Epidemiologic Profile

HIV/AIDS

in

San Luis Obispo County, CA

San Luis Obispo County Public Health Department
AIDS Program

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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 2007. 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. 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. The reporting system implemented in 2002 used an alphanumeric code, not names, to report cases. In October 2006, HIV reporting in California became name based. Because the new, name based system could not be linked

back to the alphanumeric codes, recent HIV data are misleading, and will not be included in this year's report.

Data Sources and Limitations

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

1. The data included reflects only those 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. 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 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.

7. Some numbers of reported cases and deaths by year have changed since the 2005 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.

8. California recently passed Senate Bill 699 requiring California health care facilities to begin reporting cases of HIV infection by name. The new reporting system is consistent with the Center for Disease Control and Prevention (CDC) recommendations for using a confidential name-based system. Effective April 2006, statistical information on HIV cases reported before the implementation of the new reporting law is no longer available. Therefore, due to the limited availability of reliable community and institutional data after April 2006, this report only contains HIV cases reported through San Luis Obispo County's Public Health Confidential and Anonymous Test Sites.

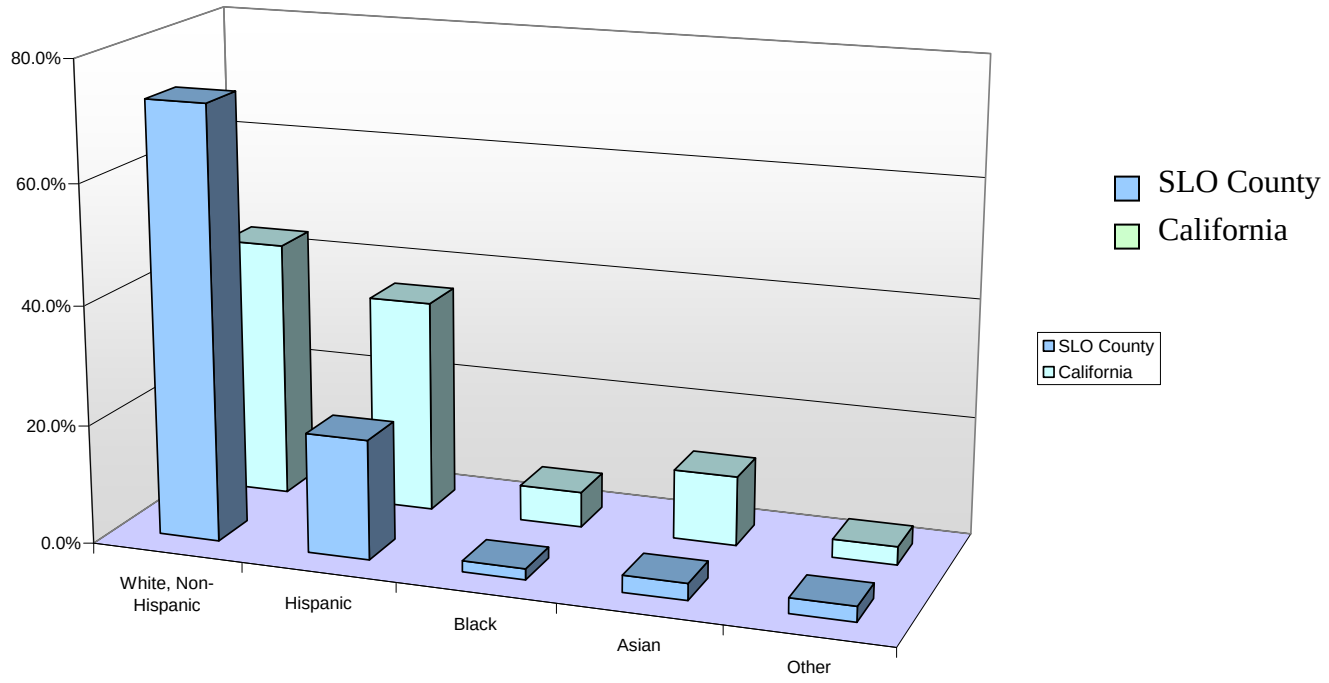
Demographic Characteristics of San Luis Obispo County

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 264,900in 2007, which represents a 0.9% increase from 2006[1]. San Luis Obispo is the 23rd 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 2004 California Department of Finance, San Luis Obispo County has a population that is 72.7% white, non-Hispanic, 20.1% Hispanic, 1.8% African-American, 2.8% Asian, and 2.6% comprised of other categories, including Native American, Alaskan Native and Pacific Islander. 15.4% of the population is above the age of 65, while approximately 35.1% is below the age of 24[3]. The median family income in 2006 was $63,800, which is slightly lower than the California median income of $64,100[4]. According to the National Association of Home Builders Housing Opportunity Index of 2007, San Luis Obispo County is ranked the 211 out of 218 in affordability, with only 6.9% of homes affordable for persons earning the median income in the County. It is estimated that in SLOC, 13.4% of persons under the age of 18 live below the poverty level, as compared to 19.6% statewide[5].

