HIV DISEASE SURVEILLANCE STATISTICS 2014



County of Orange Health Care Agency, Public Health Services HIV/AIDS Surveillance and Monitoring Program

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INTRODUCTION

This report provides a summary of HIV/AIDS cases reported in Orange County through December 31, 2014. It is our hope that in providing accurate and timely information, we can assist in reducing the spread and impact of HIV throughout Orange County. This report supplements the information given through the annual HIV/AIDS Fact Sheet, data requests, website reports and presentations, and oral presentations at public meetings.

HIV/AIDS Surveillance Program

Orange County's HIV/AIDS surveillance is conducted through active surveillance to identify and collect information on cases of HIV and AIDS diagnosed at hospitals, clinics, private physician offices, laboratories, and community-based organizations (CBOs). Mandated reporters, including laboratories and health care providers, submit reports of HIV cases to the HIV/AIDS Surveillance and Monitoring Program. HIV/AIDS Surveillance Communicable Disease Investigators (CDIs) then contact and visit sites to facilitate the completion of HIV/AIDS case reports.

Case reports are entered into the County's HIV/AIDS registry. Until May 2009, the HIV/AIDS Surveillance and Monitoring Program of the Orange County Health Care Agency maintained the Centers for Disease Control and Prevention's (CDC) HIV/AIDS Reporting System (HARS) registry. The HARS registry included all reported cases of HIV and AIDS who were residents of Orange County at the time of diagnosis. In June 2009, the California Office of AIDS (OA) transitioned to the electronic HIV/AIDS Reporting System (eHARS) and began maintaining data for the local health jurisdictions (LHJs). Because of this change, the Orange County HIV/AIDS Surveillance and Monitoring Program began relying on the HIV Case Registry (Registry), a local database containing information on individuals receiving care in Orange County, including those who reside outside of the county. Throughout the report, when discussing Persons Living with HIV Disease (PLWHD) this includes all persons determined to be currently living in Orange County, regardless of their residence of diagnosis.

The Registry database is dynamic due to the nature of HIV disease reporting, and data extracted from the Registry is considered provisional. The database is updated as duplications are resolved and additional information is added. Therefore, a snapshot of the database is extracted at the end of each calendar year and is used to present data up until that point in time. The most current extraction will be the most up-to-date number for previous years; and therefore data reported each year will be different from that reported previously. The data in this report was extracted on January 31, 2015 to reflect HIV and AIDS cases diagnosed through December 31, 2014. This will be indicated with the note "Data as of January 31, 2015."

It is also important to note that while the Registry includes a comprehensive record of individuals who have been *diagnosed and reported by name* with HIV/AIDS, the Registry does not include individuals who have not been diagnosed with HIV and/or reported by name but are living with the disease. The Centers for Disease Control and Prevention (CDC) estimates that 14% of all individuals living with HIV Disease are undiagnosed and do not know their status.¹ Using the CDC recommended Estimated Back Calculation Methodology², as of December 31, 2014 there were an estimated 938 *undiagnosed* persons living with HIV/AIDS in Orange County who are not represented in this report.

² CDC's Estimated Back Calculation = $0.21/0.79 \times 6,674$ reported persons with HIV disease as of December 31, 2011.

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¹ The total number of persons estimated to be living with HIV disease is based on the Centers for Disease Control calculation and is the number of persons known to be living with HIV disease (5,760) divided by 0.86. The difference between this calculation (6,698) and 5,760 is the additional number of persons living with HIV disease but are estimated to be unaware of their diagnosis (938).

HIV Disease

In an effort to better track the progression of the HIV/AIDS epidemic and conform to new guidelines presented by the CDC, this report will focus on HIV Disease. The term HIV Disease is used to describe the entire HIV spectrum, from initial HIV infection to advanced HIV disease (also known as AIDS). An AIDS (Acquired Immune Deficiency Syndrome) diagnosis is given to an HIV-positive person who has a CD4 count of less than 200/mm³ *or* a history of an "AIDS-defining illness." The HIV disease data presented in this report combines all AIDS cases reported and all HIV cases reported by name since April 17, 2006. For comparison purposes and to more fully understand the HIV epidemic, Appendix I breaks down HIV disease by HIV (non-AIDS) and AIDS diagnoses, by year reported and diagnosed.

EXECUTIVE SUMMARY

Since reporting began (1981 for AIDS cases and 2006 for HIV cases), Orange County has reported 11,987 HIV Disease cases to the Centers for Disease Control and Prevention (CDC) as of December 31, 2014. Of these, 8,352 have been diagnosed with AIDS and 4,748 have died.

Chapter 1: HIV Disease in Orange County

- Currently 5,760 people are living in Orange County as of December 31, 2014; this does not include individuals estimated to be living with HIV who have not been diagnosed. This includes both persons who were diagnosed as Orange County residents and persons diagnosed elsewhere. This translates to a rate of 183.9 persons living with HIV Disease (PLWHD) per 100,000 Orange County population.
- In 2014, there were 261 HIV Disease (190 HIV (non-AIDS) and 71 AIDS) cases diagnosed in Orange County residents, for a rate of 8.3 cases per 100,000 Orange County population. This number is preliminary, as cases diagnosed in 2014 will continue to be reported in 2015 and beyond.
- By gender:
 - o 4,978 PLWHD are male (86.4%), 740 female (12.8%), and 42 (0.7%) are transgender male to female.
 - Of cases diagnosed in 2014, 240 (92.0%) were male, 21 (8.0%) female. There were no cases reported in 2014 of persons identifying as transgender.
- By race/ethnicity:
 - 2,692 are Hispanic (46.7%), 2,343 PLWHD are White (40.7%), 393 (6.8%) are Asian/Pacific Islander (API), and 282 are Black (4.9%).
 - In 2014, 122 (46.7%) of cases diagnosed were Hispanic, 92 (35.2%) were White, 35 (13.4%) were API, and 12 (4.6%) were Black.
- By age:
 - The majority of PLWHD is currently age 40 years and over (4,146 or 72.0%) and is overrepresented in comparison to Orange County's population (46.8%). Persons under the age of 20 years account for 42 (0.7%) of PLWHD, and persons age 20-39 years account for 1,572 (27.3%) of PLWHD.
 - Of cases diagnosed in 2014, 154 (59.0%) were age 20-39 years at diagnosis, 96 (36.8%) were age 40 years and over, and 11 (4.2%) were under age 20 years.
- By mode of transmission
 - The majority of PLWHD are men who have sex with men (MSM) (4,131 or 71.7%), followed by persons infected through heterosexual contact (631 or 11.0%), persons who injected drugs (IDU) (461 or 8.0%), and MSM/IDU (301 or 5.2%).
 - In 2014, 200 (76.6%) of cases diagnosed were MSM, followed by IDU (19 or 7.3%), heterosexual contact (18 or 6.9%), and MSM/IDU (9 or 3.4%).
- Progression to AIDS
 - o 1,762 or 44.2% of persons diagnosed with AIDS after 1995 were concurrently diagnosed with HIV.
 - Persons with the highest percentage of concurrent diagnoses were:
 - Males (1,550 or 44.5%)
 - APIs (107 or 51.0%)
 - MSM (1,256 or 44.6%)
 - 807 (20.2%) of persons diagnosed with AIDS after 1995 were diagnosed within one year of their HIV diagnosis.

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- Persons with the highest percentage of transitioning to AIDS within one year of their HIV diagnosis were:
 - Males (713 or 20.5%)
 - Hispanics (448 or 24.2%)
 - Persons infected through heterosexual contact (96 or 23.0%)
- HIV Disease Survival
 - 2,719 (82.8%) of persons diagnosed with AIDS between 1996 and 2009 were still alive within five years of their AIDS diagnosis.
 - Persons with the highest survival rates were:
 - Males 2,365 (82.8%)
 - Hispanics 1,270 (84.9%)
 - Persons infected through heterosexual contact 317 (88.5%)
- HIV Disease Mortality
 - Deaths of persons diagnosed with HIV disease peaked in 1992 with 378 deaths, regardless of cause, occurring that year.
 - This coincides with the peak in deaths due to HIV/AIDS. In 1992 there were 301 HIV/AIDS deaths, for an age-adjusted death rate of 11.9 deaths per 100,000 Orange County population.

Chapter 2: Geography of HIV Disease in Orange County

- □ The most populous cities in Orange County are Santa Ana and Anaheim, with over 300,000 residents. These cities both have the largest numbers (between 921 and 1,222) of PLWHD.
- □ The city with the third highest number of PLWHD, and the fifth most populous is Garden Grove with 173,935 residents and 335 PLWHD.
- □ In 2014, the diagnosis rate was 15.9 per 100,000 in Santa Ana, 11.2 per 100,000 in Anaheim, and 9.2 per 100,000 in Garden Grove.

By gender:

- 304 (90.7%) of PLWHD in Garden Grove are male.
- o 1,037 (84.9%) of PLWHD in Santa Ana are male.
- o 781 (84.8%) of PLWHD in Anaheim are male.
- By race/ethnicity:
 - 923 (75.5%) of PLWHD in Santa Ana are Hispanic, 212 (17.3%) are White, 40 (3.3%) Black, and 37 (3.0%) API.
 - 544 (59.1%) of PLWHD in Anaheim are Hispanic, 249 (27.0%) are White, 62 (6.7%) Black, and 59 (6.4%) API.
 - 167 (49.9%) of PLWHD in Garden Grove are Hispanic, 93 (27.8%) White, 62 (18.5%) API, and 10 (3.0%) Black.
- By mode of transmission
 - 256 (76.4%) of PLWHD in Garden Grove were infected through MSM, 27 (8.1%) through IDU, and 22 (6.6%) through heterosexual contact, and 21 (6.3%) were MSM/IDU.
 - 662 (71.9%) of PLWHD in Anaheim were infected through MSM, 110 (11.9%) were infected through heterosexual contact, 69 (7.5%) through IDU, and 45 (4.9%) MSM/IDU.
 - 814 (66.6%) of PLWHD in Santa Ana were infected through MSM, 149 (12.2%) were infected through heterosexual contact, 138 (11.3%) through IDU, and 69 (5.6%) MSM/IDU.

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Chapter 3: Pediatric HIV Disease in Orange County

- Between 1985 and 1989, there were 19 pediatric HIV Disease cases diagnosed in Orange County, the peak five-year time period since the first pediatric case was diagnosed in 1983. This number had decreased to six by 2010-2014. Overall, 77 pediatric cases have been diagnosed.
- As of December 31, 2014, 51 children diagnosed before the age of 13 were living in Orange County.

By gender:

- Females account for 27 (52.9%) of PLWHD who were diagnosed as a child; males 24 (47.1%).
- By race/ethnicity:
 - 22 (43.1%) of pediatric PLWHD are Hispanic, 15 (29.4%) are Black, 10 (19.6%) are White, and less than five are API.
- By age:
 - 14 (27.5%) of persons diagnosed as a child are currently still under the age of 13. 18 (35.3%) are currently age 13-19 years, and 19 (37.3%) are age 20 years and over.
- By mode of transmission
 - o 44 (86.3%) of pediatric PLWHD were infected perinatally.

Chapter 4: HIV Counseling and Testing

- The Orange County Health Care Agency provides support for HIV counseling and testing services in Orange County through the provision of HIV rapid test kits funded by the HIV Prevention Services Branch of the California Department of Public Health, Office of AIDS. Counseling and Testing (C&T) sites receiving kits include: 17th Street Testing and Treatment, AIDS Services Foundation (ASF), the Health Care Agency Risk Reduction, Education, and Community Health (REACH) Program, the Asian Pacific AIDS Intervention Team (APAIT), and The LBGT Center Orange County. Tests conducted through expanded testing (see Chapter 5), private provider offices and other sites not listed here are not included in this chapter.
- □ In 2014, 9,391 persons were tested at Orange County Counseling and Testing sites. Of these, 87 (0.9%) tested positive for HIV.
- By gender:
 - o 76 (1.1%) of males tested positive, while only 8 (0.4%) of females tested positive.
- By race/ethnicity:
 - 46 (1.0%) of Hispanics, 18 (0.7%) of Whites, 14 (1.1%) of APIs, and 5 (1.2%) of Blacks tested positive.
- By age:
 - 25 persons age 19-25 years and 31 persons age 26-35 years had positivity rates of 0.9% and 1.0%, respectively, while persons age 36-45 years had a positivity rate of 0.9% (15 positive tests). Persons age 46-55 years had a positivity rate of 1.0% with 10 positive tests.
- By mode of transmission:
 - o 66 (1.9%) persons who indicated they were MSM/IDU tested positive. Persons who indicated heterosexual contact had a positivity rate of 0.2% (8 positive tests).

Chapter 5: Expanded Testing

- HIV expanded testing is a program funded by the State Office of AIDS (SOA). In Orange County, three programs are funded for this program: AltaMed, the University of California (UCI) medical centers, and Orange County Jails. The goal of the project is to routinize HIV screening in medical settings, identify a positivity rate for newly identified positives of at least 0.1%, and link HIV-positive individuals to care and support services.
- □ Since expanded testing began, 63,372 tests have been conducted, 246 of which have tested positive. Of the 246, 55 were newly positive, for a positivity rate of 0.1%

Chapter 6: National HIV/AIDS Strategy

- In July 2010, the White House released the National HIV/AIDS Strategy (NHAS) for the United States, which outlined four goals for a national response to HIV in the United States. These goals are to: 1) reduce the number of people who become infected with HIV; 2) increase access to care and improve health outcomes for people living with HIV; 3) reduce HIV-related health disparities; and 4) achieve a more coordinated national response to the HIV epidemic.
- Objective 1-1: Reduce the number of new HIV infections by 25 percent.
 - o 2010 Baseline: 281
 - o 2014 Orange County: 261
 - o 2015 Target: 211
- Objective 1-2: Reduce the HIV transmission rate by 30 percent.
 - o 2010 Baseline: 4.3
 - o 2014 Orange County: 3.9
 - o 2015 Target: 3.0
- Objective 2-1: Increase the proportion of newly diagnosed patients linked to clinical care within three months of HIV diagnosis to 85 percent.
 - o 2010 Baseline: 67%
 - o 2014 Orange County: 85%
 - o 2015 Target: 85%
- Objective 2-2: Increase the proportion of Ryan White Program clients who are in continuous care to 84 percent.
 - o 2010 Baseline: 79%
 - o 2014 Orange County: 80%
 - o 2015 Target: 84%
- □ Objective 2-3: Increase the proportion of PLWHD who are in continuous care² by 20 percent.
 - o 2010 Baseline: Not Available
 - o 2014 Orange County: 64%
 - o 2015 Target: 72%
- Objective 2-4: Increase the proportion of Ryan White Program clients with permanent housing to 92 percent.
 - o 2010 Baseline: 87%
 - o 2014 Orange County: 92%
 - o 2015 Target: 92%
- Objective 3-1: Increase the proportion of HIV diagnosed gay and bisexual men with undetectable viral load by 20 percent.
 - o 2010 Baseline: Not Available
 - o 2014 Orange County: 72%
 - o 2015 Target: 79%
- Objective 3-2: Increase the proportion of HIV diagnosed Blacks with undetectable viral load to 67 percent.
 - o 2010 Baseline: Not Available
 - o 2014 Orange County: 69%
 - o 2015 Target: 67%

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- Objective 3-3: Increase the proportion of HIV diagnosed Latinos with undetectable viral load to 67 percent.
 - o 2010 Baseline: Not Available
 - o 2014 Orange County: 63%
 - o 2015 Target: 67%

Chapter 7: Ryan White Act and Orange County

- □ The Ryan White Act was first authorized in 1990 and is the largest piece of federal legislation that offers funding for the care and treatment of PLWHD who have no other source for care.
- □ Three main goals of the Ryan White Act are:
 - To lessen the burden of treatment and care in areas most affected by HIV.
 - To foster a coordinated approach to core treatment and support of HIV services.
 - To build a community-based, strategic response to HIV from local organizations and advocates, as well as local public entities.

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Overall HIV Disease Case Reporting:

In an effort to better track the progression of the human immunodeficiency virus (HIV) epidemic and conform to CDC guidelines, this report will focus on *HIV disease*. The terminology of HIV disease is used to describe the entire HIV spectrum, from initial HIV infection to advanced HIV disease, also known as Acquired Immune Deficiency Syndrome (AIDS). AIDS first became reportable in 1981; an AIDS diagnosis is given to an HIV-positive person who has a CD4 count of less than 200 cells/µL and/or an AIDS-defining illness. HIV infection, by name, without an AIDS diagnosis, first became reportable in California in 2006. The HIV disease data presented in this report combines all AIDS cases reported since 1981 and all HIV cases reported by name since 2006.

Since reporting began (1981 for AIDS cases and 2006 for HIV cases), Orange County has reported 11,987 HIV disease cases diagnosed through 2014 to the Centers for Disease Control and Prevention (CDC). Of these, 8,352 have been diagnosed with AIDS and 4,748 have died.

The data presented throughout this chapter can be found in tables at the end of the chapter. Tables include all data since reporting began even though data by year presented in this chapter only includes the previous 10 years (2005 to 2014).

Continuum of HIV Care:

The Centers for Disease Control and Prevention (CDC) released an analysis³ showing that only one in every seven of the 1.1 million Americans living with HIV have their infection under control. The Continuum of Care provides a visual "cascade" of individuals living with HIV disease. The CDC stages of the continuum include:

- 1. **Infected with HIV**: This is the CDC estimate that includes those who know their HIV status and those who are HIV-positive but unaware of their HIV status. This report does not include information on persons living with HIV/AIDS who have not been diagnosed;
- 2. **Diagnosed with HIV**: This is the percent of individuals who are HIV-positive and aware of their status compared to the estimate of all individuals living with HIV in Orange County;
- 3. Ever Linked to HIV care: This is the percent of HIV-positive individuals who have been linked to HIV medical care (as indicated by having at least one viral load and/or CD4 count blood test after the month and year of diagnosis);
- 4. **Retained in HIV care**: This is the percent of HIV-positive individuals who are currently in HIV care with at least two visits during a two year period (as indicated by having at least two viral load and/or CD4 count blood test). For persons diagnosed prior to 2014, the two year period is 2013 to 2014. For those diagnosed in 2014, the time frame is January 2014 through August 2015;
- 5. **Receiving Antiretroviral Therapy (ART)**: This is the percent of HIV-positive individuals who are taking antiretroviral medications. Because this data is not available for Orange County, a proxy measure has been used (persons with an undetectable viral load at their last test in 2014 or persons whose viral load declined between the last test in 2014 and the previous test);
- 6. Viral Suppression: This is the percent of individuals with a HIV viral load of less than 200 copies/mL.

³ CDC. HIV in the United States: Stages of Care. <u>http://www.cdc.gov/nchhstp/newsroom/docs/HIV-Stages-of-Care-Factsheet-508.pdf</u> Released November 2014. Accessed June 23, 2015.

