

# EPIDEMIOLOGIC PROFILE: HIV/AIDS

San Luis Obispo County, California | May 2018



COUNTY OF SAN LUIS OBISPO  
HEALTH AGENCY  
PUBLIC HEALTH DEPARTMENT

# San Luis Obispo County Public Health Department

## HIV/AIDS Program

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# INTRODUCTION

This report is an Epidemiologic Profile of HIV/AIDS in San Luis Obispo County (SLO County), California. It covers the AIDS epidemic in SLO County from its beginning in 1984 through January 2018. The report attempts to describe HIV and AIDS in terms of its occurrence, transmission, patient demographics and impact. The goal in providing this information is to help community-based organizations, planners, and policy-makers in evaluating and implementing programs and policies involving HIV/AIDS for the county.

In compiling this report, the County of SLO Public Health Department followed guidelines suggested by the Centers for Disease Control and Prevention (CDC) and Health Resources Services Administration (HRSA) to develop an Epidemiologic Profile for HIV prevention and community planning<sup>1</sup>. The three key components of the profile are:

1. What are the sociodemographic characteristics of the population?
2. What is the scope of HIV/AIDS in our community?
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 (or newly diagnosed) of HIV/AIDS per year in a county, but 200 prevalent cases (the year's incident cases added to previously diagnosed cases). The prevalent cases would be a combination of the newly occurring cases and previously diagnosed cases among those already living within the community. The prevalence of HIV has increased since 1996 with the introduction of new treatments. The goal of treatment is viral suppression, a state where the HIV virus is undetectable with testing, or achieving a “durably undetectable” viral load. With newer, safer treatment regimens, one study has now estimated that for persons who are HIV positive, life expectancy in North America for men is 65.9 years, and 63.2 years for women<sup>2</sup>. The CDC estimates that

there were approximately 37,600 new HIV infections in the United States in 2014. Among all populations in the US, estimated infections declined 10% between 2010 and 2014.

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. However, some duplicate reporting may still exist, and numbers have changed over the years as cases were matched back to codex cases. In some cases, codex cases have not been matched to names. Thus, state and local numbers may differ.

## 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 162,500 or 14.8% 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, the majority of this report reflects the risks reported by HIV/AIDS who lived in SLO County at the time of their diagnosis. Data on those case currently reported living in SLO County are the best available; however, some small number of cases may have left or moved to the county since June 2013.
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. In 2008, the surveillance case definition for HIV infection and AIDS were revised into a single case definition. Thus, increases or changes in HIV and AIDS rates subsequent to those years did not necessarily reflect an increase in transmission of the virus, but might reflect changes in diagnosis and reporting.
6. Some numbers of reported cases and deaths by year have changed since the 2014 edition of this report. These changes are due to new information submitted on HIV positive persons to the state database, which has resulted in a re-allocation of some cases and deaths by jurisdiction. The overall changes resulted in fewer than 10 changes of cases or deaths by year.

# DEMOGRAPHIC CHARACTERISTICS OF SAN LUIS OBISPO COUNTY

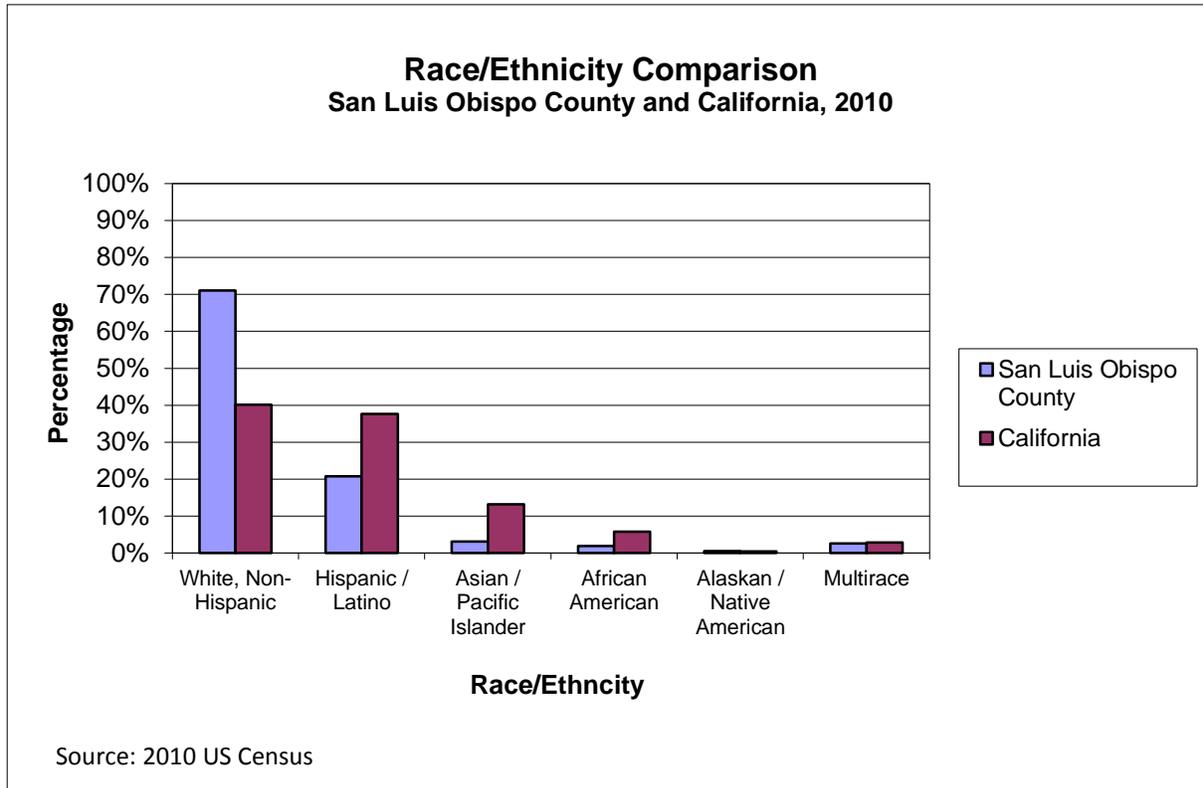
San Luis Obispo (SLO) County is located on the Central Coast of California, approximately 230 miles south of San Francisco and 200 miles north of Los Angeles. The county covers 3,316 square miles, and according to the United States Census Bureau, has an estimated population of 283,405 in 2017, which represents a 5.1% increase from 2010<sup>3</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 2010 Census is 81.7 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 9.3% between 2000 and 2010. The majority of the county is agricultural, with ~60% of the land area devoted to farming.

