

AIDS IN BLACKS

COUNTY OF SAN DIEGO, 2004

County of San Diego

**Health and Human
Services Agency,
HIV/AIDS Epidemiology Unit**



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INTRODUCTION

AIDS is seen in all racial/ethnic groups in the County of San Diego; the three most frequent are whites, Hispanics and blacks. Blacks have the highest rate of AIDS in the county for both men and women but there are more similarities than differences between racial/ethnic groups. Some of these similarities include: most frequent age of diagnosis in the 30s, more men than women diagnosed, Men who have Sex with Men (MSM) as the most frequent mode of transmission in men and heterosexual contact the most common for women, most frequent place of diagnosis is the hospital setting, and average time from diagnosis to death (in those dying before 2004) of about 2 years.

One important difference between the racial/ethnic groups is rate of AIDS; blacks have the highest rate of AIDS for both men and women, and this rate is much higher than that seen in other racial/ethnic groups. Black men/adolescents are also less likely to report MSM as the mode of transmission and more likely to report IDU or heterosexual contact.

Persons with AIDS are living longer after their diagnosis than previously. The average age at death in blacks over the course of the epidemic is 39 years but has increased to 44

years of age in recent years. This age is slightly younger than in whites and slightly older than in Hispanics, and reflects both increases in diagnoses in older age groups and life expectancy in an age of multiple therapies.

AIDS DATA

The first black resident with AIDS in the County of San Diego was diagnosed in 1984. Since then, blacks have made up 12% of all those diagnosed with AIDS in the County and this group has had the third highest number of cases diagnosed each year following whites and Hispanics. Blacks constitute only about 5% of the population of the County of San Diego and are, therefore, overrepresented in the local AIDS population.

Table 1 presents the total population of the County and the number of AIDS cases diagnosed from 1999 to 2004, and the proportion of blacks in both. The proportion of AIDS cases diagnosed in blacks has been consistently about three times the proportion of blacks in the general population. The proportion of blacks in the US population (12.9% in 2000) is higher than in the County of San Diego (5% in 2000). The proportion of AIDS cases in blacks in the County of San Diego,

TABLE 1

Proportion of Blacks in the County of San Diego Population and Among Local AIDS Cases, 1999-2004.

year	San Diego County		AIDS Cases	
	estimated population	% Black	diagnosed	% Black
1999	2,751,000	6	447	14
2000	2,813,833	5	458	16
2001	2,856,000	5	433	16
2002	2,908,505	5	434	17
2003	2,961,579	5	419	18
2004	3,014,204	5	378	14

TABLE 2
Number and Rate of AIDS Cases in Whites, Blacks, and Hispanics, 1999 to 2004.

year	White		Black		Hispanic	
	diagnosed in year	rate per 100,000	diagnosed in year	rate per 100,000	diagnosed in year	rate per 100,000
1999	227	14	63	41	147	21
2000	203	13	76	49	165	22
2001	203	13	71	45	141	18
2002	202	13	75	47	143	18
2003	175	11	77	48	153	18
2004*	175	11	54	34	134	16

*additional 2004 cases are expected to be reported through out 2005.

14-18%, is less disproportionate than the Centers for Disease Control and Prevention (CDC) 2003 estimate of 49.6%.

Whites have had the largest number of AIDS cases in the County of San Diego each year, but blacks have had the highest rate of AIDS cases since the mid-1980s. This rate, measured per 100,000 persons, more accurately reflects the relative disease burden in each group. The rate of AIDS in blacks is 2-3 times that of Hispanics and 3-4 times that of whites (see Table 2 and Figure 1). Like the proportion of cases in blacks, the rate of AIDS diagnoses in blacks in 2003 (48 per 100,000) in San Diego County is lower than

the US rate (75.2 per 100,000) estimated by the CDC in the same year.

Asian/Pacific Islander cases are not included in the tables presented because of small numbers.

GENDER

More men than women are diagnosed with AIDS each year in all racial/ethnic groups. The rates of male and female AIDS cases in whites, blacks, and Hispanics over five years are presented in Table 3. The AIDS case rate in black males is three to four times that seen in white males.

The difference in rate between males and

FIGURE 1
Rate of AIDS cases in Whites, Blacks, and Hispanics, in San Diego County, 1999-2004.