Figure 1.1 displays the HIV Continuum of Care in Orange County. Of the HIV infected, 86.0% are estimated to have been diagnosed (5,760), while 938 are estimated to be infected with HIV disease but unaware of their diagnosis. Of the total estimated to be infected (6,698)⁴, 79.7% have been linked to care at some time after their diagnosis, 66.5% are currently retained in care, 61.4% are estimated to be receiving antiretroviral therapy (ART), while 59.3% had a viral load test result less than 200 copies/ml the last time they were tested in 2014.



Summary of HIV and AIDS Prevalence and Incidence:

The following section provides an overview of:

- HIV Incidence: Individuals with a diagnosis of HIV (non-AIDS) who resided in Orange County at time of diagnosis. This does not include persons now diagnosed with AIDS.
- AIDS Incidence: Individuals with a diagnosis of AIDS and resided in Orange County at time of diagnosis.
- HIV Disease Prevalence: Persons living with HIV disease (PLWHD) in Orange County, regardless of their residency at time of diagnosis.

Figure 1.2 shows the number PLWHD as of December 31 of each year between 2005 and 2014⁵. As of December 31, 2014, there were 5,760 persons diagnosed and living with HIV disease in Orange County.



⁴ The total number of persons estimated to be living with HIV disease is based on the Centers for Disease Control calculation and is the number of persons known to be living with HIV disease (5,760) divided by 0.86. The difference between this calculation (6,698) and 5,760 is the additional number of persons living with HIV disease but are estimated to be unaware of their diagnosis (938).

⁵ The number of PLWHD living in 2014 is based on the actual number living at the end of the year. Prior to 2014, an estimate was used based on how many of the 5,760 PLWHD were living at the end of each of the previous years. The numbers shown for 2005-2013 may include people who were not living in Orange County at that time and may exclude people who were living in Orange County during 2005-2013 who were not living here at the end of 2014.

Figure 1.3 shows the number of newly diagnosed HIV and concurrently⁶ diagnosed AIDS cases reported in Orange County by year of diagnosis. In 2014, there were:

- 261 persons were newly diagnosed with HIV disease.
- 54 persons were concurrently diagnosed with AIDS indicating that the individual was living with HIV disease but unaware of their status for a significant amount of time.



Overall HIV Disease Prevalence and Incidence:

Figure 1.4 shows the number of HIV disease cases diagnosed by the earliest reported HIV diagnosis year⁷ and the number of PLWHD each year.⁸ As shown:

- Trends in Incidence: In the last 10 years, the number of new HIV disease cases diagnosed has decreased from 354 cases (12.0 per 100,000 population) to 261 (8.3 per 100,000 population). The number of cases diagnosed in 2014 is considered provisional and subject to slight increases as cases diagnosed in 2014 will continue to be reported in 2015.
- Trends in Prevalence: The number of PLWHD has increased each year, most recently by 4.5% from 2013 to 2014.



⁶ Concurrently diagnosed are persons who tested positive for HIV for the first time and had an AIDS defining condition (CD4 count below 200 cells/μL and/or a diagnosis of a disease that is an indicator condition for AIDS) in the same month and year.

⁷ HIV disease cases by year are by the year of their HIV diagnosis, regardless of what year their AIDS diagnosis was for cases diagnosed with AIDS.
 ⁸ The earliest diagnosis year shown is typically the year the person was diagnosed with HIV; in cases where the HIV date is missing or the HIV test was performed sometime after the AIDS diagnosis, the year of AIDS diagnosis is shown.

HIV Disease by Gender

Persons diagnosed with HIV disease may self-report their gender in four different categories: (1) male; (2) female; (3) transgender male to female; or (4) transgender female to male. Due to the small number of transgender PLWHD, unless indicated,⁹ transgender HIV disease cases are not included in the male or female category of figures in this section.

Prevalence by Gender:

Of the 5,760 PLWHD living in Orange County as of December 31, 2014, 4,978 are male, 740 female, and 42 transgender male to female.

Figure 1.5 shows the number of PLWHD as of December 31, 2014 compared to Orange County's 2014 population by gender. There were 4,978 male PLWHD and 740 female PLWHD. As shown:

- Males are disproportionately impacted and accounted for 86.4% of PLWHD compared to 49.5% of the population.
- Females represent 12.8% of PLWHD and 50.5% of the population.
- Transgender male to female¹⁰ cases accounted for 0.7% of PLWHD. However, Orange County population for transgender is not available to show the impact on that community.





Figure 1.6 shows the number of PLWHD cases per 100,000 Orange County residents by gender and self-reported race/ethnicity¹¹. As shown:

- Black males have the highest male rate while Black females have the highest female rate of HIV disease.The Black male rate is over twice that of all males. The Black female rate is nearly nine times that of all females.
- Hispanic males have the next highest male rate at 420.3 per 100,000, which is slightly higher than the Black female rate.
- Hispanic females have the second highest rate amongst females at 68.2 per 100,000.
- Asian/Pacific Islanders (APIs) have the lowest rate among males and females.

⁹ Information is only shown where there are five or more cases in each subgroup.

¹⁰ As of January 31, 2015, there have been no diagnosed and reported HIV disease cases among transgender female to male in Orange County. ¹¹ See the HIV disease by Race/Ethnicity section on page 1:7 for description on race/ethnicity reporting.

Figure 1.7 shows the number of PLWHD cases per 100,000 Orange County residents by gender and current age. As shown:

- Males and females age 46-55 years have the highest rate of PLWHD.
- Males age 26-35 years, 36-45 years, and 46-55 years have rates higher than all males (total).
- Females age 36-45 years and 46-55 years have rates higher than all females (total).



Figure 1.8 shows the distribution of PLWHD by mode

of transmission¹² among males and females.

- Mode of Transmission among Males: The vast majority (82.3%) of males living with HIV disease reported being exposed through men who have sex with men (MSM), followed by injection drug use (IDU), men who have sex with men who use injection drugs (MSM/IDU), and heterosexual contact.
- Mode of Transmission among Females: The majority (70.7%) of females living with HIV disease reported being exposed through heterosexual contact, followed by IDU (19.3%). Females were also more likely to be reported as having been exposed through other or unknown means, which includes blood transfusions.



¹² See the HIV disease by Mode of Transmission section on page 1:15 for description of mode of transmission reporting.

Incidence by Gender:

Of the 3,133 new cases of HIV disease diagnosed in Orange County between 2005 and 2014, 2,784 were male and 328 were females. An additional 21 were diagnosed among transgenders.

Figure 1.9 displays the three year average rate of HIV disease cases per 100,000 population by gender diagnosed each year between 2005 and 2014. As shown, case rates of HIV disease among males have been much higher than among females. The highest rate of HIV disease diagnosis occurred in 2005-2007 for both males (20.9 per 100,000 population) and females (3.0 per 100,000 population) and have since declined.



Transgender cases are excluded from Figure 1.9 because rates cannot be calculated for this population due to a lack of population estimates.

Mortality by Gender:

Figure 1.10 shows the death rate (due to any cause) per 100,000 population for the past 10 years by gender and year of death. Since the beginning of the epidemic in 1980, 4,341 males and 401 females diagnosed with HIV disease have died.

- Death Rates among Males: In the last 10 years, the highest death rate among males was in 2006, with 6.2 deaths per 100,000 males in Orange County.
- Death Rates among Females: The highest death rate among females in the last 10 years was in 2005, with 1.6 deaths per 100,000 females in Orange County.



Transgender cases are excluded from Figure 1.10 because they have fewer than five deaths in any given year. Deaths in 2014 are provisional due to reporting delays.

HIV Disease by Race/Ethnicity:

This section describes trends in HIV disease by race/ethnicity. HIV reporting complies with guidelines provided by the Federal Office of Management and Budget.¹³ Persons diagnosed with HIV disease are asked to report their race and ethnicity. To determine ethnicity, persons are asked whether they identify as Hispanic. Individuals are then asked to choose one or more of the following race categories: (1) American Indian or Alaskan Native (AI/AN); (2) Asian; (3) Black or African-American; (4) Native Hawaiian or Other Pacific Islander (NHOPI); and (5) White.

For the purposes of this report, persons who indicate that they are Hispanic are shown as "Hispanic" regardless of race chosen. The remaining racial categories capture the race of persons who indicate that they are not Hispanic. Individuals who are Black or African-American are referred to as "Black" throughout this report. Due to the small numbers of NHOPIs, this category has been combined with Asians and both groups are included in the "Asian/Pacific Islander" (API) category. Due to their small numbers, individuals identifying as AI/AN are included in the "Other/Unknown" category along with non-Hispanic individuals who identified with more than one racial category.

Prevalence by Race/Ethnicity:

Of the 5,760 PLWHD in Orange County as of December 31, 2014, 2,343 are White, 282 are Black, 2,692 are Hispanic, and 393 are API. The remaining 50 are either American Indian/Alaskan Native (AIAN), more than one race, or of unknown race.

Figure 1.11 compares PLWHD by race/ethnicity to the 2014 Orange County population. As shown:

- Whites are slightly under-represented with 40.7% PLWHD versus comprising 42.3% of the population.
- Blacks are over-represented with 4.9% PLWHD versus comprising 1.5% of the population.
- Hispanics are over-represented with 46.7%, PLWHD versus comprising 34.6% of the population.
- APIs are under-represented at 6.8% PLWHD as compared to their representation in the population (19.1%).



¹³ Office of Management and Budget, Washington, D.C. Provisional Guidance on the Implementation on the 1997 Standards for Federal Data on Race and Ethnicity, December 15, 2000.

Figure 1.12 shows the rate of PLWHD per 100,000 Orange County residents by race/ethnicity and current age. As shown:

- Blacks in all age groups have the highest rate of PLWHD.
- Hispanics have the second highest rate per 100,000 population in all age groups of PLWHD.
- Whites have higher rates of PLWHD in the age groups 36-45 years and 46-55 years than White persons of all ages.
- APIs have the lowest rates in all age groups.





Figure 1.13 shows the distribution of PLWHD by mode of transmission¹⁰ among each race/ethnicity.

- Mode of Transmission among Blacks: Black PLWHD are the only racial/ethnic group that did not have a single exposure category reported as the primary mode of transmission. Almost half (41.8%) of Black PLWHD reported being exposed through MSM. Compared to other groups, a larger proportion of Black PLWHD reported heterosexual contact (26.6%) and IDU (14.9%) as their mode of transmission.
- Mode of Transmission among Hispanics: 71.6% of Hispanic PLWHD reported being exposed through MSM, followed by heterosexual contact (12.6%), IDU (7.4%), and MSM/IDU (4.4%).
- Mode of Transmission among Whites: A large majority (74.7%) of Whites reported being exposed through MSM followed by IDU (8.9%), heterosexual contact (7.4%), and MSM/IDU (6.1%).
- Mode of Transmission among APIs: A large majority (76.3%) of API PLWHD reported being exposed through MSM, followed by heterosexual contact (10.7%). Compared to Whites and Hispanics, a large proportion (7.6%) of API reported other/unknown as their mode of transmission.



Incidence by Race/Ethnicity:

Of the 3,133 new HIV disease cases diagnosed in Orange County between 2005 and 2014, 1,202 were White, 142 were Black, 1,479 Hispanic, and 283 were API.

Figure 1.14 shows the number of newly diagnosed HIV disease cases per 100,000 Orange County population by race/ethnicity and year of diagnosis.

- Case rates peaked in 2005-2007 for Blacks and Hispanics, while rates were highest for Whites in 2006-2008 and 2007-2009.
- API rates were highest in the most recent time frame of 2012-2014.
- In 2012-2014, Blacks had the highest case rate (24.1), followed by Hispanics (12.3), Whites (6.9), and APIs (6.7).



Mortality by Race/Ethnicity:

Figure 1.15 shows the death rate (due to any cause) per 100,000 population by race/ethnicity for deaths occurring between 2005 and 2014. Since the beginning of the epidemic, 3,318 Whites, 238 Blacks, 1,075 Hispanics, and 87 API diagnosed with HIV disease have died.

- Death rates among all racial/ethnic groups except API have declined since 2005.
- Black PLWHD consistently had the highest death rates among all race/ethnicities in Orange County. Due to the small number of Black cases diagnosed each year, case rates in this community can appear to shift significantly from year to year.
- Hispanics had the second highest death among all race/ethnicities.
- Whites had the third highest death rates between 2005 and 2011. In 2012 and 2013 APIs had a higher death rate. In 2014, Whites were third, APIs fourth.



Deaths in 2014 are provisional due to reporting delays.

HIV Disease by Age:

This section describes trends in HIV disease by age groups. When describing individuals currently living with HIV disease (prevalence), the *current age* of the individual is used. When describing trends in the number of new cases (incidence), the *age of diagnosis* is used.

See Chapter 3 for a more detailed description of pediatric HIV/AIDS (HIV disease among children under age 13 at time of diagnosis) in Orange County.

Prevalence by Current Age:

Of the 5,760 PLWHD in the county as of December 31, 2014, 36 were under the age of 19, 217 were between ages 19-25 years, 881 were between ages 26-35 years, 1,431 were between ages 36-45 years, 1,952 were between ages 46-55 years, 1,243 were age 56 years or over.

Figure 1.16 compares the current age of PLWHD to the 2014 Orange County population. As shown, the majority (80.3%) of PLWHD are age 36 years and over compared to Orange County's population (51.8%).



See Figure 1.7 on page 1:5 to see the rate per 100,000 of PLWHD by gender and current age.

See Figure 1.12 on page 1:8 to see the rate per 100,000 of PLWHD by race/ethnicity and current age.

Figure 1.17 shows the distribution of PLWHD by mode of transmission¹² for six different age groups (by current age). Those currently under the age of 13 are discussed in Chapter 3.

- Mode of Transmission among 0-18 year-olds: 27.3% of persons currently age 0-18 years reported MSM as a mode of transmission, while 68.2% reported a pediatric mode of transmission.
- Mode of Transmission among 19-25 year-olds: The vast majority (82.0%) of 19-25 year-old PLWHD reported being exposed through MSM, followed by perinatal (6.0%) and heterosexual contact (4.6%). This is the age group with the highest proportion of PLWHD who reported exposure through MSM and the lowest proportion of PLWHD who reported being exposed through heterosexual contact.
- Mode of Transmission among 26-35 year-olds: The majority (78.1%) of PLWHD ages 26-35 years reported being exposed through MSM, followed by heterosexual contact (8.6%).
- Mode of Transmission among 36-45 year-olds: For persons currently ages of 36-45 years, 72.7% reported being exposed through MSM, followed by heterosexual contact (13.3%), and IDU (5.7%).
- Mode of Transmission among 46-55 year-olds: The majority of 46-55 year-old PLWHD reported being exposed through MSM (69.7%) while 11.5% reported heterosexual contact. This group reported the second highest rate of IDU at 9.8%.

 Mode of Transmission among Individuals 56 years and over: For PLWHD currently ages 56 years or older, 69.0% reported being exposed through MSM, followed by IDU (12.2%) and heterosexual contact (10.5%). This age group had highest percentage who reported IDU as a mode of transmission.



Incidence by Age at Diagnosis:

Of the 3,133 new cases of HIV disease diagnosed between 2005 and 2014, 606 were between ages 19-25 years, 998 were between ages 26-35 years, 854 were between ages 36-45 years, 466 were between ages 46 and 55 years, and 147 were age 56 years or over at time of diagnosis.

Figure 1.18 shows the rate per 100,000 population by age at diagnosis of cases diagnosed each year within each age group.

- Case rates have declined since 2005-2007 for all age groups.
- Persons aged 26-35 years consistently had the highest case rates except in 2009-2011 when person age 19-25 years had a slightly higher rate.
- Persons 56 years or older have consistently had the lowest case rates among age groups shown.



Mortality by Age at Death:

Figure 1.19 shows the death rate (due to any cause) per 100,000 population between 2005 and 2014 by age at death. Since the beginning of the epidemic, 119 persons died between the ages of 19-25 years, 1,395 were 26-35 years old at death, 1,679 were between 36-45 years old, 985 were between 46-55 years old at death, and 549 lived to be 56 years and over.

- Death rates were highest among those who died between the ages of 46 and 55 years for all years except 2006 and 2014 when the death rate among persons age 35 to 46 years was higher.
- Persons age 56 years and over at the time of death had the lowest death rates.



*Deaths in 2014 are provisional due to reporting delays.

HIV Disease by Mode of Transmission:

This section describes trends in HIV disease by mode of transmission. The term mode of transmission is used to summarize a person's possible HIV risk factors. Individuals diagnosed with HIV are asked to report potential modes of transmission. The Orange County HIV reporting system uses a hierarchy established by the Centers for Disease Control and Prevention (CDC), in determining the *primary* mode of transmission for each HIV disease case. Persons with more than one reported risk factor for HIV infection are classified in the transmission category listed first in the hierarchy. The following are modes of transmission listed in hierarchical order for adults: (1) men who have sex with men (MSM); (2) injection drug use (IDU); (3) men who have sex with men who use injection drugs (MSM/IDU) (4) treatment for hemophilia (5) heterosexual contact (with person known to have or at high-risk for HIV); (6) received transfusion of blood or blood components/transplant; (8) adult, confirmed other risk; (9) cannot be classified in above categories. Modes of transmission for pediatric cases (children under age 13 at time of diagnosis), listed in hierarchical order, include: (1) treatment for hemophilia; (2) mother has HIV/AIDS or has had sex with someone with or at-risk for HIV; (3) received transfusion of blood or blood components/transplant; (4) pediatric other risk; (5) pediatric, confirmed other risk; and (6) cannot be classified in above categories. For the purposes of this report, persons whose mode of transmission could not be classified in any of the transmission categories will be shown as "Unknown." See Chapter 3 for more detailed description of pediatric HIV in Orange County.

Prevalence by Mode of Transmission:

Figure 1.20 displays the proportion of PLWHD by reported mode of transmission. Of the 5,760 PLWHD in Orange County as of December 31, 2014, 4,131 (71.7%) were MSM, 631 (11.0%) were reported to be infected through heterosexual contact, 461 (8.0%) were IDU, and 301 (5.2%) were MSM/IDU. The remaining 236 (2.4%) were attributed to transfusion or hemophiliac (T/H), unknown adult risk category, and pediatric cases.



Incidence by Mode of Transmission:

Of the 3,133 new cases of HIV disease diagnosed between 2005 and 2014, 2,440 had MSM as their mode of transmission, 169 were IDU, 131 were MSM/IDU, and 294 were infected through heterosexual contact.

Figure 1.21 presents cases diagnosed by mode of transmission by year of diagnosis.¹⁴

- Exposure through MSM has consistently been reported as the highest mode of transmission.
- Heterosexual contact has been the second highest reported mode of transmission until 2014 when IDU accounted for a greater percentage of cases.