According to the 2010 Decennial Census, San Luis Obispo County has a population that is 71.1% white, non-Hispanic; 20.8% Hispanic; 2.6% African-American; 4.5% Asian; and 8.3% composed of other categories, including Native American, Alaskan Native and Pacific Islander. 15.2% of the population is above the age of 65, while approximately 33.5% is below the age of 24. The median household income in 2016 was \$64,014, which is higher than the California median income of \$63,783<sup>4</sup>. According to the National Association of Home Builders Housing Opportunity Index, 2018 1<sup>st</sup> Quarter report, San Luis Obispo County is ranked the 232 out of 237 in affordability, with 15.4% of homes affordable for persons earning the median income in the county. In addition, it is considered the third least affordable metro area in regions with a population of 500,000 or less.<sup>5</sup> It is estimated that in SLO County, 14.2% of individuals live below the poverty level, as compared to 15.8% statewide<sup>6</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 almost 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 29% of the

population being 55 years or older. California as a whole has a slightly younger population distribution, with ~23% of the population being 55 years or older.

**Figure 1: County and State Population Demographics, 2010**



SLO County’s economy is considered strong, with an unemployment rate of 2.9%, as of March, 2018<sup>7</sup>. The government is the county’s largest employer (federal, state and local), with construction, manufacturing and agriculture being the largest industries. 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 2017-18 year, 34,733 students were enrolled in public schools in SLO County. 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 0.9%, which has been decreasing, while the state’s rate has fluctuated, coming in at 2.4% for 2016-2017. However the percentage of high school graduates in the county for 2015-16 is higher than the state’s at 92.3% versus 83.2%<sup>8</sup>. 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, 2010\***

|                                 | San Luis Obispo County |                 | California      |
|---------------------------------|------------------------|-----------------|-----------------|
|                                 | Number                 | % of Population | % of Population |
| <b>Gender</b>                   |                        |                 |                 |
| Male                            | 137,999                | 51.2%           | 49.7%           |
| Female                          | 131,638                | 48.8 %          | 50.3%           |
| <b>Race and Hispanic Origin</b> |                        |                 |                 |
| White, Non-Hispanic             | 191,696                | 71.1%           | 40.1%           |
| Hispanic                        | 55,973                 | 20.8%           | 37.6%           |
| Black                           | 5,550                  | 2.1%            | 6.2%            |
| Asian                           | 8,507                  | 3.2%            | 13.0%           |
| Other                           | 12,649                 | 4.7%            | 18.0%           |
| <b>Age</b>                      |                        |                 |                 |
| < 5                             | 13,343                 | 4.9%            | 6.8%            |
| 5 - 14                          | 27,974                 | 10.4%           | 13.7%           |
| 15 - 24                         | 49,069                 | 18.2%           | 15.0%           |
| 25 - 34                         | 32,108                 | 11.9%           | 14.3%           |
| 35 - 44                         | 29,752                 | 11.0%           | 13.9%           |
| 45 - 54                         | 39,253                 | 14.6%           | 14.1%           |
| 55 - 64                         | 37,116                 | 13.8%           | 10.8%           |
| 65 +                            | 41,022                 | 15.2%           | 11.4%           |
| <b>Total</b>                    | <b>269,637</b>         | <b>100%</b>     | <b>100.0%</b>   |

Source: 2010 US Census

\*It should be noted that the Race and Ethnicity columns will not sum to 100%, as the Hispanic category includes White, Black, Asian and other races.

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 seven largest population centers are shown in Table 1.2. Please note that the Department of Finance estimates in City limits are not

used to calculate rates or percentages in the remainder of the report, but only used here to demonstrate where the population centers are.

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 2016 California Health Interview Survey (CHIS), 91.2% of the population has health insurance, an increase of 2.2% from the 2005 CHIS survey.

