



# ***Epidemiologic Profile***

HIV/AIDS

*in*

**San Luis Obispo County, CA**



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

**June, 2008**

# San Luis Obispo County Public Health Department

Craig McMillan, MD, MPH

Interim Health Officer

Pam Dudley, PHN, MSN

Director Nursing, Family and Community Health  
Services Division

Marsha Bollinger, MS

AIDS Program Manager

Ann McDowell, MPH

Epidemiologist

Janet Lorenzo

Surveillance Coordinator

Christine Gaiger, SPHN

Communicable Disease Program Manager

***Table of Contents***

List of Tables and Figures.....4

Introduction.....6

Data Sources and Limitations.....7

Demographic Characteristics of San Luis Obispo County.....8

HIV in San Luis Obispo.....10

AIDS in San Luis Obispo.....13

Deaths due to AIDS.....19

Sexually Transmitted Infections as a marker for risky behavior.....20

Conclusion.....23

References.....24

***List of Tables and Figures***

Table 1.1 San Luis Obispo County Population by Gender, Race and Age, 2007

Table 1.2 Population Estimates by City and Region, January 2008

Table 2.1 Racial breakdown of HIV cases in San Luis Obispo County and California expressed as a percentage of cases

Table 2.2 Exposure Categories for HIV cases in SLO County and California

Table 3.1 AIDS Prevalence rates for selected populations

Table 3.2 Racial breakdown of AIDS cases in San Luis Obispo County and California expressed as a percentage of cases, 2008

Table 3.3 Exposure categories for all Community AIDS cases in San Luis Obispo County

Table 3.4 Exposure categories for Institutional AIDS cases in SLOC

Table 3.5 San Luis Obispo County AIDS Cases by Year of Diagnosis and Year of Death

Table 4.1 HIV testing by Race in SLOC and California for the year ending June 30, 2008

Figure 1 County and State Population Demographics

Figure 2 Racial breakdown of persons with HIV in San Luis Obispo County vs. California

Figure 3.1 AIDS Cases by Year of Diagnosis – San Luis Obispo County 1994-2008

Figure 3.2 Case-Fatality Rates, SLO 1990-2008

Figure 3.3 Racial breakdown of persons with AIDS in San Luis Obispo County vs. California

Figure 3.4 Mode of Transmission for AIDS in San Luis Obispo County and California

Figure 4.1 Reported Incidence of Chlamydia in SLOC and California, 2000-2007

Figure 4.2 Reported Incidence of Syphilis in SLOC and California, 2002-2007

Figure 4.3 Reported Incidence of Gonorrhea in SLOC and California, 2000-2007

## ***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 2008. 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 for 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 living 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 viruses in the body, thereby decreasing viral load and slowing the progression to AIDS for those with HIV infection. Currently, the CDC estimates that approximately 56,000 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. The reporting system implemented in 2002 used an alphanumeric code (“codex”), not names, to report cases. In October 2006, HIV reporting in California became name based. Where possible, HIV cases reported since 2006 were matched back to codex cases. Thus, SLO County numbers of reported cases vary significantly from State reported cases, as the State does not have access to the codex, non-name based data.

## *Data Sources and Limitations*

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

1. The data included reflects those HIV and AIDS cases reported to the San Luis Obispo County 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. 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 between one quarter and one-third of persons in the US infected with the HIV virus are unaware of their infection, as they have not been tested.
3. HIV/AIDS cases are counted in the County and State of residence at the time of diagnosis. Therefore, San Luis Obispo County (SLOC) figures do not reflect HIV/AIDS cases diagnosed out of this County who subsequently moved to SLO County.
4. 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.
5. The diagnostic criteria for reporting AIDS have 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.
6. Some numbers of reported cases and deaths by year have changed since the 2005 edition of this report. These changes are 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.
7. California passed Senate Bill 699 requiring California health care facilities to begin reporting cases of HIV infection by name in 2006. This report will include HIV data and statistics, however it should be kept in mind that data is limited and trends may change as more data is collected.

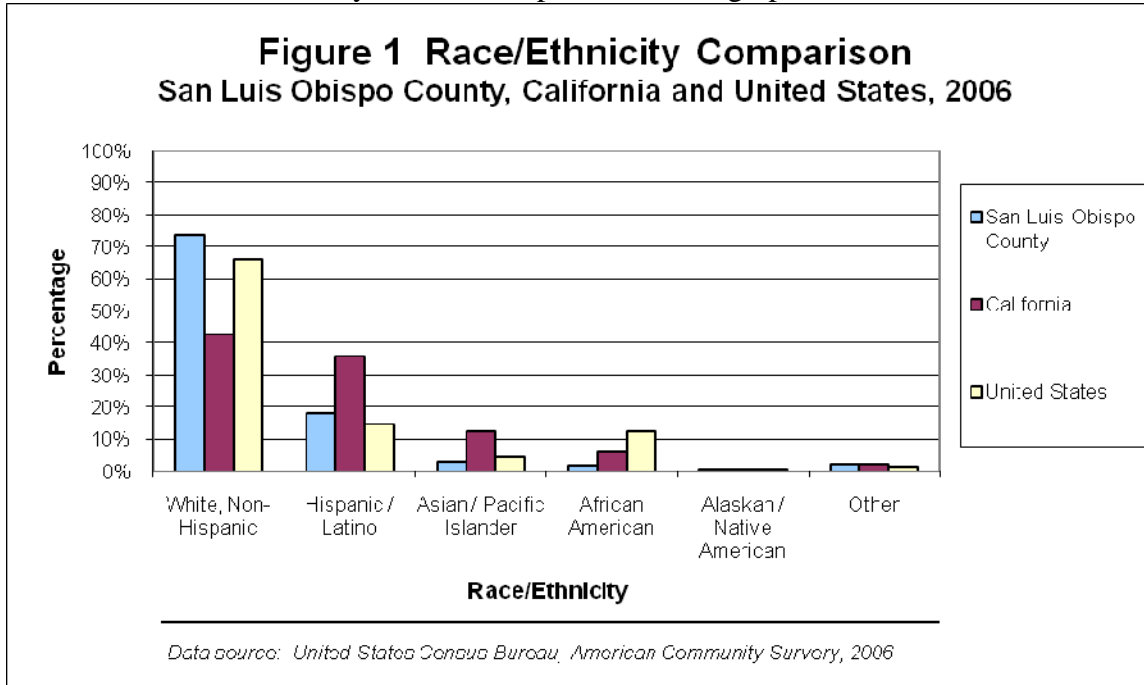
## *Demographic Characteristics of San Luis Obispo County*