Mortality by Mode of Transmission:

Figure 1.22 shows the number of deaths (due to any cause) between 2005 and 2014 by mode of transmission.

- Those reported as exposed through MSM have consistently had the highest number of deaths among individuals diagnosed with HIV disease. In the last 10 years, the number of deaths peaked in 2006 at 75.
- IDU has been the exposure group with the second highest number of deaths in all years except 2009.
- Deaths among those exposed through MSM/IDU or heterosexual contact have shared the third highest number of deaths. There were more MSM/IDU deaths in 2006, 2010, and 2011, while heterosexuals had more deaths in 2005, 2008, 2009, 2012, and 2013.



Deaths in 2014 are provisional due to reporting delays.

¹⁴ Rates for transmission categories are not provided because of the absence of denominator data (i.e., the denominator data used in this report come from the U.S. Census Bureau, but the U.S. Census Bureau does not collect data on transmission categories).

Progression from HIV to AIDS

Since 1996, Orange County has reported 3,987 AIDS cases. HIV infection, by name, without an AIDS diagnosis, first became reportable in California in 2006. Due to the relative newness of HIV (non-AIDS) reporting compared to AIDS reporting, the dates of HIV (non-AIDS) diagnosis are sometimes unknown or incomplete, especially for individuals diagnosed well before 2006. There are seven individuals diagnosed with AIDS after 1995 for which an HIV diagnosis date is unknown. Transgender male to female are included in the female percentage in Figures 1.23 through 1.25 due to the small number of cases.

The introduction of Highly Active Antiretroviral Therapy (HAART) in 1995 substantially prolonged the interval between the diagnosis of HIV infection and the development of AIDS.¹⁵ Other measures that help delay the progression to AIDS are:

- Early identification of HIV diagnosis: Testing individuals for HIV so that they know their HIV status and can be linked to care at the earliest possible stage of their HIV infection;
- Linkage to care: Ensuring that the newly diagnosed individual gets linked to HIV medical care;
- Retention in care: Ensuring that person currently in HIV medical care continue with their HIV medical care.

Figure 1.23 shows the proportion of individuals who were diagnosed with HIV at the same time (concurrently) as AIDS for persons who received their diagnoses after 1995 (since the introduction of HAART). The proportion of all individuals who were concurrently diagnosed with HIV and AIDS was 44.2%. The proportion of males, Hispanics, APIs, and those who reported transmission through MSM received concurrent HIV and AIDS diagnoses at a rate higher than the overall proportion. This indicates that these populations are living longer with HIV before diagnosis and are not getting tested until the disease has begun the progression to AIDS.



Figure 1.24 shows the proportion of individuals progressing to AIDS within one year (not concurrently) of HIV diagnosis for persons diagnosed with AIDS after 1995. The proportion of all individuals who progressed to AIDS within one year of their HIV diagnosis was 20.2%. The proportion of males, Hispanics, APIs, MSM, and those who reported transmission through heterosexual contact progressed to AIDS within one year of HIV diagnosis at a higher rate than the overall proportion.

¹⁵ Karon JM, Fleming PL, Steketee RW, De Cock KM. HIV in the United States at the turn of the century: an epidemic in transition. Am J Public Health 2001;91:1060–8.



HIV Disease Survival

The widespread use of HAART beginning in 1996 in the United States has resulted in a large reduction in mortality rates among HIV infected persons. HIV is now conceptualized as a chronic illness, to be managed in similar ways to diseases like diabetes, where a major goal of therapy is to prevent later complications and ensure quality of life. This section describes the characteristics of the 3,285 individuals who were diagnosed with AIDS between 1996 and 2009.

Figure 1.25 shows the proportion of individuals surviving five or more years after receiving an AIDS diagnosis for persons diagnosed with AIDS between 1996 (since the introduction of HAART) and 2009 (five years ago). The overall five-year survival after AIDS for persons diagnosed with AIDS between 1996 and 2009 is 82.8%. Differences in survival occurred across gender, race/ethnicity, and mode of transmission categories.

- By Gender: The proportion of males surviving five or more years after an AIDS diagnosis is almost the same as females and transgender male to female (82.8% versus 82.7%, respectively).
- By Race/Ethnicity: The proportion of Whites and Blacks who have survived five or more years since receiving their AIDS diagnosis is lower than the overall proportion.
- **By Mode of Transmission:** The proportion of IDU who have survived five or more years since receiving their AIDS diagnosis is lower than the overall proportion.



HIV Disease Mortality

Individuals reported with HIV disease are presumed living until a death report is received. A date of death may be reported through the following sources: (1) a death notice from an Orange County HIV service provider; (2) a death certificate provided by County of Orange Vital Records; (3) an update from the State Office of AIDS; or (4) through matching living cases with the annual file of death certificates certified by Orange County Vital Records. Persons diagnosed with HIV disease may die of any cause, although the majority of deaths are due to HIV disease. When a death notification is received, the date of the person's death is added to the HIV Case Registry and their vital status is changed to deceased. Though these modes are meant to capture all instances in which a person may be deceased, there are instances when death notifications do not occur (e.g. if the person moves out of the country and no death records exist in the United States). Therefore, it is possible that some of the persons counted as living with HIV disease may actually be deceased.

Figure 1.26 shows the number of deaths between 2005 and 2014 of persons diagnosed with HIV disease as residents of Orange County, *regardless of cause of death*. The number of deaths has declined 63.2% from 114 in 2005 to 42 in 2014. As of December 31, 2014, the cumulative number of deaths reported was 4,748, which represented 39.6% of the 11,987 cases reported with HIV disease during the same time period.



Deaths in 2014 are provisional due to reporting delays. See Figure 1.10 on page 1:6 for death rates by gender. See Figure 1.15 on page 1:10 for death rates by race/ethnicity. See Figure 1.19 on page 1:13 for death rates by age at diagnosis.

See Figure 1.22 on page 1:15 for number of deaths by mode of transmission.

Deaths Due to HIV¹⁶:

Figure 1.27 shows age-adjusted rate of death¹⁷ *due to HIV disease* per 100,000 Orange County population between 2004 and 2013. These HIV related deaths of Orange County residents do not include persons diagnosed with HIV disease in Orange County if they did not live in Orange County at the time of death. Death rates due to HIV disease peaked in 2005 and have since declined. On average, there have been 41 deaths per year since 2004.

¹⁶ The International Classification of Diseases (ICD) is used to facilitate the collection, processing, classification, and presentation of mortality statistics. The figure includes deaths due to HIV disease in Orange County as indicated by the 10th revision (ICD-10).

¹⁷ The age-adjusted death rate considers the number of deaths occurring in a specified age group divided by the midyear population of the age group. Age-adjusted death rates allow comparison of mortality risk among groups or over time within a particular age group.

HIV Disease Surveillance Statistics, 2014



Due to reporting delays for death statistics, data is only available through 2013.

CHAPTER 1 TABLES-HIV DISEASE IN ORANGE COUNTY

Diagnosed PLWHD¹ Rate per 100,000 Rate per 100,000 Year Number Number Population Population 1980 3 0.2 0 0.0 1981 3 0.1 0 0.0 18 0.9 2 1982 0.1 1983 50 2.4 8 0.4 1984 5.6 29 1.4 118 1985 323 14.9 82 3.8 1986 378 17.0 131 5.9 208 9.2 1987 562 24.8 757 32.7 13.4 1988 311 1989 710 29.9 434 18.3 1990 24.9 547 22.7 601 1991 563 22.9 671 27.3809 1992 525 20.9 32.2 1993 452 17.7 940 36.9 388 1994 15.1 1,082 42.0 1995 380 14.6 1,250 48.0 1996 403 15.2 1,448 54.7 1997 332 12.3 1,631 60.4 1998 282 10.3 1,834 66.7 1999 292 10.4 2,015 71.9 2000 294 2,210 77.4 10.3 2001 84.1 336 11.6 2,429 2002 12.4 91.3 362 2,661 99.3 2003 360 12.2 2,919 2004 12.2 3,169 107.2 362 2005 354 12.0 3,426 115.9 124.5 2006 343 11.6 3,680 2007 3,959 133.5 364 12.3 2008 335 11.2 4,233 141.9 2009 320 10.7 4,486 149.6 282 9.3 4,715 156.3 2010 312 4,990 163.8 2011 10.2 2012 256 8.3 5,223 169.9 306 9.9 177.9 2013 5,514 2014 261 8.3 5,760 183.9 11,987 382.6 5,760 183.9 Total

Table 1.1 (Figure 1.2, 1.4): HIV Disease Cases by Year of Diagnosis and Persons Living with HIV Disease (PLWHD), Orange County, 1980-2014

DATA SOURCES: HIV Case Registry, data as of January 31, 2015.

State of California, Department of Finance, California County Population Estimates and Components of Change, July 1, 1970-1990. Sacramento, California.

State of California, Department of Finance, Revised County Population Estimates and Components of Change by County, July 1, 1990-2000. Sacramento, California, February 2005.

State of California, Department of Finance, Population Estimates and Components of Change by County, July 1, 1999-2010. Sacramento, California, August 2011.

State of California, Department of Finance, California County Population Estimates and Components of Change by Year, July 1, 2010-2014. Sacramento, California, December 2014.

Total rate is per 100,000 2014 population.

¹The number of PLWHD each year is of the 5,760 people currently living in Orange County. Numbers for prior years indicates how many of the 5,760 were living with HIV Disease in those years, regardless of where they actually resided.

Table 1.2 (Figures 1.5-1.8, 1.11, 1.16, and 1.20): Persons Currently Living in Orange County with HIV Disease (PLWHD) by Gender and Race/Ethnicity, Current Age, and Mode of Transmission

Race/Ethnicity, Current Age, and Mode of	ty, Males Number Percent Rate			Females			Total PLWHD (Includes Transgender male to female)		
Transmission				Number Percent Rate			Number	Percent	Rate
Race/Ethnicity									
White	2,099	42.2%	321.5	238	32.2%	35.6	2,343	40.7%	177.4
Black	189	3.8%	789.2	92	12.4%	413.1	282	4.9%	610.1
Hispanic	2,294	46.1%	420.3	365	49.3%	68.2	2,692	46.7%	249.0
API	347	7.0%	122.9	44	5. 9%	14.1	393	6.8%	66.0
Other/Unknown	49	1.0%	NC	*	*	NC	50	0.9%	NC
Total	4,978	100.0%	322.0	740	100.0%	46.8	5,760	100.0%	183.9
				Current Ag	je				
0-18	14	0.3%	3.6	22	3.0%	6.0	36	0.6%	4.8
19-25	202	4.1%	123.5	15	2.0%	9.6	217	3.8%	68.0
26-35	782	15.7%	356.7	90	12.2%	43.2	881	15.3%	206.1
36-45	1,203	24.2%	568.5	205	27.7%	94.7	1,431	24.8%	334.3
46-55	1,699	34.1%	758.7	244	33.0%	106.3	1,952	33.9%	430.5
56+	1078	21.7%	315.9	164	22.2%	41.0	1,243	21.6%	167.6
Total	4,978	100.0%	322.0	740	100.0%	46.8	5,760	100.0%	183.9
Mode of Transmission									
MSM	4,097	82.3%	NC				4,131	71.7%	NC
IDU	317	6.4%	NC	143	19.3%	NC	461	8.0%	NC
MSM/IDU	294	5.9%	NC				301	5.2%	NC
Heterosexual	108	2.2%	NC	523	70.7%	NC	631	11.0%	NC
Other/Unknown	162	3.3%	NC	74	10.0%	NC	236	4.1%	NC
Total	4,978	100.0%	NC	740	100.0%	NC	5,760	100.0%	NC

DATA SOURCES: HIV Case Registry, data as of January 31, 2015.

State of California, Department of Finance, California County Population Estimates and Components of Change by Year, July 1, 2010-2014. Sacramento, California, December 2014.

Other race includes American Indian/Alaskan Native and persons of more than one race.

Other mode includes transfusion, hemophilia, and all Pediatric modes of transmission.

Transgender persons are included in the Total column but are not shown above due to their small number.

--Mode does not apply to females. NC: Rate not calculated due to lack of population estimates. Rate is per 100,000 2014 population. *Fewer than five PLWHD.

		Males		Females			
Year	Number	Percent	Rate	Number	Percent	Rate	
1980	3	100.0%	0.3	0	0.0%	0.0	
1981	3	100.0%	0.3	0	0.0%	0.0	
1982	18	100.0%	1.8	0	0.0%	0.0	
1983	50	100.0%	4.8	0	0.0%	0.0	
1984	112	94.9%	10.6	6	5.1%	0.6	
1985	300	92.9%	27.7	23	7.1%	2.1	
1986	355	93.9%	32.0	22	5.8%	2.0	
1987	510	90.7%	44.8	52	9.3%	4.6	
1988	692	91.4%	59.5	65	8.6%	5.6	
1989	658	92.7%	55.1	51	7.2%	4.3	
1990	552	91.8%	45.5	49	8.2%	4.1	
1991	506	89.9%	41.0	57	10.1%	4.7	
1992	475	90.5%	37.7	48	9.1%	3.8	
1993	406	89.8%	31.8	44	9.7%	3.5	
1994	331	85.3%	25.7	55	14.2%	4.3	
1995	334	87.9%	25.7	46	12.1%	3.5	
1996	352	87.3%	26.7	50	12.4%	3.8	
1997	282	84.9%	21.0	48	14.5%	3.5	
1998	239	84.8%	17.5	42	14.9%	3.0	
1999	249	85.3%	17.9	39	13.4%	2.8	
2000	245	83.3%	17.3	47	16.0%	3.3	
2001	286	85.1%	19.9	48	14.3%	3.3	
2002	302	83.4%	20.9	52	14.4%	3.5	
2003	316	87.8%	21.7	42	11.7%	2.8	
2004	304	84.0%	20.7	53	14.6%	3.6	
2005	308	87.0%	21.0	45	12.7%	3.0	
2006	298	86.9%	20.4	42	12.2%	2.8	
2007	314	86.3%	21.4	48	13.2%	3.2	
2008	294	87.8%	19.9	40	11.9%	2.7	
2009	293	91.6%	19.7	26	8.1%	1.7	
2010	259	91.8%	17.4	20	7.1%	1.3	
2011	281	90.1%	18.7	28	9.0%	1.8	
2012	228	89.1%	15.0	23	9.0%	1.5	
2013	269	87.9%	17.6	35	11.4%	2.2	
2014	240	92.0%	15.5	21	8.0%	1.3	
Total	10,664	89.0%	689.8	1,267	10.6%	80.2	

Table 1.3 (Figure 1.9): HIV Disease Cases by Year of Diagnosis and Gender, Orange County, 1980-2014

DATA SOURCES: HIV Case Registry, data as of January 31, 2015.

State of California, Department of Finance, *Race/Ethnic Population with Age and Sex Detail, 1970–1989.* Sacramento, California, December 1998.

State of California, Department of Finance, Race/Hispanics Population with Age and Gender Detail, 2000–2010. Sacramento, California, September 2012.

State of California, Department of Finance, California County Population Estimates and Components of Change by Year, July 1, 2010-2014. Sacramento, California, December 2014.

Rate is per 100,000. Total rate is per 100,000 2014 population.

Table 1.4 (Figures 1.10 and 1.26): Deaths (regardless of cause) Among Persons Diagnosed with HIVDisease While Living in Orange County by Year of Death and Gender, 1981-2014

Veer		Males			Females		Total Deaths (Includes Transgender male to female)		
rear	Number	Percent	Rate	Number	Percent	Rate	Number	Rate	
1981	1	100.0%	0.1	0	0.0%	0.0	1	0.0	
1982	3	100.0%	0.3	0	0.0%	0.0	3	0.1	
1983	4	100.0%	0.4	0	0.0%	0.0	4	0.2	
1984	30	90.9%	2.8	3	9.1%	0.3	33	1.6	
1985	52	94.5%	4.8	3	5.5%	0.3	55	2.5	
1986	92	97.9%	8.3	2	2.1%	0.2	94	4.2	
1987	138	95.2%	12.1	7	4.8%	0.6	145	6.4	
1988	172	93.0%	14.8	13	7.0%	1.1	185	8.0	
1989	259	94.2%	21.7	16	5.8%	1.4	275	11.6	
1990	271	93.1%	22.4	20	6.9%	1.7	291	12.1	
1991	321	95.5%	26.0	15	4.5%	1.2	336	13.7	
1992	357	94.4%	28.3	21	5.6%	1.7	378	15.0	
1993	306	94.2%	24.0	19	5.8%	1.5	325	12.7	
1994	324	92.3%	25.2	26	7.4%	2.0	351	13.6	
1995	345	94.8%	26.5	19	5.2%	1.5	364	14.0	
1996	224	91.8%	17.0	20	8.2%	1.5	244	9.2	
1997	141	91.0%	10.5	14	9.0%	1.0	155	5.7	
1998	103	89.6%	7.5	12	10.4%	0.9	115	4.2	
1999	94	88.7%	6.7	12	11.3%	0.9	106	3.8	
2000	69	84.1%	4.9	12	14.6%	0.8	82	2.9	
2001	87	85.3%	6.1	15	14.7%	1.0	102	3.5	
2002	83	85.6%	5.7	14	14.4%	1.0	97	3.3	
2003	89	87.3%	6.1	13	12.7%	0.9	102	3.5	
2004	79	90.8%	5.4	8	9.2%	0.5	87	2.9	
2005	89	78.1%	6.1	24	21.1%	1.6	114	3.9	
2006	91	88.3%	6.2	12	11.7%	0.8	103	3.5	
2007	77	87.5%	5.2	11	12.5%	0.7	88	3.0	
2008	59	74.7%	4.0	20	25.3%	1.3	79	2.6	
2009	78	92.9%	5.2	6	7.1%	0.4	84	2.8	
2010	64	92.8%	4.3	5	7.2%	0.3	69	2.3	
2011	82	83.7%	5.4	14	14.3%	0.9	98	3.2	
2012	68	84.0%	4.5	13	16.0%	0.8	81	2.6	
2013	48	80.0%	3.1	11	18.3%	0.7	60	1.9	
2014	41	97.6%	2.7	1	2.4%	0.1	5	1.3	
Total	4,341	91.4%	280.8	401	8.4%	25.4	4,748	151.6	

DATA SOURCES: HIV Case Registry, data as of January 31, 2015.

State of California, Department of Finance, *Race/Ethnic Population with Age and Sex Detail, 1970–1989.* Sacramento, California, December 1998.

State of California, Department of Finance, Race/Hispanics Population with Age and Gender Detail, 2000–2010. Sacramento, California, September 2012.

State of California, Department of Finance, California County Population Estimates and Components of Change by Year, July 1, 2010-2014. Sacramento, California, December 2014.

Transgender persons are included in the Total column but are not shown above due to their small number.

