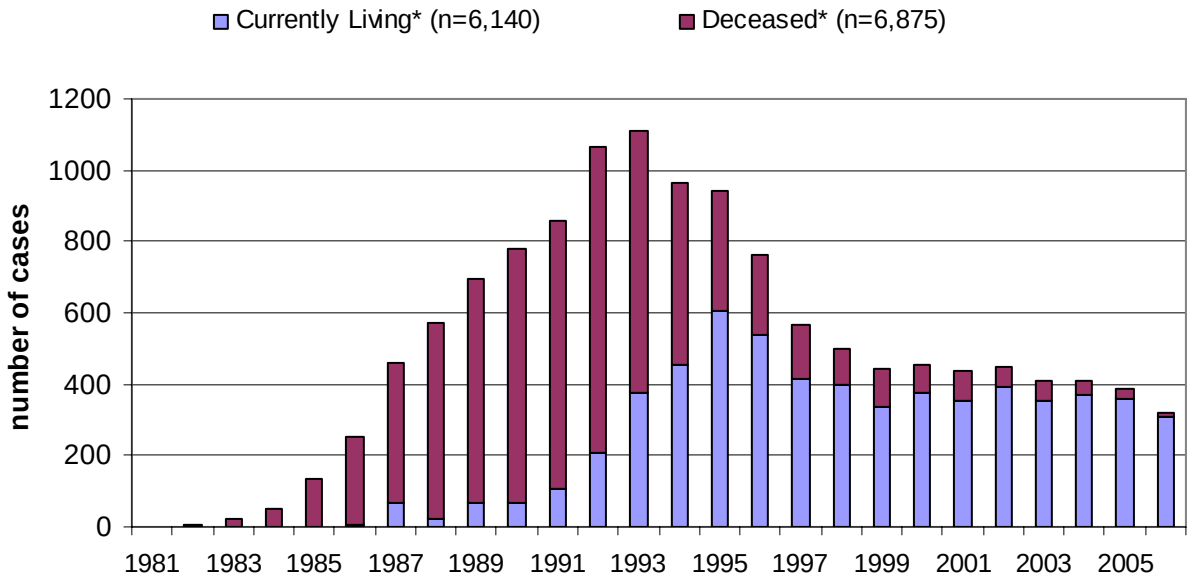
Table 13: Hispanic AIDS Cases by Gender, Place of Birth, and Time Period, San Diego County

Gender	Place of Birth	Time Period of Diagnosis 1987-1991	1992-1996	1997-2001	2002-2006	Cumulative*
Male	US born	55%	47%	33%	25%	40%
	US dependency born	3%	3%	1%	1%	2%
	Foreign born	42%	50%	66%	74%	58%
	Unknown	0%	0%	0%	<1%	<1%
	Number in time period	438	894	701	604	2680
Female	US born	56%	39%	33%	20%	33%
	US dependency born	5%	6%	0%	3%	3%
	Foreign born	39%	55%	68%	78%	64%
	Number in time period	41	89	80	107	320

*Includes cases from 1981-2006.

Note: Percentages may not total 100 due to rounding.

Figure 8: AIDS Cases by Year of Diagnosis and Status, San Diego County



*At year's end.

Table 14: Percent of Cases Progressing from Reported HIV Diagnosis to Reported AIDS Diagnosis in Less Than 1 Year, by Race/Ethnicity and 5-year Time Period, San Diego County

	Race/Ethnicity		
	White	African American	Hispanic
1987-1991	83.0%	82.5%	84.8%
1992-1996	35.9%	46.8%	49.9%
1997-2001	43.7%	50.7%	59.0%
2002-2006	44.3%	47.9%	64.3%

Figure 9: Percent of Cases Progressing from HIV to AIDS in Less Than 1 Year by Race/Ethnicity and 5-Year Time Period, San Diego County