**Table 1.2: Population Estimates by City and Region, January 2018**

| City/Region         | Number         | % of Population |
|---------------------|----------------|-----------------|
| San Luis Obispo     | 46,548         | 16.6%           |
| <b>North County</b> |                |                 |
| Paso Robles         | 31,559         | 11.3%           |
| Atascadero          | 31,147         | 11.1%           |
| <b>South County</b> |                |                 |
| Arroyo Grande       | 17,912         | 6.4%            |
| Grover Beach        | 13,560         | 4.8%            |
| Pismo Beach         | 78,233         | 2.9%            |
| <b>North Coast</b>  |                |                 |
| Morro Bay           | 10,503         | 3.7%            |
| Balance of County   | 120,639        | 43.1%           |
| <i>Total</i>        | <i>272,357</i> | <i>100.0%</i>   |

Source: California Department of Finance

## HIV IN SAN LUIS OBISPO COUNTY

HIV first became reportable in California in 2002 through an anonymous code-based (“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>9</sup>, those numbers can be significantly different than the numbers maintained and reported by the San Luis Obispo Public Health Department AIDS Program. As of January 1, 2018, 188 cases of HIV that have not progressed to AIDS have been reported in SLO County. As in previous years' SLO County HIV/AIDS Epidemiologic Profiles<sup>10</sup>, HIV cases will be broken down by community cases vs. cases of incarcerated persons.

The CDC has estimated that new HIV infections per year have begun to decline, with approximately 37,000 new infections every year. However, it is also estimated that ~14.8% 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 number of HIV/AIDS cases in the county.

## 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.

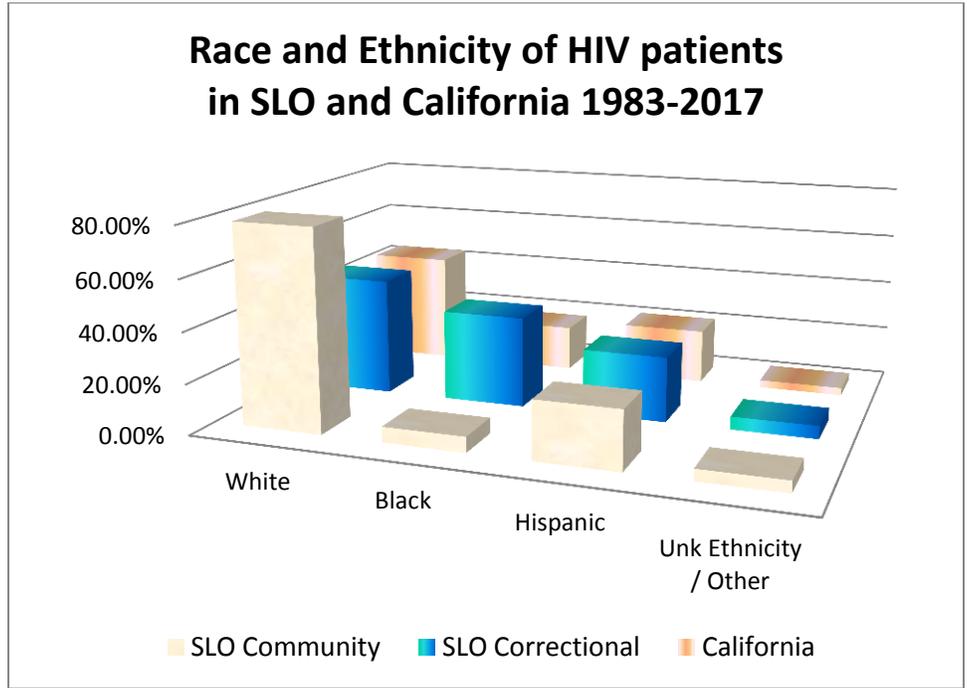
**Table 2.1: Racial and Ethnicity of HIV cases\* in San Luis Obispo County and California expressed as a percentage of cases**

| Race      | San Luis Obispo All Cases | San Luis Obispo Institutional | San Luis Obispo Community | California (All cases) |
|-----------|---------------------------|-------------------------------|---------------------------|------------------------|
| White     | 69.1%                     | 46.6%                         | 79.2%                     | 40.3%                  |
| Black     | 15.4%                     | 36.2%                         | 6.2%                      | 17.5%                  |
| Other/Unk | 15.4%                     | 17.2%                         | 14.6%                     | 42.2%                  |
| Hispanic  | 23.9%                     | 25.9%                         | 23.1%                     | 35.3%                  |

\*All cases, regardless of year diagnosed

Source: California Dept. Of Public Health, Office of AIDS, California HIV Surveillance Report - 2016 and San Luis Obispo County AIDS Program

**Figure 2: Race and Ethnicity 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. 51.5% of all cases in the community were diagnosed in this age group, and 70.7% of the institutionalized population. It should be noted, however, that almost all cases in the institutional category are male, while the San Luis Obispo County community population comprises 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, 108 males have been diagnosed with HIV and 22 females. Thus, approximately 17% of community HIV cases occur in females within the county, which is higher than the state rate of 11.7%.

## Exposure Category

Identified risks for HIV transmission vary between the community and institutional populations, as shown in Table 2.2 below. For community HIV cases, men who have sex with men (MSM) is by far the highest risk category, with 56.4% of cases falling into this category, with the next largest category being heterosexual contact. Heterosexual contact includes females who have sex with bisexual men and HIV positive men. The MSM/Bi category contains MSM and females who have sex with bisexual men. The MSM/IDU category is for those who identify as both MSM and report Intravenous Drug Use (IDU).

In the institutionalized population, the trends vary somewhat in that risk factors are more evenly distributed between MSM and 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/Bi                     | 80            | 74.1%      | 36                | 62.1%      | 88,251       | 66.7%        |
| IDU                        | 24            | 18.5%      | 26                | 44.8%      | 7,979        | 6.0%         |
| MSM + IDU                  | 11            | 8.5%       | 17                | 29.3%      | 9,218        | 7.0%         |
| Hemophilia/<br>Transfusion | 1             | 0.8%       | 3                 | 5.2%       | Not reported | Not reported |
| Hetsx contact              | 39            | 30.0%      | 22                | 37.9%      | 19,529       | 14.7%        |
| No risk report/<br>Other   | 14            | 10.8%      | 6                 | 10.3%      | 7428         | 5.6%         |

\*This table reflects the risk factors for those persons reported from SLO County who are HIV+ only, so numbers may be smaller than in previous years. HIV+ patients may have progressed to AIDS, and will be reflected in the Community AIDS exposure categories.

Exposure by gender statistics are shown in Table 2.3. As seen, the greatest risk for men is MSM, while the greatest risk for females is heterosexual contact and IDU. Percentages will not add up to 100%, as persons may report more than one risk factor.

**Table 2.3: Exposure Categories for HIV cases in SLO County by Gender**

| Mode of Transmission    | SLO Community Males |            | SLO Community Females |            |
|-------------------------|---------------------|------------|-----------------------|------------|
|                         | Count               | Percentage | Count                 | Percentage |
| MSM/Bi                  | 80                  | 74.1%      | 0                     | 0.0%       |
| IDU                     | 16                  | 14.8%      | 8                     | 36.4%      |
| MSM + IDU               | 11                  | 10.2%      | 0                     | 0.0%       |
| Hemophilia/ Transfusion | 1                   | 0.9%       | 0                     | 0.0%       |
| Hetsx contact           | 20                  | 18.5%      | 19                    | 86.4%      |
| No risk report/ Other   | 10                  | 9.3%       | 4                     | 18.2%      |

## AIDS IN SAN LUIS OBISPO COUNTY

The first case of AIDS was reported in 1984. As of January 2018, 657 cases of HIV infection reported in San Luis Obispo County had progressed to AIDS. 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 and the now current ART regimen helps halt the replication of the HIV virus in the body, thereby decreasing viral load and slowing or stopping the progression to AIDS for those with HIV infection. The goal of treatment for HIV infection is to have patients with a “durably undetectable” viral load. This increases life span, and helps stop transmission of the virus.

### 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 2.1% of the population in San Luis Obispo, 24.4% 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 is the case with HIV.

Reviewing Table 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** *Race and Ethnicity of AIDS cases\* in San Luis Obispo County and California expressed as a percentage of cases 1983-2017*

| <b>Race</b> | <b>San Luis Obispo<br/>(All cases)</b> | <b>San Luis Obispo<br/>Institutional</b> | <b>San Luis Obispo<br/>Community</b> | <b>California<br/>(All cases)</b> |
|-------------|--|--|--------------------------------------|-----------------------------------|
| White       | 60.9%                                  | 33.9%                                    | 83.3%                                | 40.3%                             |
| Black       | 24.4%                                  | 47.0%                                    | 5.6%                                 | 17.5%                             |
| Other race  | 14.8%                                  | 19.1%                                    | 11.1%                                | 42.2%                             |
| Hispanic    | 19.0%                                  | 23.8%                                    | 15.0%                                | 35.3%                             |

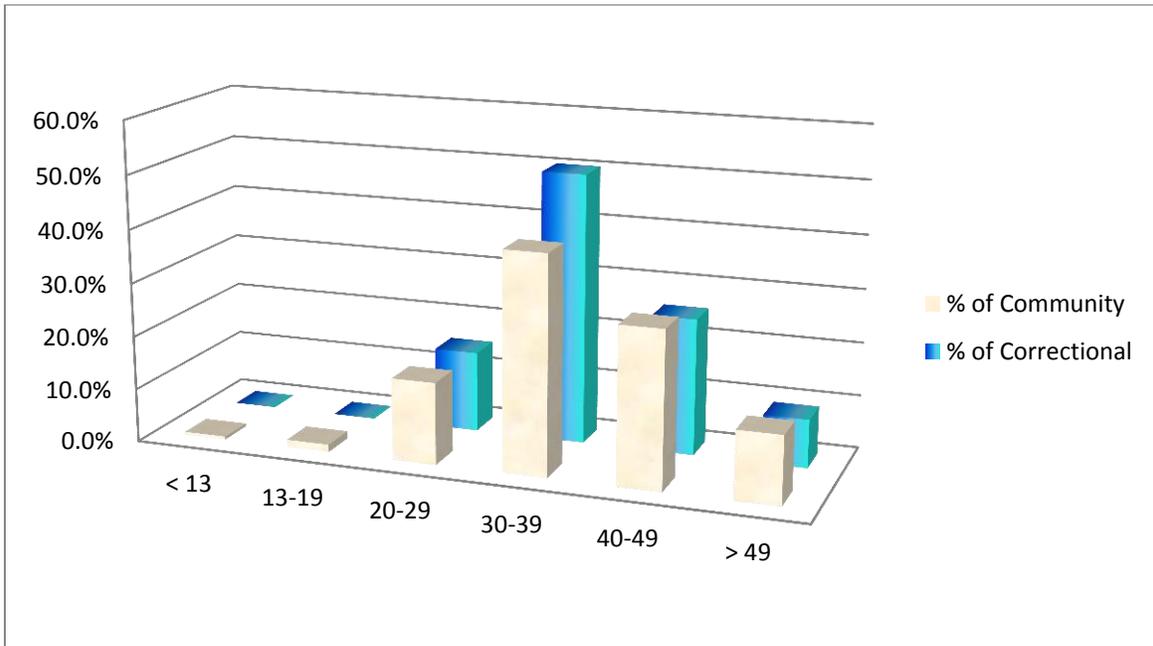
\*All cases, regardless of year diagnosed

Source: California Dept. Of Public Health, Office of AIDS, California HIV Surveillance Report - 2016 and San Luis Obispo County AIDS Program

## Age

The majority of AIDS cases are diagnosed in 30-39 year olds in both the San Luis Obispo County community and institutional populations. 69.9% of all cases in the community were diagnosed in this age group, and 75.8% of the institutionalized population. It should be noted that almost all AIDS cases in the institutional category are adult males, thus no patients were diagnosed in the correctional population between the ages of 0-19.

**Figure 3: Age at Diagnosis of AIDS for SLO County 1983-2017**



## 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, 318 males have been diagnosed with AIDS and 41 females. Thus, 11.4% of community AIDS cases occur in females within the county, while 88.6% are male.

## 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 (95.1%), followed by Intravenous Drug Use (IDU). For community males, men who have sex with men (MSM) is by far the highest risk category, with 79.9% of male cases falling into this category, followed by the combined IDU category at 23.6%.

In institutionalized males, the trends vary somewhat in that IDU is the highest risk factor categorized for those with AIDS. Table 3.3 shows that the next highest risk factors are MSM followed by heterosexual contact. 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. The percentages in Table 3.2 will not add up to 100%, as persons may have reported multiple risks, and thus be counted in more than one risk category.

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

| Exposure /<br>Mode of Transmission   | Males (n = 318) |                 | Females (n=41) |                   |
|--------------------------------------|-----------------|-----------------|----------------|-------------------|
|                                      | # of Cases      | % of male Cases | # of Cases     | % of female Cases |
| Male-to-male Sexual contact (MSM)/Bi | 254             | 79.9%           | 0              | 0.0%              |
| Injection drug use (IDU)             | 75              | 23.6%           | 13             | 31.7%             |
| MSM + IDU                            | 53              | 16.7%           | 0              | 0.5%              |
| Hemophilia/Transfusion               | 7               | 2.2%            | 2              | 4.9%              |
| Heterosexual Contact                 | 59              | 18.6%           | 39             | 95.1%             |
| Undetermined                         | 25              | 7.9%            | 3              | 7.3%              |

**Table 3.3:** Exposure categories for Institutional AIDS cases in SLO County

| Exposure /<br>Mode of Transmission | Cases (n) | Cases (%) |
|------------------------------------|-----------|-----------|
| MSM                                | 164       | 55.2%     |
| IDU                                | 172       | 57.9%     |
| MSM + IDU                          | 85        | 28.6%     |
| Hemophilia/Transfusion             | 15        | 5.1%      |
| Heterosexual Contact               | 138       | 46.5%     |
| Undetermined                       | 12        | 4.0%      |

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

For the institutional population, 57.9% of all males report IDU as one of their risk factors, however only 14% report it as their only risk factor. In the community, for both males and females, a combined 24.5 % of cases listed IDU as one of their risk factors. It is possible that IDU is rising as a factor in HIV and AIDS due to the opioid epidemic.

## Currently Reported Living in San Luis Obispo County

As of January 2018, there were a total of 384 persons reported living in San Luis Obispo County who were HIV or AIDS positive. Of these, 115 lived in correctional facilities, and 269 were reported as living in a community setting. The number of HIV/AIDS patients in a correctional setting has dropped dramatically since 2013, due to the Department of Corrections designating San Luis Obispo County as a high-risk environment for HIV/AIDS patients due to endemic *Coccidioidomycosis* (Valley Fever).

**Table 3.4:** *Persons currently living in San Luis Obispo County with HIV/AIDS*

|                  | Living in SLO Co. | HIV+ Only | HIV/AIDS | Male | Female |
|------------------|-------------------|-----------|----------|------|--------|
| SLO Community    | 269               | 119       | 150      | 227  | 42     |
| SLO Correctional | 115               | 34        | 81       | 113  | 2      |

**Table 3.5:** *Current Age of persons living with HIV /AIDS in SLO County*

| Current Age Range | <13 | 13-19 | 20-29 | 30-39 | 40-49 | >49 | Total |
|-------------------|-----|-------|-------|-------|-------|-----|-------|
|                   | 0   | 0     | 19    | 42    | 70    | 253 | 384   |

## Recent Testing as an Indicator of Care

The California Department of Public Health, Office of AIDS (CDPH OA) has adopted a strategy of "Getting to Zero," which comprises three elements:

- Zero new HIV infections
- Zero AIDS-related deaths
- Zero Stigma and Discrimination against People Living with HIV (PLWH)

CDPH OA estimates that in 2016, 71% of PLWH in California were in care, and 57% were virally suppressed. Viral suppression leads to longer life, and results in almost no risk of HIV transmission. In San Luis Obispo County, among PLWH in the community, as of January 2018, 68% had had a lab test within the past year, indicating that they were in care. In the past two years, 82% of community PLWH had a lab test. For persons in correctional facilities, the story is very different. The percentage of persons in

correctional settings reporting recent tests and viral suppression is so low, it is more probable that many lab tests for those persons have not been submitted to the state and entered into their database. However, when the state calculates percentage of persons in care, it appears they combine the community and correctional numbers to determine overall percentage of those in care and virally suppressed, leading to artificially low numbers for our county.

In the community, for those tested within the past year, 54.7%% were considered virally suppressed. Viral suppression is indicated by having a viral load less than 200 copies per milliliter. The CDPH California HIV Surveillance Report – 2016 reported that in San Luis Obispo County, only 56.8% of all PLWH were in treatment, and only 28.6% of them were virally suppressed. In Table 3.7 below, the data through January of 2017 demonstrates the differences between community, correctional, and combined totals.

**Table 3.6: PLWH in care and virally suppressed**

|              | <b>Living in SLO County</b> | <b>Tested within past 2 Years</b> | <b>Virally suppressed with test in past two years</b> | <b>Tested within past 1 year</b> | <b>Virally suppressed with test in past 1 year</b> | <b>Virally suppressed at last test(no matter how long ago)</b> |
|--------------|-----------------------------|-----------------------------------|---|----------------------------------|--|--|
| Community    | 269                         | 221 (82.2%)                       | 176 (65.4%)   | 184 (68.4%)                      | 147 (54.7%)  | 194 (72.1%)  |
| Correctional | 115                         | 17 (14.8%)                        | 7 (6.1%)  | 13 (11.3%)                       | 6 (5.2%)   | 45 (39.1%)   |
| TOTAL        | 384                         | 238 (62%)                         | 183 (47.7%)   | 197 (51.3%)                      | 153 (39.8%)  | 239 (62.2%)  |

## 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.

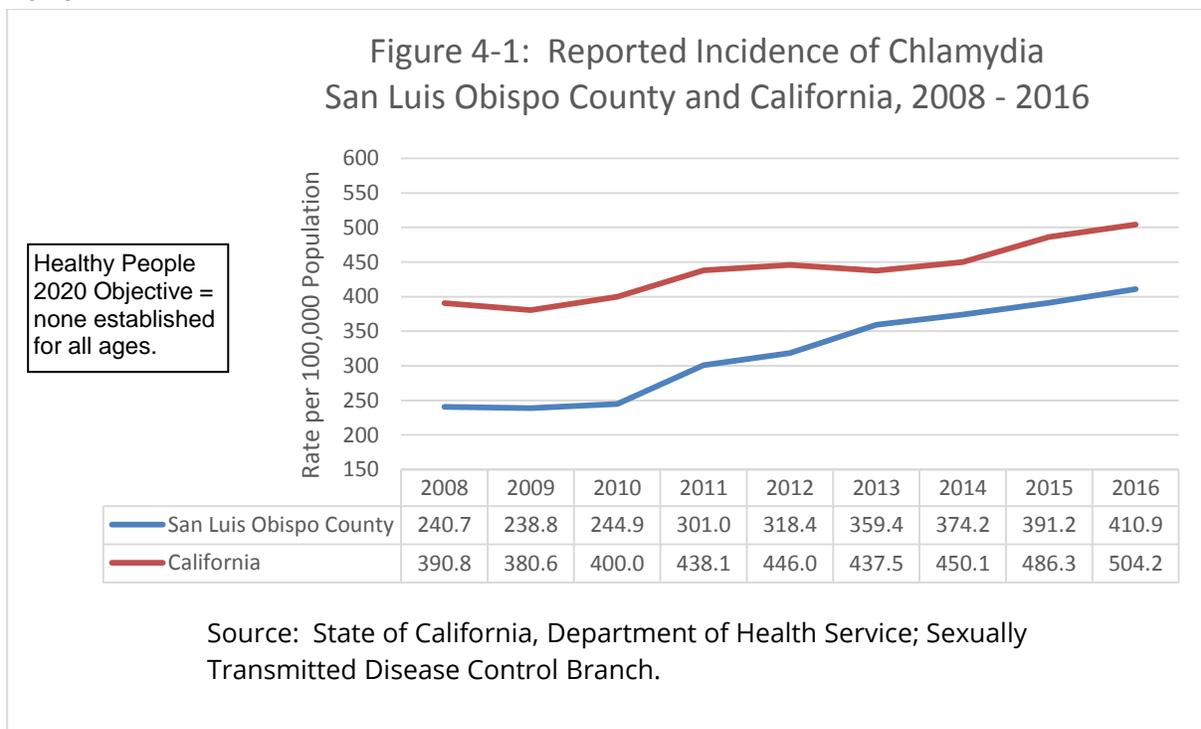
Some STIs can increase the chances of becoming infected with HIV. These STIs, such as syphilis and herpes (HSV), can cause open sores that give HIV an increased chance of entering the bloodstream<sup>11</sup>. HSV is the most common genital co-infection in HIV infected men and women (although not reportable 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, chancroid, chlamydia, gonorrhea, and syphilis are all reportable diseases, and statistics are tabulated at both the state and county level. Syphilis as well as gonorrhea has had a recent surge in case numbers among MSM across the United States, 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, chlamydia was the most commonly reported STI; however, the rate of chlamydia infections per 100,000 runs well below the state rate.

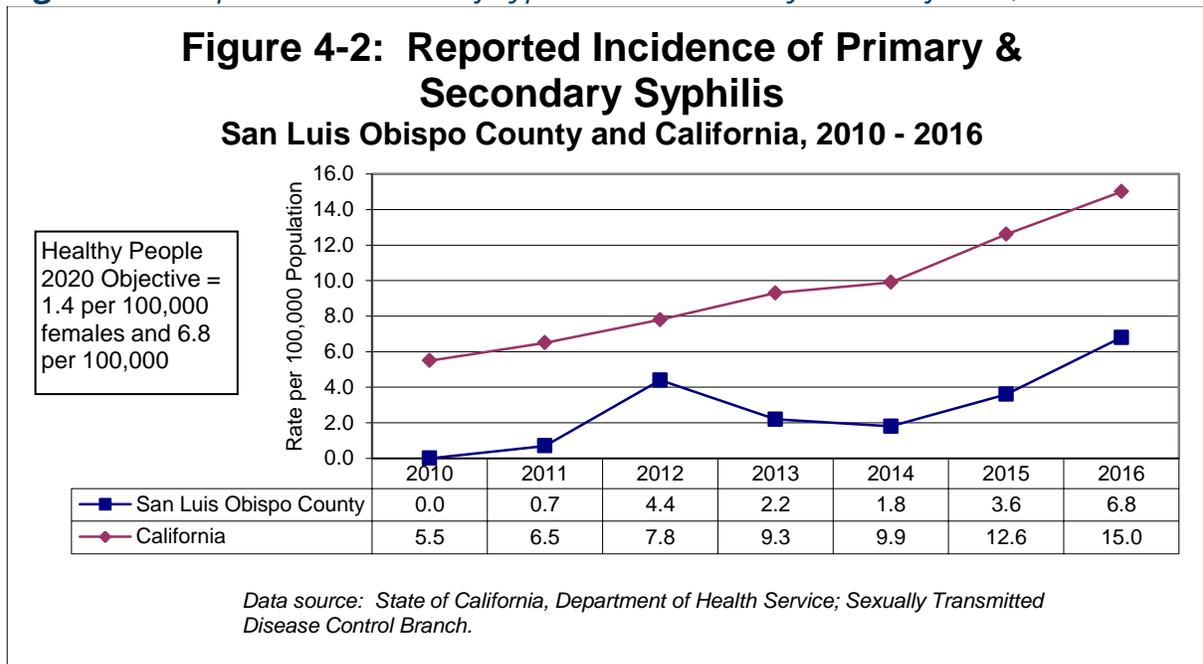
**Figure 4.1:** Reported Incidence of Chlamydia in SLO County and California, 2008 - 2016



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 has open lesions are they infectious. There has been a general increase in syphilis cases in California and the U.S. 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 4.2. 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 rise between 2010 and 2012, with a sharp decline the next year. The overall trend is a continuing rise in the rate of primary and secondary syphilis. Note that the rate for San Luis Obispo doubled from 2014 to 2015, and almost doubled again between 2015 and 2016. California's rate has almost tripled between 2010 and 2016. The County of SLO Public Health Department has a STI program investigator that contacts each reported case of syphilis, and conducts a thorough investigation. Despite education and outreach, rates have continued to rise.

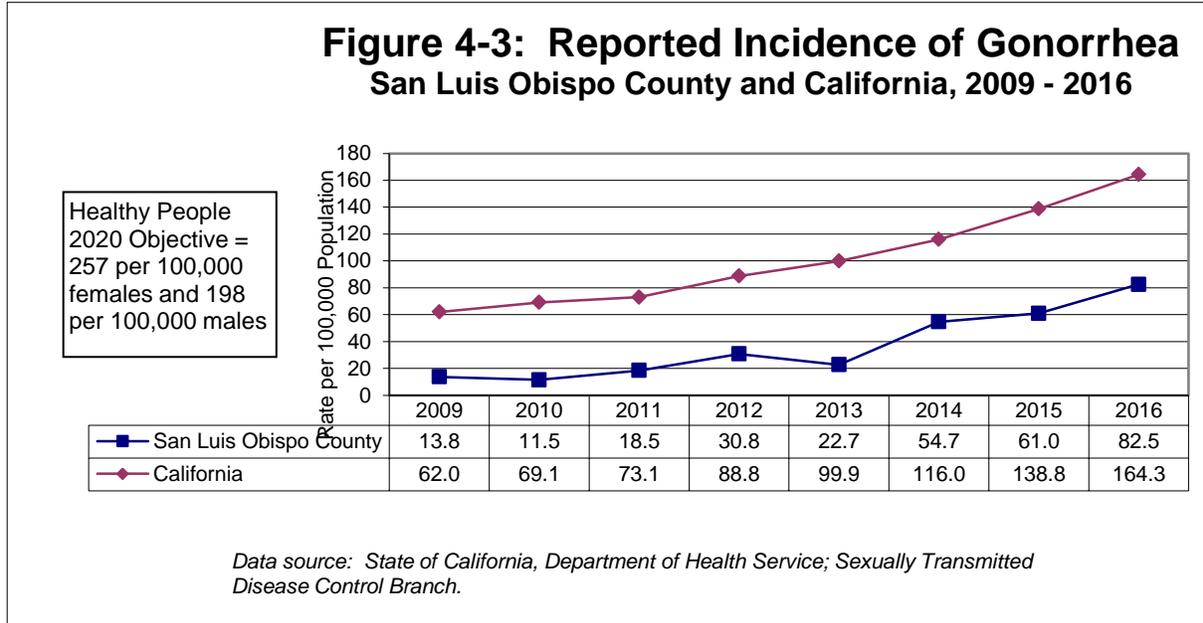
**Figure 4.2:** Reported Incidence of Syphilis in SLO County and California, 2010-2016