Rate is per 100,000. Total rate is per 100,000 2014 population.
HIV Disease Surveillance Statistics, 2014

Current Age and		White			Black			Hispanic		API		
Mode of Transmission	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate
					Curr	ent Age						
0-18	4	0.2%	1.7	11	3.9%	116.1	18	0.7%	5.0	3	0.8%	2.4
19-25	63	2.7%	56.9	10	3.5%	189.2	122	4.5%	91.0	21	5.3%	36.1
26-35	251	10.7%	159.8	38	13.5%	547.2	510	18.9%	297.1	75	19.1%	92.2
36-45	371	15.8%	239.0	55	19.5%	811.6	831	30.9%	513.3	157	39.9%	163.2
46-55	931	39.7%	430.9	100	35.5%	1,287.3	821	30.5%	629.1	85	21.6%	93.2
56+	723	30.9%	160.3	68	24.1%	681.8	390	14.5%	308.5	52	13.2%	36.2
Total	2,343	100.0%	177.4	282	100.0%	610.1	2,692	100.0%	249.0	393	100.0%	66.0
					Mode of 1	Fransmissic	n					
MSM	1,750	74.7%	NC	118	41.8%	NC	1,928	71.6%	NC	300	76.3%	NC
IDU	209	8.9%	NC	42	14.9%	NC	198	7.4%	NC	9	2.3%	NC
MSM/IDU	144	6.1%	NC	17	6.0%	NC	119	4.4%	NC	12	3.1%	NC
Heterosexual	173	7.4%	NC	75	26.6%	NC	340	12.6%	NC	42	10.7%	NC
Other/Unknown	67	2.9%	NC	30	10.6%	NC	107	4.0%	NC	30	7.6%	NC
Total	2,343	100.0%	NC	282	100.0%	NC	2,692	100.0%	NC	393	100.0%	NC

Table 1.5 (Figures 1.12-1.13): Persons Currently Living in Orange County with HIV Disease (PLWHD) by Race/Ethnicity and Current Age and Mode of Transmission

DATA SOURCES: HIV Case Registry, data as of January 31, 2015.

State of California, Department of Finance, California County Population Estimates and Components of Change by Year, July 1, 2010-2014. Sacramento, California, December 2014.

Other includes transfusion, hemophilia, and all Pediatric modes of transmission.

NC: Rate not calculated due to lack of population estimates.

Rate is per 100,000 2014 population.

		White			Black			Hispanic			API	
'ear	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate
980	2	66.7%	0.1	0	0.0%	0.0	1	33.3%	0.3	0	0.0%	0.0
981	2	66.7%	0.1	0	0.0%	0.0	1	33.3%	0.3	0	0.0%	0.0
982	12	66.7%	0.8	0	0.0%	0.0	5	27.8%	1.4	1	5.6%	0.8
983	41	82.0%	2.7	1	2.0%	3.4	7	14.0%	1.9	0	0.0%	0.0
984	101	85.6%	6.6	3	2.5%	9.8	10	8.5%	2.5	3	2.5%	2.0
985	263	81.4%	17.2	14	4.3%	43.8	40	12.4%	9.3	5	1.5%	3.0
986	315	83.3%	20.5	14	3.7%	41.8	41	10.8%	9.0	4	1.1%	2.2
987	441	78.5%	28.6	26	4.6%	74.4	88	15.7%	18.1	5	0.9%	2.5
988	575	76.0%	37.2	25	3.3%	68.7	146	19.3%	28.4	9	1.2%	4.2
989	511	72.0%	32.9	26	3.7%	68.5	162	22.8%	29.8	10	1.4%	4.4
990	443	73.7%	28.6	29	4.8%	73.6	117	19.5%	20.5	9	1.5%	3.7
991	381	67.7%	24.7	30	5.3%	74.0	137	24.3%	22.8	12	2.1%	4.6
992	332	63.2%	21.5	26	5.0%	62.3	150	28.6%	23.6	12	2.3%	4.2
993	272	60.2%	17.8	27	6.0%	63.3	142	31.4%	21.3	11	2.4%	3.7
994	219	56.4%	14.5	30	7.7%	69.1	127	32.7%	18.4	10	2.6%	3.2
995	203	53.4%	13.6	19	5.0%	43.0	143	37.6%	19.9	11	2.9%	3.3
996	208	51.6%	14.0	27	6.7%	59.7	152	37.7%	20.3	14	3.5%	4.0
997	160	48.2%	10.8	21	6.3%	45.2	138	41.6%	17.6	10	3.0%	2.7
998	103	36.5%	7.0	17	6.0%	35.7	147	52.1%	18.0	9	3.2%	2.3
999	137	46.9%	9.3	20	6.8%	41.0	119	40.8%	14.0	11	3.8%	2.7
2000	121	41.2%	8.3	15	5.1%	34.3	153	52.0%	17.5	5	1.7%	1.2
2001	164	48.8%	11.2	18	5.4%	40.8	135	40.2%	15.1	16	4.8%	3.7
2002	138	38.1%	9.5	24	6.6%	54.3	175	48.3%	19.2	21	5.8%	4.7
2003	145	40.3%	10.0	25	6.9%	56.3	169	46.9%	18.2	16	4.4%	3.5
004	135	37.3%	9.4	17	4.7%	38.2	177	48.9%	18.8	26	7.2%	5.6
005	144	40.7%	10.1	22	6.2%	49.5	169	47.7%	17.7	14	4.0%	3.0
006	140	40.8%	10.0	11	3.2%	24.8	166	48.4%	17.3	24	7.0%	5.0
2007	151	41.5%	10.8	21	5.8%	47.4	166	45.6%	17.1	23	6.3%	4.7
008	142	42.4%	10.3	13	3.9%	29.2	149	44.5%	15.1	26	7.8%	5.2
009	137	42.8%	10.1	17	5.3%	38.1	145	45.3%	14.4	19	5.9%	3.7
010	101	35.8%	7.6	14	5.0%	31.4	133	47.2%	13.1	31	11.0%	5.7
011	113	36.2%	8.5	11	3.5%	24.5	157	50.3%	15.2	29	9.3%	5.2
012	88	34.4%	6.6	7	2.7%	15.5	118	46.1%	11.2	40	15.6%	7.0
013	94	30.7%	7.1	14	4.6%	30.8	154	50.3%	14.4	42	13.7%	7.3
014	92	35.2%	7.0	12	4.6%	26.0	122	46.7%	11.3	35	13.4%	5.9
Total	6,626	55.3%	501.7	596	5.0%	1,289.5	4,161	34.7%	384.9	513	4.3%	86.1
Total DATA SOURCES:	6,626 HIV Case Regis State of Califo Race/Hispanics and Componer	55.3% stry, data as of Ja prnia, Departmen s Population with pts of Change by	501.7 anuary 31, 2015 t of Finance, <i>R</i> Age and Gende Vear, July 1, 20	596 State of Califor Pace/Ethnic Popul or Detail, 2000–20 10-2014 Sacram	5.0% nia, Department lation with Age 010. Sacramento ento, California	1,289.5 of Finance, <i>Race</i> <i>and Sex Detail</i> , , California, Sep December 2014	4,161 e/Ethnic Populati 1990–1999. Sac tember 2012. St	34.7% ion with Age and cramento, CA, Re tate of California,	384.9 Sex Detail, 1970 evised May 2000 Department of	513 <i>2–1989.</i> Sacrame 5. State of Cali Finance, Califorr	4.3% nto, California, De fornia, Departmen nia County Popula	ecem ¹ nt of tion

		White	<u> </u>		Black		Hispanic			
Year	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate	
1981	0	0.0%	0.0	0	0.0%	0.0	1	100.0%	0.3	
1982	2	66.7%	0.1	0	0.0%	0.0	1	33.3%	0.3	
1983	2	50.0%	0.1	1	25.0%	3.4	1	25.0%	0.3	
1984	27	81.8%	1.8	1	3.0%	3.3	3	9.1%	0.7	
1985	51	92.7%	3.3	1	1.8%	3.1	3	5.5%	0.7	
1986	80	85.1%	5.2	2	2.1%	6.0	10	10.6%	2.2	
1987	125	86.2%	8.1	5	3.4%	14.3	15	10.3%	3.1	
1988	155	83.8%	10.0	5	2.7%	13.7	22	11.9%	4.3	
1989	206	74.9%	13.3	12	4.4%	31.6	51	18.5%	9.4	
1990	240	82.5%	15.5	6	2.1%	15.2	43	14.8%	7.5	
1991	258	76.8%	16.7	9	2.7%	22.2	66	19.6%	11.0	
1992	288	76.2%	18.7	19	5.0%	45.5	68	18.0%	10.7	
1993	243	74.8%	15.9	18	5.5%	42.2	60	18.5%	9.0	
1994	258	73.5%	17.1	16	4.6%	36.8	72	20.5%	10.4	
1995	265	72.8%	17.7	17	4.7%	38.4	77	21.2%	10.7	
1996	156	63.9%	10.5	12	4.9%	26.5	67	27.5%	9.0	
1997	94	60.6%	6.3	11	7.1%	23.7	45	29.0%	5.8	
1998	72	62.6%	4.9	6	5.2%	12.6	33	28.7%	4.1	
1999	63	59.4%	4.3	6	5.7%	12.3	34	32.1%	4.0	
2000	50	61.0%	3.4	7	8.5%	16.0	25	30.5%	2.9	
2001	60	58.8%	4.1	7	6.9%	15.9	34	33.3%	3.8	
2002	57	58.8%	3.9	11	11.3%	24.9	27	27.8%	3.0	
2003	54	52.9%	3.7	11	10.8%	24.8	35	34.3%	3.8	
2004	52	59.8%	3.6	4	4.6%	9.0	22	25.3%	2.3	
2005	78	68.4%	5.5	8	7.0%	18.0	22	19.3%	2.3	
2006	62	60.2%	4.4	6	5.8%	13.5	33	32.0%	3.4	
2007	46	52.3%	3.3	6	6.8%	13.5	31	35.2%	3.2	
2008	42	53.2%	3.0	3	3.8%	6.7	29	36.7%	2.9	
2009	42	50.0%	3.1	2	2.4%	4.5	36	42.9%	3.6	
2010	43	62.3%	3.2	6	8.7%	13.4	15	21.7%	1.5	
2011	52	53.1%	3.9	9	9.2%	20.0	31	31.6%	3.0	
2012	48	59.3%	3.6	6	7.4%	13.3	22	27.2%	2.1	
2013	27	45.0%	2.0	4	6.7%	8.8	25	41.7%	2.3	
2014	20	47.6%	1.5	1	2.4%	2.2	16	38.1%	1.5	
Total	3,318	69.9%	251.2	238	5.0%	514.9	1,075	22.6%	99.4	

 Table 1.7 (Figure 1.15): Deaths (regardless of cause) Among Persons Diagnosed with HIV Disease

 While Living in Orange County by Year of Death and Race/Ethnicity, 1981-2014

DATA SOURCES: HIV Case Registry, data as of January 31, 2015.

State of California, Department of Finance, *Race/Ethnic Population with Age and Sex Detail, 1970–1989.* Sacramento, California, December 1998.

State of California, Department of Finance, Race/Hispanics Population with Age and Gender Detail, 2000–2010. Sacramento, California, September 2012.

State of California, Department of Finance, California County Population Estimates and Components of Change by Year, July 1, 2010-2014. Sacramento, California, December 2014.

Rate is per 100,000. Total rate is per 100,000 2014 population.

Mode of	19	-25	26	-35	36	-45
Transmission	Number Percent		Number	Percent	Number	Percent
MSM	178	82.0%	688	78.1%	1,040	72.7%
IDU	3	1.4%	33	3.7%	82	5.7%
MSM/IDU	7	3.2%	50	5.7%	77	5.4%
Heterosexual	10	4.6%	76	8.6%	190	13.3%
Perinatal	13	6.0%	4	0.5%	0	0.0%
Other/Unknown	6	2.8%	30	3.4%	42	2.9%
Total	217	100.0%	881	100.0%	1,431	100.0%

Table 1.8 (Figure 1.17): Persons Currently Living in Orange County with HIV Disease (PLWHD) by Current Age and Mode of Transmission

Mode of	46	-55	56+		
Transmission	Number	Percent	Number	Percent	
MSM	1,361	69.7%	858	69.0%	
IDU	191	9.8%	152	12.2%	
MSM/IDU	117	6.0%	50	4.0%	
Heterosexual	224	11.5%	130	10.5%	
Other/Unknown	59	3.0%	53	4.3%	
Total	1,952	100.0%	1,243	100.0%	

Mode of	0-	12	13-18		
Transmission	Number	Percent	Number	Percent	
MSM	*	*	6	27.3%	
Heterosexual	*	*	*	*	
Perinatal	12	85.7%	15	68.2%	
Other Pediatric/Unknown	*	*	*	*	
Total	14	100.0%	22	100.0%	

DATA SOURCES: HIV Case Registry, data as of January 31, 2015.

Other includes transfusion, hemophilia, and non-perinatal pediatric modes of transmission. *Fewer than five PLWHD.

HIV Disease Surveillance Statistics, 2014

Table 1.9 (Figure 1.18): HIV Disease Cases by Year of Diagnosis and Age at Diagnosis, Orange County, 1980-2014									2014						
Veen		19-25			26-35			36-45			46-55			56+	
Year	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate
1980	0	0.0%	0.0	2	66.7%	0.6	1	33.3%	0.4	0	0.0%	0.0	0	0.0%	0.0
1981	0	0.0%	0.0	2	66.7%	0.6	1	33.3%	0.4	0	0.0%	0.0	0	0.0%	0.0
1982	5	27.8%	1.7	7	38.9%	1.9	1	5.6%	0.4	1	5.6%	0.5	1	5.6%	0.3
1983	8	16.0%	2.7	14	28.0%	3.7	17	34.0%	6.2	6	12.0%	2.9	1	2.0%	0.3
1984	29	24.6%	9.7	55	46.6%	14.3	20	16.9%	7.0	8	6.8%	3.9	4	3.4%	1.2
1985	80	24.8%	26.2	135	41.8%	33.9	72	22.3%	24.0	19	5.9%	9.2	11	3.4%	3.2
1986	73	19.3%	23.6	168	44.4%	40.7	72	19.0%	23.0	38	10.1%	18.0	16	4.2%	4.6
1987	79	14.1%	25.5	248	44.1%	57.7	150	26.7%	46.0	50	8.9%	23.1	27	4.8%	7.5
1988	103	13.6%	32.6	369	48.7%	82.8	179	23.6%	53.0	61	8.1%	27.4	36	4.8%	9.9
1989	90	12.7%	28.1	317	44.6%	68.4	200	28.2%	57.1	66	9.3%	28.2	25	3.5%	6.7
1990	76	12.6%	24.0	301	50.1%	63.3	150	25.0%	41.4	51	8.5%	21.0	16	2.7%	4.3
1991	59	10.5%	19.2	260	46.2%	54.1	144	25.6%	38.6	62	11.0%	24.9	34	6.0%	8.9
1992	65	12.4%	21.7	242	46.1%	50.0	142	27.0%	36.8	53	10.1%	20.6	17	3.2%	4.4
1993	53	11.7%	18.1	206	45.6%	42.6	128	28.3%	32.7	41	9.1%	15.2	15	3.3%	3.8
1994	45	11.6%	15.7	162	41.8%	33.8	121	31.2%	30.5	36	9.3%	12.9	17	4.4%	4.3
1995	41	10.8%	14.6	183	48.2%	38.4	105	27.6%	25.9	33	8.7%	11.5	11	2.9%	2.7
1996	32	7.9%	11.7	175	43.4%	36.7	120	29.8%	28.8	51	12.7%	17.0	19	4.7%	4.6
1997	32	9.6%	11.8	131	39.5%	27.3	109	32.8%	25.3	38	11.4%	12.2	14	4.2%	3.3
1998	42	14.9%	15.5	109	38.7%	22.6	90	31.9%	20.2	28	9.9%	8.7	8	2.8%	1.8
1999	26	8.9%	9.6	112	38.4%	23.3	105	36.0%	23.0	34	11.6%	10.2	12	4.1%	2.6
2000	32	10.9%	11.6	112	38.1%	23.3	98	33.3%	20.9	39	13.3%	11.2	9	3.1%	1.9
2001	33	9.8%	12.0	118	35.1%	25.0	124	36.9%	26.1	41	12.2%	11.4	15	4.5%	3.1
2002	48	13.3%	17.3	129	35.6%	27.9	112	30.9%	23.4	50	13.8%	13.5	18	5.0%	3.6
2003	40	11.1%	14.2	134	37.2%	29.6	129	35.8%	26.9	37	10.3%	9.8	20	5.6%	3.8
2004	61	16.9%	21.4	119	32.9%	26.9	115	31.8%	24.0	49	13.5%	12.7	12	3.3%	2.2
2005	59	16.7%	20.5	119	33.6%	27.7	108	30.5%	22.7	47	13.3%	12.0	13	3.7%	2.4
2006	61	17.8%	21.0	114	33.2%	27.3	93	27.1%	19.7	54	15.7%	13.5	14	4.1%	2.5
2007	67	18.4%	22.9	109	29.9%	26.5	119	32.7%	25.4	49	13.5%	12.0	16	4.4%	2.8
2008	56	16.7%	19.0	117	34.9%	28.7	93	27.8%	20.0	50	14.9%	11.9	10	3.0%	1.7
2009	65	20.3%	22.0	89	27.8%	21.7	96	30.0%	21.2	50	15.6%	11.5	14	4.4%	2.3
2010	66	23.4%	21.8	90	31.9%	21.8	67	23.8%	15.1	40	14.2%	9.1	15	5.3%	2.3
2011	72	23.1%	23.5	95	30.4%	22.9	87	27.9%	19.8	40	12.8%	9.0	13	4.2%	2.0
2012	44	17.2%	14.1	95	37.1%	22.7	60	23.4%	13.8	42	16.4%	9.4	11	4.3%	1.6
2013	58	19.0%	18.4	96	31.4%	22.7	74	24.2%	17.2	50	16.3%	11.1	22	7.2%	3.1
2014	58	22.2%	18.2	74	28.4%	17.3	57	21.8%	13.3	44	16.9%	9.7	19	7.3%	2.6
Total	1,758	14.7%	550.9	4,808	40.1%	1,124.7	3,359	28.0%	784.7	1,358	11.3%	299.5	505	4.2%	68.1

HIV Disease Surveillance Statistics, 2014, County of Orange, Health Care Agency

Table 1.10 (Figure 1.19): Deaths among Persons Diagnosed with HIV Disease While Living in Orange County by Year of Death and Age at Death, 1981-2014