Demographic distributions of SLOC are quite different from that of the State. Although gender distribution is similar, SLOC 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 25% of the population being 55 years or older. California as a whole has a slightly younger population distribution, with only 20% of the population being 55 years or older.

Figure 1
County vs. State % Population by Race, 2007[1]



Source: California Department of Finance Population Estimates

SLO County's economy is considered strong, with an average unemployment rate per year of 4.1%, and a rate of 3.4% for the month of May 2005[6]. 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 2005-06 year (2006-2007 statistics were unavailable), 35,971 students were in enrolled in public schools in SLOC. Numbers have been steadily declining since the 2000-01 school year when 37,693 students were enrolled. The high school dropout rate for the County is 10.5%, which has been increasing, while the state's rate has been decreasing (12.6%). However the percentage of high school graduates in the County is higher than the state's at 89.3% versus 84.9%[7]. More demographic characteristics of the County are displayed in Table 1.1.

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
Gender			
Male	135,231	51.1%	49.9%
Female	129,254	48.9%	50.1%
Race and Hispanic Origin			
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%
Age			
< 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%
Total	264,485	100%	100.0%

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 2005 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 2007

City/Region	Number	% of Population
San Luis Obispo	44,239	16.8%
North County		
Paso Robles	29,514	11.2%
Atascadero	27,778	10.6%
South County		
Arroyo Grande	16,759	6.4%
Grover Beach	13,085	5.0%
Pismo Beach	8,545	3.2%
North Coast		
Morro Bay	10,463	4.0%
Balance of County	112,987	42.9%
Total	*263,242*	*100.0%*

Source: California Department of Finance

AIDS in San Luis Obispo County

The first case of AIDS in SLOC was reported in 1984. By June 1997, 405 cases had been reported, as of June 2007, 574 cases have been reported. 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 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. CIR data was more extensively reported in previous years, it will be limited for this report. Prevalence, a better measure of the current status of HIV/AIDS in the SLO community, will be used instead.

The large incarcerated populations of SLOC have greatly increased the overall number of HIV/AIDS cases in the County. SLO County is home to three State institutions: California Men's Colony (CMC - estimated population 6,000), Atascadero State Hospital (ASH - estimated population 1,290 people) and Paso de Robles Boys School. In 2004,

the last year that CIR was regularly reported on, the CIR for the 3 institutions was 112.5, using the SLO County base population as the denominator population. The Community CIR was 102.9, calculated from the same base population. Table 2.1 shows the CIR from 2004.

Table 2.1 Cumulative Incidence (CIR) - 2004

	Incidence Rate (per 100,000) through May 31, 2004
California	400.4
San Luis Obispo (all cases)*	216.1
SLO Institutional#	112.5
SLO Community	102.9

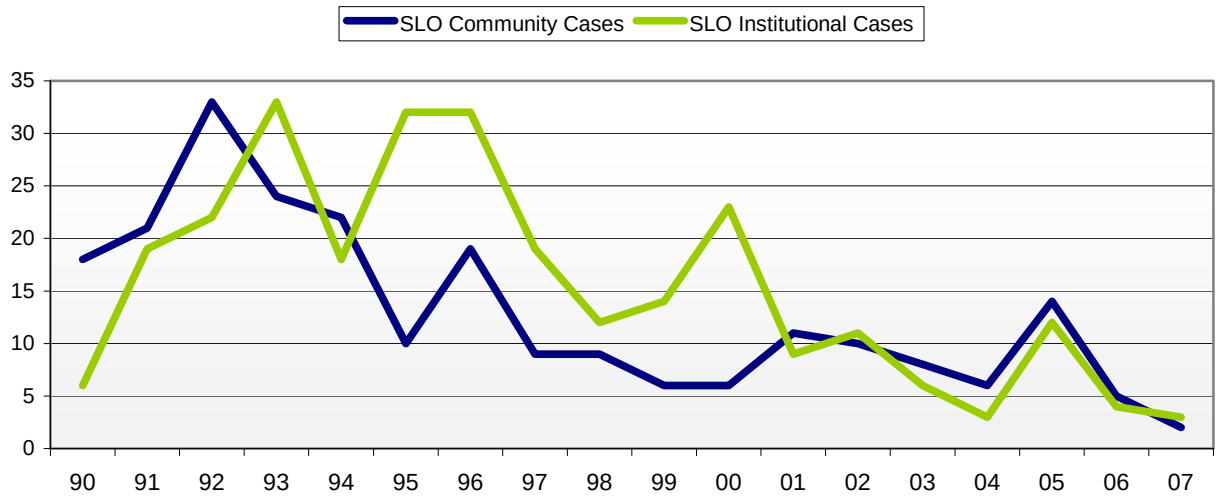
Source: California Dept. Of Health Services, Office of AIDS, HIV/AIDS Surveillance Report and San Luis Obispo County AIDS Program

The CIR for institutional persons with AIDS was higher than that of the community cases, leading to the conclusion that the institutional population skews the overall numbers of HIV/AIDS in SLO County higher. The number of new HIV cases occurring per year has been hypothesized to have remained steady from 1999 to 2005.

In SLO County, the number of community AIDS cases diagnosed increased steadily from 1983 through 1992. In 1993, the AIDS case definition changed, contributing to a decline in diagnosed cases. In 1996, HAART treatment was introduced, and helped to reduce the diagnosis of 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 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. All data on AIDS cases are considered to be estimates, as it is estimated that up to 1/3 of all persons currently infected with the virus are unaware of their status.

Prior to 1996, estimates of HIV infection in the population were based on back-calculation from AIDS mortality data. 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.

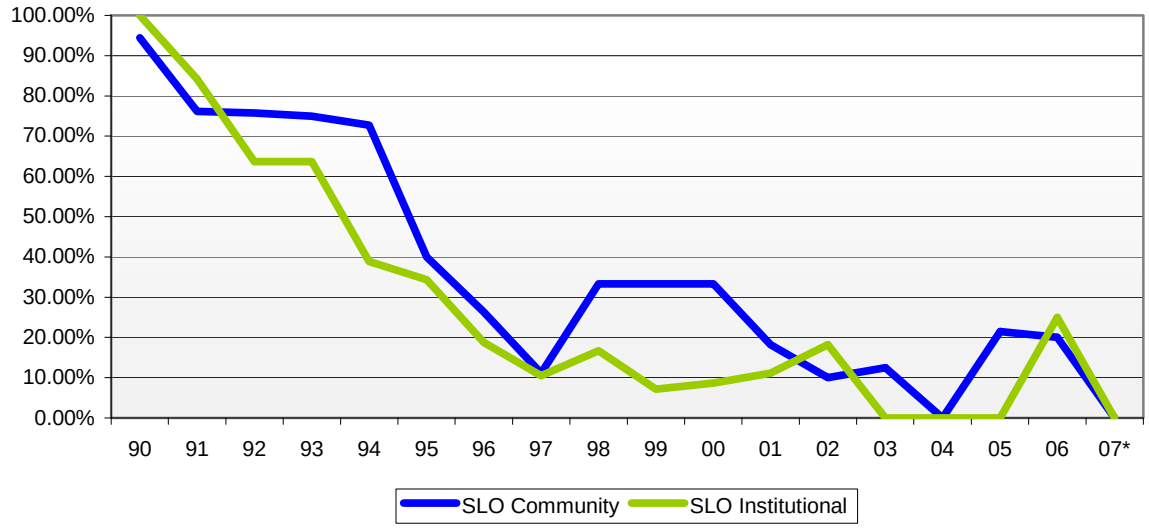
Figure 2.1
AIDS Cases by Year of Diagnosis San Luis Obispo 1989-2007



Source: San Luis Obispo County AIDS Program

HAART therapy also contributed significantly to a decrease in the case-fatality rate of persons living with AIDS. The case-fatality rate is a ratio of deaths to cases. In SLO County, the case-fatality rate was extremely high until 1996, when deaths due to AIDS began to fall. Figure 2.2 shows the case fatality rate from 1990-2007 in the community and institutional populations.

Figure 2.2
Case-Fatality Rates, SLO 1990 - 2007



*Data for 2007 is for the first 6 months 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.

Table 2.2 shows the prevalence rates for SLO County and selected comparison populations. While the prevalence rate for the community population is 71, the prevalence rate for the institutional population is 45. 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[8] were used as the denominator, the institutional prevalence rate would approximately twice as high. The overall HIV/AIDS rate in SLO County is higher than Santa Barbara County, but less than Monterey. The community prevalence in SLO County is similar to Santa Barbara County. It should be noted that Monterey also has a large prison within its jurisdiction, while Santa Barbara does not. Thus, it is reasonable to see that community rates for SLO County are similar to Santa Barbara, while overall prevalence is similar to Monterey County.