Gonorrhea rates per 100,000 in San Luis Obispo County are lower than the state average, and rates had remained relatively steady in the County between 2003 and 2010. Since 2010-11 however, gonorrhea rates are on the rise across the U.S. In San Luis

Obispo County, each Gonorrhea case is investigated, contacted and educated on STI prevention and treatment.

**Figure 4.3:** Reported Incidence of Gonorrhea in SLO County and California, 2009 - 2016



In the past ten years, STI rates have been rising steadily. The County of SLO Public Health Department continues to investigate and contact each case of gonorrhea and syphilis to ensure proper treatment, as well as provide prevention education. For many patients, however, the availability of ready treatment encourages risky behavior and practices. One study in San Francisco and Los Angeles<sup>13</sup> seems to suggest that the increase in syphilis rates does not correspond to increases in HIV rates. With the introduction of newer, safer HIV treatments, HIV transmission can be effectively stopped when viral suppression is achieved. However, risky sexual behavior can still have serious consequences for health and well-being in the population.

# CONCLUSION

HIV and AIDS continue to significantly affect the population of San Luis Obispo County. The changes in HIV/AIDS data collection allows us to now estimate the number of persons living in our county with HIV/AIDS, which is very different from the number of residents diagnosed in our county. (Persons diagnosed here may move away, while persons diagnosed elsewhere may move here).

While the trend in progression from HIV to AIDS continues to decline, the HIV epidemic is far from over. A large number of HIV+ persons are still unaware of their status. These persons are at risk of spreading the disease, and progressing to AIDS. The advent of new, safer and more effective treatments for HIV/AIDS is leading to increased viral suppression among PLWH. Pre-Exposure Prophylaxis (PrEP) helps persons at high risk for becoming infected with HIV avoid infection. Both of these strategies are helping to decrease annual incidence of HIV infection and progression to AIDS. However, treatment can only help if persons are aware of their status. An increase in testing and awareness is necessary to help achieve the CDPH "Getting to Zero" plan.<sup>14</sup>

According to the CDC, the lifetime treatment costs of health care associated with HIV is estimated at \$379,668 (in 2010 dollars).<sup>15</sup> One study cited by the CDC estimates that the medical savings from infections averted by U.S. prevention programs from 1991-2006 to be \$129.9 billion with 361,878 infections prevented<sup>16</sup>. A key strategy in any HIV/AIDS program 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.

Another key strategy is effective and timely treatment for those infected with the disease. With newly available data on persons living in our community with HIV/AIDS, a better understanding of needs and gaps will help provide the treatment and support needed.

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<sup>1</sup> Centers for Disease Control and Prevention and Health Resources and Services Administration. *Integrated Guidelines for Developing Epidemiologic Profiles: HIV Prevention and Ryan White CARE Act Community Planning*. Atlanta, GA: Centers for Disease Control and Prevention; 2004

<sup>2</sup> Trickey, Adam et al. Survival of HIV-positive patients starting antiretroviral therapy between 1996 and 2013: a collaborative analysis of cohort studies *The Lancet HIV*, Volume 4, Issue 8, e349 - e356

<sup>3</sup> US Census Bureau, American Community Survey, 2017  
<http://quickfacts.census.gov/qfd/states/06/06079.html>>

<sup>4</sup> US Census Bureau, American Community Survey, 2012-2016 5-year estimates.  
<http://factfinder.census.gov>

<sup>5</sup> National Association of Home Builders Housing Opportunity Index of 2018. [www.nahb.org](http://www.nahb.org)

<sup>6</sup> US Census Bureau, American Community Survey 2012-2016 5-year estimates.

<sup>7</sup> California Employment Development Departments, <http://www.edd.ca.gov/>, Unemployment rates

<sup>8</sup> California Department of Education, DataQuest, <http://data1.cde.ca.gov/dataquest/dataquest.asp>

<sup>9</sup> State of California, Department of Public Health, Office of AIDS.  
<http://www.cdph.ca.gov/programs/AIDS/Pages/Default.aspx>

<sup>10</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>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> California Department of Public Health, Center for Infectious Diseases, Office of AIDS *Laying a Foundation for Getting to Zero: California's Integrated HIV Surveillance, Prevention and Care Plan* 2016

<sup>15</sup> Schackman BR, Gebo KA, Walensky RP, Losina E, Muccio T, Sax PE, Weinstein MC, Seage GR 3rd, Moore RD, Freedberg KA. The lifetime cost of current human immunodeficiency virus care in the United States. *Med Care* 2006; 44(11):990-997

<sup>16</sup> Farnham PG, Holtgrave DR, Sansom SL, Hall HI. Medical costs averted by HIV prevention efforts in the United States, 1991-2006. *JAIDS* 2010; 54(5): 565-567