	,	19-25			26-35			36-45			46-55			56+	
Year	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate
1981	0	0.0%	0.0	1	100.0%	0.3	0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
1982	0	0.0%	0.0	3	100.0%	0.8	0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
1983	0	0.0%	0.0	2	50.0%	0.5	1	25.0%	0.4	1	25.0%	0.5	0	0.0%	0.0
1984	3	9.1%	1.0	8	24.2%	2.1	14	42.4%	4.9	4	12.1%	2.0	3	9.1%	0.9
1985	2	3.6%	0.7	22	40.0%	5.5	18	32.7%	6.0	7	12.7%	3.4	6	10.9%	1.8
1986	3	3.2%	1.0	36	38.3%	8.7	25	26.6%	8.0	19	20.2%	9.0	9	9.6%	2.6
1987	15	10.3%	4.8	50	34.5%	11.6	45	31.0%	13.8	21	14.5%	9.7	12	8.3%	3.4
1988	6	3.2%	1.9	68	36.8%	15.3	57	30.8%	16.9	28	15.1%	12.6	25	13.5%	6.9
1989	13	4.7%	4.1	103	37.5%	22.2	88	32.0%	25.1	45	16.4%	19.2	25	9.1%	6.7
1990	9	3.1%	2.8	126	43.3%	26.5	99	34.0%	27.4	35	12.0%	14.4	21	7.2%	5.6
1991	11	3.3%	3.6	136	40.5%	28.3	103	30.7%	27.6	65	19.3%	26.1	21	6.3%	5.5
1992	14	3.7%	4.7	134	35.4%	27.7	152	40.2%	39.4	40	10.6%	15.6	34	9.0%	8.8
1993	3	0.9%	1.0	120	36.9%	24.8	125	38.5%	31.9	51	15.7%	18.9	25	7.7%	6.4
1994	2	0.6%	0.7	129	36.8%	26.9	141	40.2%	35.5	59	16.8%	21.2	18	5.1%	4.5
1995	5	1.4%	1.8	131	36.0%	27.5	135	37.1%	33.3	64	17.6%	22.2	29	8.0%	7.2
1996	3	1.2%	1.1	82	33.6%	17.2	103	42.2%	24.7	39	16.0%	13.0	16	6.6%	3.9
1997	2	1.3%	0.7	44	28.4%	9.2	64	41.3%	14.8	32	20.6%	10.3	12	7.7%	2.8
1998	2	1.7%	0.7	30	26.1%	6.2	49	42.6%	11.0	21	18.3%	6.5	13	11.3%	3.0
1999	2	1.9%	0.7	20	18.9%	4.2	50	47.2%	10.9	25	23.6%	7.5	8	7.5%	1.8
2000	0	0.0%	0.0	21	25.6%	4.4	32	39.0%	6.8	17	20.7%	4.9	11	13.4%	2.3
2001	2	2.0%	0.7	14	13.7%	3.0	46	45.1%	9.7	24	23.5%	6.7	15	14.7%	3.1
2002	1	1.0%	0.4	19	19.6%	4.1	38	39.2%	7.9	25	25.8%	6.8	14	14.4%	2.8
2003	1	1.0%	0.4	17	16.7%	3.8	46	45.1%	9.6	25	24.5%	6.6	12	11.8%	2.3
2004	1	1.1%	0.4	7	8.0%	1.6	29	33.3%	6.0	31	35.6%	8.0	19	21.8%	3.5
2005	4	3.5%	1.4	12	10.5%	2.8	44	38.6%	9.3	39	34.2%	9.9	15	13.2%	2.7
2006	3	2.9%	1.0	8	7.8%	1.9	36	35.0%	7.6	30	29.1%	7.5	26	25.2%	4.6
2007	3	3.4%	1.0	10	11.4%	2.4	25	28.4%	5.3	36	40.9%	8.8	14	15.9%	2.4
2008	1	1.3%	0.3	5	6.3%	1.2	22	27.8%	4.7	30	38.0%	7.1	21	26.6%	3.6
2009	0	0.0%	0.0	6	7.1%	1.5	24	28.6%	5.3	32	38.1%	7.4	22	26.2%	3.5
2010	2	2.9%	0.7	3	4.3%	0.7	12	17.4%	2.7	28	40.6%	6.4	24	34.8%	3.8
2011	2	2.0%	0.7	10	10.2%	2.4	21	21.4%	4.8	43	43.9%	9.7	22	22.4%	3.3
2012	0	0.0%	0.0	5	6.2%	1.2	13	16.0%	3.0	41	50.6%	9.1	22	27.2%	3.2
2013	3	5.0%	1.0	9	15.0%	2.1	11	18.3%	2.6	17	28.3%	3.8	20	33.3%	2.8
2014	1	2.4%	0.3	4	9.5%	0.9	11	26.2%	2.6	11	26.2%	2.4	15	35.7%	2.0
Total	119	2.5%	37.3	1,395	29.4%	326.3	1,679	35.4%	392.3	985	20.7%	217.2	549	11.6%	74.0

DATA SOURCES: HIV Case Registry, data as of January 31, 2015. State of California, Department of Finance, *Race/Ethnic Population with Age and Sex Detail, 1970–1989.* Sacramento, California, December 1998. State of California, Department of Finance, *Race/Ethnic Population with Age and Sex Detail, 1990–1999.* Sacramento, CA, Revised May 2009. State of California, Department of Finance, Race/Hispanics Population with Age and Gender Detail, 2000–2010. Sacramento, California, September 2012. State of California, Department of Finance, California County Population Estimates and Components of Change by Year, July 1, 2010-2014. Sacramento, California, December 2014. Rate is per 100,000. Total rate is per 100,000 2014 population.

HIV Disease Surveillance Statistics, 2014

Table 1.11	able 1.11 (Figure 1.21): HIV Disease Cases by Year of Diagnosis and Mode of Transmission, Orange County, 1980-2014									
	M	SM	IC	U	MSM	/IDU	Hetero	sexual		
Year	Number	Percent	Number	Percent	Number	Percent	Number	Percent		
1980	1	33.3%	1	33.3%	1	33.3%	0	0.0%		
1981	3	100.0%	0	0.0%	0	0.0%	0	0.0%		
1982	15	83.3%	0	0.0%	3	16.7%	0	0.0%		
1983	39	78.0%	1	2.0%	8	16.0%	0	0.0%		
1984	90	76.3%	4	3.4%	14	11.9%	1	0.8%		
1985	243	75.2%	26	8.0%	26	8.0%	4	1.2%		
1986	299	79.1%	30	7.9%	26	6.9%	8	2.1%		
1987	400	71.2%	59	10.5%	44	7.8%	17	3.0%		
1988	547	72.3%	93	12.3%	56	7.4%	26	3.4%		
1989	518	73.0%	87	12.3%	46	6.5%	21	3.0%		
1990	429	71.4%	85	14.1%	42	7.0%	19	3.2%		
1991	403	71.6%	63	11.2%	26	4.6%	41	7.3%		
1992	382	72.8%	69	13.1%	26	5.0%	30	5.7%		
1993	307	67.9%	58	12.8%	27	6.0%	36	8.0%		
1994	245	63.1%	64	16.5%	15	3.9%	46	11.9%		
1995	255	67.1%	55	14.5%	18	4.7%	32	8.4%		
1996	271	67.2%	52	12.9%	22	5.5%	38	9.4%		
1997	215	64.8%	37	11.1%	18	5.4%	42	12.7%		
1998	184	65.2%	32	11.3%	14	5.0%	37	13.1%		
1999	190	65.1%	35	12.0%	17	5.8%	36	12.3%		
2000	193	65.6%	30	10.2%	15	5.1%	43	14.6%		
2001	223	66.4%	35	10.4%	23	6.8%	42	12.5%		
2002	251	69.3%	27	7.5%	14	3.9%	55	15.2%		
2003	253	70.3%	24	6.7%	21	5.8%	41	11.4%		
2004	255	70.4%	23	6.4%	12	3.3%	45	12.4%		
2005	267	75.4%	22	6.2%	12	3.4%	40	11.3%		
2006	263	76.7%	22	6.4%	17	5.0%	36	10.5%		
2007	271	74.5%	28	7.7%	17	4.7%	42	11.5%		
2008	264	78.8%	15	4.5%	16	4.8%	31	9.3%		
2009	257	80.3%	13	4.1%	13	4.1%	32	10.0%		
2010	242	85.8%	11	3.9%	7	2.5%	19	6.7%		
2011	255	81.7%	17	5.4%	6	1.9%	27	8.7%		
2012	191	74.6%	10	3.9%	20	7.8%	19	7.4%		
2013	230	75.2%	12	3.9%	14	4.6%	30	9.8%		
2014	200	76.6%	19	7.3%	9	3.4%	18	6.9%		
Total	8,651	72.2%	1,159	9.7%	665	5.5%	954	8.0%		

DATA SOURCE:

HIV Case Registry, data as of January 31, 2015.

Disease Control & Epidemiology Division

HIV/AIDS Surveillance & Monitoring Program

HIV Disease Surveillance Statistics, 2014, County of Orange, Health Care Agency

 Table 1.12 (Figure 1.22): Deaths among Persons Diagnosed with HIV Disease While Living in Orange County by Year of Death and Mode of Transmission, 1981-2014

	M	SM	11	DU	MSM	/IDU	Hetero	sexual
Year	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1981	0	0.0%	1	100.0%	0	0.0%	0	0.0%
1982	2	66.7%	0	0.0%	1	33.3%	0	0.0%
1983	2	50.0%	0	0.0%	2	50.0%	0	0.0%
1984	23	69.7%	1	3.0%	7	21.2%	0	0.0%
1985	38	69.1%	2	3.6%	7	12.7%	1	1.8%
1986	78	83.0%	6	6.4%	3	3.2%	1	1.1%
1987	102	70.3%	9	6.2%	16	11.0%	3	2.1%
1988	130	70.3%	14	7.6%	16	8.6%	5	2.7%
1989	201	73.1%	33	12.0%	16	5.8%	7	2.5%
1990	223	76.6%	21	7.2%	18	6.2%	6	2.1%
1991	260	77.4%	31	9.2%	23	6.8%	4	1.2%
1992	285	75.4%	37	9.8%	22	5.8%	6	1.6%
1993	239	73.5%	34	10.5%	21	6.5%	11	3.4%
1994	258	73.5%	41	11.7%	23	6.6%	15	4.3%
1995	275	75.5%	40	11.0%	19	5.2%	13	3.6%
1996	165	67.6%	38	15.6%	17	7.0%	12	4.9%
1997	97	62.6%	30	19.4%	11	7.1%	7	4.5%
1998	77	67.0%	19	16.5%	6	5.2%	6	5.2%
1999	66	62.3%	21	19.8%	8	7.5%	7	6.6%
2000	46	56.1%	22	26.8%	4	4.9%	5	6.1%
2001	59	57.8%	19	18.6%	6	5.9%	10	9.8%
2002	55	56.7%	22	22.7%	9	9.3%	6	6.2%
2003	64	62.7%	18	17.6%	5	4.9%	9	8.8%
2004	51	58.6%	16	18.4%	6	6.9%	2	2.3%
2005	62	54.4%	21	18.4%	8	7.0%	12	10.5%
2006	75	72.8%	13	12.6%	8	7.8%	5	4.9%
2007	48	54.5%	24	27.3%	6	6.8%	6	6.8%
2008	45	57.0%	19	24.1%	3	3.8%	8	10.1%
2009	64	76.2%	4	4.8%	4	4.8%	8	9.5%
2010	46	66.7%	12	17.4%	6	8.7%	3	4.3%
2011	52	53.1%	24	24.5%	12	12.2%	7	7.1%
2012	50	61.7%	13	16.0%	6	7.4%	10	12.3%
2013	36	60.0%	11	18.3%	4	6.7%	8	13.3%
2014	32	76.2%	5	11.9%	2	4.8%	2	4.8%
Total	3,306	69.6%	621	13.1%	325	6.8%	205	4.3%

DATA SOURCE: HIV Case Registry, data as of January 31, 2015. Other includes transfusion, hemophilia, and all Pediatric modes of transmission.

Disease Control & Epidemiology Division

HIV/AIDS Surveillance & Monitoring Program

Table 1.13a (Figures 1.23-1.24): Length of Time Between HIV and AIDS Diagnosis, Persons Diagnosed with AIDS After 1995 by Gender, Race/Ethnicity, and Mode of Transmission, Orange County

Gender,		Number		Perc	ent
Race/Ethnicity, and Mode of Transmission	Diagnosed Concurrently	Diagnosed Within One Year	Total Diagnosed After 1995	Diagnosed Concurrently	Diagnosed Within One Year
		Ger	nder		
Male	1,550	713	3,484	44.5%	20.5%
Female	212	94	503	42.1%	18.7%
Total	1,762	807	3,987	44.2%	20.2%
		Race/E	thnicity		
White	671	261	1,674	40.1%	15.6%
Black	91	40	212	42.9%	18.9%
Hispanic	878	448	1,848	47.5%	24.2%
API	107	50	210	51.0%	23.8%
Other/Unknown	15	8	43	34.9%	18.6%
Total	1,762	807	3,987	44.2%	20.2%
		Mode of Tr	ansmission		
MSM	1,256	577	2,818	44.6%	20.5%
IDU	158	73	401	39.4%	18.2%
MSM/IDU	64	37	192	33.3%	19.3%
Heterosexual	181	96	417	43.4%	23.0%
Other/Unknown	103	24	159	64.8%	15.1%
Total	1,762	807	3,987	44.2%	20.2%

DATA SOURCES: HIV Case Registry, data as of January 31, 2015.

Other race includes American Indian/Alaskan Native and persons of more than one race.

Other mode includes transfusion, hemophilia, and all Pediatric modes of transmission.

Transgender (all male to female) persons are included in the female row due to their small number.

Table 1.13b (Figures 1.25): Persons Diagnosed with AIDS 1996-2009 Surviving Five or More Years After Diagnosis by Gender, Race/Ethnicity, and Mode of Transmission, Orange County

Gender, Race/Ethnicity, and Mode of Transmission	Number Surviving Five or More Years	Total Diagnosed 1996-2009	Percent
		Gender	
Male	2,365	2,857	82.8%
Female	354	428	82.7%
Total	2,719	3,285	82.8%
		Race/Ethnicity	
White	1,154	1,428	80.8%
Black	150	186	80.6%
Hispanic	1,270	1,496	84.9%
API	116	137	84.7%
Other/Unknown	29	38	76.3%
Total	2,719	3,285	82.8%
		Mode of Transmission	
MSM	1,917	2,269	84.5%
IDU	252	358	70.4%
MSM/IDU	133	157	84.7%
Heterosexual	317	358	88.5%
Other/Unknown	100	143	69.9%
Total	2,719	3,285	82.8%

DATA SOURCES: HIV Case Registry, data as of January 31, 2015.

Other race includes American Indian/Alaskan Native and persons of more than one race.

Other mode includes transfusion, hemophilia, and all Pediatric modes of transmission.

Transgender (all male to female) persons are included in the female row due to their small number.

Includes persons who are now deceased but lived for five or more years.

Disease Control and Epidemiology Division

HIV/AIDS Surveillance and Monitoring Program

Chapter 2: Geography of HIV Disease in Orange County

Disease Control & Epidemiology Division

HIV/AIDS Surveillance & Monitoring Program

Overall Geography and Population in Orange County

Orange County is a large suburban county located between Los Angeles and San Diego Counties in Southern California. The county is comprised of 34 cities and covers approximately 798 square miles. With just over 3.1 million residents, Orange County has a population larger than 22 U.S. states and is the sixth largest county in the United States, exceeded in population only by Los Angeles County, California; Cook County, Illinois; Harris County, Texas; Maricopa County, Arizona, and San Diego County, California.¹⁸

Between 1980¹⁹ and 2014²⁰ Orange County's total population increased by 61.1% from 1.9 to 3.1 million. As of July 1, 2014, Orange County's population density stood at 3,926 persons per square mile. The density of cities within Orange County vary from a low of 491 persons per square mile in unincorporated areas to highs of 12,985 in Stanton, 12,311 in Santa Ana, and 9,663 in Garden Grove.²¹

The data presented throughout this chapter can be found in tables at the end of the chapter. Tables include all data since reporting began even though data by year presented in this chapter only includes the previous 10 years (2005 to 2014).

Figure 2.1 shows a map of the population in Orange County by city in 2014. As shown:

- The most populous cities are Santa Ana and Anaheim, with over 300,000 residents.
- Cities with between 100,000 and 299,999 include Costa Mesa, Fullerton, Garden Grove, Huntington Beach, Irvine, and the City of Orange.



¹⁸ U.S. Census Bureau, American Community Survey, 2013 and 2014.

¹⁹ State of California, Department of Finance, E-6 County Population Estimates and Components of Change — July 1, 1970–1990, Sacramento, California.

²⁰ State of California, Department of Finance, California County Population Estimates and Components of Change by Year, July 1, 2012-2013. Sacramento, California, December 2013.

²¹ State of California, Department of Finance, E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2014 and 2015. Sacramento, California, May 2015.

HIV Disease Surveillance Statistics, 2014, County of Orange, Health Care Agency

Number of Persons Living with HIV Disease by City

As of December 31, 2014, there were 5,760 persons living with HIV disease (PLWHD) in Orange County. Figure 2.2 shows a map of the number of PLWHD by city of current residence.²² Figure 2.3 shows the 10 cities with the highest number of PLWHD. As shown:

- Santa Ana and Anaheim have the largest numbers (1,222 and 921, respectively) of PLWHD.
- The city with the third highest number of PLWHD is Garden Grove, followed by Orange, Huntington Beach, Costa Mesa, Irvine, Laguna Beach, Fullerton, and Tustin.



²² The city of residence for PLWHD is the most current Orange County city of residence known to the HIV/AIDS Surveillance and Monitoring Program. Therefore, persons who were reported in a county other than Orange County are included if their most recent known address is in Orange County and excludes resident cases whose most recent known address is outside of Orange County.

Persons Living with HIV Disease, Rates by City

Figure 2.4 shows a map of the PLWHD per 100,000 population based on city of residence.

- Figure 2.5 shows the 10 cities with the highest HIV Disease rate. As shown:
- Laguna Beach is the city most heavily impacted by HIV Disease in Orange County. There are 198 PLWHD in Laguna Beach (as shown in Figure 2.3), for a rate of 852.7 PLWHD for every 100,000 residents.
- Santa Ana, Anaheim, Tustin, Costa Mesa, Stanton, Orange, Garden Grove, Laguna Niguel, and Westminster are the next most heavily impacted areas with between 185.5 to 367.6 PLWHD per 100,000 residents.



HIV Disease in Select Cities: Santa Ana, Anaheim, and Garden Grove

This section provides the demographics of persons who live in the three cities in Orange County with the highest number of PLWHD: Santa Ana, Anaheim, and Garden Grove.

Santa Ana

Located in central Orange County, Santa Ana is the second most populous city in the county with 332,386⁶ residents. Santa Ana is challenged by some of the highest hardship indicators in the county; 22.8% of residents in the city live below 100% of the federal poverty level compared to 13.5%²³ in Orange County overall. Santa Ana is home to the largest number of PLWHD (1,222) and has the second highest rate of PLWHD per 100,000 (367.6).