San Luis Obispo (SLO) County 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 264,900 in 2007, which represents a 0.9% increase from 2006<sup>1</sup>. San Luis Obispo is the 23<sup>rd</sup> largest county in California. That is, 22 counties have larger populations, and 35 counties have smaller populations than SLO County. 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 2006 American Community Survey, San Luis Obispo County has a population that is 73.9% white, non-Hispanic, 18.3% Hispanic, 1.8% African-American, 3.2% Asian, and 2.9% comprised of other categories, including Native American, Alaskan Native and Pacific Islander. 15.5% of the population is above the age of 65, while approximately 36.8% is below the age of 24. The median household income in 2006 was \$50,209, which is lower than the California median income of \$56,645<sup>3</sup>. According to the National Association of Home Builders Housing Opportunity Index, 2008 1<sup>st</sup> Quarter report, San Luis Obispo County is ranked the 219 out of 223 in affordability, with 13.9% of homes affordable for persons earning the median income in the County<sup>4</sup>. It is estimated that in SLOC, 13.6% of individuals live below the poverty level, as compared to 13.10% statewide<sup>5</sup>.

Demographic distributions of SLO County are quite different from that of the State. Although gender distribution is similar, SLO County has a considerably more homogeneous racial make-up than the State, with approximately three-fourths of the County's population classifying themselves as white, non-Hispanic (see Figure 1). The County has also attracted a significant retirement population, with approximately 27% of the population being 55 years or older. California as a whole has a slightly younger population distribution, with only 21% of the population being 55 years or older.

**Figure 1**  
County and State Population Demographics, 2006<sup>2</sup>



SLO County’s economy is considered strong, with an average unemployment rate per year of 4.3%, in 2006<sup>6</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 2007-08 year, 35,260 students were enrolled in public schools in SLOC. Numbers have been steadily declining since the 2000-01 school year when 37,693 students were enrolled. The adjusted high school four year dropout rate for the County is 14.9%, which has been increasing, while the state’s rate has fluctuated, coming in at 24.2% for 2006-2007. However the percentage of high school graduates in the County is higher than the state’s at 87.6% versus 80.3%<sup>7</sup>. More demographic characteristics of the County are displayed in Table 1.1.



## Race

**Table 1.1**  
San Luis Obispo County and California Populations by Gender, Race and Age, 2007\*

	San Luis Obispo County		California
	Number	% of Population	% of Population
<b>Gender</b>			
Male	135,231	51.1%	49.9%
Female	129,254	48.9%	50.1%
<b>Race and Hispanic Origin</b>			
White, Non-Hispanic	192,239	72.7%	43.4%
Hispanic	53,099	20.1%	35.8%
Black	4,892	1.8%	6.0%
Asian	7,462	2.8%	11.7%
Other	6,793	2.6%	3.1%
<b>Age</b>			
< 5	13,776	5.2%	7.2%
5 - 14	29,345	11.1%	14.5%
15 - 24	47,022	17.8%	14.9%
25 - 34	31,109	11.8%	13.2%
35 - 44	29,594	11.2%	15.1%
45 - 54	40,299	15.2%	14.2%
55 - 64	32,595	12.3%	10.0%
65 +	40,745	15.4%	10.8%
<b>Total</b>	<b>264,485</b>	<b>100%</b>	<b>100.0%</b>

Source: California Department of Finance Population Estimates, 2007

\*There is a large discrepancy between the Department of Finance's estimate for overall County population and the 2006 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 2005 California Health Interview Survey

(CHIS), 89.0% of the population has health insurance, an increase of 1.4% from the 2003 CHIS survey.

**Table 1.2**  
Population Estimates by City and Region, January 2008

<b>City/Region</b>	<b>Number</b>	<b>% of Population</b>
San Luis Obispo	44,697	17.0%
<b>North County</b>		
Paso Robles	29,934	11.4%
Atascadero	28,590	10.9%
<b>South County</b>		
Arroyo Grande	17,036	6.5%
Grover Beach	13,213	5.0%
Pismo Beach	8,603	3.3%
<b>North Coast</b>		
Morro Bay	10,548	4.0%
Balance of County	116,716	44.3%
<i>Total</i>	<i>263,242</i>	<i>100.0%</i>

Source: California Department of Finance

### ***HIV in San Luis Obispo County***

Prior to 1996, estimates of HIV infection in the population were based on back-calculation from AIDS mortality data. Name based reporting is starting to give us a better idea of actual new infections, but because many people are unaware of their infection status, estimating the number of new cases is still necessary. The CDC has estimated that new HIV infections per year have remained somewhat steady throughout the 1990s and into the new millennium, with approximately 56,000 new infections every year. However, it is also estimated that up to 1/3 of persons infected with the HIV virus are unaware of their HIV positive status.

Starting in November 2004, the California Department of Public Health began describing the HIV/AIDS epidemic in terms of prevalence rather than the previously utilized Cumulative Incidence Rate, or 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.

The large incarcerated populations of SLO County have greatly increased the overall number of HIV/AIDS cases in the County. SLO County is home to two State institutions: California Men’s Colony (CMC - estimated population 6,000), and Atascadero State Hospital (ASH - estimated population 1,290 people). In addition, the now-closed Paso Robles Boys School has contributed to the burden of HIV/AIDS in the County.

HIV first became reportable in California in 2002 through an anonymous code-based system (“codex”) system that assigned a codex number to all cases, and did not report to the State the name of the infected individual. In 2006, a name-based system was implemented, allowing for more accurate tracking of cases, and in line with the CDC’s recommendations for name-based reporting. Demographic information is available for all cases reported, whether codex or named cases. Where possible, cases reported by name after 2006 were matched back to previously reported cases that had been assigned codex numbers for anonymity. The State only has access to name-based data, so although the State reports numbers for all Counties on its website<sup>8</sup>, those numbers are significantly different than the numbers maintained and reported by the San Luis Obispo Public Health Department AIDS Program. This will be the first time San Luis Obispo County will present data on HIV cases in this report.

As of June 30, 2008, 214 cases of HIV have been reported in SLO County. As in previous years SLO County HIV/AIDS Epidemiologic Profiles<sup>9</sup>, HIV cases will be broken down by community cases vs. cases of incarcerated persons.

***Race***

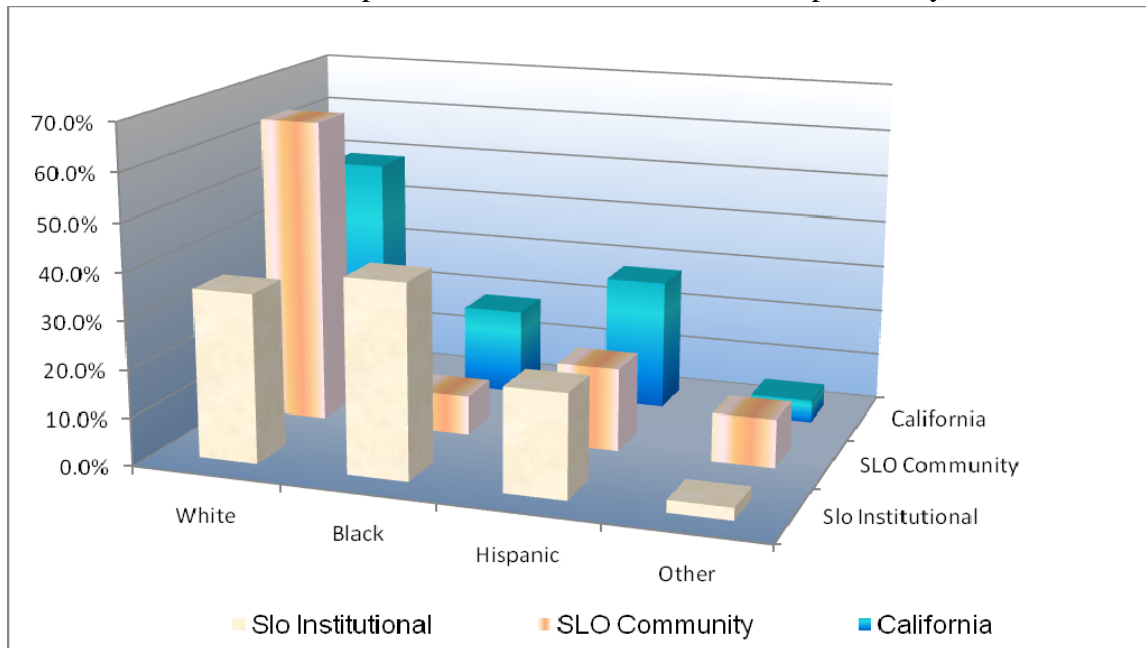
The ethnic distribution of HIV in SLO County differs from the ethnic distribution of the population overall. Table 2.1 contains data showing the racial distribution of HIV cases within the County. African Americans represent only 1.8% of the population in San Luis Obispo, but 25.7% of all HIV cases in the County are African-Americans. This reflects national 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 are occurring in the incarcerated population. In Figure 2.1, the racial distribution of HIV cases for the State, SLO County community and SLO County institutional cases are shown. The graph demonstrates that the African-American institutional population of SLO County is significantly over-represented as a percentage of overall HIV cases, even when compared to the entire State population. By viewing both Table 2.1 and Figure 2.1, the difference in demographic distribution of cases between community and institutional cases can be easily ascertained.

**Table 2.1**  
Racial breakdown of HIV cases\* in San Luis Obispo County and California  
expressed as a percentage of cases

Race	San Luis Obispo All Cases	San Luis Obispo Institutional	San Luis Obispo Community	California
White	48.6%	35.3%	64.3%	49.1%
Black	25.7%	40.5%	8.2%	18.4%
Hispanic	19.6%	21.6%	17.3%	27.8%
Other	6.1%	2.6%	10.2%	4.7%

\*All cases, regardless of year diagnosed

**Figure 2**  
Racial breakdown of persons with HIV in San Luis Obispo County vs. California



**Age**

The majority of HIV cases are diagnosed in 30-49 year olds in both the San Luis Obispo County community and institutional populations. 59.2% of all cases in the community were diagnosed in this age group, and 75.9% of the institutionalized population. It should be noted however that all cases in the institutional category are male, while the San Luis Obispo County community population is comprised of both males and females.

**Gender**

Because SLO County has such a large, male-only institutional population, it is important to look at community and institutional HIV cases separately in order to truly understand the impact on specific genders. In the SLO County community population, 78 males have been diagnosed with HIV and 20 females. Thus, approximately 20% of community HIV cases occur in females within the County, which is higher than the state rate of 13.4%.

**Exposure Category**

Identified risks for HIV transmission vary by gender within the community, as shown in Table 2.2 below. For females, Heterosexual Contact is the largest risk factor (60%), followed by Injection Drug Use (IDU). For community males, men who have sex with men (MSM) is by far the highest risk category, with 65% of male cases falling into this category, followed by the combined MSM/IDU category at 13%.

In institutionalized males, the trends vary somewhat in that risk factors are more evenly distributed between MSM, IDU and MSM+IDU. These results are shown in Table 2.2.

**Table 2.2**  
Exposure Categories for HIV cases in SLO County and California

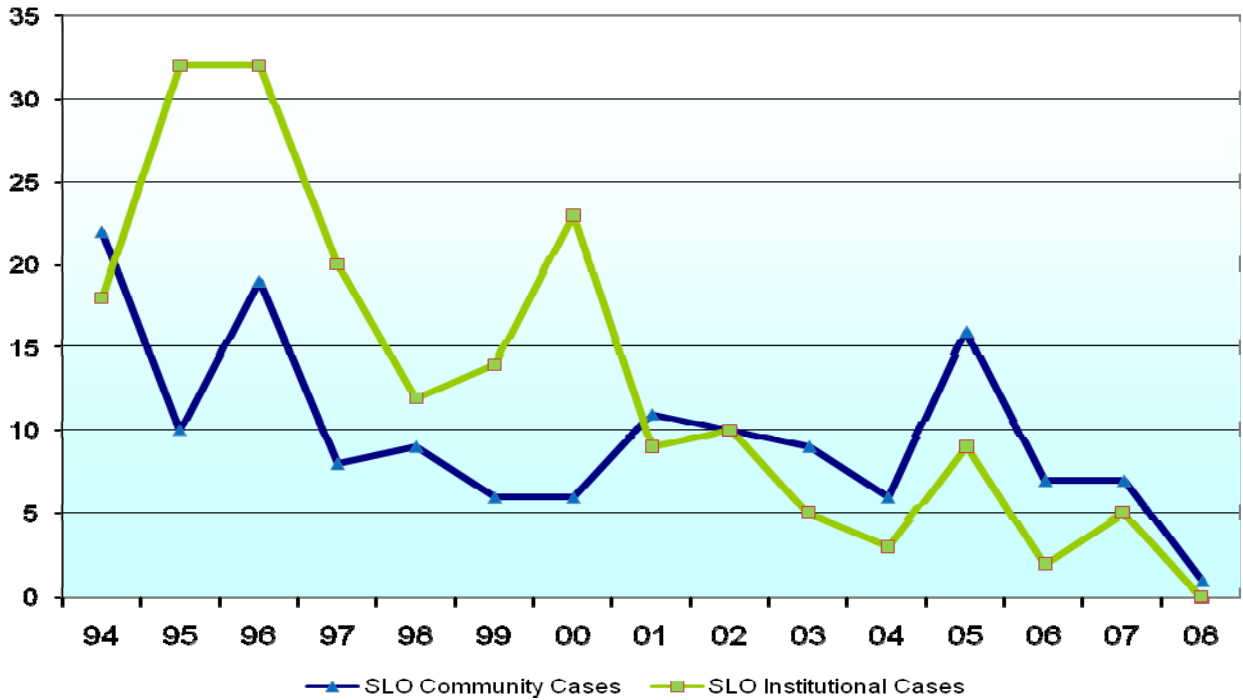
Mode of Transmission	SLO Community		SLO Institutional		California	
	Count	Percentage	Count	Percentage	Count	Percentage
MSM	51	52.0%	34	29.3%	19854	64.8%
IDU	15	15.3%	29	25.0%	2263	7.4%
MSM + IDU	10	10.2%	28	24.1%	1959	6.4%
Hemophilia/ Transfusion	2	2.0%	1	0.9%	109	0.4%
Hetsx contact	19	19.4%	13	11.2%	2824	9.2%
No risk report/ Other	1	1.0%	11	9.5%	3616	11.8%
<b>Total</b>	<b>98</b>	<b>100.0%</b>	<b>116</b>	<b>100.0%</b>	<b>30625</b>	<b>100.0%</b>

### *AIDS in San Luis Obispo County*

The first case of AIDS was reported in 1984. As of June 2008, 579 cases of AIDS have been reported in San Luis Obispo County. AIDS cases are divided into community and institutional cases as per HIV statistics.

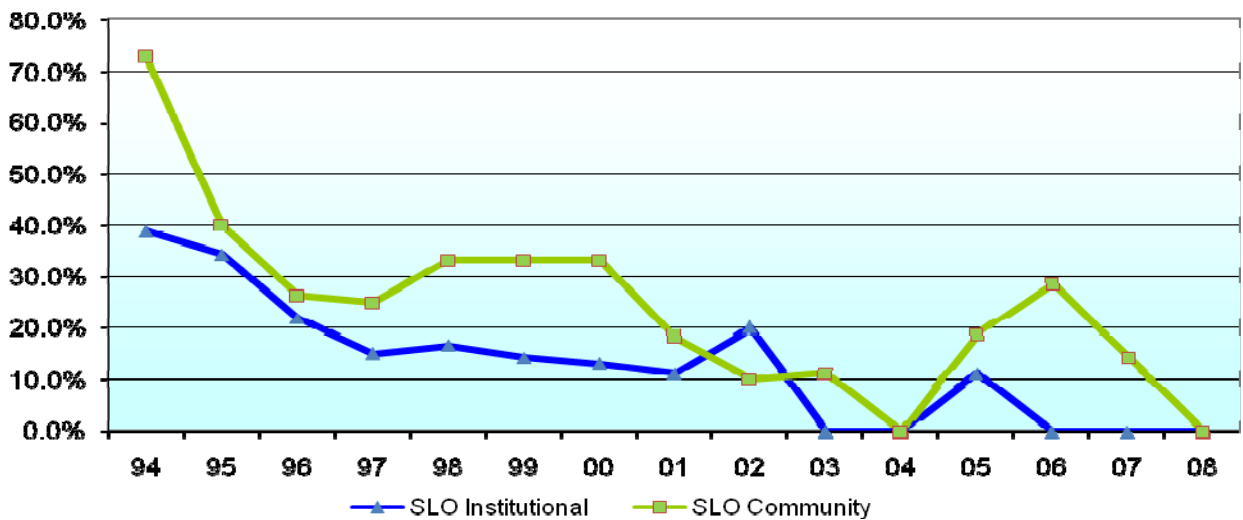
In SLO County, the number of diagnosed community AIDS cases increased steadily between 1983 and 1992. In 1993, the AIDS case definition changed, contributing to a decline in diagnosed cases. In 1996, HAART treatment was introduced, and helped to slow the progression of HIV to AIDS cases even further in the community. HAART helps halt the replication of the HIV virus in the body, thereby decreasing viral load and slowing the progression to AIDS for those with HIV infection. In the years since its introduction, there have been three generations of HAART therapies, each improving on previous versions. In the SLO institutional population however, the 1992 change in case definition did little to change the incidence of AIDS cases, and it was only with the introduction of HAART in 1996 that the institutionalized population showed a drop in incidence. Figure 2.1 shows the trends in case diagnosis by year for SLO County.

**Figure 3.1**  
AIDS Cases by Year of Diagnosis - San Luis Obispo 1994-2008



The case-fatality rate is a ratio of deaths to cases. In SLO County, the case-fatality rate for AIDS was extremely high until 1996, when the rate began to fall. Figure 3.2 shows the case fatality rate from 1994-2008 in the community and institutional populations.

**Figure 3.2**  
Case Fatality Rates SLO County 1990-2008\*



\*Data for 2008 is for the first 6 months of 2008 only.

The case-fatality rates for both the correctional and institutional populations showed similar trends, declining as time progressed. However, the community case-fatality rate was significantly higher for a period of years, 1997-2001. The increase shown between 2004-2007 reflects small numbers, and is not a statistically significant increase.

Table 3.1 shows the prevalence rates for SLO County and selected comparison populations. While the prevalence rate for the community population is 48, the prevalence rate for the institutional population is 68. This in part can be explained by the fact that prevalence rates are calculated for both community and institutional populations using the overall County population as the denominator. If the overall State prison population<sup>10</sup> were used as the denominator, the institutional prevalence rate would be much higher. The overall HIV/AIDS rate in SLO County is higher than Santa Barbara and Monterey counties. It should be noted that Monterey also has a large prison within its jurisdiction. Thus, it is reasonable to see that overall prevalence is similar to Monterey County.

**Table 3.1**  
AIDS Prevalence Rates for Selected Populations

	Prevalence Rate (per 100,000) through June 30, 2008
California	172
San Luis Obispo (all cases)*	116
SLO Institutional <sup>2</sup>	68
SLO Community	48
Santa Barbara County	81
Monterey County	101

Source: California Dept. Of Public Health , Office of AIDS, HIV/AIDS Surveillance Report and San Luis Obispo County AIDS Program and population estimates from CA Department on Finance, 1/1/2006.

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

^ 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*

As in HIV cases, the ethnic distribution of AIDS in SLO County 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 1.8% of the population in San Luis Obispo, 27.1% of all AIDS cases in the County are African-Americans. The majority of the African-American AIDS cases in San Luis Obispo County are occurring in the incarcerated population, as the case with HIV. In Figure 3.1, the racial distribution of AIDS cases for the State, SLO County community and SLO County institutional cases are shown. This figure demonstrates that the African-American institutional population of SLO County 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

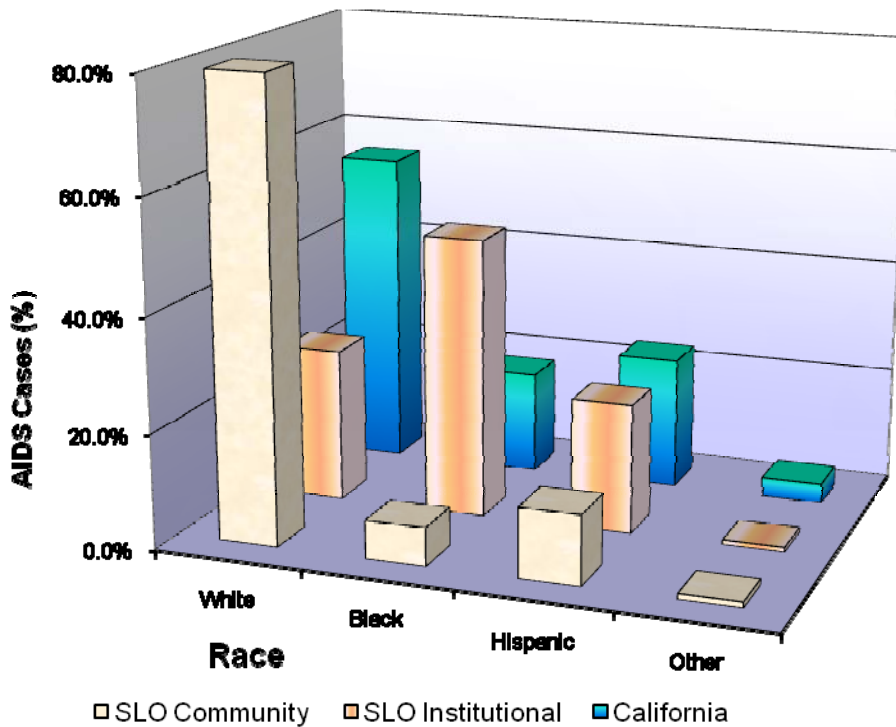
Figure 3.1, the difference in demographic distribution of cases between community and institutional cases can be easily ascertained. The ethnic distribution of AIDS in community cases more closely follows the overall ethnic distribution of the County.

**Table 3.2**  
Racial breakdown of AIDS cases in San Luis Obispo County and California expressed as a percentage of cases, 2008

Race	San Luis Obispo (All cases)	San Luis Obispo Institutional	San Luis Obispo Community	California
White	53.6%	26.8%	79.9%	55.6%
Black	27.6%	48.8%	6.8%	17.9%
Hispanic	17.4%	22.6%	12.3%	23.2%
Other	1.4%	0.8%	1.0%	3.3%

Source: California Dept. Of Health Services, Office of AIDS, AIDS Surveillance Report Cumulative Cases as of June 30th, 2008 and San Luis Obispo County AIDS Program

**Figure 3.3**  
Racial breakdown of persons with AIDS in San Luis Obispo County vs. California





## *Age*

The majority of AIDS cases are diagnosed in 30-39 year olds in both the San Luis Obispo County community and institutional populations. 43.7% of all cases in the community were diagnosed in this age group, and 54% of the institutionalized population. It should be noted however that all cases in the institutional category are male.

## *Gender*

Because SLO County has such a large, male-only institutional population, it is important to look at community and institutional cases separately in order to truly understand the impact of AIDS on specific genders. In the SLO County community population, 261 males have been diagnosed with AIDS and 29 females. Thus, approximately 10% of community AIDS cases occur in females within the County, which is higher than the state rate of 8.7%.

## *Exposure Category*

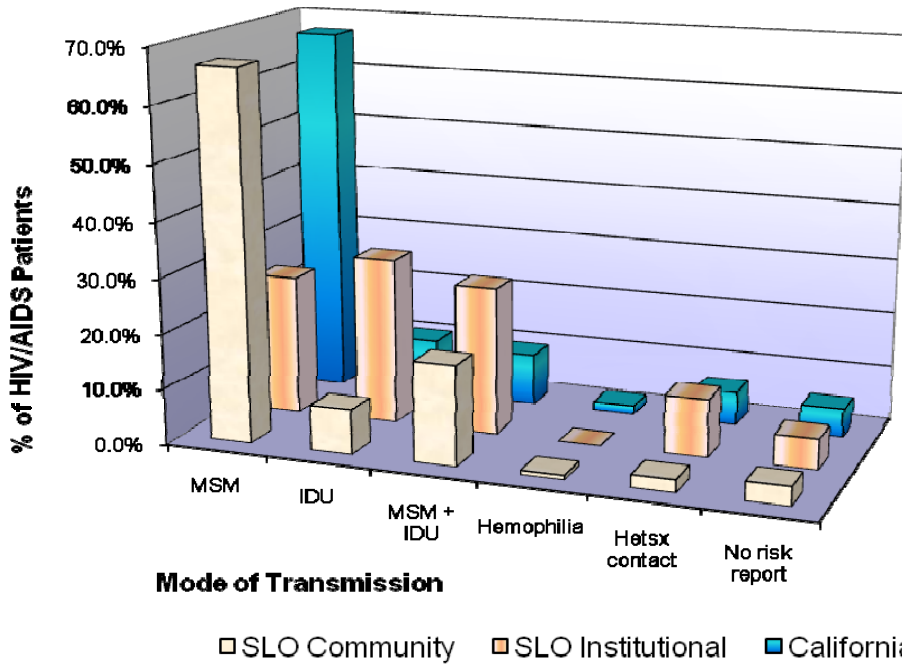
Identified risks for HIV transmission vary by gender within the community, as shown in Table 3.2 below. For females, Heterosexual Contact is the largest risk factor (55%), followed by Injection Drug Use (IDU). For community males, men who have sex with men (MSM) is by far the highest risk category, with 67% of male cases falling into this category, followed by the combined MSM/IDU category at 18%.

In institutionalized males, the trends vary somewhat in that IDU is the highest risk factor categorized for those with AIDS. Table 3.2 shows that the next highest risk factors are MSM/IDU followed closely by 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 3.3**  
Exposure categories\* for Community AIDS cases in San Luis Obispo County

<b>Exposure / Mode of Transmission</b>	<b>Males (n = 249)</b>		<b>Females (n=30)</b>	
	<b># of Cases</b>	<b>% of Cases</b>	<b># of Cases</b>	<b>% of Cases</b>
Male-to-male Sexual contact (MSM)	174	66.7%	0	0.0%
Injection drug use (IDU)	21	8.0%	10	34.5%
MSM + IDU	47	18.0%	0	0.0%
Hemophilia/Transfusion	4	0.8%	0	0.0%
Heterosexual Contact	6	2.3%	16	55.2%
Transfusion	2	0.8%	2	6.9%
Undetermined	9	3.4%	1	3.4%
<b>Total</b>	<b>261</b>	<b>100.0%</b>	<b>29</b>	<b>100.0%</b>

**Figure 3.4**  
Mode of Transmission for AIDS in San Luis Obispo County and California



**Table 3.4**  
Exposure categories for institutional AIDS cases\* in SLOC

Exposure / Mode of Transmission	Cases (n)	Cases (%)
MSM	73	25.4%
IDU	87	30.3%
MSM + IDU	77	26.8%
Hemophilia/Transfusion	4	1.4%
Heterosexual Contact	30	10.5%
Undetermined	16	5.6%
Total	287	100.0%

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

\*All institutional cases are males

For the institutional population, IDU is the greatest risk factor, with 30.3% of the cases reporting that as their only risk factor, but 57.1% reporting it as one of their possible risk factors. In the community, a combined 26.6 % of cases listed IDU as a risk.

## Deaths due to AIDS

Prior to the introduction of HAART, the AIDS case-fatality rate was extremely high. The case-fatality rate is the percentage of persons dying who have contracted a disease. 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 cumulative community case-fatality rate is 58%, which is somewhat higher than the cumulative institutional case-fatality rate of 35.5%. 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. All prisoners receive medical care in the prison system, while the economics of healthcare in the community may contribute to less access to healthcare for people with HIV/AIDS.

AIDS is not one of the 10 leading causes of death in SLO County for the period of 1999-2007. The picture in recent years shows low AIDS mortality, but the case-fatality data in Table 3.4 shows that this was not always the case.

**Table 3.5**  
San Luis Obispo County AIDS Cases by Year of Diagnosis and Year of Death

Year	Community Cases		Institutional Cases		Total Reported Cases and Deaths		Case Fatality Rate
	Cases	Deaths	Cases	Deaths	Cases	Deaths	
<b>1983-1989</b>	51	47	14	11	65	59	90.8%
<b>1990</b>	18	17	6	6	24	23	95.8%
<b>1991</b>	21	16	19	16	40	32	80.0%
<b>1992</b>	33	25	22	15	55	40	72.7%
<b>1993</b>	24	18	33	22	57	40	70.2%
<b>1994</b>	22	16	18	7	40	23	57.5%
<b>1995</b>	10	4	32	11	42	15	35.7%
<b>1996</b>	19	5	32	7	51	12	23.5%
<b>1997</b>	8	2	20	3	28	5	17.9%
<b>1998</b>	9	3	12	2	21	5	23.8%
<b>1999</b>	6	2	14	2	20	4	20.0%
<b>2000</b>	6	2	23	3	29	5	17.2%
<b>2001</b>	11	2	9	1	20	3	15.0%
<b>2002</b>	10	1	10	2	20	3	15.0%
<b>2003</b>	9	1	5	0	14	1	7.1%
<b>2004</b>	6	0	3	0	9	0	0.0%
<b>2005</b>	16	3	9	1	25	4	16.0%
<b>2006</b>	7	2	2	0	9	2	22.2%
<b>2007</b>	7	1	5	0	12	1	8.3%
<b>2008*</b>	1	0	0	0	1	0	0.0%
<b>Total</b>	294	167	288	109	582	277	47.6%

\*2008 data through June, 2008

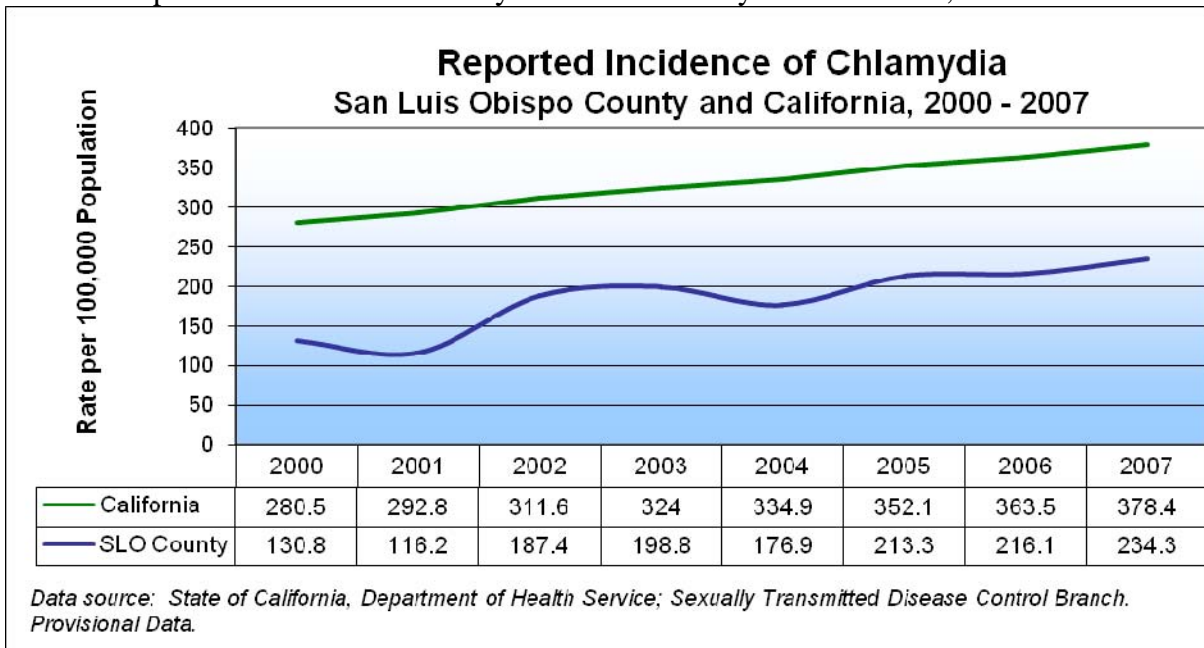
## *Sexually Transmitted Infections as a Marker for Risky Behavior*

The spread of Sexually Transmitted Infections (STIs) other than HIV is considered a marker for behavior that can and does spread HIV. Someone diagnosed with a STI has almost certainly had unprotected sex, a risk for contracting HIV. Some STIs can increase the chances of becoming infected with HIV. These STIs, such as syphilis and herpes (HSV), can cause open sores that give HIV an increased chance of entering the bloodstream<sup>11</sup>. HSV is the most common genital co-infection in HIV infected men and women (although not reportable in California), and HIV infectiousness from men to women is increased by the presence of STIs<sup>12</sup>. Monitoring STIs allows the AIDS Program to estimate the prevalence of risky sexual behavior occurring in the population.

In California, 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 US, and in San Luis Obispo County as well. The primary explanation for this increase in 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.

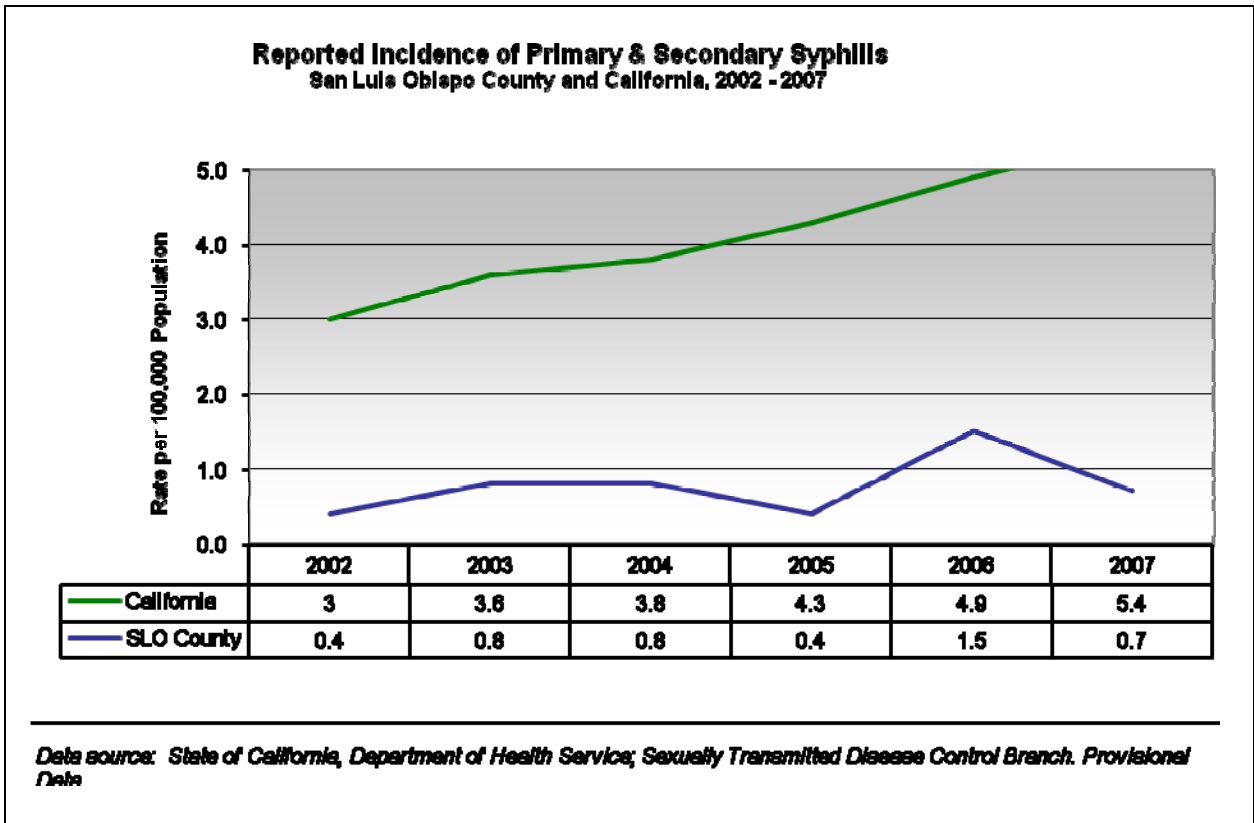
In San Luis Obispo County, although chlamydia was the most commonly reported STI, as shown in figure 4.1, the rate of chlamydia infections per 100,000 runs well below the State rate.

