

AIDS IN HISPANICS

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 groups are whites, Hispanics and blacks. Hispanics have the second largest number of cases, following whites, and the second highest rate of AIDS, following blacks, in both men and women. Some similarities across racial/ethnic groups include: most frequent age of diagnosis in the 30s, more men than women diagnosed, most frequent mode of transmission in men is MSM, most common mode of transmission is heterosexual contact for women, and most frequent place of diagnosis is the hospital setting.

One important difference between the racial/ethnic groups is country of origin; the majority of Hispanic cases were born outside the United States, most commonly in Mexico. Hispanics are also younger at the time of their diagnosis and this may impact the direction of prevention practices.

AIDS DATA SUMMARY

The first Hispanic resident with AIDS in the County of San Diego was diagnosed in 1983. Cumulatively, Hispanics have made up 22% of all those diagnosed with AIDS in the County and this group has had the second

highest number of cases diagnosed each year following whites. The proportion of Hispanic cases has increased each year since 1992 to the current proportion of more than one one-third (37% in 2004). Hispanics constitute a little more than a quarter of the population of the County of San Diego (28% in 2004). About 12.5% of the United States (US) population is Hispanic.

Table 1 presents the total population of the County and the number of AIDS cases diagnosed from 1999 to 2004, and the proportion of Hispanics in both. The proportion of AIDS cases diagnosed in Hispanics in this time period (1999-2004) has been consistently about one-third higher than the proportion of Hispanics in the general population. The proportion of Hispanics in the US population (12.5% in 2000) is lower than in the County of San Diego (27% in 2000).

Whites have had the largest number of AIDS cases in the County of San Diego each year, but Hispanics have had a higher rate of AIDS than whites since the mid-1990s. This rate, measured per 100,000 persons, more accurately reflects the relative disease burden in each group. The rate of AIDS in Hispanics is 50-75% higher than of whites, but about half that seen in blacks (see Table 2 and Figure 1). Unlike the proportion of cases in His-

TABLE 1
Proportion of Hispanics in the County of San Diego Population and Among Local AIDS Cases, 1999-2004.

Year	San Diego County		AIDS Cases	
	Estimated population	% Hispanic	Diagnosed	% Hispanic
1999	2,751,000	25	447	34
2000	2,813,833	27	458	36
2001	2,856,000	27	433	33
2002	2,908,505	28	434	32
2003	2,961,579	28	419	37
2004	3,014,204	28	378	37

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.

Rates are per 100,000 population.

panics, the rate of AIDS diagnoses in Hispanics in 2003 (18 per 100,000) in San Diego County is lower than the US rate (26.8 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 of cases in this racial/ethnicity group.

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 the past four years are presented in Table 3. The AIDS case rate in Hispanic males is about twenty-five percent greater than the rate in white males, but about half that seen in black males.

FIGURE 1

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

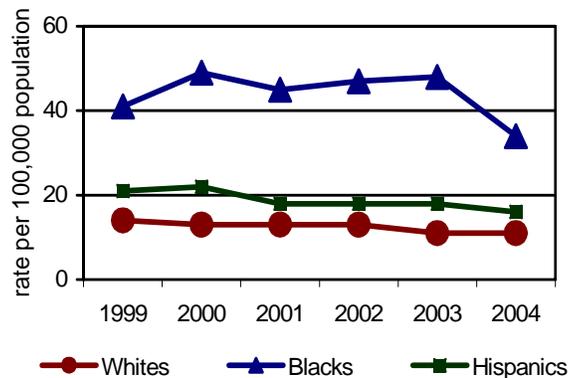


TABLE 3

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

Rate per 100,000 population.

TABLE 4
Proportion of AIDS Cases in White, Black, and Hispanic Females, County of San Diego, in Five-Year Time Periods.

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

The proportion of female AIDS cases in Hispanics is more than twice that seen in whites, but less than half of that seen in black females. In each time period presented in Table 4, the proportion of females in Hispanic cases is statistically significantly greater than the proportion seen in whites and statistically significantly lower than the proportion seen in blacks (see Figure 2). Over the course of the epidemic, the proportion of females in Hispanic AIDS cases is twice that seen in whites and one-third lower than seen in blacks. In recent years (2000-2004), the proportion of female cases in Hispanics is almost twice that seen in whites with less difference between blacks and Hispanics. The proportion of female Hispanic,

white, and black cases in San Diego County in recent years (2000-2004) is about half of the CDC's national estimate for 2003.