Anaheim

The city of Anaheim is located in the northern region of Orange County. Home to 348,369 residents²⁴, Anaheim is the most populous city in Orange County. Anaheim is also home to the second highest number of PLWHD (921) and has the third highest rate of PLWHD per 100,000 (264.4).

Garden Grove

Garden Grove is a city located in the northern region of Orange County and is home to 173,935 residents⁶. It is the fifth most populous city in Orange County. Garden Grove is home to the third highest number of PLWHD (335) and the eighth highest rate of PLWHD per 100,000 (192.6).

Incidence in Select Cities:

Figure 2.6 (below) shows the number of newly diagnosed HIV Disease cases per 100,000 population during the last 10 years in Santa Ana, Anaheim, Garden Grove, and Orange County overall by year of diagnosis.

- Santa Ana: Santa Ana had the second highest annual rate between 2005 and 2011, which was in 2005 at 25.5 per 100,000 population. In 2014, Santa Ana's HIV disease rate has declined to 15.8 cases per 100,000 population.
- Anaheim: In the past 10 years, the annual HIV disease case rate was highest in 2007 at 17.6 cases per 100,000 and has since declined to 11.1 cases per 100,000 in 2014.
- Garden Grove: Garden Grove had the highest rate in 2011 with 14.0 cases per 100,000 population. Since 2005, case rates have declined from 11.3 cases in 2005 to 9.2 cases per 100,000 in 2014.



Rates for 2014 are provisional due to reporting delays.

²³ U.S. Census Bureau, American Community Survey, 2013.

²⁴ State of California, Department of Finance, E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2014 and 2015. Sacramento, California, May 2015.

Prevalence in Select Cities by Gender²⁵:

Figures 2.7.a-2.7.d (below) show the distribution of PLWHD by gender in Orange County (Figure 2.7.a) and the cities of Santa Ana (Figure 2.7.b), Anaheim (Figure 2.7.c), and Garden Grove (Figure 2.7.d).

- Santa Ana (Figure 2.7.b): The majority (84.9%) of PLWHD Santa Ana residents are male. However, compared to the county overall, there is a higher proportion of female PLWHD (14.1% in Santa Ana vs. 12.8% in Orange County) and transgender male to female PLWHD (1.1% in Santa Ana vs. 0.7% in Orange County) who are residents of Santa Ana.
- Anaheim (Figure 2.7.c): The majority (84.8%) of PLWHD living in Anaheim are male. However, compared to Orange County, there is a slightly higher proportion of female PLWHD (14.1% in Anaheim vs. 12.8% in Orange County) and transgender male to female PLWHD (1.1% vs. 0.7%).
- Garden Grove (Figure 2.7.d): The vast majority (90.7%) of PLWHD in Garden Grove are male. This is higher than the county-wide proportion of male PLWHD.



Prevalence in Select Cities by Race/Ethnicity²⁶:

Figures 2.8.a-2.8.d (below) show the distribution of PLWHD by race/ethnicity in Orange County (Figure 2.8.a), and the cities of Santa Ana (Figure 2.8.b), Anaheim (Figure 2.8.c), and Garden Grove (Figure 2.8.d). Blacks are most heavily impacted by the epidemic, with the percentage of PLWHD in the county overall is 3.3 times that of the population. The impact is even greater in Santa Ana at 5.5 times, Garden Grove at 5.0 times, while Anaheim is similar at 3.5 times the population.

- Santa Ana (Figure 2.8.b): Whites and Blacks are most disproportionately impacted by the epidemic, with Whites comprising 17.3% of PLWHD but 8.8% of the population, Blacks 3.3% of PLWHD but 0.6% of the population. Conversely, Hispanics represent a similar percentage of PLWHD and the population overall, while APIs represent 10.9% of the population but only 3.0% of PLWHD.
- Anaheim (Figure 2.8.c): In Anaheim, Whites make up similar percentages of both PLWHD and the overall population, while Blacks and Hispanics are disproportionately impacted. Blacks comprise 6.7% of PLWHD, but only 1.9% of the population, Hispanics 59.1% of the epidemic, but 52.1% of the population. Like Santa Ana, the proportion of API PLWHD is much lower than that in the population.
- Garden Grove (Figure 2.8.d): The population in Garden Grove has an impact similar to Anaheim. Whites, Blacks, and Hispanics comprise a greater proportion of PLWHD than the general population, whereas the percentage of API is less than the overall population.



Prevalence in Select Cities by Mode of Transmission²⁷:

Figures 2.9.a-2.9.d (below) show the distribution of PLWHD by mode of transmission in Orange County (Figure 2.9.a), and the cities of Santa Ana (Figure 2.9.b), Anaheim (Figure 2.9.c), and Garden Grove (Figure 2.9.d).

- Santa Ana (Figure 2.9.b): For PLWHD who are residents of Santa Ana, 66.6% reported being exposed through MSM, followed by IDU (11.3%), and heterosexual contact (12.2%). Compared to Orange County as a whole, PLWHD living in Santa Ana are less likely to report MSM as a mode of transmission and more likely to report heterosexual contact and IDU as a mode of transmission
- Anaheim (Figure 2.9.c): A large majority (71.9%) of PLWHD who are residents of Anaheim reported being exposed through men who have sex with men (MSM) followed by heterosexual contact, injection drug use (IDU), and MSM/IDU. These proportions generally reflect those of Orange County as a whole.
- Garden Grove (Figure 2.9.d): Garden Grove has the highest number of PLWHD who reported exposure through MSM (76.4%) and a lower percentage exposed through heterosexual contact (6.6%).



CHAPTER 2 TABLES-GEOGRAPHY

TABLE 2.1 (FIGURES 2.1-2.5): PERSONS LIVING WITH HIV DISEASE (PLWHD), ANNUAL POPULATION, AND CASE RATES PER 100,000 POPULATION, ORANGE COUNTY

City		Dopulation	Pate per 100 000 Deputation
		Population	
Laguna Beach	1 222	23,219	852.7
Santa Ana	1,222	332,386	367.6
	921	348,369	264.4
Tustin	186	/8,34/	237.4
Costa Mesa	260	111,835	232.5
Stanton	85	38,954	218.2
Orange	295	139,268	211.8
Garden Grove	335	173,935	192.6
Laguna Niguel	123	64,449	190.8
Westminster	170	91,637	185.5
Laguna Hills	55	30,848	178.3
Dana Point	59	34,031	173.4
Buena Park	134	82,330	162.8
Placentia	74	52,084	142.1
Fullerton	198	140,120	141.3
Laguna Woods	23	16,575	138.8
Aliso Viejo	68	49,939	136.2
Huntington Beach	265	196,009	135.2
La Habra	81	61,705	131.3
Newport Beach	108	86,870	124.3
Lake Forest	94	79,125	118.8
San Clemente	75	64,865	115.6
Brea	46	42,389	108.5
Mission Viejo	103	95,320	108.1
Fountain Valley	61	56,690	107.6
San Juan Capistrano	34	35,891	94.7
Seal Beach	23	24,586	93.5
Irvine	222	242,676	91.5
Los Alamitos	10	11,725	85.3
Villa Park	5	5,932	84.3
Cypress	41	48,874	83.9
La Palma	12	15,890	75.5
Rancho Santa Margarita	30	48,823	61.4
Yorba Linda	39	67,055	58.2
Capistrano Beach	16	NA	NC
Corona Del Mar	22	NA	NC
Midway City	21	NA	NC
Trabuco Canyon	16	NA	NC
Ladera Ranch	9	NA	NC
Foothill Ranch	8	NA	NC
Newport Coast	7	NA	NC
Coto De Caza	3	NA	NC
Balboa Island	1	NA	NC
Dove Canvon	1	NA	NC
Rossmoor	1	NA	NC.
	1	1 1/ 1	

DATA SOURCES: HIV Case Registry, data as of January 31, 2015. State of California, Department of Finance, E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2014 and 2015. Sacramento, California, May 2015.

NA: Population estimate not available. NC: Rate not calculated.

The city of residence for PLWHD is the most current Orange County city of residence known to the HIV/AIDS Surveillance and Monitoring Program. Therefore, persons who were reported in a county other than Orange County are included if their most recent known address is in Orange County and excludes resident cases whose most recent known address is outside of Orange County.

HIV Disease Surveillance Statistics, 2014, County of Orange, Health Care Agency

Diagn	Santa	a Ana	Anal	neim	Garder	Grove	Orange	County
Year	Number	Rate	Number	Rate	Number	Rate	Number	Rate
1980	1	0.5	2	0.9	0	0.0	3	0.2
1981	0	0.0	0	0.0	0	0.0	3	0.1
1982	3	1.3	1	0.4	0	0.0	18	0.9
1983	7	3.0	4	1.7	7	5.4	50	2.4
1984	11	4.5	13	5.4	7	5.3	118	5.6
1985	47	18.8	30	12.3	25	18.5	323	14.9
1986	40	15.5	49	19.8	15	11.0	378	17.0
1987	84	31.7	61	24.1	32	23.1	562	24.8
1988	125	45.5	96	37.7	52	37.4	757	32.7
1989	134	46.6	82	31.7	41	29.1	710	29.9
1990	92	31.5	57	21.6	35	24.6	601	24.9
1991	80	26.7	65	23.8	27	18.7	563	22.9
1992	81	26.5	59	21.1	29	19.6	525	20.9
1993	80	25.8	51	17.8	32	21.4	452	17.7
1994	79	25.2	49	16.7	18	11.8	388	15.1
1995	67	21.3	43	14.4	26	16.9	380	14.6
1996	70	22.1	48	15.9	25	16.2	403	15.2
1997	74	23.0	38	12.4	27	17.2	332	12.3
1998	52	16.0	48	15.3	22	13.8	282	10.3
1999	54	16.3	52	16.3	12	7.4	292	10.4
2000	57	17.0	41	12.6	20	12.2	294	10.3
2001	67	19.8	47	14.3	22	13.2	336	11.6
2002	72	21.4	57	17.2	24	14.3	362	12.4
2003	83	24.6	49	14.8	14	8.3	360	12.2
2004	63	18.8	56	16.8	18	10.7	362	12.2
2005	85	25.5	52	15.7	19	11.3	354	12.0
2006	79	24.0	48	14.6	20	11.9	343	11.6
2007	70	21.4	58	17.6	17	10.1	364	12.3
2008	72	22.2	46	13.9	19	11.3	335	11.2
2009	63	19.4	42	12.6	13	7.7	320	10.7
2010	68	21.0	48	14.3	17	9.9	282	9.3
2011	69	21.2	50	14.7	24	14.0	312	10.2
2012	69	21.0	42	12.2	23	13.3	256	8.3
2013	72	21.8	48	13.8	20	11.5	306	9.9
2014	53	15.9	39	11.2	16	9.2	261	8.3
Total	2,223	668.8	1,571	451.0	718	412.8	11,987	382.6

Table 2.2 (Figure 2.6): Number and Rate per 100,000 Population of HIV Disease Cases by Year of Diagnosis, Santa Ana, Anaheim, Garden Grove, and Orange County, 1980-2013

DATA SOURCES: HIV Case Registry, data as of January 31, 2015.

State of California, Department of Finance, Population Estimates for California Cities and Counties, January 1, 1981 to January 1, 1990.

State of California, Department of Finance, E-4 Historical Population Estimates for City, County and the State, 1991-2000, with 1990 and 2000 Census Counts. Sacramento, California, August 2007.

State of California, Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2001-

2010, with 2000 & 2010 Census Counts. Sacramento, California, November 2012

State of California, Department of Finance, E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2013 and 2014. Sacramento, California, May 2014.

State of California, Department of Finance, E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2014 and 2015. Sacramento, California, May 2015.

HIV Disease Surveillance Statistics, 2014

Gender,	Santa	a Ana	Anal	neim	Garder	Grove	All PL	NHD
Race/Ethnicity, and Current Age	Number	Percent	Number	Percent	Number	Percent	Number	Percent
			(Gender				
Male	1,037	84.9%	781	84.8%	304	90.7%	4,978	86.4%
Female	172	14.1%	130	14.1%	27	8.1%	740	12.8%
Transgender Male to Female	13	1.1%	10	1.1%	4	1.2%	42	0.7%
Total	1,222	100.0%	921	100.0%	335	100.0%	5,760	100.0%
			Race	e/Ethnicity				
White	212	17.3%	249	27.0%	93	27.8%	2,343	40.7%
Black	40	3.3%	62	6.7%	10	3.0%	282	4.9%
Hispanic	923	75.5%	544	59.1%	167	49.9%	2,692	46.7%
API	37	3.0%	59	6.4%	62	18.5%	393	6.8%
Other/Unknown	10	0.8%	7	0.8%	3	0.9%	50	0.9%
Total	1,222	100.0%	921	100.0%	335	100.0%	5,760	100.0%
		1	Cu	rrent Age	1		1	1
0-18	9	0.7%	5	0.5%	0	0.0%	36	0.6%
19-25	46	3.8%	43	4.7%	18	5.4%	217	3.8%
26-35	207	16.9%	167	18.1%	49	14.6%	881	15.3%
36-45	361	29.5%	270	29.3%	94	28.1%	1,431	24.8%
46-55	375	30.7%	284	30.8%	109	32.5%	1,952	33.9%
56+	224	18.3%	152	16.5%	65	19.4%	1,243	21.6%
Total	1,222	100.0%	921	100.0%	335	100.0%	5,760	100.0%
			Mode of	Transmissi	on			
MSM	814	66.6%	662	71.9%	256	76.4%	4,131	71.7%
IDU	138	11.3%	69	7.5%	27	8.1%	461	8.0%
MSM/IDU	69	5.6%	45	4.9%	21	6.3%	301	5.2%
Heterosexual	149	12.2%	110	11.9%	22	6.6%	631	11.0%
Other/Unknown	52	4.3%	35	3.8%	9	2.7%	236	4.1%
Total	1,222	100.0%	921	100.0%	335	100.0%	5,760	100.0%

 Table 2.3 (Figures 2.7-2.9): Persons Living with HIV Disease (PLWHD) by Gender, Race/Ethnicity,

 Current Age, and Mode of Transmission, Santa Ana, Anaheim, Garden Grove, and Orange County

DATA SOURCES: HIV Case Registry, data as of January 31, 2015.

Other race includes American Indian/Alaskan Native and persons of more than one race.

Other mode includes transfusion, hemophilia, and all Pediatric modes of transmission.

Disease Control and Epidemiology Division

HIV/AIDS Surveillance and Monitoring Program

Chapter 3: Pediatric HIV Disease in Orange County

Disease Control & Epidemiology Division

HIV/AIDS Surveillance & Monitoring Program

Overview of Pediatric HIV Reporting

This section describes trends in HIV disease for pediatric cases (children under the age of 13 at time of diagnosis). As of December 31, 2014, there have been a total of 77 pediatric cases reported in Orange County. This represents less than 1% of total HIV disease cases reported in the county. Most of these pediatric cases, 75.3%, are attributed to perinatal transmission, which is transmission from mother to child during pregnancy, labor, or delivery. Due to the small numbers of pediatric cases, reported each year²⁸ data is presented in five or ten year periods.

In this report, when describing individuals currently living with HIV Disease (prevalence), the *current age* of the individual is shown. When describing trends in the number of new cases (incidence), the *age of diagnosis* is used. Age groups for which there are fewer than five cases in each subgroup will not be shown in this section.

Data throughout this chapter is presented in graphs and pie charts. Complete data tables that correspond to the graphical representations can be found at the end of this chapter.

Incidence

Figure 3.1 displays the number of pediatric cases diagnosed by age at diagnosis since 1985 in five-year periods by the earliest date of diagnosis. As shown, between 1995-1999 and 2000-2004, there was a significant decrease in the number of pediatric cases. This decrease is likely due to giving pregnant women infected with HIV and their newborns zidovudine (ZDV) (starting in 1994) which reduced the risk for this type of HIV transmission. This intervention started in 1994, and since then, the testing of pregnant women and treatment for those who are infected have resulted in a dramatic decline in the number of children perinatally infected with HIV locally and nationally.

Cases diagnosed in 1985-1989 were due to perinatal transmission, a child receiving treatment for hemophilia, and children who were infected due to a blood transfusion. From 1990 until 2014, nearly all the pediatric cases diagnosed have been due to perinatal transmission. The majority of the cases diagnosed since 2005 were born outside of the United States.



²⁸ Fewer than five cases for most years. Disease Control and Epidemiology Division

Prevalence

This section provides information on the **51** children living with HIV Disease (PLWHD) who were under age 13 at time of diagnosis. Comparisons are made to "All PLWHD" or the **5,760** PLWHD as of December 31, 2014 regardless of age at diagnosis and Orange County's total 2014 population.

Prevalence by Race/Ethnicity

Figure 3.3 shows the proportion of pediatric PLWHD compared to all PLWHD and Orange County's 2014 population by race/ethnicity. As shown, the pediatric PLWHD are more likely to be Hispanic and Black, and less likely to be White than the overall population.



*Fewer than 5 PLWHD.

Prevalence by Current Age

Figure 3.4 shows the distribution of pediatric PLWHD by current age. As shown, the largest group of pediatric PLWHD are between the ages of 13 and 19. Those age 0-12 years and 20-29 years of age make up the second largest proportion of pediatric PLWHD.



Survival

Figure 3.5 shows the percent of pediatric cases and all reported cases of HIV disease in Orange County who are still living. As shown, 66.2% (51 of 77) of all reported pediatric cases are still living in Orange County compared to 48.1% (5,760 of 11,987) of all reported HIV disease cases in Orange County are still living in Orange County as of December 31, 2014.



CHAPTER 3 TABLES-PEDIATRIC HIV DISEASE

(Feuldiric), and A			Linnicity, and	current Age,		<u>y</u>					
Gender, Dess /Ethnisity	F	Pediatric PLWH)								
and Current Age	Number	Percent	Rate	Number	Percent	Rate					
	Gender										
Male	24	47.1%	1.6	4,978	86.4%	322.0					
Female	27	52.9%	1.7	740	12.8%	46.8					
Transgender	*	*	*	42	0.7%	NC					
Total	51	100.0%	1.6	5,760	100.0%	183.9					
	Race/Ethnicity										
White	10	19.6%	0.8	2,343	40.7%	177.4					
Black	15	29.4%	32.5	282	4.9%	610.1					
Hispanic	22	43.1%	2.0	2,692	46.7%	249.0					
API	*	*	*	393	6.8%	66.0					
Other/Unknown	*	*	*	50	0.9%	NC					
Total	51	100.0%	1.6	5,760	100.0%	183.9					
			Current Age	_							
0-12	14	27.5%	2.8	14	0.2%	2.8					
13-18	15	29.4%	5.9	22	0.4%	8.7					
19-25	13	25.5%	4.1	217	3.8%	68.0					
26-35	7	13.7%	1.6	881	15.3%	206.1					
36-45	*	*	*	1,431	24.8%	334.3					
46-55	*	*	*	1,952	33.9%	430.5					
56+	*	*	*	1,243	21.6%	167.6					
Total	51	100.0%	1.6	5,760	100.0%	183.9					

Table 3.1 (Figures 3.2-3.4): Persons Living with HIV Disease (PLWHD) Diagnosed Prior to Age 13 (Pediatric), and All PLWHD by Gender, Race/Ethnicity, and Current Age, Orange County

DATA SOURCES: HIV Case Registry, data as of January 31, 2015.