Table 2.2

AIDS Prevalence Rates for Selected Populations

	Prevalence Rate (per 100,000) through June 30, 2007
California	164
San Luis Obispo (all cases)*	114
SLO Institutional[2]	45
SLO Community	71
Santa Barbara County	77
Monterey County	118

Source: California Dept. Of Health Services, 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

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. 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

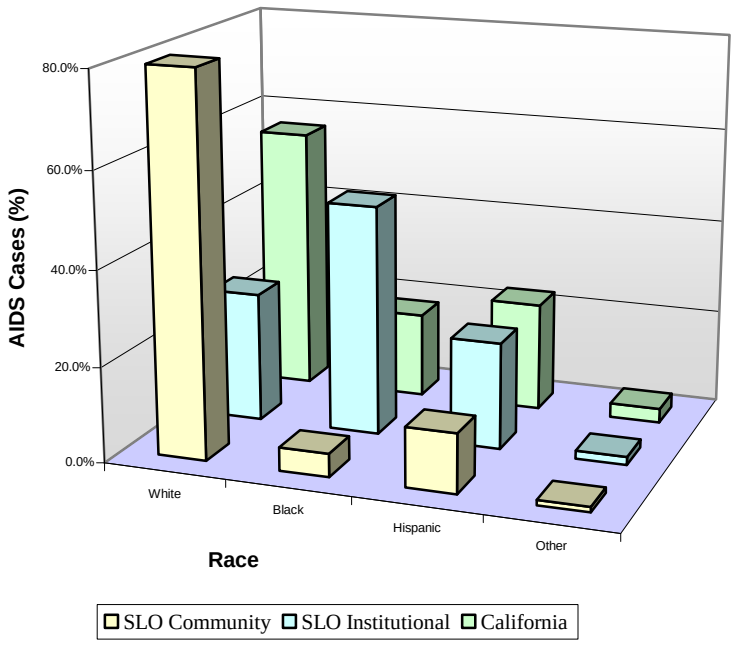
community and SLOC institutional cases are shown. This figure demonstrates that the African-American institutional population of SLOC is significantly over-represented as a percentage of overall AIDS cases, even when compared to the entire State population. By viewing both Table 3.1 and Figure 3.1, the 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, 2007

Race	San Luis Obispo (All cases)	San Luis Obispo Institutional	San Luis Obispo Community	California
White	53.8%	27.3%	81.5%	56.0%
Black	27.1%	48.5%	4.9%	18.0%
Hispanic	17.6%	22.5%	12.5%	23.0%
Other	1.5%	1.7%	1.1%	3.0%

Source: California Dept. Of Health Services, Office of AIDS, AIDS Surveillance Report Cumulative Cases as of June 30th, 2007 and San Luis Obispo County AIDS Program

Figure 3.1
Racial breakdown of persons with AIDS in San Luis Obispo County vs. California

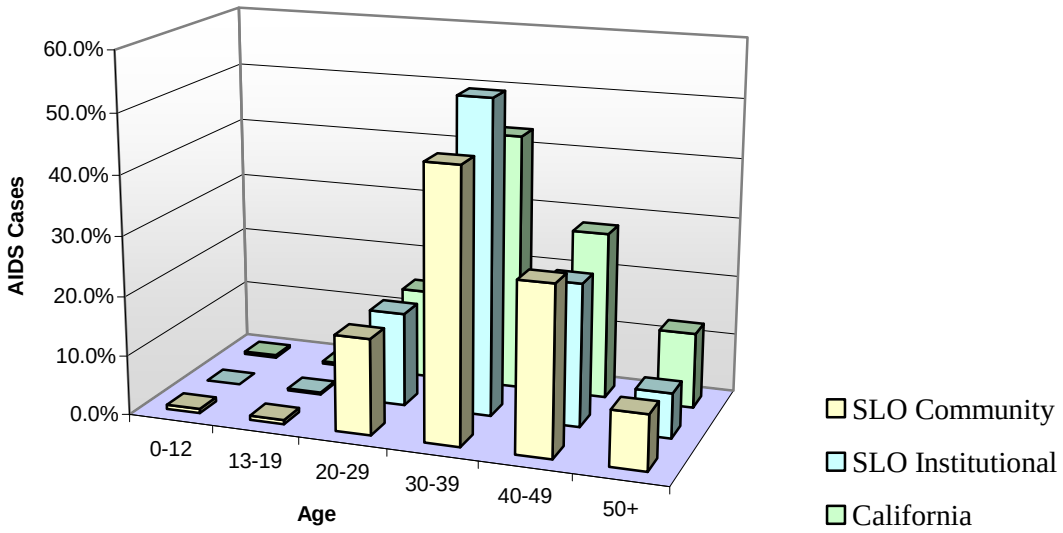


Source: San Luis Obispo County AIDS Program

Age

The majority of AIDS cases are diagnosed in 30-39 year olds, across all populations, including the San Luis Obispo County community, institutional, and California population. Figure 3.2 shows a graph of the age distribution of persons living with AIDS 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 County 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



Source: San Luis Obispo County AIDS Program

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, 250 males have been diagnosed with AIDS and 30 females. Thus, approximately 11% of community AIDS cases occur in females within the County, which is higher than the state rate of 8%. 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 for acquiring AIDS. These results are shown in Table 3.3. The next highest risk factors are MSM/IDU followed closely by MSM. The table shows that risks are more evenly

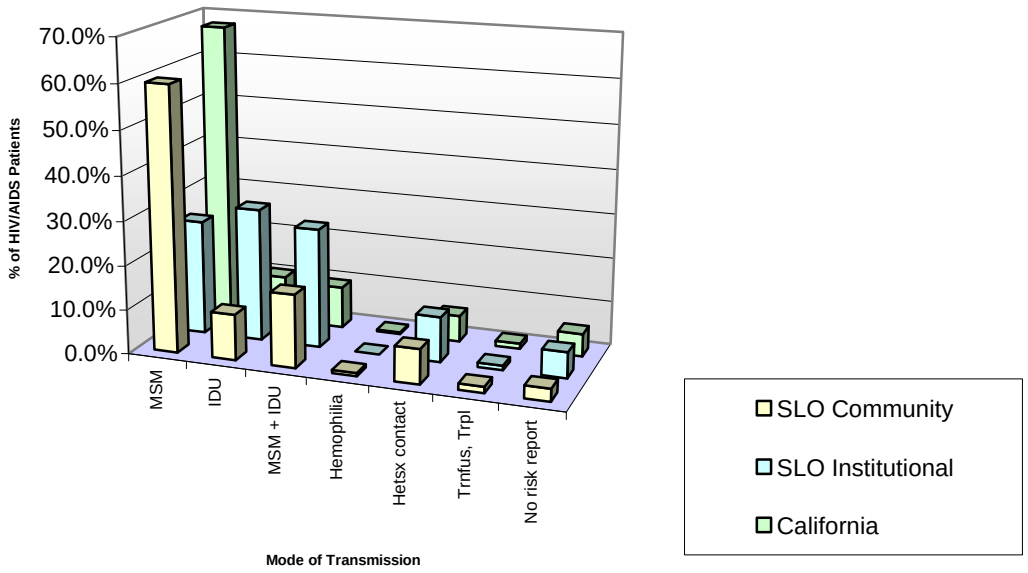
distributed among the top three risks factors in the institutional cases, while in the community, MSM is by far the greatest risk factor.

Table 3.2
Exposure categories* for Community AIDS cases in San Luis Obispo County

Exposure / Mode of Transmission	**Males (n = 249)**		**Females (n=30)**	
	# of Cases	% of Cases	# of Cases	% of Cases
Male-to-male Sexual contact (MSM)	167	67.1%	0	0.0%
Injection drug use (IDU)	19	7.6%	10	33.3%
MSM + IDU	46	18.5%	0	0.0%
Hemophilia	2	0.8%	0	0.0%
Heterosexual Contact	6	2.4%	16	53.3%
Transfusion	2	0.8%	2	6.7%
Undetermined	7	2.8%	1	3.3%
Mother at Risk	0	0.0%	1	3.3%
Total	249	100.0%	30	100.0%

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

Figure 3.3
Mode of Transmission for HIV/AIDS in San Luis Obispo County and California



Source: San Luis Obispo County AIDS Program

Table 3.3
Exposure categories for institutional AIDS cases* in SLOC

Exposure / Mode of Transmission	Cases (n)	Cases (%)
MSM	76	25.9%
IDU	88	30.0%
MSM + IDU	79	27.0%
Hemophilia	0	0.0%
Heterosexual Contact	30	10.2%
Transfusion	3	1.0%
Undetermined	17	5.8%
Total	293	100.0%

Source: California Dept. Of Health Services, 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 57.0% reporting it as one of their possible risk factors. In the community, a combined 26.1 % 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 persons with AIDS. 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 46.5%. 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. Although persons with AIDS often died soon after diagnosis early on in the HIV/AIDS epidemic, that is not the case today. Often, prisoners are moved so frequently, that they rarely die in the jurisdiction where they are diagnosed. 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.

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 1999-2007. 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.