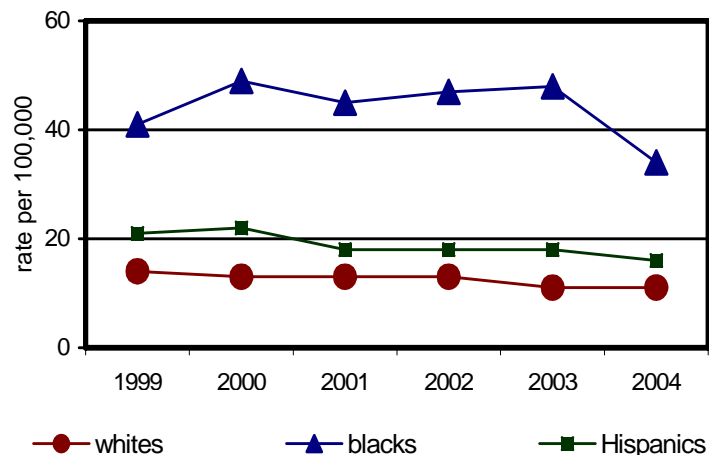


TABLE 3

Rate of AIDS in Male and Female Whites, Blacks, and Hispanics, 2001-2004	year	white		black		Hispanic	
		male	female	male	female	male	female
	2001	24	2	74	18	32	5
	2002	25	2	72	17	31	4
	2003	21	1	80	13	31	6
	2004	22	1	51	13	27	5

NB: Rate per 100,000 population.

TABLE 4

Proportion of AIDS Cases in White, Black, and Hispanic Females, County of San Diego, in Five-

time period	white		black		Hispanic	
	total group	% women	total group	% women	total group	% women
1985-1989	1602	2.9	186	11.3	17	7.1
1990-1994	3247	4.7	547	13.2	74	8.6
1995-1999	1801	6.1	442	17.6	82	9.5
2000-2004	962	7.2	347	16.4	101	13.4
cumulative	7612	4.9	1522	15.0	2424	10.1

females is less pronounced in blacks than in whites or Hispanics. In each time period presented in Table 4 the proportion of females in black cases is significantly greater than the proportion seen in whites or Hispanics (see Figure 2). Over the course of the epidemic, the proportion of female black AIDS cases is three times greater than that seen in whites and 50% higher than in Hispanics. In recent years, the proportion of

cases in black females is more than twice that seen in whites with less difference between blacks and Hispanics. The proportion of females in recent (2000-2004) white and black cases in San Diego County is about half that estimated by the CDC in the US for 2003.

The proportion of female cases in each racial/ethnic group has been increasing over time. The increase over the five-year time

FIGURE 2

Percentage of White, Black, and Hispanic Women Diagnosed with AIDS in the County of San Diego, in Five-Year Time Periods.

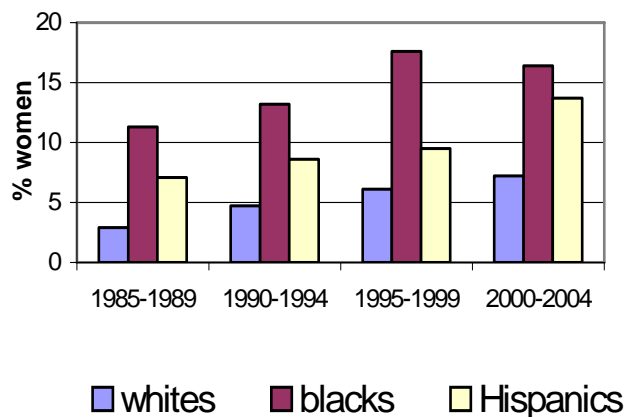


TABLE 5

Mean and Median, and Age Range at Time of AIDS Diagnosis in Whites, Blacks, and Hispanics, Recent and Cumulative Cases, County of San Diego.

	white		black		Hispanic	
	recent*	cumulative	recent*	cumulative	recent*	cumulative
mean age (years)	41.6	38.7	39.4	36.9	38.1	35.8
median age (years)	41.0	37.0	39.0	36.0	37.0	35.0
range (years)	4-92	0-92	13-68	0-71	0-78	0-78
total cases	962	7708	347	1527	734	2728

*2000-2004.

periods is significant in whites ($p < 0.001$), blacks ($p = 0.033$), and Hispanics ($p < 0.001$) (see Table 4).

AGE AT DIAGNOSIS

The mean age at diagnosis of cumulative AIDS cases in blacks, 36.9 years, is significantly younger than in whites (38.7 years, $p < 0.001$), but significantly older than in Hispanics (35.8 years, $p = 0.005$) (see Table 5). In recent years, 2000-2004, blacks have remained significantly younger at diagnosis than whites ($p = 0.002$) but not significantly older than Hispanics ($p = 0.375$).

Over time the mean age at diagnosis has

increased in all racial/ethnic groups but has remained in the 30-39 year age range. Blacks have a higher proportion of cases in this group than either whites or Hispanics (see Figure 3).

The number of cumulative pediatric cases (diagnosis in those under thirteen years of age), is the same for blacks and whites, but the proportion in blacks (0.8%) is four times that seen in whites (0.2%). This proportion in blacks is one-third lower than that seen in Hispanics (1.2%). Small numbers of pediatric cases mean that the significance of these differences cannot be determined and these data should be interpreted with caution.

FIGURE 3
Percent of Cumulative AIDS Cases in 10-year Age Groups in Whites, Blacks, and Hispanics, County of San Diego.

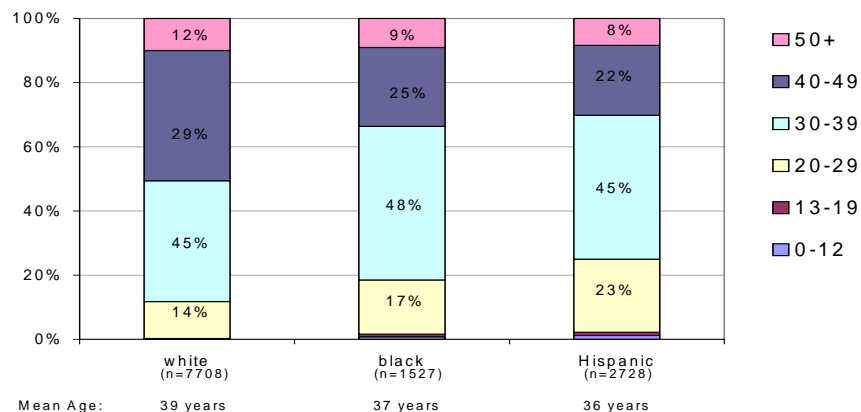


TABLE 6

Current Age of White, Black, and Hispanic Individuals Living with AIDS, County of San Diego, 2004.

	white	black	Hispanic
mean age (years)	45.6	43.3	41.1
median age (years)	45.0	43.0	40.0
range (years)	4-85	5-76	3-83
total cases	3094	787	1563

CURRENT AGE

Almost half (48%) of the individuals who were diagnosed with AIDS in the County of San Diego were deceased by 12/31/04. In black cases alive in 2004, the mean age was 43.3 years (see Table 6). Among those alive in 2004, blacks were significantly younger than whites ($p < 0.001$) and significantly older than Hispanics ($p < 0.001$).

AGE AT DEATH

About 48% of blacks diagnosed with AIDS in the County of San Diego had died by the end of 2004. The average age at death since 1985 in these cases is 39 years. Whites were, on average, slightly older at time of death and Hispanics slightly younger than blacks. In recent years (2000-2004) the average age at death for blacks has increased to 44 years; still somewhat younger than whites but

also younger than Hispanics, unlike previous time periods. This increase in age at death reflects both diagnoses at older ages and increased life expectancy that come with more and better therapy options.

MODE OF HIV TRANSMISSION

Men who have sex with men (MSM) has been and continues to be the most commonly reported mode of HIV transmission among men with AIDS, regardless of ethnic/racial group (see Table 7). Although the proportion of MSM AIDS cases has significantly declined in whites over 5-year time periods, it has been relatively stable in blacks with about two-thirds of cases attributed to this mode of transmission. Black men/adolescents have the lowest proportion of AIDS cases diagnosed in MSM but injecting drug use (IDU) is a significantly more com-

TABLE 7

Mode of HIV Transmission Among Adult/Adolescent White, Black, and Hispanic Men with AIDS,