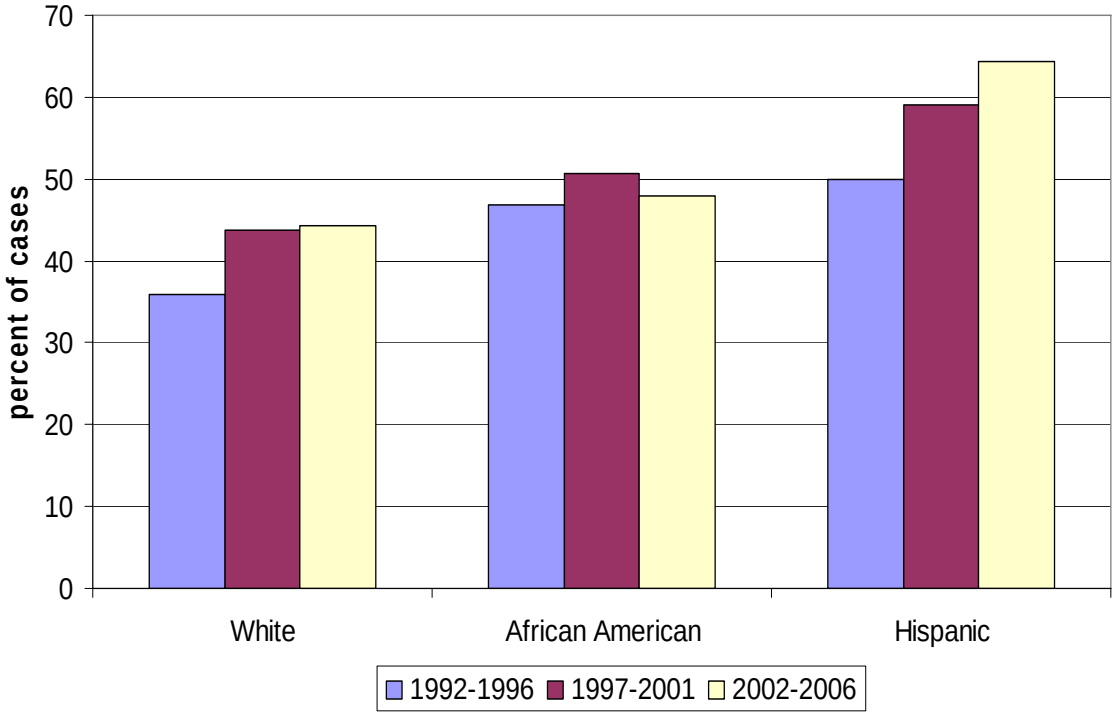


Table 15: Cumulative Hispanic AIDS Cases by Ethnic Origin, San Diego County

Ethnic Origin	Number	Percent
Mexian	2,451	81.7
Hispanic, not specified	249	8.3
Puerto Rican	114	3.8
Central American	56	1.9
South American	55	1.8
Spain/Portugal	36	1.2
Cuban	34	1.1
Dominican	5	0.2
Total	3,000	100

Table 16: Cumulative Asian/Pacific Islander AIDS Cases by Ethnic Origin, San Diego County

Ethnic Origin	Number	Percent
Filipino	142	52.4
Chinese	21	7.7
Japanese	18	6.6
Vietnamese	18	6.6
Asian, not specified	14	5.2
Guamanian	13	4.8
Hawai'ian	12	4.4
Samoan	8	3.0
Laotian	6	2.2
Other*	19	7.1
Total	271	100

*Includes Indonesian, Burmese, East Indian, Pacific Islander, Tongan, Fijiian, Micronesian, Korean Asian Indian, and Taiwanese.

Table 17: Community of Residence at Time of AIDS Diagnosis, Cumulative AIDS Cases, San Diego County

Community	Number	Percent
San Diego	9,552	73.4
Chula Vista	454	3.5
Oceanside	378	2.9
El Cajon	254	2.0
Escondido	246	1.9
Vista	207	1.6
La Mesa	191	1.5
San Ysidro	186	1.4
National City	185	1.4
Spring Valley	178	1.4
La Jolla	144	1.1
Carlsbad	133	1.0
Santee	98	0.8
Lemon Grove	94	0.7
Encinitas	90	0.7
Imperial Beach	90	0.7
San Marcos	78	0.6
Lakeside	50	0.4
Poway	45	0.3
Coronado	41	0.3
Fallbrook	40	0.3
Del Mar	39	0.3
Bonita	32	0.2
Ramona	28	0.2
Cardiff-by-the-Sea	21	0.2
Leucadia	20	0.2
Other*	141	1.0
Total	13,015	100.0

*The following communites had fewer than 20 cases each: Alpine, Bonsall, Borrego Springs, Boulevard, Camp Pendleton, Campo, Descanso, Dulzura, Guatay, Jamul, Julian, Mount Laguna, Pauma Valley, Pine Valley, Ranchita, Rancho Santa Fe, San Luis Rey, Santa Ysabel, Solana Beach, and Valley Center.

Table 18: Frequency of Indicator Diseases Among All Reported AIDS Cases (Adult/Adolescent and Pediatric) and Among those Diagnosed in 2002-2006, San Diego County

	Cumulative		2002-2006	
Indicator Disease*	Frequency	Percent**	Frequency	Percent**
CD4 count<200/µL or <14%	4,214	32%	1,330	67%
Pneumocystitis carinii pneumonia	3,562	27%	206	10%
Wasting syndrome	2,077	16%	146	7%
Kaposi's sarcoma	1,579	12%	65	3%
Mycobacterium avium complex or *M. kansasii*	1,095	8%	17	1%
Candidiasis, esophageal	1015	8%	76	4%
HIV encephalopathy	819	6%	27	1%
Cytomegalovirus	744	6%	32	2%
Cytomegalovirus retinitis	613	5%	10	1%
Cryptosporidiosis	481	4%	16	1%
M. tuberculosis, pulmonary	494	4%	87	4%
Immunoblastic lymphoma	440	3%	26	1%
Herpes simplex, invasive or chronic	305	2%	12	1%
Toxoplasmosis of the brain	298	2%	16	1%
M. tuberculosis, disseminated or extrapulmonary	289	2%	59	3%
Lymphoma, primary of the brain	184	1%	4	<1%
Progressive multifocal leukoencephalopathy	183	1%	10	1%
Pneumonia, recurrent in 12-month period	118	1%	12	1%
Candidiasis, pulmonary	84	1%	6	<1%
Mycobacterium, of other species	66	1%	5	<1%
Coccidiomycosis	61	1%	6	<1%
Burkitt's lymphoma	58	<1%	20	1%
Histoplasmosis	52	<1%	3	<1%
Isosporiasis	27	<1%	0	
Salmonella septicemia	26	<1%	1	<1%
Lymphoid interstitial pneumonia	21	<1%	1	<1%
Recurrent bacterial infections	8	<1%	0	
Carcinoma, invasive cervical	2	<1%	0	

*May not be a complete list of all indicator diseases experienced by every case.

**Total percent will not total 100 and frequency will not total 13,015 (total number of cases) because each case may experience more than one indicator disease.

III. HIV Cases

Table 19: Cumulative Adult/Adolescent HIV Cases by Gender and Area of Residence, San Diego County

	United States		California		San Diego	
	Through 12/31/05*		Through 12/31/06***		Through 12/31/06***	
Gender	no.	%	no.	%	no.	%
Male	171,169	70%	6,547	86%	1,172	89%
Female	73,692	30%	1,012	13%	139	11%
Transgendered	**	**	97	1%	*	*
Unknown	7	<1%	0	0%	0	0%
Total	**244,868**		**7,656**		**1,311**	

*Most recent year available.

** Not collected or not reported.

***Data from 4/17/06-12/31/06.

Table 20: Cumulative Adult/Adolescent HIV Cases by Race/Ethnicity and Area of Residence, San Diego County

	United States		California		San Diego	
	Through 12/31/05		Through 12/31/06		Through 12/31/06	
Race/Ethnicity	no.	%	no.	%	no.	%
Black	118,612	48%	1,293	17%	132	10%
Hispanic	38,202	16%	2,086	27%	406	31%
White	83,251	34%	3,840	50%	736	56%
Other	2,635	1%	350	5%	37	3%
Unknown	2168	1%	87	1%	0	0%
Total	**244,868**		**7,656**		**1,311**	

*Most recent year available.

Table 21: Cumulative HIV Cases Age at Diagnosis and in 2006, San Diego County

	Age at Diagnosis		Current Age*	
Age Group, Years	number	percent	number	percent
Less than 20	50	3.8	28	2.1
20-29	461	34.8	206	15.6
30-39	515	38.8	423	31.9
40-49	242	18.3	493	37.2
More than 49	58	4.4	174	13.1
Total	1326	100	1324	100

*Age in 2006 of those living as of December 31, 2006 (2 cases had died).

Table 22: Cumulative HIV Cases by HHSA Region and Race/Ethnicity, San Diego County

Race/Ethnicity	Central %	East %	South %	North Coastal %	North Inland %	North Central %	total %
White	62.0	51.9	20.4	48.9	56.8	73.7	55.7
Black	10.2	16.5	10.2	13.8	2.3	5.8	10.1
Hispanic	24.9	30.4	66.7	33.0	38.6	17.5	31.4
Asian/PI	2.2	1.3	2.7	3.2	2.3	2.9	2.3
Native American	0.8	0.0	0.0	1.1	0.0	0.0	0.5
Total cases	786	79	186	94	44	137	1,326

Note: Percentages may not total 100 due to rounding.

Table 23: HIV Cases by Mode of Transmission and Gender, San Diego County

Gender	Mode of Transmission	Number	Percent
Male	**Adolescent/Adult:**		
	MSM	982	84%
	IDU	40	3%
	MSM+IDU	93	8%
	Heterosexual	32	3%
	Contaminated blood product	0	0%
	Risk not specified/other	25	2%
	Pediatric (0-12 years):		
	All modes	4	<1%
	Number in Group	1176	100%
Female	**Adolescent/Adult:**		
	IDU	31	21%
	Heterosexual	93	62%
	Contaminated blood product	0	0%
	Risk not specified/other	15	10%
	Pediatric (0-12 years):		
	All modes	11	7%
	Number in Group	150	100%

Figure 10: Adult/Adolescent Male HIV Cases by Modes of Transmission, San Diego County

Figure 11: Adult/Adolescent Female HIV Cases by Modes of Transmission, San Diego County

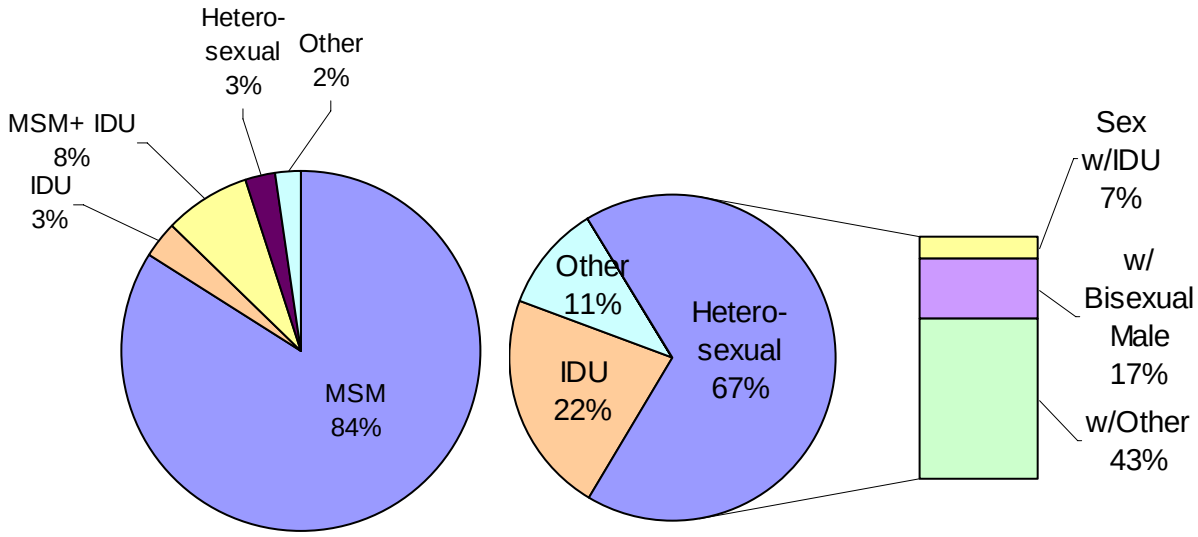


Table 24: Adult/Adolescent Male HIV Cases by Mode of Transmission and Race/Ethnicity, San Diego County

Mode of Transmission	White		Black		Hispanic		Asian/PI		Native American		total	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
MSM	586	84.4	68	66.7	302	88.0	23	88.5	3	42.9	982	83.8
IDU	26	3.7	9	8.8	4	1.2	0	0.0	1	14.3	40	3.4
MSM+IDU	63	9.1	8	7.8	17	5.0	2	7.7	3	42.9	93	7.9
Heterosexual contact	8	1.2	12	11.8	11	3.2	1	3.8	0	0.0	32	2.7
Blood products	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Risk not specified	11	1.6	5	4.9	9	2.6	0	0.0	0	0.0	25	2.1
Total	694	100	102	100	343	100	26	100	7	100	1172	100

Table 25: Adult/Adolescent Female HIV Cases by Mode of Transmission and Race/Ethnicity, San Diego County

Mode of Transmission	White		Black		Hispanic		Asian/PI		Native American		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
IDU	15	35.7	10	33.3	5	7.9	1	25.0	0	0.0	31	22.3
Heterosexual contact	24	57.1	18	60.0	49	77.8	2	50.0	0	0.0	93	66.9
Blood products	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Risk not specified	3	7.1	2	6.7	9	14.3	1	25.0	0	0.0	15	10.8
Total	42	100	30	100	63	100	4	100	0	100	139	100

Table 26: Hispanic HIV Cases by Ethnic Origin, San Diego County

Ethnic origin	Number	Percent
Mexican	315	75.7
Hispanic, non-specific	88	21.2
Puerto Rican	5	1.2
Central American	4	1.0
South American	3	0.7
Cuban	1	0.2
Total	416	100.0

Table 27: Asian HIV Cases by Ethnic Origin, San Diego County

Ethnic origin	Number	Percent
Filipino	16	51.6
Asian, non-specific	4	12.9
Cambodian	2	6.5
Vietnamese	2	6.5
Chinese	2	6.5
Asian Indian	1	3.2
Japanese	1	3.2
Guamanian Islander	1	3.2
Korean	1	3.2
Hawaiian	1	3.2
total	31	100.0

Table 28: HIV Cases by Community of Residence at Time of Diagnosis, San Diego County

Community of residence	number	percent
San Diego	976	73.6
Chula Vista	56	4.2
San Ysidro	46	3.5
Oceanside	40	3.0
Vista	25	1.9
El Cajon	20	1.5
Escondido	20	1.5
La Mesa	20	1.5
National City	17	1.3
Carlsbad	14	1.1
La Jolla	13	1.0
Imperial Beach	11	0.8
Santee	11	0.8
Lemon Grove	10	0.8
Other*	47	3.5
Total	1326	100.0

* The following communities had 9 or fewer cases: Alpine, Bonita, Bonsall, Boulevard, Cardiff By The Sea, Coronado, Del Mar, Encinitas, Fallbrook, Lakeside, Poway, Ramona, Rancho Santa Fe, San Marcos, Solana Beach, Spring Valley, and Valley Center.

IV. Appendices

Appendix 1. Glossary

Adult/Adolescent Cases—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.

Mode of Transmission—The way in which a 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.

Prevalence—The number of all living cases (old and new) of a given disease within a specified time period.

Prevalence Rate—The number of all living cases (new and old) 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.

Year of Diagnosis—The year in which an individual met the CDC case definition for HIV or AIDS.

Year of Report—The year in which an HIV/AIDS case is reported to the Department of Health Services.

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, other health care providers, hospitals, and clinics 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 Community Epidemiology is delayed results in "under-reporting". It is likely that cases diagnosed in 2006 will continue to be reported in 2007.

2. ***Diagnosis date versus report date*** - Reporting delays impact the available data. Those cases diagnosed in 2005, for example, may not have been reported to the Health and Human Services Agency until 2006 or later. It is likely that cases diagnosed in 2006 will continue to be reported in 2007. See *Appendix 1, Glossary* for Year of Diagnosis and Year of Report.

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

4. ***Non-resident cases*** - Persons with HIV or AIDS diagnosed elsewhere and relocating to San Diego County after diagnosis, are not represented in data for the county. Persons receiving medical care or other services in San Diego County while residing outside the county, are also not reflected in this data.

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.*** Names-based reporting of HIV infection without an AIDS defining condition is authorized under SB 699, which was signed into law by the Governor on April 17. 2006. HIV data may be skewed to primarily represent the patients of 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 a HIV or AIDS is required to make a report. (California Code of Regulations, Health & Safety Statutes, Title 17, Section 2643.5 and Section 2500).

When is HIV Reported?

Report a case when a patient has a test result indicative of HIV infection. This includes:

- Confirmed positive HIV antibody test
- Any viral load test
- P24 antigen test
- Viral isolation test

Providers should report an individual newly positive for HIV, as well as those the health care provider (ordering the test) has never reported and has no verification that the individual has already been reported with HIV. 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 care provider is required to report the case to the local health department within 7 days of the diagnosis (for HIV infected individuals, definitive or presumptive):

* CD4+ T-lymphocyte count <200 mL/mm^3 or<14% of total T-lymphocytes
* Candidiasis of the bronchi, trachea, or lungs
* Candidiasis, esophageal
* Cervical cancer, invasive
* Coccidioidomycosis, disseminated or extra-pulmonary
* Cryptococcosis, extra-pulmonary
* Cryptosporidiosis, chronic intestinal
* Cytomegalovirus disease
* Cytomegalovirus retinitis
* Encephalopathy, HIV-related
* Herpes simplex: chronic ulcers or bronchitis 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 extrapulmonary
* *Mycobacterium tuberculosis*, any site
* *Pneumocystis carinii* pneumonia
* Pneumonia, recurrent
* Progressive multifocal leukoencephalopathy
* Salmonella septicemia, recurrent
* Toxoplasmosis of the brain
* Wasting syndrome due to HIV

The pediatric AIDS case definition (children 12 years of age and younger) includes all of the above indicator diseases except pulmonary *Mycobacterium tuberculosis*, cervical cancer and CD4+ T-lymphocyte counts <200 mL/mm^3 or <14% of total T-lymphocytes.