Table 3.4
San Luis Obispo County AIDS Cases by Year of Diagnosis and Year of Death

Table 3.4 San Luis Obispo County AIDS Cases by Year of Diagnosis and Deaths by Year							
	Community Cases		Institutional Cases		Total Reported Cases and Deaths		Case Fatality Rate
Year	Cases	Deaths	Cases	Deaths	Cases	Deaths	
1983-1989	48	46	15	12	63	58	92.1%
1990	18	17	6	6	24	23	95.8%
1991	21	16	19	16	40	32	80.0%
1992	33	25	22	14	55	39	70.9%
1993	24	18	33	21	57	39	68.4%
1994	22	16	18	7	40	23	57.5%
1995	10	4	32	11	42	15	35.7%
1996	19	5	32	6	51	11	21.6%
1997	9	1	19	2	28	3	10.7%
1998	9	3	12	2	21	5	23.8%
1999	6	2	14	1	20	3	15.0%
2000	6	2	23	2	29	4	13.8%
2001	11	2	9	1	20	3	15.0%
2002	10	1	11	2	21	3	14.3%
2003	8	1	6	0	14	1	7.1%
2004	6	0	3	0	9	0	0.0%
2005	14	3	12	0	26	3	11.5%
2006	5	1	4	1	9	2	22.2%
2007*	2	0	3	0	5	0	0.0%
Total	*281*	*163*	*293*	*104*	*574*	*267*	*46.5%*

Source: San Luis Obispo County AIDS Program
*2007 data through June, 2007

HIV Testing and Seroprevalence

With the advent of names based HIV reporting beginning in April 2006, HIV data is being collected from laboratories and physicians throughout the State. However, this data is still very preliminary, and so will not be reported in this year's profile. Data from testing performed by the AIDS Program at the SLO Public Health Department is presented below.

HIV testing in San Luis Obispo County is offered both confidentially and anonymously. Confidential testing requires the testing individual to sign a consent form 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. Results are delivered to the patient via a coded numbering system. The AIDS Program of SLO County offers both confidential and anonymous HIV testing at multiple sites.

Affected Populations

Race

The ethnic distribution of persons being testing for HIV in San Luis Obispo County is fairly similar to the overall racial makeup of the County. Table 4.1 shows the racial distribution of persons being tested for HIV between July 2006 and June of 2007 by the AIDS Program vs. those testing positive. Note that the racial breakdown of those testing positive varies somewhat from those simply being tested. However, with fewer than 10 positive test results, the percentages are very volatile.

Table 4.1
HIV testing by Race in SLOC for the year ending June 30, 2007.

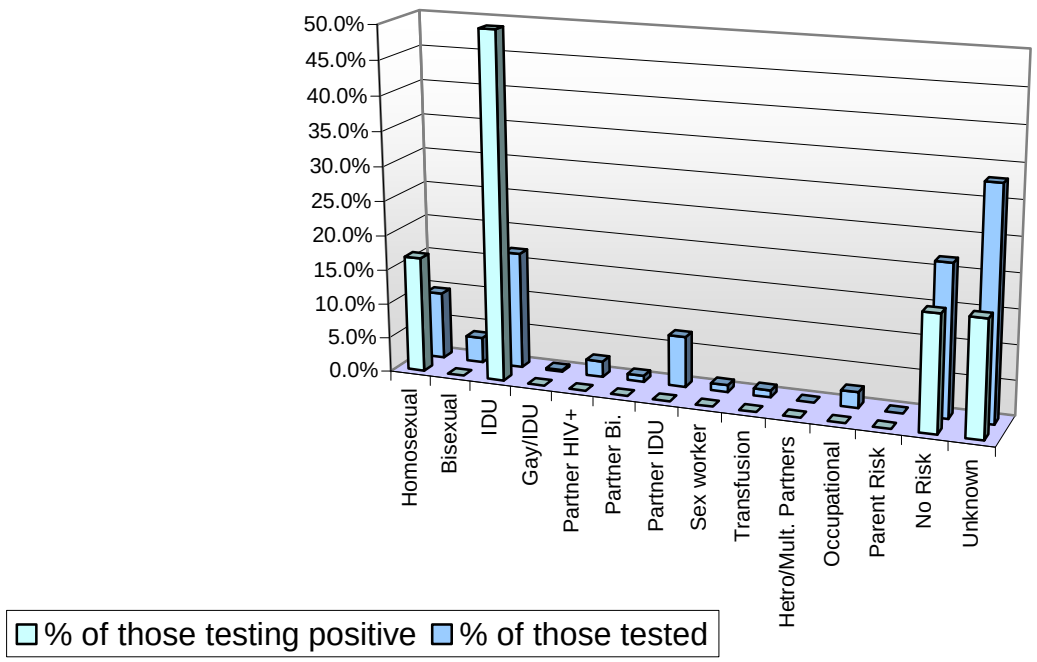
Race	SLO County (%)	Persons being tested for HIV (%)	Persons testing positive for HIV (%)
White	72.70%	77.06%	83.33%
Black	1.80%	3.30%	0.00%
Hispanic	20.10%	15.21%	16.67%
Other	5.40%	4.44%	0.00%

Source: San Luis Obispo County AIDS Program

Exposure Category

The most commonly reported risk category for persons being tested at AIDS Program sites between July 2006 and June 2007 was the risk category "Unknown", followed by "Injection Drug User" (IDU). For those testing positive, the greatest risk category was "IDU" followed by "Unknown." Figure 4 compares the breakdown of risks for persons being tested vs. those who tested positive for HIV at AIDS Program sites for 2006. 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 2006, in the State population, the greatest risk factor for a positive HIV test was MSM, followed by "Risk not reported" and "Heterosexual contact." Starting in 2004, the State mandated that only those in high risk categories for HIV/AIDS transmission be tested. This has resulted in lower numbers of persons being tested for HIV. This year, almost 25% fewer HIV tests were performed than in 2006, while positive tests results doubled. The overall percentage of persons who tested positive (0.75%) seems to suggest that HIV testing is being limited more and more to those at risk. Although the low positive testing rate seems to indicate that HIV prevalence is fairly low in San Luis Obispo County, more complete data from name-based reporting will need to be evaluated to understand the true scope of HIV prevalence within the community.

Figure 4
HIV Test Results by Behavior, 2006



Source: San Luis Obispo County AIDS Program

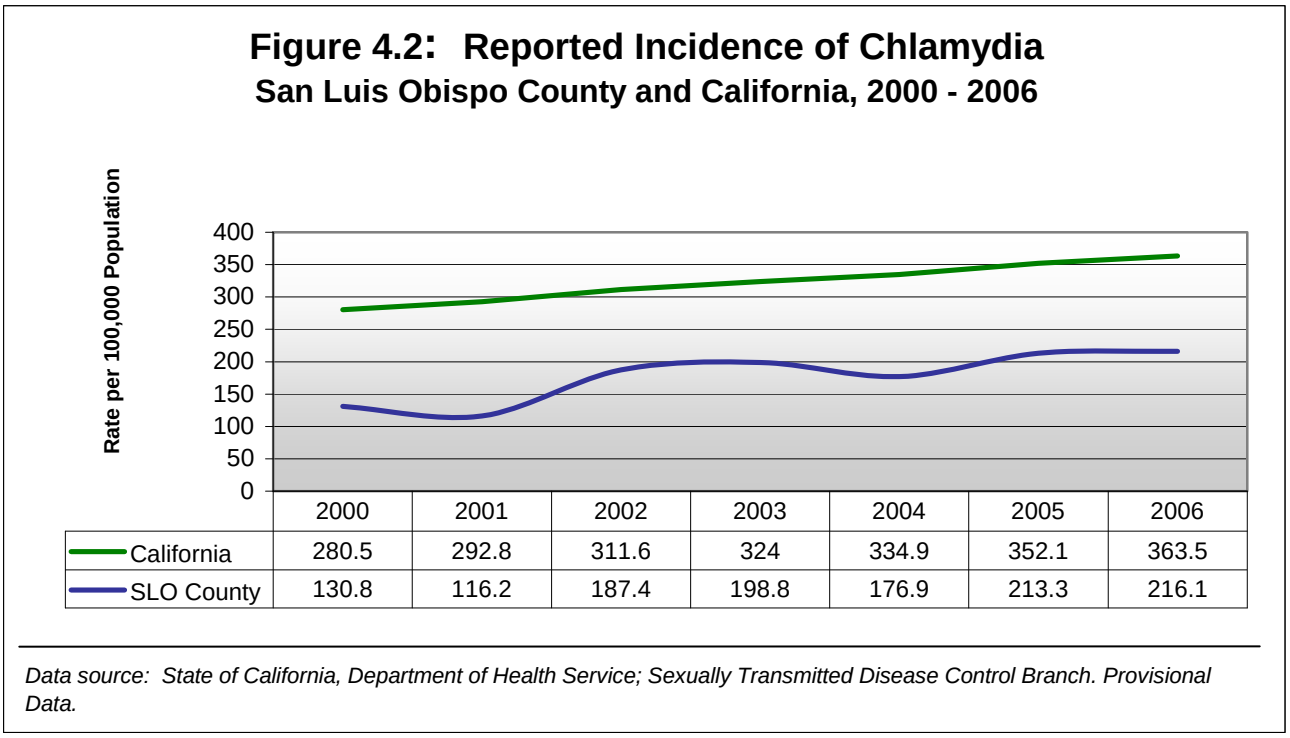
Sexually Transmitted Infections as a Marker for Risky Behavior

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[9]. 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[10]. Monitoring STIs allows the AIDS Program to estimate the prevalence of risky sexual behavior occurring in the population.

In California, cancroid, 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.