The proportion of females in all AIDS cases has increased significantly ($p < 0.001$) over 5-year time periods. This increase is also seen over 5-year time periods when looking at Hispanics ($p < 0.001$), whites ($p < 0.001$), and blacks ($p = 0.033$) (see Table 4).

AGE AT DIAGNOSIS

Of cumulative AIDS cases in Hispanics, the mean age at diagnosis is 35.8 years which is significantly younger than in whites (38.7 years, $p < 0.001$) and blacks (36.9 years, $p = 0.005$) (see Table 5). In recent years, 2000-2004, Hispanics have remained significantly

FIGURE 2
Percentage of White, Black, and Hispanic Women Diagnosed with AIDS in the County of San Diego, in Five-Year Time Periods.

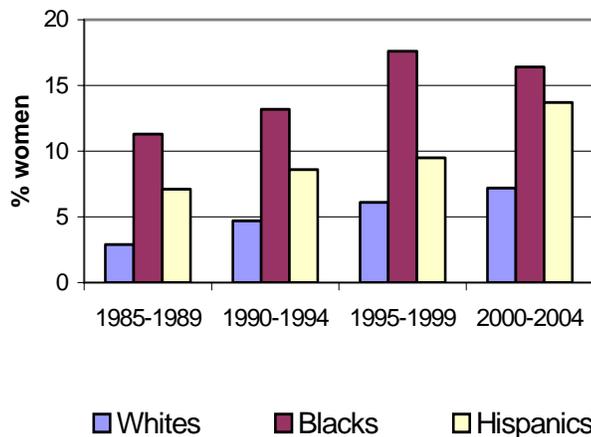


TABLE 5

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

younger at diagnosis than whites ($p=0.002$) but not younger than blacks ($p=0.375$).

Over time, the mean age at diagnosis has increased in all racial/ethnic groups, but has remained in the 30-39 year age range. Cumulatively, Hispanics have a significantly higher proportion of cases in the 20-29 year age group than either whites ($p<0.001$) or blacks ($p<0.001$) (see Figure 3) reflecting their overall younger age at diagnosis.

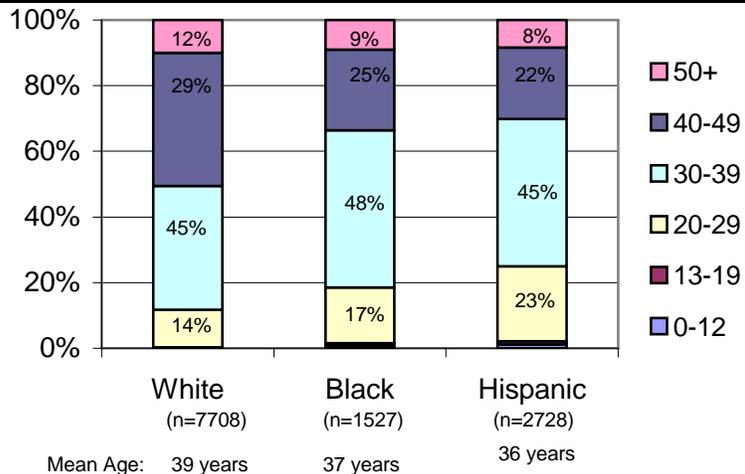
While the number of cumulative pediatric cases (diagnosis in those 12 years of age and younger) is similar for blacks and whites, the number seen in Hispanics is more than twice that seen in the other racial/ethnic groups. In addition, the

proportion of pediatric cases in Hispanics (1.2%) is fifty percent higher than in blacks (0.8%) and six times that seen in whites (0.2%). Small numbers of pediatric cases mean that the significance of these differences cannot be determined and these data should be interpreted with caution.

CURRENT AGE

About half (48%) of the individuals who were diagnosed with AIDS in the County of San Diego were deceased by 12/31/04. Among Hispanic cases alive in 2004, the mean age was 41.1 years (see Table 6). Among those alive in 2004, Hispanics were

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



NOTE: Percentages for 0-12 and 13-19 age groups too small to appear on graphic.

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

significantly younger than whites ($p < 0.001$) and blacks ($p < 0.001$) reflecting their younger age at diagnosis.

AGE AT DEATH

About 42% of Hispanics diagnosed with AIDS in the County of San Diego had died by the end of 2004. The average age of death since 1985 in these cases is 39 years. Hispanics are, on average, somewhat younger than whites, but similar to blacks at time of death. In recent years (2000-2004), the average age at death for Hispanics has increased to 46 years. Unlike previous time periods, this age at death is still somewhat younger than whites but, older than blacks. 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 has significantly declined in whites over 5-year time periods, it has been stable in Hispanics with 77% of cases attributed to this mode of transmission. Injecting drug use (IDU) as a mode of transmission in men/adolescents has also been stable in Hispanics and blacks, but is significantly less common in Hispanic men/adolescents than black men/adolescents ($p < 0.001$). Over the course of the epidemic, a greater proportion of Hispanic men/adolescents report IDU as risk for transmission than whites ($p < 0.001$), but this is not seen in recent years (2000-2004). The proportion of Hispanic men/

TABLE 7

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

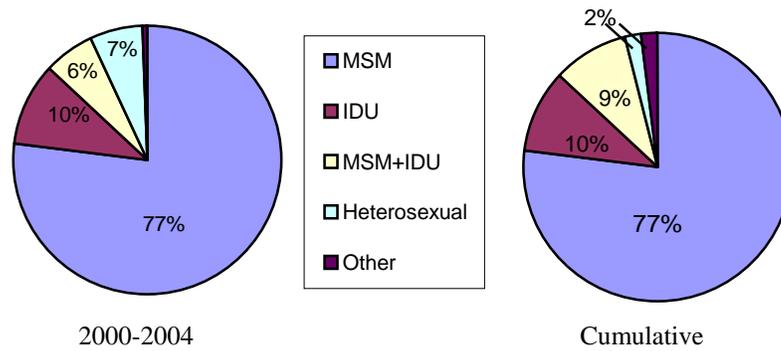
	White		Black		Hispanic	
	recent*	cumulative	recent*	cumulative	recent*	cumulative
MSM	74%	83%	67%	65%	77%	77%
IDU	9%	4%	17%	17%	10%	10%
MSM+IDU	13%	11%	9%	13%	6%	9%
Heterosexual	3%	1%	8%	4%	7%	2%
Other**	1%	1%	1%	1%	1%	2%
Total in group	892	7300	290	1287	633	2414

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

NOTE: Columns may not total 100% due to rounding.

FIGURE 4

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



adolescents with both MSM and IDU has decreased over time (see Figure 4), but this decrease is not significant. Heterosexual transmission for males has increased significantly over 5-year time intervals in blacks, whites, and Hispanics.

In recent years (2000-2004), the proportion of MSM in Hispanics (77%) is higher in San Diego County than the CDC 2003 national estimate (51%). The CDC estimates for IDU (30%) and heterosexual transmission (12%) in Hispanics were higher than the proportions seen in the County of San Diego (10% and 7% respectively).

In adult/adolescent women, heterosexual contact is the most commonly reported mode

of HIV transmission (Table 8). The proportion of cases in Hispanic women/adolescents listing heterosexual contact as mode of transmission has increased significantly ($p < 0.001$) over time and the proportion is significantly greater than that seen in whites ($p < 0.001$) and blacks ($p < 0.001$). The proportion of IDU in Hispanic adult/adolescent women has not decreased significantly over time, but is significantly lower than that seen in whites ($p < 0.001$) and blacks ($p = 0.043$) in recent years. The CDC 2003 national estimates for the proportion of AIDS cases in Hispanic women reporting heterosexual transmission (65%) is lower than that seen in the County of San Diego in recent years (75%), while the CDC

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.

estimate for IDU (33%) is higher than that seen in the County (21%).

COUNTRY OF ORIGIN

More than half (57%) of Hispanics diagnosed with AIDS in San Diego County were born outside of US territory (Table 9). This is in contrast to whites and blacks of whom more than 95% were born in the US or its dependencies. The majority of Hispanic cases (52.1%) were born in Mexico. Less common countries of origin include Cuba, Colombia, Guatemala, Honduras, Panama, Brazil, and Costa Rica which collectively account for 3.3% of cases.

There are differences between Hispanic AIDS cases born in the US and foreign-born Hispanic AIDS cases. Those born outside of the US are, on average, significantly older at diagnosis than those born in the US (36.3 years vs. 35.1 years, $p < 0.001$). Foreign-born Hispanic AIDS cases also have less time from first reported HIV diagnosis to AIDS diagnosis (1.7 years vs. 2.2 years, $p < 0.001$) and months of survival from AIDS diagnosis to death (19.6 vs. 27.4, $p < 0.001$) than US-born Hispanic cases.

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 a

resident in the US. For example, a case born outside the US may have lived in the US for all but a few months of his or her life. It is therefore not possible to assess how being born outside the US, or time for acculturation, impacts risk factors for disease or transmission.

RESIDENCE AT DIAGNOSIS

The majority (62.4%) of Hispanics diagnosed with AIDS in the County of San Diego were living in the city of San Diego at the time of their diagnosis. This proportion living in the city of San Diego is significantly lower than that seen in whites (76.4%, $p < 0.001$) and in blacks (81.9%, $p < 0.001$). In addition to the city of San Diego, 23% of Hispanics lived in Chula Vista, San Ysidro, National City, Oceanside, or Escondido at the time of diagnosis. The city of San Diego encompasses a wide geographic area, extending outward from the Health and Human Services Agency (HHSA) Central Region. Almost half of Hispanic cases were living in the Central Region at the time of their diagnosis, compared to 60% of whites and 70% of blacks. Twenty-five percent of Hispanic cases lived in the South Region at the time of diagnosis where they comprised almost 60% of cases in this region—the only region with a non-white majority of cases. The East Re-

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.

gion had about 6% of all Hispanic cases, while the North Central, Coastal, and Inland Regions had 5-8% of Hispanic cases each.

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 health department. Individual cases are reported from hospitals, private medical offices, public clinics, prisons, and other locations. In all racial/ethnicity groups, more AIDS diagnoses have been made in the inpatient or outpatient hospital setting than in any other setting. Cumulatively, a smaller proportion of Hispanics (44%) were diagnosed in the hospital setting than whites (46%) or blacks (58%). A significantly larger proportion of Hispanics (20%) was diagnosed in HIV clinics than whites (12%; $p < 0.001$) or blacks (13%, $p < 0.001$). A smaller proportion of Hispanics (20%) than whites (27%) were diagnosed by private medical providers or HMOs. The proportion of Hispanics diagnosed in this setting is higher than that seen in blacks (15%). A similar pattern is seen in recent cases (2000-2004). A significantly greater ($p < 0.001$) proportion of Hispanics (1.7%) was diagnosed in a correctional facility when compared to whites (0.6%). The proportion of Hispanics diagnosed in a correctional facility was not significantly ($p = 0.150$) different from that seen in blacks (2.4%). These differences should be interpreted with caution because of the relatively small number of cases diagnosed in correctional facilities.

SURVIVAL

Table 10 presents the times from AIDS diagnosis to death of deceased whites, blacks, and Hispanics 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.

Over 5-year time periods whites, blacks, and Hispanics have similar lengths of survival (see Table 10), with no significant differences between the racial/ethnic groups. The proportions of deceased cases in each diagnosis time period also did not differ between the racial/ethnic groups. Of those who have died 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.

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 period	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 period	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 period	238	862	863	735
	percent deceased	91%	70%	27%	11%

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

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 cases who have died. 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.

In those cases alive in 2004, the mean survival in years for Hispanics is 5.8 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 6.1 mean years of survival in blacks ($p = 0.267$).

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, contrib-

utes 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. When small numbers are presented, caution should be exercised in the interpretation of data presented. This is particularly true for pediatric AIDS cases and, to a lesser extent, those diagnosed while in a correctional facility.

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 percent 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 County or state and died. This may result in inaccurate assumptions and survival calculations.

The County has a higher proportion of Hispanics and a lower proportion of blacks than do many states, the US, and even some other counties within California. These racial/ethnic demographic differences make comparisons of the County of San Diego to the nation as a whole, and to other counties and states, difficult and must be taken into account when discussing the impact of the AIDS epidemic on the County of San Diego.

SUMMARY

Hispanics have the second highest rate of AIDS in the County of San Diego: 16 per 100,000 in 2004.

Hispanics are somewhat over represented in the local AIDS epidemic.

While women make up a relatively small percentage of individuals diagnosed with AIDS in the County of San Diego, the proportion of female cases among Hispanics is twice that seen in whites.

Cases in Hispanics are, on average, younger than whites and blacks at the time of diagnosis, but, like whites and blacks, they are most frequently in the 30-39 years age group at the time of diagnosis.

Men who have Sex with Men (MSM) is the most common mode of transmission in Hispanic males cases while Hispanic female cases are most likely to report heterosexual transmission. Hispanic female cases are less likely to report injecting drug use (IDU) than females of other racial/ethnic groups.

About 58% of Hispanics diagnosed with AIDS locally were alive in 2004, with a mean age of 41 years.

The average age at death since 1985 in Hispanic cases is 39 years. In recent years (2000-2004), this age has increased to almost 46 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