**Figure 4.1**  
Reported Incidence of Chlamydia in SLO County and California, 2000-2007



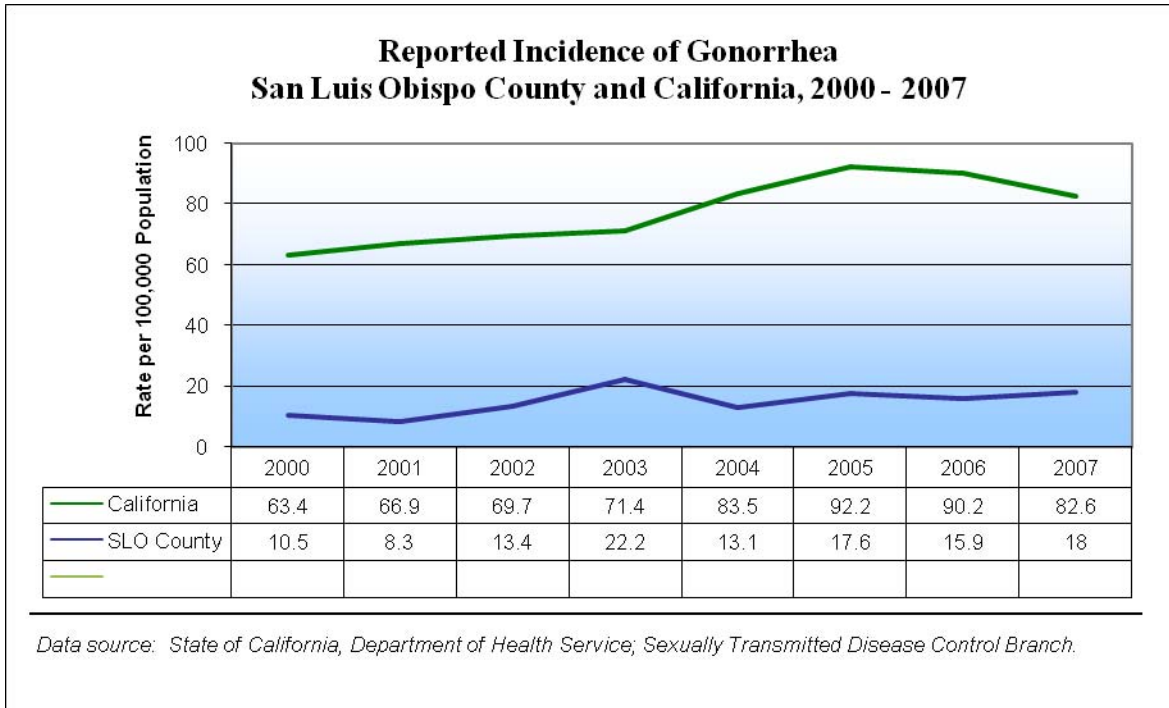
Syphilis is generally described by the stage of disease that a person is in when diagnosed. For example, a person may have Primary, Secondary or Latent Syphilis, and Syphilis of unknown duration. The diagnosis is based on symptoms and length of infection. In San Luis Obispo County, the majority of cases diagnosed are in the Late Latent stages of infection. Late Latent cases are no longer infectious. Only when a person is in the primary or secondary stage of infection and have open lesions are they infectious. There has been a general increase in syphilis cases in California and the US over the past several years, particularly in the MSM community. However, SLO County has a low incidence of Primary and Secondary cases of Syphilis. Once again the incidence is lower than that of the State of California, as shown in Figure 5.2. These cases have occurred primarily among MSM. Due to low overall numbers of Primary and Secondary Syphilis cases in SLO County, a small number of cases can cause large swings in incidence data, which is reflected in the apparent surge between 2005 and 2006, with a sharp decline the next year.

**Figure 4.2**  
Reported Incidence of Syphilis in SLO County and California, 2000-2007



Gonorrhea rates per 100,000 in San Luis Obispo County are lower than the State average, and had shown a downward trend prior to 2001. Since 2001 however, gonorrhea rates are on the rise, both in San Luis Obispo County and California as a whole. As seen in Figure 4.3, gonorrhea rates increased from 2001 until 2003, and seem trending slightly upward, although the State as a whole is trending downward.

**Figure 4.3**  
 Reported Incidence of Gonorrhea in SLO County and California, 2000-2007



While the low rates of STIs up until 2001 suggested a general decline in risky behavior, the figures for 2002 and continuing into 2007 show overall increases that should be addressed. The rates show the 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>13</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. 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), information will be more accurate in years to come due to the advent of name-based HIV reporting. Data based on non-name based reporting from 2002 to 2006 showed ~140 cases of HIV in the community. It will remain to be seen from name-based reporting whether these figures are borne out. 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, in part due to an estimated 1/3 of cases of HIV being unaware of their status. 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 STIs suggest that risky sexual behavior has increased in the population, leading to increased risks of transmission of HIV. These factors, in combination, can easily lead to higher HIV transmission rates, re-igniting a slowing epidemic. According to the California Department of Health Services, the lifetime costs of health care associated with HIV can range from \$71,143 (for low end care) to \$424,763 (for high-end care).<sup>14</sup> The intermediate cost is equal to approximately \$255,848. Thus the cost for every 100 individuals so affected at an intermediate cost would be \$25,585,800. 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.

---

<sup>1</sup> State of California, Department of Finance. *E-1 City / County Population Estimates, with Annual percent Change, January 1, 2006 and 2007*. Sacramento, CA. <<http://www.dof.ca.gov>>

<sup>3</sup> US Census Bureau, American Community Survey, 2006. <http://factfinder.census.gov>

<sup>4</sup> National Association of Home Builders Housing Opportunity Index of 2008. [www.nahb.org](http://www.nahb.org)

<sup>5</sup> US Census Bureau, American Community Survey, 2006

<sup>6</sup> California Employment Development Departments, <http://www.edd.ca.gov/>, Unemployment rates

<sup>7</sup> California Department of Education, DataQuest, <http://data1.cde.ca.gov/dataquest/dataquest.asp>

<sup>8</sup> State of California, Department of Public Health, Office of AIDS.  
<http://www.cdph.ca.gov/programs/AIDS/Pages/Default.aspx>

<sup>9</sup> San Luis Obispo County Public Health Department Epidemiology program reports,  
[http://www.slocounty.ca.gov/health/publichealth/famhealth/epi/epidemiology\\_data\\_and\\_publications.htm](http://www.slocounty.ca.gov/health/publichealth/famhealth/epi/epidemiology_data_and_publications.htm)

<sup>10</sup> State of California, Department of Corrections, Monthly Population Report, June 2007.  
<http://www.cdcr.ca.gov/ReportsResearch/OffenderInfoServices/PopulationReports.asp>

<sup>11</sup> HIV prevention through early detection and treatment of other Sexually Transmitted Diseases.” MMWR 47.2 (1998).

<sup>12</sup> Coombs RW, Reichelderfer P, Landlay AL; Recent observation on HIV type-1 infection in the genital tract of men and women, *AIDS*; 2003, V17:455-480

<sup>13</sup> HIV prevention through early detection and treatment of other Sexually Transmitted Diseases.” MMWR 47.2 (1998).

<sup>14</sup> State of California, Department of Health Services, *Economic Evaluation of California’s prevention case management intervention for HIV-Positive and HIV-Negative persons:The HIV Transmission Prevention Project*, November 2006