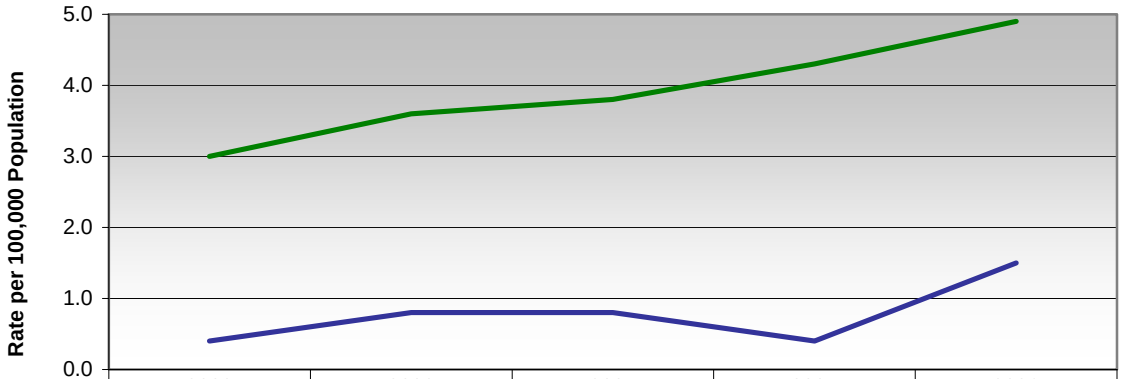
In San Luis Obispo County, although chlamydia was the most commonly reported STI, as shown in figure 5.1, the rate of chlamydia infections per 100,000 runs well below the State.

Figure 5.1
Reported Incidence of Chlamydia in SLOC and California, 2000-2006



Syphilis is generally described by the stage of disease that a person is in when diagnosed. For example, a person may have Primary, Secondary and 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.

Figure 5.2: Reported Incidence of Primary & Secondary Syphilis
San Luis Obispo County and California, 2002 - 2006



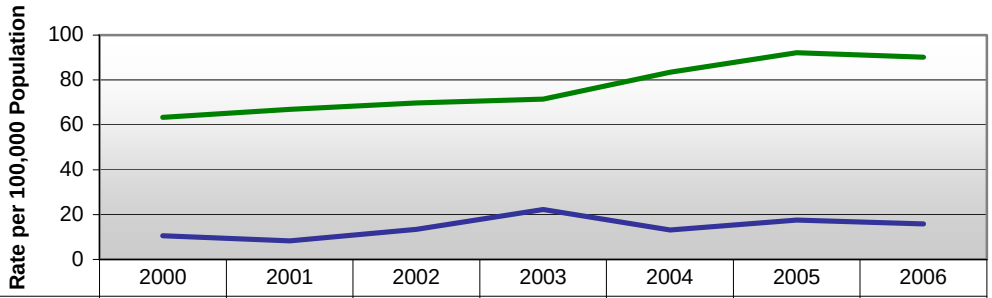
	2002	2003	2004	2005	2006
California	3	3.6	3.8	4.3	4.9
SLO County	0.4	0.8	0.8	0.4	1.5

Data source: State of California, Department of Health Service; Sexually Transmitted Disease Control Branch. Provisional Data.

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 5.3, gonorrhea rates increased from 2001 until 2003, and seem to be leveling off, a trend mirrored in the State statistics as well.

Figure 5.3

Figure 5.3: Reported Incidence of Gonorrhea
San Luis Obispo County and California, 2000 - 2006



	2000	2001	2002	2003	2004	2005	2006
California	63.4	66.9	69.7	71.4	83.5	92.2	90.2
SLO County	10.5	8.3	13.4	22.2	13.1	17.6	15.9

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

While the low rates of STIs up until 2001 suggested a general decline in risky behavior, the figures for 2002 and continuing into 2006 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[11] 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).[12] 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.

[1] 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>

[3] State of California, Department of Finance, *Race/Ethnic Population with Age and Sex Detail, 2000–2050.* Sacramento, CA. < http://www.dof.ca.gov>

[3] San Luis Obispo County Community Foundation, *ACTION for Health Communities*

[5] National Association of Home Builders Housing Opportunity Index of 2007. www.nahb.org

[6] California Department of Health Services and California Conference of Local Health Officers. *County Health Status Profiles 2006.* http://www.dhs.ca.gov/hisp/chs/OHIR/reports/healthstatusprofiles/2006/

[7] State of California, Department of Education / Education Demographics Unit. DataQuest. Sacramento, California, May 2006. <www.cde.ca.gov/ds/>

[8] State of California, Department of Corrections, Monthly Population Report, June 2007. http://www.cdcr.ca.gov/ReportsResearch/OffenderInfoServices/PopulationReports.asp

[9] HIV prevention through early detection and treatment of other Sexually Transmitted Diseases." MMWR 47.2 (1998).

[10] 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

[11] HIV prevention through early detection and treatment of other Sexually Transmitted Diseases." MMWR 47.2 (1998).

[12] 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