In addition, recurrent bacterial infections (at least two episodes within a two year period) and lymphoid interstitial pneumonia/pulmonary lymphoid hyperplasia (LIP/PHL) are AIDS defining conditions for HIV infected children.

The original case definition of AIDS was estab-

lished by the Centers for Disease Control (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's publication entitled 'Morbidity and Mortality Weekly Report' (MMWR).

What information is required to be reported?

Reports of HIV and AIDS cases to the local health department shall minimally include: 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.

Community Epidemiology 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:

Lyn Cardoza
Health and Human Services Agency
Community Epidemiology
P.O. Box 85222
San Diego, CA 92186-5222

Providers also have the option of reporting cases by phone. For a reporting kit or any additional information, call the Community Epidemiology Branch at **(619) 515-6675**, 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 our 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 which represents under-reporting of 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 Community Epidemiology Branch at **(619)515-6675.** For a copy of the regulations and more information on HIV/AIDS reporting go to: www.dhs.ca.gov/AIDS.

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

Calculating a rate of AIDS is a better indication of the burden of disease for a given population than just looking at the raw numbers. Not all population sizes are the same so the same number of cases in different populations may not reflect the proportion of that population which experiences a given disease. A rate normalizes the number and allows populations with 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 for HCT rates) or individuals in a research study (STD seroprevalence study).

AIDS Rates

A rate is calculated by dividing the number of individuals with a disease/condition in a given time period by the population size. As is common for population-based rates, the proportion of AIDS cases in a given population is then multiplied by 100,000 to give the rate per 100,000. For example, in year 2001, there were 434 individuals diagnosed with AIDS. When the number of cases (434) is divided by the population size (2,868,873) and multiplied by 100,000, the result is:

(434/2,868,873)*100,000 = 15 AIDS cases per 100,000 residents of San Diego County.

Rates by racial/ethnic groups were 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 (*see Table 4*). Rates calculated in this report are based on current estimates of population size published by San Diego Association of Governments (SANDAG), which is calculated from Census data. Race information was collected differently during the 2000 Census and does not match the way race is collected on the HIV/AIDS report forms. This change over time and mismatch could affect rates, particularly when analyzing groups with small numbers.

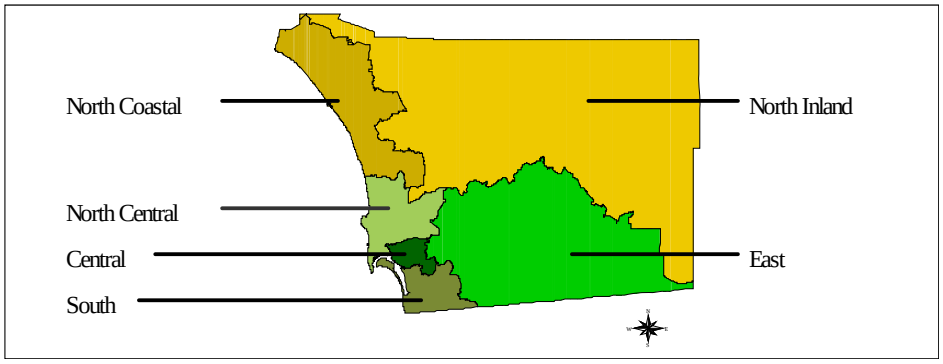
Statistics

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. One such test is used in this report, the 95% confidence interval. When rates are described here as '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 (HHSA) Regions of San Diego

San Diego County is divided into 6 Health and Human Services Agency regions by zip code. The following list presents the regions and the zip codes contained therein.

Figure 12:
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.

Community Epidemiology
HIV/AIDS Epidemiology
P.O. Box 85222
San Diego, CA 92186-5222

County of San Diego
Health and Human Services Agency
PHS
Public Health Services
Community Epidemiology