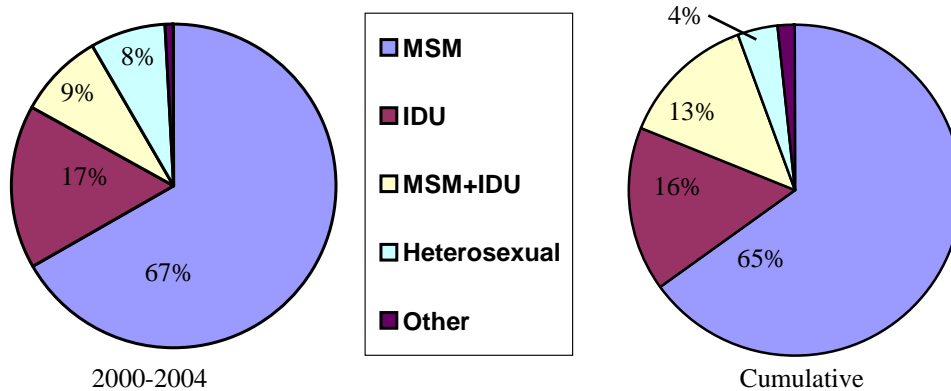
	white		black		Hispanic	
	recent*	cumulative	recent*	cumulative	recent*	cumulative
MSM	74%	83%	67%	65%	77%	77%
IDU	9%	4%	17%	17%	10%	10%
MSM+IDU	13%	11%	9%	13%	6%	9%
heterosexual	3%	1%	8%	4%	7%	2%
other**	1%	1%	1%	1%	1%	2%
total in group	892	7300	290	1287	633	2414

*2000-2004; **includes transfusion, transplantation, hemophilia, and not specified

NB: columns may not total 100% due to rounding.

FIGURE 4

Recent (2000-2004) and Cumulative Modes of HIV Transmission in Black Males in the County of San Diego.



mon mode of transmission for HIV in black men than in whites ($p < 0.001$) or Hispanics ($p < 0.001$) and this proportion has remained stable over time. The proportion of black adult/adolescent AIDS cases with both MSM and IDU has, however, decreased over time (see Figure 4). Heterosexual transmission among males has increased significantly over time intervals in blacks, whites, and Hispanics. Very few recent cases (2000-2004) have resulted from receiving blood products or transplanted tissues.

The proportion of MSM in black AIDS cases in recent years, 67%, is higher in San Diego County than the CDC 2003 national

estimate (44%). The CDC estimates for IDU (30%) and heterosexual transmission (17%) in blacks were higher than the proportions seen in the County of San Diego (17% and 8% respectively).

In adult/adolescent women, heterosexual contact is the most commonly reported mode of HIV transmission (Table 8). The proportion of cases in black women listing heterosexual contact as mode of transmission has increased significantly ($p = 0.003$) over time while the proportion with IDU has decreased significantly ($p = 0.011$). The proportion of IDU in black adult/adolescent female cases is lower than that seen in whites but higher

TABLE 8

Mode of HIV Transmission Among Adult/Adolescent White, Black, and Hispanic Women with AIDS,

	white		black		Hispanic	
	recent*	cumulative	recent*	cumulative	recent*	cumulative
heterosexual	49%	43%	70%	53%	75%	65%
IDU	48%	45%	30%	44%	21%	26%
blood/tissue#	0%	9%	0%	3%	1%	7%
other**	3%	3%	0%	1%	3%	2%
total in group	69	370	57	224	100	257

* 2000-2004; **includes partner with known HIV, and risk not specified; #includes recipients of blood, blood products, tissues in transfusions/transplantations, and artificial insemination

than in Hispanics. Few cases in recent years have resulted from transfusion or transplantation of tissues in women and no cases in black women/adolescents fall into the “other” category. Unlike cases in black men, the CDC 2003 estimates for black female AIDS cases for proportion of heterosexual (64%) and IDU (33%) are similar to those seen in the County of San Diego in recent years (70% and 30%).

COUNTRY OF ORIGIN

The vast majority (95.5%) of blacks, like whites, were born in the United States (Table 9). Of the sixty-seven blacks not born in the US or a US dependency, 49% were born in sub-Saharan Africa. Sub-Saharan countries of origin include Ethiopia, Uganda, Kenya, the Democratic Republic of Congo, and the Somali Republic. Fifteen percent of these cases are of Caribbean origin. This is in contrast to whites; the majority of whites born outside the US or a US dependency were born in Europe and Canada. The majority of Hispanic cases were born outside the US or a US dependency with 52.1% born in Mexico.

It should be remembered that it is not possible, with the current database, to determine how long a person with AIDS born outside the US or its territories has been resi-

dent in the US. It is possible that a case born outside the US has lived here for all but a few months of his or her life. It is therefore not possible to assess acculturation or how being born outside the US impacts risk factors.

RESIDENCE AT DIAGNOSIS

The majority (82.0%) of blacks diagnosed in the County of San Diego were living in the city of San Diego at the time of their diagnosis. This was followed by Oceanside, Chula Vista, Spring Valley, and El Cajon. The city of San Diego encompasses a wide geographic area, extending outward from the Health and Human Services Agency (HHSA) Central Region. Almost 70% of black cases were living in the Central Region at the time of their diagnosis, somewhat more than the 60% of whites in this Region. The North Central and South Regions had about 8% of black cases each, while the South and North Coastal Regions had about 6% of cases each. The North Inland Region had only about 2% of black cases at the time of diagnosis.

FACILITY OF DIAGNOSIS

AIDS is one of over eighty diseases which must, by law, be reported by the diagnosing health care provider to the local

TABLE 9

Country of Origin of Those with AIDS, County of San Diego

	white	black	Hispanic
USA	97.6%	95.5%	40.9%
US Dependency	0.1%	0.1%	2.3%
Other	2.3%	4.4%	56.8%
total in group	7694	1523	2709

Note: columns may not total 100% due to cases with unknown origin.

health department. Individual cases are reported from hospitals, private medical offices, public clinics, prisons, and other locations. More diagnoses have been made in the inpatient or outpatient hospital setting than in any other setting. Cumulatively, a greater proportion of blacks (58%) were diagnosed in the hospital setting than whites (46%) or Hispanics (44%). A smaller proportion of blacks (15%) were diagnosed by private medical providers or HMOs than whites (27%) or Hispanics (20%). A similar pattern is seen in recent cases (2000-2004). Blacks have the highest proportion of cases diagnosed in correctional facilities in both cumulative and recent cases when compared to whites and Hispanics.

SURVIVAL

Table 10 presents the times from AIDS diagnosis to death of deceased white, black, and Hispanic cases in five-year increments over the course of the epidemic in San Diego County. There has been a general increase in survival time over 5-year intervals. Part of this results from increased therapy options prolonging the lives of cases after diagnosis. Changes in case definition to include conditions that arise earlier in HIV disease, such as lowered CD4 counts, also increase survival times by providing earlier diagnoses.

Whites and blacks, among those who have died, have similar survival times although a somewhat larger proportion of blacks are deceased in recent time intervals.

TABLE 10
Length of Survival (Months) of Deceased AIDS Cases in Whites, Blacks, and Hispanics, in 5-year Increments, County of San Diego.

racial/ethnic group	months, from diagnosis to death	time period of diagnosis			
		1985-1989	1990-1994	1995-1999	2000-2004*
white	mean	22.2	26.8	27.7	9.7
	median	16.2	20.0	17.3	3.9
	range	<1-178	<1-166	<1-109	<1-50
	number deceased	1529	2407	438	126
	total cases in time peri	1602	3247	1801	962
	percent deceased	95%	74%	24%	13%
black	mean	23.9	25.5	30.6	12.0
	median	15.5	18.6	18.4	6.8
	range	<1-118	<1-153	<1-113	<1-41
	number deceased	172	390	118	48
	total cases in time peri	186	547	442	347
	percent deceased	92%	71%	27%	14%
Hispanic	mean	22.4	24.6	25.2	7.3
	median	13.2	18.1	15.0	2.7
	range	<1-158	<1-165	<1-112	<1-46
	number deceased	216	602	231	81
	total cases in time peri	238	862	863	735
	percent deceased	91%	70%	27%	11%

*the number in this time frame is expected to increase over time.

Of deceased cases, whites and blacks have longer mean survival times than Hispanics. Over the course of the epidemic, whites and blacks have a similar mean survival time of about 25 months (2.1 years). This is longer than the mean survival time of 23 months (1.9 years) seen in Hispanics but this difference is not significant.

The longest survival times are seen in whites (178 months, 14.8 years) followed by Hispanics (165 months, 13.8 years) and blacks (153 months, 12.8). In recent time periods, 1995-1999 and 2000-2004, maximum survival times have been similar. The true length of survival may be difficult to calculate, in part, because of a small number of cases who are not diagnosed with AIDS until their disease is advanced. For example, an opportunistic infection causing death may be the first indication for an AIDS diagnosis.

It is important to remember that only information on those cases who have died is presented in Table 10. Each subsequent time interval contains a smaller proportion of those diagnosed because each time interval has a smaller proportion of deceased cases. In addition, each subsequent time period will have fewer months available from diagnosis to death. Those diagnosed in 1985-1989 have up to 240 months, in 1990-1995 up to 180 months and so on. For this reason and because each race/ethnicity group has individuals who die soon after diagnosis, data for 2000-2004 should be interpreted with caution. Not until similar lengths of time have past will this last 5-year interval be comparable to the previous intervals.

Average length of survival to date in

those AIDS cases who have not died is longer than in those who have died. The mean survival in years in blacks who were alive in 2004 is 6.1 years. This is statistically significantly lower than the 7.1 years mean of survival seen in whites ($p < 0.001$), but not significantly different from the 5.8 mean years of survival in Hispanics ($p = 0.267$). When all survival times are included, those who have died and those who were alive in 2004, no significant difference is seen in mean survival time among the racial/ethnicity groups.

The length of survival in each racial/ethnic groups is also longer in those diagnosed after 1993 when the AIDS case definition was changed to include lowered CD4 counts or percentages. This case definition change meant AIDS could be diagnosed earlier in the course of the disease and, in combination with more therapy options, contributed to increased survival time.

LIMITATIONS

The data contained in this report is dependent on accurate reporting from health-care providers, laboratories and patients. Patients, for many reasons, may not wish to provide accurate information to their health-care providers for reporting. Healthcare providers may not provide complete information or data entry errors may occur. These inaccuracies may impact analysis.

Caution should be exercised in the analysis of the most recent time period because additional cases are likely to be reported over time. Retrospective case finding will continue and it is expected that cases diagnosed in 2004 will be reported in 2005 and into 2006.

Case reports are also updated as new information becomes available. When, for example, more information on risks is obtained the database is updated and this may impact proportions and rates used in analysis.

Some of the variables under study do not have sufficient numbers of occurrences to make statistical inferences. It is the policy of the County of San Diego, Health and Human Service Agency not to report fewer than five individuals for any given variable, and when small numbers are presented, caution should be exercised in the interpretation of data presented. This is particularly true for pediatric AIDS cases.

In 1993 the AIDS case definition was modified by the CDC to include those HIV positive patients in whom the CD₄ absolute count dropped below 200 or in whom the per-

cent of CD₄ cells fell below 14%. This increased the number of cases substantially and allowed for the identification of cases earlier in their disease progress. It is probable that this has increased both the number of surviving cases and the length of their survival from diagnosis to death.

Whenever possible, case information is updated as to vital status of cases. However, it is possible that some cases may have died but the death not reported to the HIV/AIDS Epidemiology Unit. Some of these cases may have left the area or state and died. This may result in inaccurate assumptions and survival calculations.

SUMMARY

Blacks have the highest rate of AIDS in the County of San Diego: 48 per 100,000 in 2003.

Blacks are over represented in the local AIDS epidemic in comparison to other racial/ethnic groups.

While women make up a relatively small percentage of individuals diagnosed with AIDS in the County of San Diego, blacks have the highest proportion of cases diagnosed in women.

Black AIDS cases are, on average, slightly younger than whites and older than Hispanics at the time of diagnosis; they are most frequently 30-39 years of age at the time of diagnosis.

Blacks have a smaller proportion of AIDS cases in Men who have Sex with Men (MSM) and a larger proportion of cases diagnosed in injecting drug users (IDU) and heterosexuals than other racial/ethnic groups.

About 48% of blacks diagnosed with AIDS locally were alive in 2004, with an average age of 43 years.

The average age at death since 1985 for black AIDS cases is 39 years, while whites were slightly older and Hispanics slightly younger. In recent years, the age at death in black AIDS cases has increased to 44 years.

DATA SOURCES:

County of San Diego, HIV/AIDS Epidemiology Unit database and Annual Report, SANDAG population estimates, *HIV/AIDS Surveillance Report, 2003* (Vol. 15), Centers for Disease Control and Prevention *Profiles of General Demographic Characteristics, 2000*, US Dept of Commerce