State of California, Department of Finance, California County Population Estimates and Components of Change by Year, July 1, 2010-2014. Sacramento, California, December 2014.

State of California, Department of Finance, California County Population Estimates and Components of Change by Year, July 1, 2010-2014. Sacramento, California, December 2014.

Other race includes American Indian/Alaskan Native and persons of more than one race.

Other mode includes transfusion, hemophilia, and all Pediatric modes of transmission.

NC: Rate not calculated due to lack of population estimates.

NA: Number is not available.

*Fewer than five PLWHD.

Rate is per 100,000 2014 population.

Disease Control and Epidemiology Division

HIV/AIDS Surveillance and Monitoring Program

Chapter 4: HIV Counseling and Testing

Disease Control & Epidemiology Division

HIV/AIDS Surveillance & Monitoring Program

HIV Counseling and Testing:

The Orange County Health Care Agency provides support for HIV counseling and testing services in Orange County through the provision of HIV rapid test kits funded by the HIV Prevention Services Branch of the California Department of Public Health, Office of AIDS. Counseling and Testing (C&T) sites receiving kits include: 17th Street Testing and Treatment, AIDS Services Foundation (ASF), the Health Care Agency Risk Reduction, Education, and Community Health (REACH) Program, the Asian Pacific AIDS Intervention Team (APAIT), and The Center Orange County. Tests conducted at private provider offices and other sites not listed here are not included in this chapter.

In addition to the sites listed above, the Orange County jails also receive test kits, however these sites are part of the HIV expanded testing program funded by the State Office of AIDS (SOA). The goal of the project, which began in 2012, is to routinize HIV screening in medical settings, identify a positivity rate for newly identified positives of at least 0.1%, and link HIV-positive individuals to care and support services. Tests conducted in the jails are excluded from this section but are included in Chapter 5: Expanded Testing.

This chapter describes the trends and demographics of those who received tests and those who tested positive for HIV at C&T sites between 2010 and 2014. C&T sites provide counseling and testing services at no cost to individuals. An individual may take more than one test in a single year or over multiple years. Therefore, the numbers in this chapter should not be considered an unduplicated count of individuals. Though no one is refused testing at these sites, it is important to note that the C&T sites target outreach to high-risk populations such as men who have sex with men, substance users, and partners of infected individuals. Therefore, positivity rates shown here are likely higher than those expected in the general population.





Figure 4.2, displays the positivity rate (number of positive tests divided by number of persons tested) and number of individuals (indicated with "n") who tested positive for HIV in each year. As shown, an average of 1.0% of tests were positive in the last five years.



HIV Counseling and Testing by Gender

Table 4.1 displays the number of tests and the number of positive results each year at C&T sites between 2010 and 2014 by gender. As shown, there were more tests conducted for males than females each year. Though tests were provided to transgender individuals, the number of positive tests each year for this population was too low (fewer than five) to show.

Table 4.1. Number of Tests Provided and Positive Results at Orange County C&T Sites by Gender, 2010-2014

	2010		2011		2012		2013		2014	
	Total	Number								
Gender	Tests	Positive								
Male	6,586	80	7,018	91	6,940	76	7,190	97	7,006	76
Female	2,283	6	2,414	1	2,452	5	2,389	3	2,040	8
Transgender	125	2	138	2	114	3	138	1	188	1

*Fewer than five positive tests. "Transgender" includes both male to female and female to male transgender individuals.

Figure 4.3 displays the percent of individuals who tested positive for HIV by gender and overall between 2010 and 2014. As shown, males tend to have higher positivity rates, while females had lower positivity rates than total tests. Information for transgender individuals is not shown due to the number of positive tests each year being less than five.



HIV Counseling and Testing by Race/Ethnicity

Table 4.2, displays the number of tests and the number of positive results each year at C&T sites between 2010 and 2014 by race/ethnicity. As shown, Hispanics received the most tests and had the highest number of positive test results, followed by Whites, APIs, and Blacks.

Table 4.2. Number of Tests Provided and Positive Results at Orange County C&T Sites byRace/Ethnicity, 2010-2014

	2010		2011		2	2012		2013	2014	
	Total	Number								
Race/Ethnicity	Tests	Positive								
White	2,854	23	2,917	24	2,945	20	2,713	20	2,580	18
Black	339	4	421	4	420	1	414	3	417	5
Hispanic	4,352	51	4,786	53	4,473	51	4,992	66	4,692	46
API	1,011	8	1,075	10	1,319	11	1,338	10	1,313	14

Figure 4.4 displays the percent of positive tests within each race/ethnicity by year. As shown, in general, Hispanics have had the highest percent positivity in all years except 2014 where APIs had a higher rate. Positivity for Blacks is not shown due to having fewer than five positive tests in most years.



HIV Counseling and Testing by Age

Table 4.3 displays the number of tests and the number of positive results each year at C&T sites between 2010 and 2014 by age group. As shown, 20 to 29 years olds received the most tests, followed by 30 to 39 years olds.

Table 4.3. Number of Tests Provided and Positive Results at Orange County C&T Sites	by
Race/Ethnicity, 2010-2014	-

	2010		2011		2012		2013		2014	
Age	Total	Number								
Group	lests	Positive								
0-18	489	3	547	2	694	0	441	2	368	2
19-25	2,602	24	2,697	24	2,824	17	2,865	26	2,808	25
26-35	2,874	31	3,074	34	2,915	40	3,130	40	3,030	31
36-45	1,787	18	1,817	22	1,626	17	1,731	23	1,647	15
46-55	857	10	1,032	10	995	9	1,094	7	1,046	10
56+	356	1	391	2	403	1	467	3	429	4

HIV Disease Surveillance Statistics, 2014, County of Orange, Health Care Agency

Figure 4.5 displays the percent of positive tests by age group between 2010 and 2014. No single age group has had the highest positivity rate over this period of time.



HIV Counseling and Testing by Mode of Exposure

Table 4.4 displays the number of tests and the number of positive results each year at C&T sites between 2010 and 2014 by mode of exposure. As shown, those exposed through heterosexual contact received the highest number of tests each year, followed by men who have sex with men (MSM), and injection drug users (IDU).

Table 4.4.	Number of Te	sts Provided a	and Positive F	Results at Or	ange County	C&T Sites by	Mode of
Exposure,	2010-2014						

-	2010		2011		2012		2013		2014	
Mode of	Total	Number								
Exposure	Tests	Positive								
MSM	2,543	67	2,905	73	3,131	66	3,204	80	3,460	66
IDU	475	3	567	0	566	1	705	2	668	0
MSM/IDU	45	4	42	3	46	3	65	3	103	2
Heterosexual	1 655	o	4 775	11	1 222	10	1 102	0	2 455	о
Contact	4,000	0	4,775	11	4,323	10	4,103	ö	5,400	õ
Transgender	125	2	138	2	114	3	138	1	188	1
Unknown	334	0	448	3	544	1	865	4	666	9

"Heterosexual Contact" includes HIV-positive sex partner, IDU sex partner, MSM sex partner, Heterosexual multiple partners, and Heterosexual single partner.

"Transgender" includes both male to female and female to male transgender individuals.

Figure 4.6 displays the percent of positive tests by mode of exposure for MSM and those who reported exposure through heterosexual contact. Other exposure groups are not shown as there were too few cases to show trends for the indicated years. As shown, MSM have had higher positivity rates compared to those exposed through heterosexual contact.



Chapter 5: Expanded Testing

Disease Control and Epidemiology Division

HIV/AIDS Surveillance and Monitoring Program

HIV Expanded Testing (Routine Testing):

HIV expanded testing is a program funded by the State Office of AIDS (SOA). In Orange County, three programs are funded for the expanded testing program: AltaMed, the University of California (UCI) medical centers, and Orange County Jails. The goal of the project is to routinize HIV screening in medical settings to identify HIV-positive individuals and link HIV-positive individuals to care and support services.

Figure 5.1 shows the total number of HIV tests performed by the three Orange County programs involved with the HIV Expanded Testing between January 2012 and December 2014. The Orange County Jails performed 8,530 tests at five testing sites. The UCI General Internal Medicine Clinic in Orange and the Family Health Centers in Santa Ana and Anaheim have conducted 12,599 tests. AltaMed has conducted a total of 42,243 tests at nine testing sites throughout Orange County.



Figure 5.2 displays the number of tests performed per year by programs. Orange County Jails performed 1,235 tests in 2012, 3,067 tests in 2013, and 4,228 in 2014. UCI performed 2,634 tests in 2012, 3,977 tests in 2013, and 5,988 in 2014. AltaMed provided 12,017 tests in 2012, 14,787 tests in 2013, and 15,439 tests in 2014.



Figure 5.3 displays the total positive individuals tested, total number of newly identified positive individuals, and percent of newly positive individuals for each of the three Expanded Testing programs through December 2014. The total new positivity rate for the combined programs is 0.09%.


Chapter 6: National HIV/AIDS Strategy

Disease Control & Epidemiology Division

Overview of National HIV/AIDS Strategy Goals and Objectives

In July 2010, the White House released the *National HIV/AIDS Strategy (NHAS) for the United States*, which outlined four goals for a national response to HIV in the United States. These goals are to: 1) reduce the number of people who become infected with HIV; 2) increase access to care and improve health outcomes for people living with HIV; 3) reduce HIV-related health disparities; and 4) achieve a more coordinated national response to the HIV epidemic.

Orange County's 2012-14 Comprehensive HIV Plan is in alignment with NHAS. The objectives associated with the first three NHAS goals are measurable using current Orange County data sources, shown below. Data sources are described starting in Appendix V: Data Sources, data methods are described in Appendix III: Technical Notes.

Goal 1: Reduce the Number of New HIV Infections

Orange County Objectives for 2015	Baseline (2010)	Orange County (2014)	Target (2015)
Objective 1-1: Reduce the number of new HIV infections by 25 percent.	281	261	211
Objective 1-2: Reduce the HIV transmission rate ¹ by 30 percent.	4.3	3.9	3.0

¹HIV transmission rate is defined as the number of new HIV infections per 100 people estimated to be living with HIV.

Goal 2: Increase Access to Care and Optimize Health Outcomes for People Living with HIV Disease (PLWHD)

Orange County Objectives for 2015	Baseline (2010)	Orange County (2014)	Target (2015)
Objective 2-1: Increase the proportion of newly diagnosed patients linked to clinical care within three months of HIV diagnosis to 85 percent.	67%	85%	85%
Objective 2-2: Increase the proportion of Ryan White Program clients ¹ who are in continuous ² care to 84 percent. ³ Objective 2-3: Increase the proportion of PLWHD ⁴ who are in continuous care ² by 20 percent ⁵	79% N/A	80% 64%	84% 72%
Objective 2-4: Increase the proportion of Ryan White Program clients ¹ with permanent housing to 92 percent ⁶ .	87%	92%	92%

N/A: 2010 Baseline data for PLWHD for all Orange County residents was not comparable to 2013 midpoint.

¹Ryan White Program clients only. The Ryan White Program is a federally funded program that supports primary medical care and essential support services for PLWHD who have no other payer source for these services.

²Continuous care is defined as having at least two care visits, at least 3 months apart, in a 12 month period. Care visits are represented by a CD4 and/or viral load laboratory result. Percent calculated out of persons age 13 years and older who were living in Orange County at the end of each year and diagnosed by the end of the prior year.

³The NHAS objective is to increase the proportion to 80%. This objective was modified to increase the proportion by five percentage points, above the baseline, given that Orange County's 2013 midpoint met the national objective.

⁴Orange County is applying this objective to all Orange County residents living with HIV Disease who are in care, regardless of payer source. The NHAS and California objective is based on Ryan White Program clients only.

⁵2015 target is a 20% increase from the 2013 midpoint of 60%.

⁶Permanently housed is anyone who had the living situation of living with relatives/friends, participant-owned housing, rental housing, or rented room at the end of the year. The NHAS objective is to increase the proportion to 86%. This objective was modified to increase the proportion by five percentage points, above the baseline, given that Orange County's baseline exceeded the national objective.



Goal 3: Reduce HIV-Related Health Disparities

Orange County Objectives for 2015	Baseline (2010)	Orange County (2014)	Target (2015)
Objective 3-1: Increase the proportion of HIV diagnosed gay and bisexual men with undetectable viral load by 20 percent ¹ .	N/A	72%	79%
Objective 3-2: Increase the proportion of HIV diagnosed Blacks with undetectable viral load to 67 percent ² .	N/A	69%	67%
Objective 3-3: Increase the proportion of HIV diagnosed Latinos with undetectable viral load to 67 percent ² .	N/A	63%	67%

N/A: 2010 Baseline was not comparable to 2013 midpoint.

¹2015 target is a 20% increase from the 2013 midpoint of 66%. Percent with an undetectable viral load uses the total population of PLWHD age 13 and over as a denominator, not just persons who had a viral load test during the year.

²The proportion of White PLWHD with undetectable viral load in 2013 was 67%. The intent of Goal 3 is to reduce HIV-related health disparities; therefore, the target for Blacks and Latinos was modified to 67% to eliminate the disparity.



Disease Control & Epidemiology Division

Disease Control & Epidemiology Division

Chapter 7: Ryan White Act and Orange County

Disease Control & Epidemiology Division

Overview of Ryan White Act

First authorized in 1990, the Ryan White Act is the largest piece of federal legislation that offers funding for the care and treatment of persons living with HIV disease (PLWHD) who have no other source for care. Three main goals of the Ryan White Act are:

- To lessen the burden of treatment and care in areas most affected by HIV.
- To foster a coordinated approach to core treatment and support of HIV services.
- To build a community-based, strategic response to HIV by local organizations and advocates, as well as local public entities.

The Ryan White Act is administered by the U.S. Department of Health and Human Services (HHS), Health Resources and Services Administration (HRSA), HIV/AIDS Bureau (HAB). Federal funds are awarded to agencies located around the country, which in turn deliver care to eligible individuals under funding categories called Parts, as outlined below.

The Ryan White legislation created a number of programs, called Parts, to meet the needs for different communities and populations affected by HIV/AIDS. Each is described below. Orange County receives funding from Ryan White Parts A, B, and C, as well as the Minority AIDS Initiative (MAI) to provide primary medical care and support services to HIV-positive individuals.

Part A provides emergency assistance to Eligible Metropolitan Areas (EMAs) and Transitional Grant Areas (TGAs) that are most severely affected by the HIV/AIDS epidemic. The Orange County Health Care Agency (HCA) HIV Planning and Coordination Unit acts as Orange County's grantee for these funds. The Orange County HIV Planning Council acts as the planning body for Ryan White Part A funding.

Part B provides grants to all 50 States, the District of Columbia, Puerto Rico, Guam, the U.S. Virgin Islands, and 5 U.S. Pacific Territories or Associated Jurisdictions. Orange County receives Ryan White Part B funds through the California Office of AIDS.

Part C provides comprehensive primary health care in an outpatient setting for people living with HIV disease. The HCA's HIV Ambulatory Care Clinic (known as 17th Street Care) receives Part C funds directly from the federal government to provide outpatient ambulatory medical care.

Part D provides family-centered care involving outpatient ambulatory care for women, infants, children, and youth with HIV/AIDS. AltaMed Health Services received Part D Women, Infants, Children, and Youth (WICY) funds directly and provides a range of core and support services to the WICY population.

Part F provides funds for a variety of programs:

- The Special Projects of National Significance Program grants fund innovative models of care and supports the development of effective delivery systems for HIV care.
- The AIDS Education and Training Centers Program (AETC) supports a network of 11 regional centers and several National centers that conduct targeted, multidisciplinary education and training programs for health care providers treating people living with HIV/AIDS. The University of California, Irvine (UCI) coordinates AETC activities for Southern California.
- The Dental Programs provide additional funding for oral health care for people with HIV.
- The Minority AIDS Initiative (MAI) provides funding to evaluate and address the disproportionate impact of HIV/AIDS on African Americans and other minorities. Orange County receives MAI funds directly through the federal government.



Disease Control & Epidemiology Division

APPENDIX I: HIV (NON-AIDS) AND AIDS DIAGNOSIS AND Reportiong Years

Year of Diagnosis versus Year of Report:

There are two dates associated with an HIV or AIDS case, the date of HIV or AIDS diagnosis and the date the case was reported to Orange County HIV/AIDS Surveillance and Monitoring. Most HIV/AIDS data reports utilize the report date to determine what year the case was reported. When showing case demographics in individual years, this data report will focus on the date that the case was diagnosed with HIV or AIDS. Presenting data by year of diagnosis gives a clearer picture of the current nature of the epidemic and the demographics of the most newly infected individuals. Due to reporting delays, diagnosis data for 2014 is incomplete as cases diagnosed in 2014 will continue to be reported throughout 2015. By using the year of report, the number of cases reported each year should be relatively stable making it appropriate to compare the most current year of reporting to previous years. However, when HIV reporting began by non-name code and again by name, additional surveillance efforts were made to identify cases of HIV or AIDS never reported into HARS. This resulted in an increased number of cases being reported that were not reflective of an increase in the epidemic, nor were they reflective of the demographics of persons newly diagnosed.

Overall HIV Case Reporting:



The first year of diagnosis for a case that is currently diagnosed HIV (non-AIDS) is 1984. ^2014 diagnosed cases are considered provisional due to reporting delays.

HIV reporting by non-name code originally began in 2002 although cases reported were diagnosed with HIV as early as 1984, as shown in Figure A1:1. The cases originally reported in 2002-2005 were reported by non-name code and have since been re-reported with a name. Of the 215 HIV cases reported in 2014, 190 cases were diagnosed in 2014. The increase in cases reported in 2008 is due to intensive surveillance efforts to identify cases previously unreported under either reporting methodology and included 249 cases (54.8%) that were diagnosed prior to the year 2002 (before HIV reporting began).



Overall AIDS Case Reporting:



^2014 diagnosed cases are considered provisional due to reporting delays.

The initial Orange County AIDS case was reported in 1981 and, as shown in Figure A1:2, reported cases continued to rise each year until 1993, except for a slight decrease in 1992. Seven hundred and forty-one (740) AIDS cases were reported in Orange County in 1993, following the expansion of the Centers for Disease Control (CDC) AIDS surveillance case definition, which was implemented in January of that year. The decreasing and leveling of reported AIDS cases after 1995 coincides with advancements in treatment, particularly the introduction of highly active antiretroviral therapy (HAART). In 2014, Orange County reported 134 AIDS cases, (a decrease of 5.0% from the 141 cases reported in 2013) and 115 new AIDS cases were diagnosed.

APPENDIX II: GLOSSARY OF TERMS

Age-adjusted death rate	A statistical method applied to the crude death rate to remove the effect of age, thus permitting unbiased comparison of rates between groups having different underlying compositions with respect to age.
Acquired Immuno- Deficiency Syndrome (AIDS)	A disease of the body's immune system caused by the human immunodeficiency virus (HIV). AIDS is characterized by the death of CD4 cells (an important part of the body's immune system), which leaves the body vulnerable to life-threatening conditions such as infections and cancers.
Antiretroviral therapy (ART	(T) Treatment with drugs that inhibit the ability of retroviruses (such as HIV) to multiply in the body. The antiretroviral therapy recommended for HIV infection is referred to as highly active antiretroviral therapy (HAART), which uses a combination of medications to attack HIV at different points in its life cycle. (See <i>HAART</i> , <i>NNRTI</i> , <i>NRTI</i> , and <i>Protease inhibitors</i>)
Asymptomatic	Having no obvious signs or symptoms of disease. (See incubation period)
CD4 ("helper T") cell	Also known as helper T cell or CD4 lymphocyte. A type of infection-fighting white blood cell that carries the CD4 receptor on its surface. CD4 cells coordinate the immune response, signaling other cells in the immune system to perform their special functions. The number of CD4 cells in a sample of blood is an indicator of the health of the immune system. HIV infects and kills CD4 cells, leading to a weakened immune system.
Case	A particular instance of disease.
Case definition	Standard criteria for deciding whether a person has a particular health-related condition or disease. For AIDS, the CDC lists specific conditions a person must have in order to be classified as an AIDS case.
Case fatality rate	The proportion of persons contracting a disease who die of that disease: the numerator is the number of deaths caused by a disease and the denominator is the number of diagnosed cases of the disease.
Case rate per 100,000 population	The number of cases reported within a group divided by the number of people in that group. For example, if there were 10 HIV cases reported among Blacks and the Black population is 45,000, the case rate for Blacks would be 22.2 per 100,000 (10/45,000 x 100,000). This would mean that for every 100,000 Black people, 22 of them are infected with HIV. The case rate provides a way to compare the impact of a disease between different groups.
Centers for Disease Control and Prevention (CDC)	An agency of the U.S. Department of Health and Human Services (DHHS) that is charged with protecting the health and safety of citizens at home and abroad. The CDC serves as the national focus for developing and applying disease prevention and control, environmental health, and health promotion and education activities designed to improve the health of the people of the United States.
Combination therapy	Two or more drugs used together to achieve optimal results in controlling HIV infection. Combination therapy has proven more effective in decreasing viral load than monotherapy (single-drug therapy), which is no longer recommended for the treatment of HIV. An example of combination therapy is the use of two NRTIs plus a PI or an NNRTI.

HIV Disease Surveillance Statistics, 2014, County of Orange, Health Care Agency

Crude death rate	A rate giving the total number of events occurring in an entire population over a period of time, without reference to any of the individuals or subgroups within the population.
Cumulative	Pertaining to the total number of persons/cases reported for a given disease or event of interest.
Cumulative rate	The cumulative number of cases reported as AIDS during a specified time period divided by the total population at risk for AIDS in the most recent year of reporting.
Demographic	The characteristics of a population (e.g., sex, race, age, geographic location).
eHARS	Electronic HIV/AIDS Reporting System. Surveillance database, maintained by the State Office of AIDS, containing HIV and AIDS reports.
Epidemic	The occurrence of more cases of disease than expected in a given area or among a specific group of people over a particular period of time.
Epidemiology	The branch of medical science that studies the occurrence, distribution, and control of a disease in populations.
Exposure	Contact with a factor that is suspected to influence the risk for a person developing a particular disease.
Gender	Term or variable to classify a person as male or female; recent gender categories may now include both male-to-female and female-to-male transgender persons.
HAART	Highly Active Antiretroviral Therapy. The name given to treatment regimens that aggressively suppress HIV replication and progression of HIV disease. The usual HAART regimen combines three or more anti-HIV drugs.
HARS	HIV/AIDS Reporting System. Surveillance database containing HIV and AIDS reports.
HIV	The virus that causes Acquired Immunodeficiency Syndrome (<i>AIDS</i>). HIV is in the retrovirus family, and two types have been identified: HIV-1 and HIV-2. HIV-1 is responsible for most HIV infections throughout the world, while HIV-2 is found primarily in West Africa.
HIV Case Registry	Also known as the Registry, it is an Access database containing information on both residents and non-residents receiving care in Orange County. The data in this report contains information on resident HIV disease cases and was extracted from the Registry on December 31, 2009.
HIV Disease	Total cases reported to Orange County HIV/AIDS Surveillance and Monitoring Program, regardless of current diagnosis (HIV or AIDS).
IDU	Injection drug user. Individual who injects non-prescription drugs into their body.
Immunosuppressed	Inability of the immune system to function normally. May be caused by drugs (for example, chemotherapy), or result from certain diseases (for example, HIV infection).

	HIV Disease Surveillance Statistics, 2014
Incidence	The occurrence of new cases of a particular disease in a given population in a specific time period (usually one year).
Incidence rate	The rate of occurrence of new cases of a particular disease in a given population. Often reported as number of cases per 100,000 people.
Indicator condition	Illnesses caused by various organisms that occur in people with weakened immune systems, including people with HIV/AIDS. Indicator conditions common in people with AIDS include <i>Pneumocystis jiroveci</i> pneumonia; cryptosporidiosis; histoplasmosis; toxoplasmosis; other parasitic, viral, and fungal infections; and some types of cancers.
MSM	Men who have sex with men. For HIV/AIDS reporting, it is a mode of transmission, and included men who have same sex contact (homosexual or bisexual).
Migration	Movement from one area or jurisdiction to another.
Mode of transmission	The manner in which a disease was passed from one individual to another. In describing HIV/AIDS cases, it identifies how a person may have been exposed to HIV.
NRR	No reported risk; cases of HIV or AIDS in which no risk behavior for infection was identified.
Non-name code	Code required by regulation that was used to report new cases of HIV infection in California between July 1, 2002 and April 16, 2006. Comprised of an alphanumeric code (based on last name), date of birth, gender, and last four digits of the social security number.
Overrepresentation	A group that is overrepresented or disproportionately impacted makes up a greater proportion of the epidemic than their proportion in the population. For example, if 40% of the population are Hispanics and 60% of HIV/AIDS cases are among Hispanics, Hispanic are overrepresented or disproportionately impacted in the HIV/AIDS epidemic.
Pandemic	An outbreak of an infectious disease, such as HIV, that affects people or animals over an extensive geographical area. Also known as a global epidemic.
Pediatric cases	HIV or AIDS cases diagnosed in persons age 12 or younger.
PLWA	Persons living with AIDS.
PLWH/A	Persons living with HIV or AIDS. Synonymous with PLWHD.
PLWH	Persons living with HIV.
PLWHD	Persons living with HIV Disease. Synonymous with PLWH/A.
Population density	The number of people per square mile.
Prevalence	The number of people in a population affected with a particular disease or condition at a given time, usually the end of a particular year. Prevalence can be thought of as a snapshot of all existing cases of a disease or condition at a specified time.

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HIV Disease Surveillance Statistics, 2014, County of Orange, Health Care Agency

- **Prevalence rate** The number of people in a population affected with a particular disease or condition at a given time. Prevalence can be thought of as a snapshot of all existing cases of a disease or condition at a specified time. It is often expressed per 100,000.
- **Proportion** Ratio of a part of the whole to the whole, for example, 33% of Orange County residents are Hispanic.
- RateThe frequency of an event in a specified population. Rates are often multiplied
by a factor to give the number of events per 1,000, 10,000, or 100,000
population. (See *incidence rate*)
- **Report delay** The period of time between the date a reportable disease is diagnosed by a health care provider and the date the diagnosis is reported to public health officials.
- **Surveillance** A process to monitor disease, involving close supervision during the incubation period of possible contacts of individuals exposed to an infectious disease.
- **Transgender** People whose gender identity does not conform to norms and expectations traditionally associated with a binary classification of gender based on external genitalia, or, more simply, their sex assigned at birth. It includes people who self-identify as gender variant; male to female or transgender women; female to male or transgender men; many other gender nonconforming people with identities beyond the gender binary; and people who self-identify simply as female or male. Gender identity, gender expression, and sexual orientation are separate, distinct concepts, none of which is necessarily linked to one's genital anatomy.
- **Underrepresentation** A group that is underrepresented makes up a smaller proportion of the epidemic than their proportion in the population. For example, if 16% of the population are Asian/Pacific Islander (API) and 4% of HIV/AIDS cases are among API, APIs are underrepresented in the HIV/AIDS epidemic.
- Unique identifier A code used as a substitute for a person's identifying information, such as name, date of birth, and address, that can be retraced to a unique person. (Compare *Anonymous HIV testing* and *Non-name code*)
- Year of diagnosis The year in which an individual has met the CDC case definition for HIV/AIDS.
- Year of report The year in which an HIV/AIDS case is reported to the County of Orange Health Care Agency.

Definition Sources:

- AIDS info Glossary. U.S. Department of Health Services (DHHS). <u>http://aidsinfo.nih.gov/Default.aspx</u>.
- The AIDS Education Global Information System (AEGIS). <u>http://www.aegis.com/</u>.
- Dorland's Illustrated Medical Dictionary, provided by Merck Source. <u>http://www.mercksource.com</u>.
- Centers for Disease Control, Reproductive Health Glossary. <u>http://www.cdc.gov/reproductivehealth/EpiGlossary/glossary.htm#E</u>.

Year of Diagnosis versus Year of Report:

There are two dates associated with an HIV disease case, the date of HIV diagnosis and the date the case was reported to Orange County HIV/AIDS Surveillance and Monitoring Program. Most HIV/AIDS data reports utilize the report date to determine what year the case was reported. When showing case demographics in individual years, this data report will focus on the date that the case was diagnosed with HIV (unless this date is absent, in which case the AIDS diagnosis date will be used). Presenting data by year of diagnosis gives a clearer picture of the current nature of the epidemic and the demographics of the most newly infected individuals. Due to reporting delays, diagnosis data for 2014 is incomplete as cases diagnosed in 2014 will continue to be reported throughout 2015. By using the year of report, the number of cases reported each year should be relatively stable making it appropriate to compare the most current year of reporting to previous years. However, in recent years additional surveillance efforts were made to identify cases of HIV disease never reported to the SOA. This resulted in an increased number of cases being reported that were not reflective of an increase in the epidemic, nor were they reflective of the demographics of persons newly diagnosed.

Calculation of Rates:

- Population based rates were calculated by using population figures from California Department of Finance data sets; the numerator represents the number of cases in a particular sub-population, period of time, or the whole population. The rate is expressed per 100,000 population.
- Percentages are calculated by dividing the number of cases in a particular group by the total number of cases reported or diagnosed for that time period or subset. For example, the percentage of cumulative cases reported that were age 20-29 at diagnosis would be the number of cases age 20-29 at diagnosis divided by the total number of cumulated cases reported.

Data Limitations:

- Reported vs. Diagnosed cases: Data presented by demographics in this report represents the number of HIV disease cases <u>diagnosed</u> in a particular year. Caution must be taken in interpreting these data, since cases will continue to be reported which were diagnosed in previous years, so diagnosis data is never "complete." However, it does give a more accurate picture of the current epidemic and who is testing positive today.
- Attention should be given to what the numbers represent (rates, number of cases, percentages, etc.). Please refer to the Glossary of Terms for definitions.
- Surveillance data are revised as duplicate cases are removed at the state level. Therefore, the total numbers presented for a particular period are subject to revision.
- The number of HIV disease cases among some subgroups may be small. Small numbers may appear misleadingly large when viewed as a rate. Therefore, large rates for some characteristics should be interpreted with caution. In addition, subgroups with fewer than five cases reported will be masked and a footnote will appear.

National HIV/AIDS Strategy Methodology:

Goal 1: Reduce the Number of New HIV Infections

- Objectives 1-1 and 1-2
 - HIV incidence estimates are based on algorithms developed by the Centers for Disease Control and Prevention (CDC).
 - Baseline (2010) calculation: 281 cases (incidence)/6,579 estimated prevalence (diagnosed (5,395) + undiagnosed (1,184))*100 = 4.3 new HIV transmissions per 100 people estimated to be living with HIV.
 - 2014 calculation: 261 cases (incidence)/6,698 estimated prevalence (diagnosed (5,760) + undiagnosed (938))*100 = 3.9 new HIV transmissions per 100 people estimated to be living with HIV.
- Goal 2: Increase Access to Care and Optimize Health Outcomes for People Living with HIV Disease
 - o Objectives 2-1; 2-2; and 2-3
 - Laboratory data were used as a proxy for care visits; a care visit was defined as a CD4 and/or viral load laboratory result reported to Orange County Health Care Agency (OCHCA).
 - Newly diagnosed persons linked to care were defined as persons diagnosed with HIV infection during a calendar year and received care within three months of their diagnosis (excluding persons who died within three months of their diagnosis).
 - In continuous care was defined as having at least two care visits, as represented by a CD4 and/or viral load laboratory result, during a calendar year, where the visits were at least three months apart.
 - For 2-3 the denominator included Orange County resident cases living with HIV disease at the end of the calendar year, diagnosed by the end of the previous year, and at least 13 years old. For 2-2 the denominator included only those who are clients in the Ryan White Program.
 - o Objectives 2-4
 - Defined as HIV Care Program Ryan White clients who received at least one service during a calendar year and reported "stable/permanent" housing (living with relatives/friends, participant-owned housing, rental housing, or rented room) as their living situation at the most recent date before the end of the calendar year. If no living situation was available prior to the end of the year, the living situation closest to that date was used.
 - Data are from Orange County's and California's HIV Care Program client management system, the AIDS Regional Information and Evaluation System (ARIES).
 - Unknown/missing data (2.8 percent in 2010, 0.1 percent in 2014) were excluded from denominator.
 - For additional information about the Ryan White Program, please see: <u>http://hab.hrsa.gov/abouthab/index.html</u>.

Goal 3: Reduce HIV-related Health Disparities

o Objectives 3-1; 3-2; and 3-3

- Denominator for 2014 included current Orange County residents diagnosed with HIV disease on or before December 31, 2013 and at least 13 years old on December 31, 2013 and were still alive on December 31, 2014.
- Persons whose most recent viral load test result was less than 200 copies/ml during January 1, 2014-December 31,2014 were considered virally suppressed and included in the numerator of those with an "undetectable viral load".

Suggested Citation:

County of Orange, Health Care Agency, HIV/AIDS Surveillance and Monitoring Program. Disease Control & Epidemiology. *HIV Disease Surveillance Statistics, 2014.*

2014 Stages of HIV Infection

- 1. Acute Infection:
 - Within 2-4 weeks after HIV infection, many, but not all, people develop flu-like symptoms. Symptoms can include fever, swollen glands, sore throat, rash, muscle and joint aches and pains, fatigue, and headache. This is called "acute retroviral syndrome" (ARS) or "primary HIV infection," and it's the body's natural response to the HIV infection. During this early period of infection, large amounts of virus are being produced in the body. The virus uses CD4 cells to replicate and destroys them in the process. Because of this, CD4 counts can fall rapidly. Eventually the immune response will begin to bring the level of virus in the body. At this point, CD4 counts begins to increase, but may not return to pre-infection levels. It may be particularly beneficial to begin ART during this stage.
- 2. Clinical Latency Stage:
 - "Latency" means a period where a virus is living or developing in a person without producing symptoms. During the clinical latency stage, people who are infected with HIV experience no HIV-related symptoms, or only mild ones. (This stage is sometimes called "asymptomatic HIV infection" or "chronic HIV infection.") During the clinical latency stage, the HIV virus continues to reproduce at very low levels, although it is still active.
- 3. AIDS:
 - This is the stage of HIV infection that occurs when the immune system is badly damaged and becomes vulnerable to infections and infection-related cancers called opportunistic infections. When the number of your CD4 cells falls below 200 cells per cubic millimeter of blood (200 cells/mm3), a person is considered to have progressed to AIDS. Progression to AIDS also occurs when a person develops one or more opportunistic illnesses, regardless of CD4 count.

Table 1: Opportunistic Illnesses Included in the 2014 AIDS Surveillance Case Definition

AIDS INDICATOR DISEASE	CODE
Bacterial infections, multiple or recurrent (age five years and younger)	BI
Candidiasis of bronchi, trachea, or lungs	С
Candidiasis, esophageal	CE
Cervical cancer, invasive	ICC
Coccidiodomycosis, disseminated or extrapulmonary	COM
Cryptococcosis, extrapulmonary	CC
Crytosporidiosis, chronic intestinal (>1 month duration)	CS
Cytomegalovirus disease (other than liver, spleen, or nodes)	CMV
Cytomegalovirus retinitis (with loss of vision)	CMVR
Encephalopathy, HIV-related	HIVE
Herpes simplex: chronic ulcer(s) (>1 month duration) or bronchitis, pneumonitis, or esophagitis	HSV
Histoplasmosis, disseminated or extrapulmonary	HIS
Isosporiasis, chronic intestinal (>1 month duration)	I
Kaposi's sarcoma	KS
Lymphoma, Burkitt's (or equivalent term)	BL
Lymphoma, immunoblastic (or equivalent term)	IL
Lymphoma, primary in brain	PBL
Mycobacterium avium complex or Mycobacterium kansasii, disseminated or extrapulmonary	MAI
Mycobacterium tuberculosis, of any site, pulmonary, disseminated or extrapulmonary	MTB/PTB
Mycobacterium, other species or unidentified species, disseminated or extrapulmonary	MO
Pneumocystis jiroveci pneumonia (formerly Pneumocystis carinii pneumonia)	PCP
Pneumonia, recurrent	RP
Progressive multifocal leukoencephalopathy	PML
Salmonella septicemia, recurrent	SS
Toxoplasmosis of brain	TOXO
Wasting syndrome due to HIV	WS

Source: Centers for Disease Control and Prevention, MMWR Recommendations and Reports/Vol. 63/No. 3, April 11, 2014.

APPENDIX V: DATA SOURCES

Population Data:

- Population:
 - State of California, Department of Finance, Revised County Population Estimates and Components of Change by County, July 1, 1990-2000. Sacramento, California, February 2005.
 - State of California, Department of Finance, Population Estimates and Components of Change by County, July 1, 1999-2010. Sacramento, California, August 2011.
 - State of California, Department of Finance, California County Population Estimates and Components of Change by Year, July 1, 2010-2014. Sacramento, California, December 2014.
 - State of California, