

# ***Epidemiologic Profile***



HIV/AIDS

*in*

**San Luis Obispo County,  
CA**

**San Luis Obispo County Public Health Department  
AIDS Program**

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# San Luis Obispo County Public Health Department

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## Introduction

This report is an Epidemiologic Profile of HIV/AIDS in San Luis Obispo County (SLOC), California. It covers the AIDS epidemic in SLOC from its beginning in 1984 through June 2005. The report attempts to describe HIV and AIDS in terms of its occurrence, transmission, and impact. The goal in providing this information is to help community-based organizations, planners, and policy-makers in evaluating and implementing the programs and policies involving HIV/AIDS in the county.

In compiling this report, the SLOC Public Health Department follows guidelines suggested by the Centers for Disease Control and Prevention (CDC) to develop an Epidemiologic Profile for HIV prevention and community planning. The three key components of the profile are:

1. What are the sociodemographic characteristics of the population?
2. What is the impact of HIV/AIDS on the population?
3. Who is at risk for becoming infected with HIV?

Due to the relatively small population of San Luis Obispo County, and the correspondingly small numbers of HIV/AIDS cases throughout the County, geographic distribution of cases will not be discussed.

It is important to understand some key concepts when reporting on HIV/AIDS. Incident cases are those that are newly occurring, in other words, cases just discovered. Prevalent cases are those existing at any given time in the County. For example, there might be 15 incident cases of HIV/AIDS per year in a county, but 200 prevalent cases. The prevalent cases would be a combination of the newly occurring cases, and those already existing within the community. The prevalence of HIV has increased since 1996 with the introduction of Highly Active Anti-retroviral Therapy (HAART). HAART treatment helps halt the replication of the HIV virus in the body and kill existing virus in the body, thereby decreasing viral load and slowing the progression to AIDS for those with HIV infection. Before 1996, an estimate of newly occurring HIV infection could be made from back-calculation of mortality rates due to AIDS. Since then, the numbers of AIDS cases and AIDS mortality rates have fallen dramatically due to HAART. All estimates of new HIV infection today are less reliable than prior to the introduction of HAART, but the CDC estimates that approximately 40,000 new cases of HIV infection occur per year in the United States. As of July 2002, HIV infection became a reportable condition in California. Previously, only AIDS was reportable. Actual reporting by physicians however, is highly variable. Because HIV has only been reportable for a relatively short period of time, data may be misleading. HIV statistics, although presented in this report, most likely represent an under-reporting of the true burden of HIV morbidity within the County.

## Data Sources and Limitations

When reviewing this report, please keep in mind the following:

1. The data included reflects only those HIV/AIDS cases reported to the SLOC Public Health Department AIDS Program, by private physicians, laboratories, and State Institutions. It is not considered reflective of the total number of cases of HIV and/or AIDS, as there are undetected and unreported cases in the community. The data only reflects current reporting practices.
2. As a result of the distinct differences in community vs. institutional reported cases, where possible, the data in this report is separated out into institution vs. community cases. State statistics regarding cumulative AIDS incidence within the County for all cases of AIDS, both institutional and community, use a denominator of the County's population, not incarcerated persons. To remain consistent with the State statistics, the County's population is used when calculating Cumulative Incidence rates, not the County's incarcerated population. Going forward, prevalence will be the measure used to describe the burden of HIV/AIDS within the county.
3. HIV reporting in the State and County is not as representative of the total HIV+ population as is AIDS reporting for the AIDS population. The CDC estimates that at least one-third of persons in the US infected with the HIV virus are unaware of their infection, as they have not been tested.
4. HIV/AIDS cases are counted in the County and State of residence at the time of diagnosis. Therefore, SLOC figures do not reflect HIV/AIDS cases diagnosed out of this County who subsequently moved to SLOC.
5. Due to confidentiality issues, when a category of persons being reported would result in a small number of cases, categories were collapsed to protect confidentiality. For example, some racial categories were collapsed to "Other" in tables. This condensation of data is done to protect confidentiality only, and is not meant to show any greater or lesser significance placed on any demographic or geographic group.
6. The diagnostic criteria for reporting AIDS has changed several times during the course of the epidemic, and as a consequence, trends in reporting have changed over time. Specifically, changes in 1985, 1987 and 1993 led to increases in the number of cases being reported. Thus, increases in AIDS rates subsequent to those years did not necessarily reflect an increase in transmission of the virus, merely diagnosis.

7. HIV reporting since July of 2002 is not considered a true reflection of incident cases of HIV. Many of the cases reported since HIV became a reportable condition are reflective of the prevalent cases within the community. Once more data is available, better projections regarding HIV incidence within the County can be made.
8. Some numbers of reported cases and deaths by year has changed since the 2003 edition of this report. These changes are in large part due to a comprehensive review by the State of California of all AIDS cases and deaths by jurisdiction, which has resulted in a re-allocation of some cases and deaths by jurisdiction. The overall changes resulted in fewer than 10 changes by year of cases or deaths by year.

## Demographic Characteristics of San Luis Obispo County

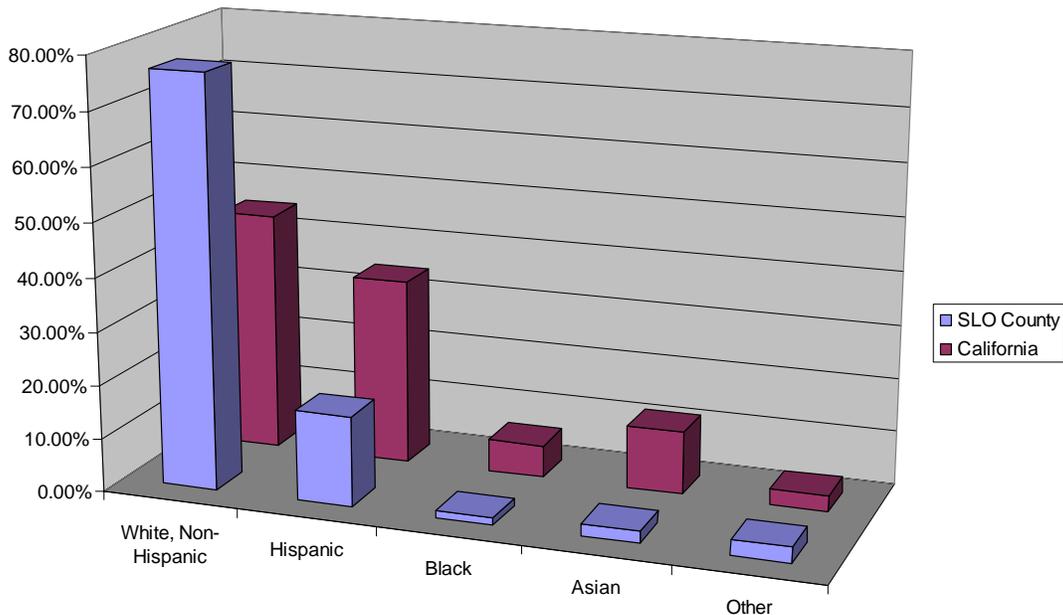
SLOC is located on the Central Coast of California, approximately 230 miles south of San Francisco and 200 miles north of Los Angeles. The County covers 3,316 square miles, and according to the California Department of Finance estimates, has a population of 260,727 as of January 2005, which represents a 1.0% increase from 2004<sup>1</sup>. San Luis Obispo ranks 35<sup>th</sup> out of 58 counties in population size, that is, 34 counties have smaller populations than SLOC. The population density according to the 2000 Census is 76 persons per square mile, but much of the population is in distinct clusters, primarily along the main north-south highway running through the County (US 101). The population grew approximately 13.6% between 1990 and 2000. The majority of the County is agricultural, with 61.6% of the land area devoted to farming.

According to the 2003 American Community Survey (ACS), SLOC has a population that is 76.8% white, 16.8% Hispanic, 1.2% African-American, 2.3% Asian, and 2.9% comprised of other categories, including Native American, Alaskan Native and Pacific Islander. 15% of the population is above the age of 65, while approximately 35% is below the age of 24. The median family income is \$45,412, which is slightly lower than the California median income of \$50,220. According to the National Association of Homebuilders Housing Opportunity Index of 2004, SLOC is one of the 25 least affordable metro areas in the United States. It is estimated that 12.4% of the County's population below the age of 18 live below the poverty level, as compared to 19% statewide<sup>2</sup>.

The demographic distribution of SLOC differs from the state. Although gender distribution is similar between county and state, the racial and age demographics vary. SLOC has a considerably more homogeneous racial make-up than the state, with over three-fourths of the County's population classifying themselves as white, non-hispanic, according to the 2003 ACS (See Figure 1). The County has also attracted a significant retirement population, with almost one-fourth of the population 55 years or older. California as a whole has a slightly younger population distribution.

Figure 1

County vs. State % Population by Race



SLOC's economy is considered strong, with an average unemployment rate per year of 4.3%, and a rate of 3.8% for the month of April 2005<sup>3</sup>. The government is the County's largest employer (Federal, State and local), followed by PG &E and healthcare organizations. The County has several large institutions, which contribute to area employment, including California Polytechnic State University (CPSU), California Men's Colony (CMC), Atascadero State Hospital (ASH), Diablo Canyon Nuclear Power Plant, and two military sites. The economy is also dependent on tourism, a major industry in the region. The County is home to over 80 vineyards and other agricultural concerns. Overall, there is a strong mix of civil service, private industry and agriculture contributing to the economic and demographic makeup of the County. The education system is also strong, although there has been a decline in enrollment over the past few years. For the 2004-05 year, 36,361 students were enrolled in public schools in SLOC. This shows a decline from the 2000-01 school year when 37,693 students were enrolled. The high school dropout rate for the County is 8.9%, which is lower than the state rate (13.3%). Some of the demographic characteristics of the County are detailed in Table 1.1.

Table 1.1  
San Luis Obispo County Population by Gender, Race and Age\* #

San Luis Obispo County Population by Gender, Race and Age			California Population by Gender, Race and Age	
Description	Number	% of Population		% of Population
<b>Gender</b>				
Male	117,024	49.22%		49.60%
Female	120,733	50.78%		50.40%
<b>Race</b>				
White, Non-Hispanic	182,502	76.76%		44.80%
Hispanic	40,004	16.83%		34.60%
Black	2,935	1.23%		6.00%
Asian	5,531	2.33%		11.70%
Other	6,785	2.85%		2.90%
<b>Age</b>				
<5	11,932	5.02%		7.30%
5-14	28,434	11.96%		15.40%
15-24	40,091	16.86%		13.90%
25-34	29,565	12.43%		14.80%
35-44	30,536	12.84%		15.80%
45-54	35,759	15.04%		13.60%
55-64	27,544	11.58%		8.90%
65+	33,896	14.26%		10.30%
<b>Total</b>	<b>237,757</b>	<b>99.99%</b>		<b>100.00%</b>

\* Source: 2003 American Community Survey

# There is a large discrepancy between the Department of Finance's estimate for overall county population and the 2003 American Community Survey's overall population, which is partially explained by the fact that the American Community survey is limited to the household population and excludes the population living in institutions, college dormitories, and other group quarters.

Although the population density is 76 persons per square mile, most of the population lives in several large cities or unincorporated regions, the largest of which is the County seat, the city of San Luis Obispo. The 7 largest population centers are shown in Table 1.2.

The County has four hospitals, two of which are located within the city of San Luis Obispo. One hospital is located in Templeton, which serves the majority of the North County population, and a fourth hospital is located in Arroyo Grande, in South County, where there is a large cluster of retired persons. According to the 2003 California Health Interview Survey (CHIS), 88.6% of the population has health insurance. In addition, according to the 2003 Action for Healthy Communities Comprehensive Report, about 5.7% has Medi-Cal, Medicare or VA coverage.

Table 1.2 Population Estimates by City and Region Tracked by California Department of Finance January 2005

<b>Population by City/Region</b>		
<b>City/Region</b>	<b>Number</b>	<b>% of Population</b>
San Luis Obispo	44,519	17.07%
<b>North County</b>		
Paso Robles	27,964	10.73%
Atascadero	27,596	10.58%
<b>South County</b>		
Arroyo Grande	16,537	6.34%
Grover Beach	13,228	5.07%
Pismo Beach	8,644	3.32%
<b>North Coast</b>		
Morro Bay	10,511	4.03%
Balance of County	111,728	42.85%
<b>Total</b>	<b>260,727</b>	<b>99.99%</b>

## AIDS in San Luis Obispo

The first case of AIDS in SLOC was reported in 1984. By June 1997, 405 cases had been reported, and to date, 542 cases have been reported. This represents an increase from 175.12 cases per 100,000 in 1998, to an overall cumulative incidence rate (CIR) of 216.1 per 100,000 as of July 1, 2004. Cumulative Incidence, by definition, is a measure of cases occurring over time, and thus will always increase, as long as an epidemic continues. Starting in November 2004, the California Department of Health Services began describing the HIV/AIDS epidemic in terms of prevalence rather than the previously utilized CIR. The measure of prevalence helps us better understand the current impact of HIV/AIDS in our community, as prevalence describes the current number of people living with HIV/AIDS in a community versus the total number of persons who have contracted the disease since the beginning of the epidemic. Although, CIR data is still in this report it is taken from previous year's data only. Beginning with this year's report prevalence will be reported. Table 2.1 shows the CIR for SLOC and selected comparison populations.

Table 2.1 AIDS Case Cumulative Incidence Rates for Selected Populations

	Incidence Rate (per 100,000) through May 1999	Incidence Rate (per 100,000) through May 31, 2004
California	337.7	400.4
San Luis Obispo (all cases) <sup>1</sup>	170.1	216.1
SLO Institutional <sup>2</sup>		112.5
SLO Community		102.9
Santa Barbara County	150.4	181.8
Monterey County	187.2	213.8

Source: California Dept. Of Health Services, Office of AIDS, HIV/AIDS Surveillance Report and San Luis Obispo County AIDS Program

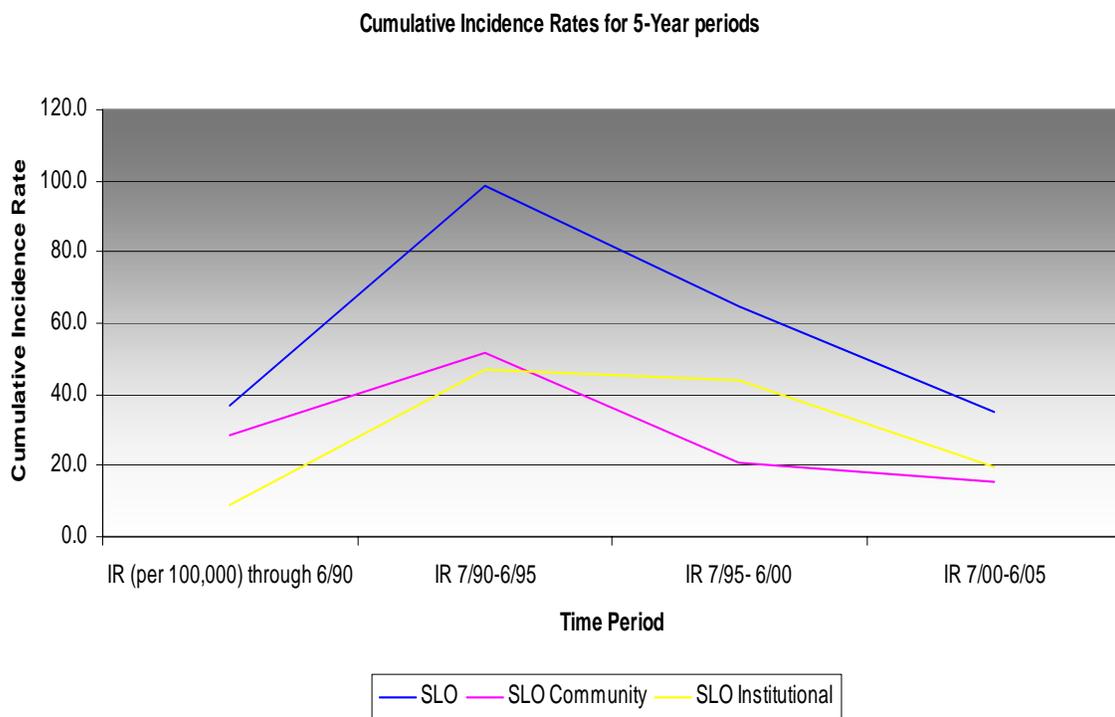
<sup>1</sup> All cases in San Luis Obispo County, both community and institutional

<sup>2</sup> The institutional population IR uses a denominator of the overall population of San Luis Obispo County, not solely the institutionalized population

The large incarcerated populations of SLOC have greatly increased the overall number of HIV/AIDS cases in the County. SLOC is home to three State institutions: CMC (estimated population 6,000), ASH (estimated population 1,290 people) and Paso de Robles Boys School. While the CIR for the community population is 102.9, the institutional population has a CIR of 112.5, (which is based on the County's overall population). Between 1999 and 2004, the CIR for SLOC rose by 46 cases per 100,000. This is more than the increase in the neighboring counties of Santa Barbara and Monterey (31.4 and 26.8, respectively), but less than the statewide increase of (62.7). Since the CIR for institutional patients is higher than that of the community cases, this leads to the conclusion that the institutional population skews the overall numbers of HIV/AIDS in SLOC higher, explaining why our increase is greater than neighboring counties. The number of new HIV cases occurring per year has been hypothesized to have remained steady from 1999 to 2005.

In order to gather a more accurate picture of the frequency of AIDS cases occurring, a CIR of AIDS was calculated for five-year periods throughout the epidemic, and the data is presented in Figure 2.1. This graph shows that the five-year period CIRs for AIDS increased rapidly in the beginning of the AIDS epidemic, but has been slowing as a result of the introduction of HAART therapy, most dramatically in the community population. In this graph, trends in AIDS incidence can be seen going up until 1998, but after HAART therapy, AIDS incidence has been falling. AIDS incidence is no longer temporally correlated with HIV infection, so no direct conclusions can be drawn about present day HIV infection. The CDC however, has estimated that incident HIV infections per year have remained somewhat steady throughout the 1990s and into the new millennium, with approximately 40,000 new infections every year.

Figure 2.1



Tables 2.2 shows the prevalence rates for SLOC and selected comparison populations. While the prevalence rate for the community population is 42.2, the prevalence rate for the institutional population is 73.3. This suggests that the institutional population causes the overall numbers of HIV/AIDS in SLOC to be higher, which is consistent with the conclusions drawn from the CIR data. Once again, HIV/AIDS rates in SLOC are seen to be higher than neighboring counties, which can be explained by SLOC's high institutional population in comparison to those neighboring counties. Overall, prevalence rates yield findings consistent with the conclusions drawn from CIRs.

Table 2.2 AIDS Case Prevalence Rates for Selected Populations

	Prevalence Rate (per 100,000) through June 30, 2005
California	159
San Luis Obispo (all cases) <sup>1</sup>	115.4
SLO Institutional <sup>2</sup>	42.2
SLO Community	73.3
Santa Barbara County	68
Monterey County	91

Source: California Dept. Of Health Services, Office of AIDS, HIV/AIDS Surveillance Report and San Luis Obispo County AIDS Program

1 All cases in San Luis Obispo County, both community and institutional

2 The institutional population prevalence rate uses a denominator of the overall population of San Luis Obispo County, not solely the institutionalized population

## Affected Populations

### *Race*

The ethnic distribution of AIDS in SLOC differs from the ethnic distribution of the population overall. Table 3.1 contains data showing the racial distribution of AIDS cases within the County. For instance, although African Americans represent only 1.2% of the population in San Luis Obispo, 27.1% of all AIDS cases in the County are African-Americans. This reflects trends in HIV/AIDS data, with African Americans representing the ethnic group with the highest rate of new cases. The majority of the African-American cases in San Luis Obispo County however, are occurring in the incarcerated population. In Figure 3.1, the racial distribution of AIDS cases for the State, SLOC Community and SLOC Institutional cases are shown. This figure demonstrates that the African-American Institutional population of SLOC is significantly over-represented as a percentage of overall AIDS cases, even when compared to the entire State population. By viewing both Table 3.1 and Figure 3.1, the difference in demographic distribution of cases between community and institutional cases can be easily ascertained. The ethnic distribution of AIDS in community cases more closely follows the overall ethnic distribution of the County.

Table 3.1 Racial breakdown of AIDS cases in San Luis Obispo County and California expressed as a percentage of cases

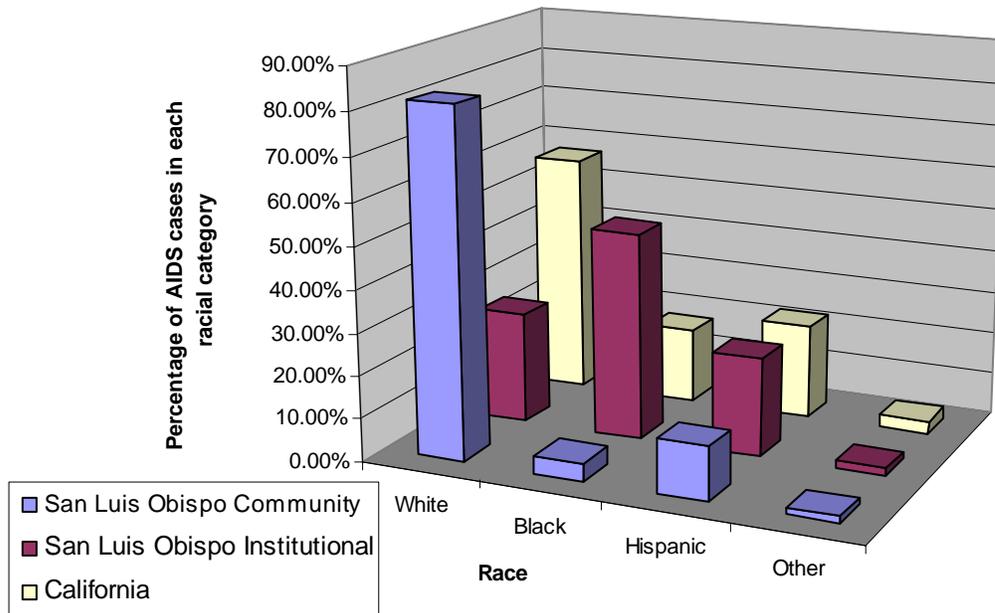
Race	San Luis Obispo (All cases) <sup>1</sup>	San Luis Obispo Community	San Luis Obispo Institutional	California
White	53.1%	81.8%	26.2%	57.0%
Black	27.1%	4.2%	48.8%	17.6%
Hispanic	18.1%	12.6%	23.3%	22.3%
Other	1.7%	1.5%	1.8%	3.1%

Source: California Dept. Of Health Services, Office of AIDS, AIDS Surveillance Report Cumulative Cases as of June 30th, 2005 and San Luis Obispo County AIDS Program

1. Representing the combined category of institutional and community cases

Figure 3.1

Racial breakdown of AIDS patients in San Luis Obispo County vs. all of California

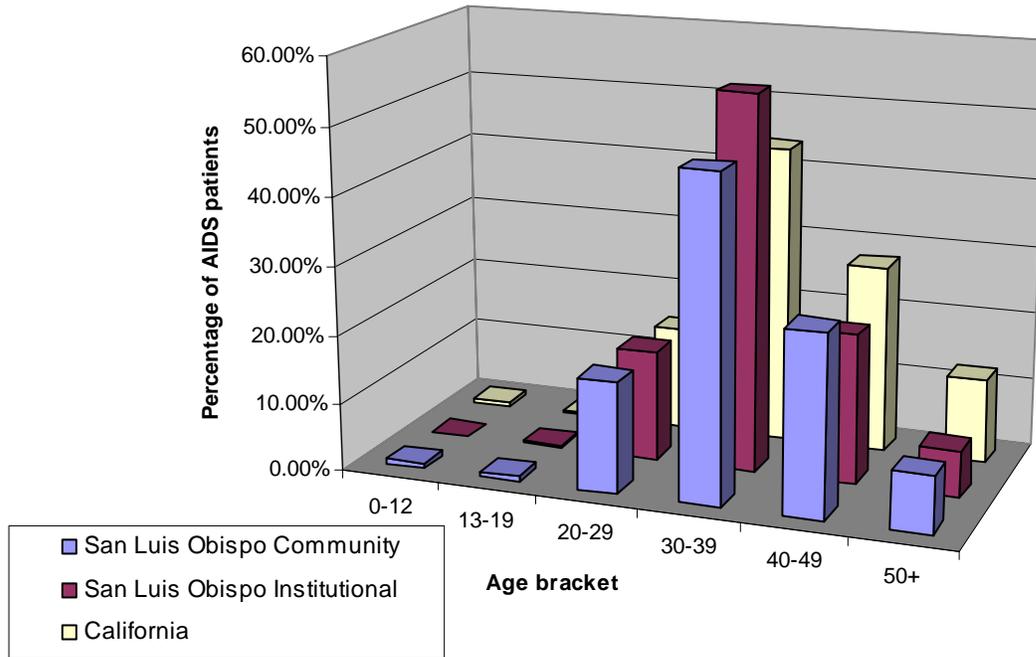


**Age**

The majority of AIDS cases within the County are diagnosed in 30-39 year olds, across all populations, including the San Luis Obispo Community, Institutional, and California population. Figure 3.2 shows a graph of the age distribution of AIDS patients in all three of these populations. It should be noted however that all cases in the institutional category are male, while the California and San Luis Obispo Community populations are comprised of both males and females.

Figure 3.2

Age at diagnosis of AIDS in San Luis Obispo County compared to California



**Gender**

Because SLOC has such a large, male-only institutional population, it is important to look at the community and institutional cases separately in order to truly understand the impact of AIDS on specific genders. In the SLOC community population, 235 males have been diagnosed with AIDS and 28 females. Thus, approximately 10.6% of community AIDS cases occur in females within the County, which is higher than the state rate of 8%. However, State statistics do not differentiate between community and institutionalized populations. Identified risks for HIV transmission vary by gender within the community, as shown in Table 3.2 below. For females, Heterosexual Contact is the largest risk factor (50.0%), followed by Intravenous Drug Use (IDU). For community males, men who have sex with men (MSM) is by far the highest risk category, followed by the combined MSM/IDU category.

In institutionalized males, the trends vary somewhat in that IDU is the highest risk factor for acquiring AIDS. These results are shown in Table 3.3. The next highest risk factors are MSM/IDU and MSM. The table shows that risks are more evenly distributed among the top three risks factors in the institutional cases, while in the community MSM is by far the greatest risk factor.

Table 3.2: Exposure categories\* by gender for all Community AIDS cases in San Luis Obispo County

Exposure / Mode of Transmission	Males (n = 235)		Females (n=28)	
	# of Cases	% of Cases	# of Cases	% of Cases
Male-to-male Sexual contact(MSM)	154	65.5%	0	0.0%
Injection drug use (IDU)	18	7.7%	10	35.7 %
MSM + IDU	46	19.6 %	0	0.0%
Hemophilia	3	1.3%	0	0.0%
Heterosexual Contact	3	1.3 %	14	50.0 %
Transfusion	3	1.3 %	2	7.1 %
Undetermined	8	3.4 %	1	3.6%
Mother at Risk	0	0.0%	1	3.6%
Total	235	100.1 %	28	100 %

Source: California Dept. Of Health Services, Office of AIDS, HIV/AIDS Surveillance Report and San Luis Obispo County AIDS Program

\*This list does not include all exposure categories. Categories with small numbers have been omitted.

Figure 3.3

Mode of Transmission for HIV/AIDS patients in San Luis Obispo and California

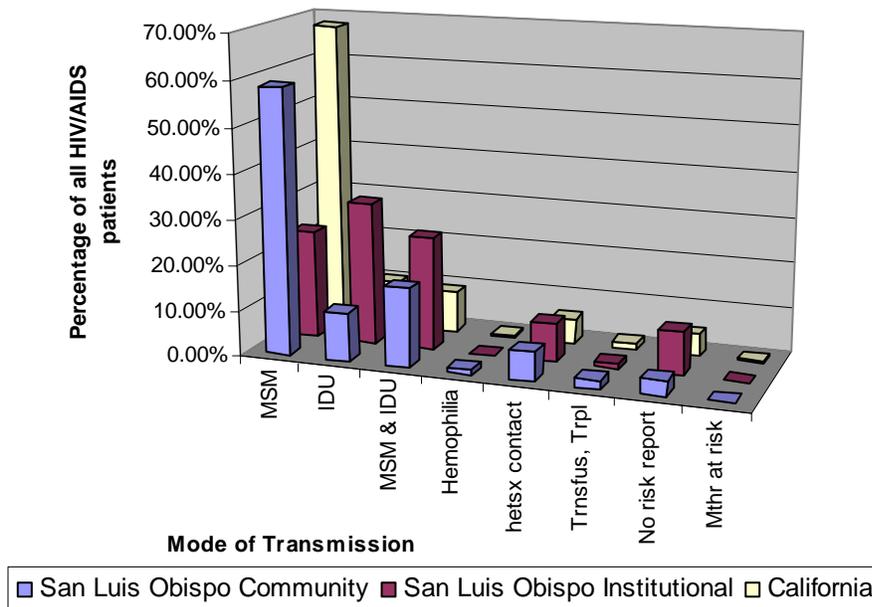


Table 3.3 Exposure categories for Institutional AIDS cases<sup>1</sup> in San Luis Obispo County

Exposure / Mode of Transmission	# of Cases	% of Cases
Male-to-male Sexual contact(MSM)	67	24.0%
Injection drug use (IDU)	88	31.5%
MSM + IDU	70	25.1%
Hemophilia	0	0.0%
Heterosexual Contact	24	8.6%
Transfusion	3	1.1 %
Undetermined	27	9.7%
Mother at Risk	0	0.0%
Total	279	100 %

Source: California Dept. Of Health Services, Office of AIDS, HIV/AIDS Surveillance Report and San Luis Obispo County AIDS Program

1. All institutional cases are males

Combining the MSM and MSM+IDU categories to reveal total risk to gay/bisexual men shows similar rates of exposure between SLOC cases and California cases at 85.1% and 84% of AIDS cases, respectively. For the institutional population, IDU is the greatest risk factor, with 31.5% of the cases reporting that as their only risk factor, but 56.6% reporting it as one of their possible risk factors. In the community, a combined 27.3 % of cases listed IDU as a risk.

### Deaths due to AIDS

Prior to the introduction of HAART, the AIDS case-fatality rate was very high, reaching 100% in some years. The case-fatality rate is the percentage of persons dying who have contracted a disease. As progression to AIDS has slowed, so has the case-fatality rate amongst AIDS patients. Table 3.4 shows the number of AIDS cases diagnosed by calendar year for both community and institutionalized cases, and the case-fatality rate by year. The total case-fatality rate is 45.1%. Note that the cumulative community case-fatality rate is 59.3%, which is somewhat higher than the cumulative institutional case-fatality rate of 31.9%. The explanation for this is not known, although loss to follow up within the prison system could account for some of the difference. The difference in access to care between Community and incarcerated populations could also be a factor.

When looking at the leading cause of death in SLOC, AIDS is not one of the 10 leading causes of death for the period of 1999-2005. Because coding for the classification of diseases changed in 1999, it is impossible to compare the years prior to 1999 to years occurring after. Thus, the snapshot we have now shows low AIDS mortality, but the case-fatality data in Table 3.4 shows that this was not always the case.

	Community Cases		Institutional Cases		Total Reported Cases and Deaths		Case Fatality Rate
	Cases	Deaths	Cases	Deaths	Cases	Deaths	
Year							
<b>1983-1989</b>	48	44	15	11	63	55	87.3%
<b>1990</b>	18	16	6	6	24	22	91.7%
<b>1991</b>	21	16	19	16	40	32	80.0%
<b>1992</b>	33	24	22	13	55	37	67.3%
<b>1993</b>	24	18	33	16	57	34	59.6%
<b>1994</b>	22	15	18	7	40	22	55.0%
<b>1995</b>	10	4	31	7	41	11	26.8%
<b>1996</b>	19	4	32	6	51	10	19.6%
<b>1997</b>	9	1	20	1	29	2	6.9%
<b>1998</b>	9	3	11	1	20	4	20.0%
<b>1999</b>	6	2	14	1	20	3	15.0%
<b>2000</b>	6	2	23	1	29	3	10.3%
<b>2001</b>	11	2	10	1	21	3	14.3%
<b>2002</b>	10	1	13	1	23	2	8.7%
<b>2003</b>	7	1	5	0	12	1	8.3%
<b>2004</b>	5	0	4	0	9	0	0.0%
<b>Total</b>	258	153	276	88	534	241	45.1%

Source: San Luis Obispo County AIDS Program

## **HIV in San Luis Obispo**

Since July 2002, when the reporting of HIV became mandatory in California, there have been a total of 141 reported cases of HIV in SLOC; however, this number cannot be considered an accurate representation of the total infected population of SLOC. There are several reasons for this: mandatory reporting has been a requirement for a very short period of time, this number doesn't include those diagnosed prior to moving into the county or those diagnosed here but have since left the county and the CDC estimated that up to one third of those infected with HIV are unaware of their infection. Below is a comparison chart of the prevalence of HIV in SLOC and other selected populations. Just as with AIDS, the high percent of the population housed in institutions skews the overall numbers of HIV in the population, making the numbers higher. Table 4.1 shows the prevalence rate for SLOC and selected comparison populations.

Table 4.1 HIV Case Prevalence Rates for Selected Populations

	Prevalence Rate (per 100,000) through June 30, 2005
California	103
San Luis Obispo (all cases) <sup>1</sup>	54.1
SLO Institutional <sup>2</sup>	28.8
SLO Community	25.3
Santa Barbara County	32
Monterey County	37

Source: California Dept. Of Health Services, Office of AIDS, HIV/AIDS Surveillance Report and San Luis Obispo County AIDS Program

1 All cases in San Luis Obispo County, both community and institutional

2 The institutional population IR uses a denominator of the overall population of San Luis Obispo County, not solely the institutionalized population

The large incarcerated population of SLOC, just as with AIDS, skews the overall numbers of HIV cases higher for the County. The prevalence rate is higher for the institutional population than the community and once again SLOC's overall prevalence is higher than neighboring counties. Yet, SLOC still remains well below the prevalence rate for California as a whole. As reporting of HIV continues, the degree to which HIV affects the County will become more apparent. With only a few years of data it is safe to say that the prevalence rate will rise with out intervention and change in risky behavior. The section on STD's explains how risky behavior factors into the spread of HIV.

## Affected Populations

### Race

Like AIDS, the ethnic distribution of HIV in SLOC differs from the ethnic distribution of the population overall. Table 4.2 shows the racial breakdown of HIV within the County as compared to California. The HIV data supports the trend that African-Americans represent the ethnic group with the highest rate of new cases. African-Americans only represent 1.2% of the population but 25.5% of all HIV cases in the County. The majority of these cases occur in the institutional population. In Figure 4, the racial distribution of AIDS cases for the State, SLOC Community and SLOC Institutional cases are shown. This figure demonstrates, that just like with the AIDS data, the African-American Institutional population of SLOC is significantly over-represented as a percentage of overall HIV cases, even when compared to the entire State population. The SLOC ethnic distribution for the community more closely fits the overall ethnic distribution of the County. The distribution of HIV among different races also matches the findings in the AIDS data.

Table 4.2 Racial breakdown of HIV cases in San Luis Obispo County and California expressed as a percentage of cases

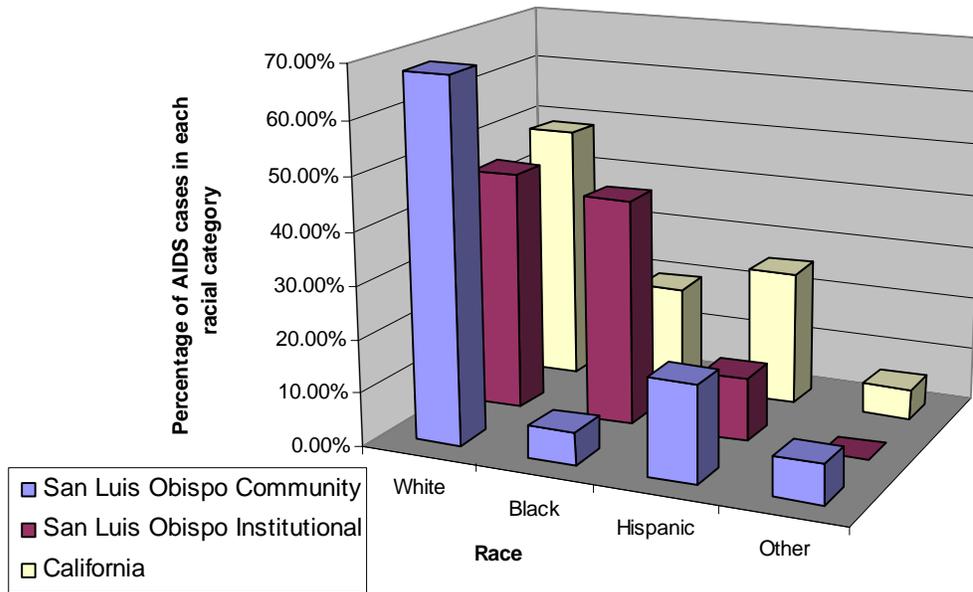
Race	San Luis Obispo (All cases) <sup>1</sup>	San Luis Obispo Community	San Luis Obispo Institutional	California
White	56.03%	68.18%	45.33%	48.74%
Black	25.53%	6.06%	42.67%	19.80%
Hispanic	14.89%	18.18%	12.00%	25.60%
Other	3.55%	7.58%	0.00%	5.86%

Source: California Dept. Of Health Services, Office of AIDS, AIDS Surveillance Report Cumulative Cases as of June 30th, 2005 and San Luis Obispo County AIDS Program

1. Representing the combined category of institutional and community cases

Figure 4.1

Racial breakdown of HIV patients in San Luis Obispo County vs. all of California



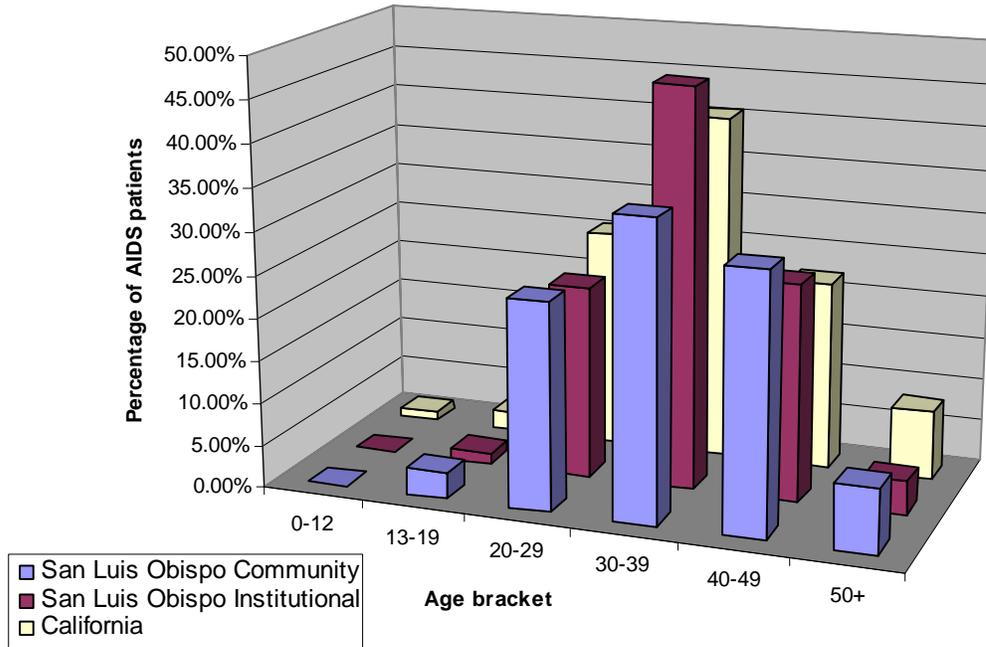
The distribution of HIV among different races also matches the findings in the AIDS data.

### Age

The majority of AIDS cases with the County are diagnosed in 30-39 year olds across both the institutional and community populations. Statewide, the same is true. Figure 4.2 shows a graph of the age distribution of HIV patients in all three of these populations. California and SLO community populations are comprised of both males and females, while the SLO institutional is only males.

Figure 4.2

Age at diagnosis of HIV in San Luis Obispo County compared to California



**Gender**

As previously mentioned, SLOC has such a large, male-only institutional population. This means it is necessary to look at community and institutional cases separately in order to see the actual impact of HIV on gender within the County. In the SLOC community population 35 males and 12 females have been diagnosed with HIV. Thus, 18.2% of community HIV cases occur in females, which like with AIDS data, is higher than the state rate of 14%. State statistics, unlike SLOC’s, are not separated into community and institutional categories. The identified risks for HIV transmission vary within the community, as shown in Table 4.3, below. Just like with the AIDS data, for females heterosexual contact is the largest risk factor (58.3%) followed by IDU and for community males it is MSM that is by far the highest risk factor at 64.8%.

In institutionalized males, the trends vary somewhat from the community male population. MSM/IDU is the highest risk factor followed by MSM. These results are shown in Table 4.4.

Table 4.3: Exposure categories\* by gender for all Community HIV cases in San Luis Obispo County

Exposure / Mode of Transmission	Males (n =54)		Females (n=12)	
	# of Cases	% of Cases	# of Cases	% of Cases
Male-to-male Sexual contact(MSM)	35	64.8%	0	0%
Injection drug use (IDU)	8	14.8%	4	33.3%
MSM + IDU	7	13.0%	0	0%
Hemophilia	0	0.0%	0	0%
Heterosexual Contact	2	3.7%	7	58.3%
Transfusion	1	1.9%	0	0%
Undetermined	1	1.9%	1	8.3%
Total	54		12	99.9%

Source: California Dept. Of Health Services, Office of AIDS, HIV/AIDS Surveillance Report and San Luis Obispo County AIDS Program

\*This list does not include all exposure categories. Categories with small numbers have been omitted.

Table 4.4 Exposure categories for Institutional HIV cases<sup>1</sup> in San Luis Obispo County

Exposure / Mode of Transmission	# of Cases	% of Cases
Male-to-male Sexual contact(MSM)	19	25.3%
Injection drug use (IDU)	16	21.3%
MSM + IDU	21	28.0%
Hemophilia	0	0.0%
Heterosexual Contact	9	12.0%
Transfusion	2	2.7%
Undetermined	8	10.7%
Total	75	100.0%

Source: California Dept. Of Health Services, Office of AIDS, HIV/AIDS Surveillance Report and San Luis Obispo County AIDS Program

2. All institutional cases are males

## HIV Testing and Seroprevalence

HIV testing in SLOC is offered both confidentially and anonymously. Confidential testing requires the testing individual to sign a consent to be tested, and the AIDS Program does not release test information without the written consent of the person receiving the test. Anonymous testing is exactly what the name implies. The person being

tested does not reveal their name to anyone, including the AIDS Program. The AIDS Program of SLOC offers both confidential and anonymous HIV testing at multiple sites. The sites are listed below, with the types of testing services offered.

Table 5.1  
Public Health Department HIV testing sites\* by testing option offered

<b>Public Health Clinic Sites</b>	<b>Confidential Testing Offered</b>	<b>Anonymous Testing Offered</b>
San Luis Obispo	Yes	Yes
Paso Robles	Yes	Yes
Morro Bay	Yes	Yes
Grover Beach	Yes	Yes
SLO County Jail	Yes	No
Juvenile Services Center	Yes	No
AIDS Program Outreach Van	Yes	Yes

\* HIV/AIDS testing is also offered at private MD offices and clinic sites throughout the County.

During 2003, a total of 2,384 tests were performed, an increase in total number of tests by 14.5% from 2002. The positive test rate for 2003 was 0.16%, a decrease in positive test results of 0.03%. Yet in 2004, there were only 1,416 tests performed, a decrease by 41.7%. This decrease is due to the State requirement that only high risk candidates be tested for HIV/AIDS. In the past, California public health clinics have tested a large number of people with no apparent risk, who sought testing for personal comfort. Now California is attempting to cut unnecessary costs by only testing those persons considered at risk. The percent that tested positive for HIV in 2004 was 0.28%, an increase in positive test results from 2003 by .12%. The demographic characteristics of those testing positive for HIV versus those testing negative follows.

***Race***

The ethnic distribution of persons being testing for HIV in SLOC is very similar to the overall racial makeup of the County. Table 5.2 shows the racial distribution of persons being tested for HIV in 2004 by the AIDS Program. Notice that the racial demographics of those testing positive appears consistent with the percentage being tested. This is deceiving however, because in years past the opposite has been true. The number of persons testing positive for HIV/AIDS in SLOC are so small that percentages can vary widely from year to year. The addition of one positive test result can cause the percentages to vary significantly.

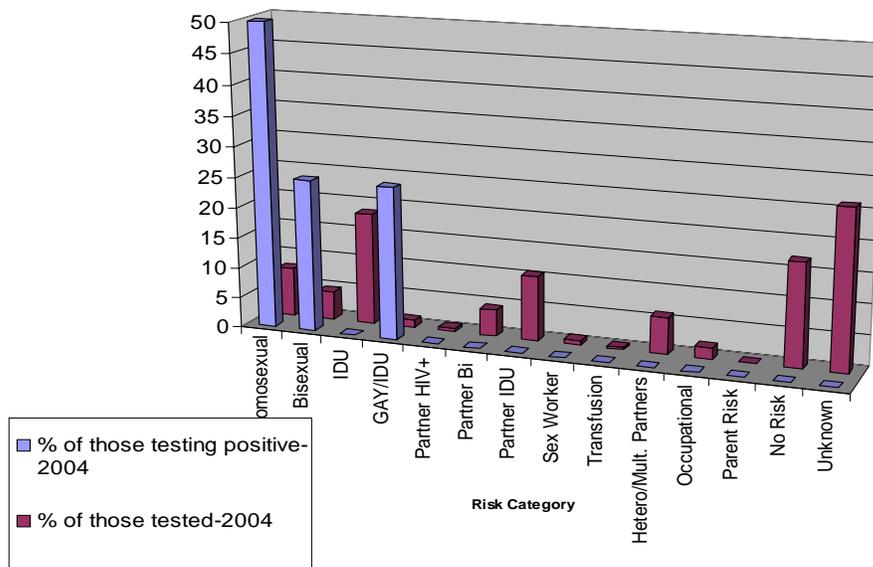
Table 5.2 Racial breakdown of HIV testing for 2004

RACE	Percent of persons being tested	Percent of persons testing positive
White	73.0%	75.0%
Black	2.0%	0.0%
Hispanic	18.0%	25.0%
Other	3.0%	0.0%

## Exposure Category

The most commonly reported risk category for those persons being tested at AIDS Program sites in 2004 was the risk category of “Injection Drug User” (IDU). For those testing positive however, the greatest risk category was “Homosexual”, followed by “Homosexual +IDU” and “Bisexual.” Figure 5.1 compares the breakdown of risks for persons being tested vs. those who tested positive for HIV at SLO AIDS program sites for 2004. State statistics were not added to the comparison, as State statistics are compiled by Calendar year, while SLOC statistics are compiled by Fiscal year. However, in the calendar year 2004, in the State population, the greatest risk factor for a positive HIV test was MSM, followed by “risk not reported” and “IDU”. The low overall percentage of persons who tested positive in SLO (0.28%) seems to suggest that HIV prevalence is fairly low in SLOC, although more of the true prevalence of HIV in SLOC will be learned in subsequent years as the reporting of HIV infection captures more data. It should be noted that many of those being tested who tested positive were tested in institutions, suggesting a very low community prevalence of HIV infection.

Figure 5.1 HIV Testing Results by Behavior-2004



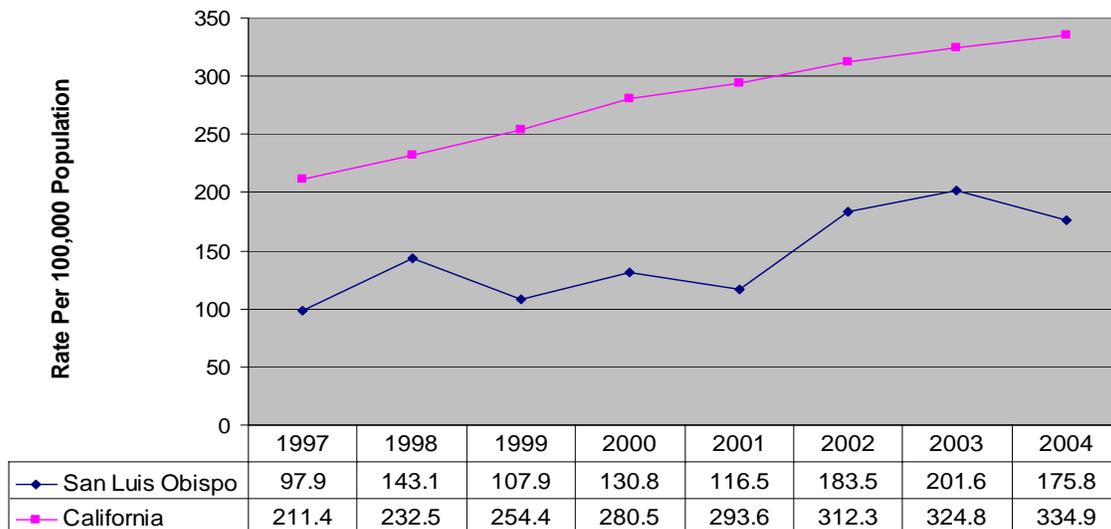
## Sexually Transmitted Diseases as a Marker for Risky Behavior

The spread of Sexually Transmitted Diseases (STD) other than HIV is considered a marker for behavior that can and does spread HIV. Someone diagnosed with a STD has almost certainly had unprotected sex, a risk for contracting HIV. Some STDs can increase the chances of becoming infected with HIV. These STDs, such as syphilis and herpes<sup>4</sup>, can cause open sores that give HIV an increased chance of entering the bloodstream. Gonorrhea has been shown to increase viral shedding from HIV infected partners<sup>5</sup>, thus increasing the risk of transmission. Monitoring STDs allows the AIDS Program to estimate the prevalence of risky sexual behavior occurring in the population.

In California, Chancroid, Chlamydia, Gonorrhea, and Syphilis are all reportable diseases, and statistics are tabulated at both the state and County level. Syphilis has had a recent surge in case numbers among MSM across the United States and in San Luis Obispo County as well. The primary “epicenters” for the MSM syphilis outbreak are New York, San Francisco and Los Angeles. The location of SLO between two of the major centers for this outbreak increases the chances that SLO will continue to experience an upsurge in Syphilis cases without preventative education and testing. The primary explanation for this increase in Syphilis cases is increased risky sexual contact. The reasons for this include a prevailing belief that there is a “cure” for AIDS, and a decreased sensitivity to safe-sex messages in the MSM community.

In San Luis Obispo, although Chlamydia was the most commonly reported STD, figure 6.1 shows that the rate of Chlamydia infections per 100,000 runs well below the state rate.

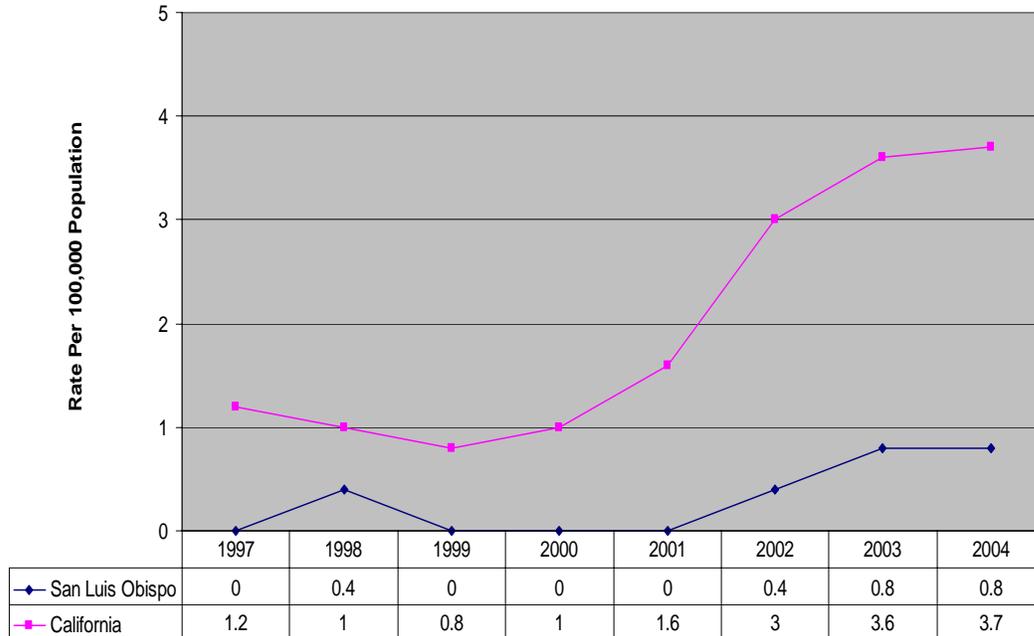
**Figure 6-1: Reported Incidence of Chlamydia San Luis Obispo County and California, 1997-2004**



*Data Source: State of California, Department of Health Service; Sexually Transmitted Disease Control Branch*

There has been a generalized trend of increased incidence of syphilis cases in SLO County beginning in 2001, although, once again, the overall incidence is lower than that of the State of California, as shown in Figure 6.2. These cases have occurred primarily among MSM.

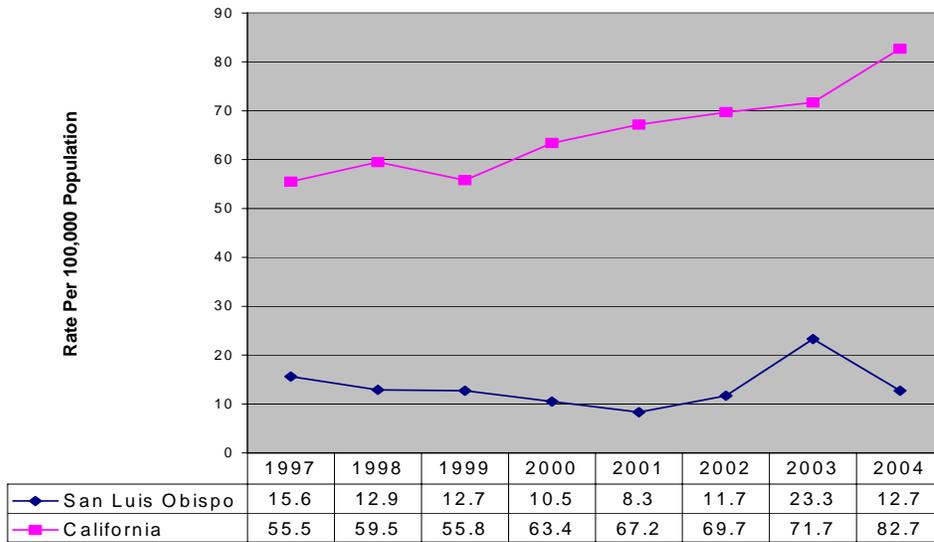
**Figure 6-2: Reported Incidence of Syphilis  
San Luis Obispo County and California, 1997-2004**



Data Source: State of California, Department of Health Service; Sexually Transmitted Disease Control Branch

Gonorrhea rates per 100,000 in San Luis Obispo County are lower than the State average, and had shown a downward trend between the years of 1997-2001. With the upswing in cases since then however, gonorrhea rates have been on the rise, both in San Luis Obispo County and California as a whole. As shown in Figure 6.3, gonorrhea rates are now above their low point of 2001, but are on the decline from their high-point in 2003.

**Figure 6-3: Reported Incidence of Gonorrhea  
San Luis Obispo County and California; 1997-2004**



*Data Source: State of California, Department of Health Service; Sexually Transmitted Disease Control Branch*

While the low rates of STDs up until 2001 had suggested a general decline in risky behavior, the figures for 2002 and continuing into 2003 show increases that should be addressed. In 2004, the rates dropped in Chlamydia and Gonorrhea, while remaining the same in syphilis. Future years will show whether or not the decline will continue, indicating a decrease in risky sexual behavior. Based on the information available now, there is a need for education and intervention to prevent these diseases as well as HIV. Because HIV testing data is still preliminary, it is unknown whether these trends are extending to HIV incidence rates. One recent study in San Francisco and Los Angeles<sup>6</sup> however, seems to suggest that the increase in Syphilis rates does not correspond to increases in HIV rates. This data however, is subject to limitations in the study.

## CONCLUSION

HIV and AIDS continue to significantly affect the population of San Luis Obispo County. While the incarcerated population of SLO County accounts for the greatest number and increases in AIDS cases in the County, Community cases are still a major source of concern. Although the exact number of HIV positive individuals or individuals living with AIDS within the County is not known, (persons diagnosed here may move away, while persons diagnosed elsewhere may move here), more information regarding these numbers will continue to illuminate the true burden of HIV in the following years due to

the advent of mandatory HIV reporting. While the trend in progression from HIV to AIDS continues to decline, the HIV epidemic is far from over, and in fact could be in danger of increasing its spread through the population as demonstrated by the increases in other STDs, most notably the increase in Syphilis cases among MSM. As the cases of AIDS have declined, the prevalence of HIV in the population is increasing. Recent national studies, as well as increasing rates of other STDs suggest that risky sexual behavior has increased in the population, leading to increased risks of transmission of HIV. Other studies suggest that up to three-fourths of HIV infected homosexual and bisexual men are unaware of their HIV infections. These factors, in combination, can easily lead to higher HIV transmission rates, re-igniting a slowing epidemic. According to the Department of Health and Human Services, the lifetime costs of health care associated with HIV, in light of recent advances in diagnostics and therapeutics is \$155,000 or more per person<sup>7</sup>. Thus the cost for every 100 individuals so affected would be \$15,500,000. The key is to prevent HIV transmission in individuals, before the tragedy of HIV and AIDS enters their lives. To do this requires constant surveillance, education and prevention efforts.

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<sup>1</sup> State of California, Department of Finance, *E-1 City / County Population Estimates, with Annual percent Change, January 1, 2004 and 2005*. Sacramento, California, May 2005.

<sup>2</sup> *California Department of Health Services and California Conference of Local Health Officers, County Health Status Profiles 2005*  
<http://www.dhs.ca.gov/hisp/chs/OHIR/reports/healthstatusprofiles/2005/>

<sup>3</sup> California Employment Development Department, Labor Force & Unemployment Data, April 2005  
[www.labormarketinfo.edd.ca.gov](http://www.labormarketinfo.edd.ca.gov)

<sup>4</sup> TB and HIV infection: Recommendations for the Advisory Committee for the Elimination of TB  
MMWR 1989;38:236-250

<sup>5</sup> HIV prevention through early detection and treatment of other Sexually Transmitted Diseases –US  
MMWR 1998;47:2

<sup>6</sup> Trends in Primary and Secondary Syphilis and HIV infections in Men Who Have Sex with Men – San Francisco and Los Angeles, California, 1998-2002 – US MMWR Vol 53, No 26;575 7/09/2004

<sup>7</sup> California Department of Health Services, Office of AIDS, HIV/AIDS Surveillance Report;  
[http:// www.dhs.ca/ps/ooa/Statistics/default.htm](http://www.dhs.ca/ps/ooa/Statistics/default.htm)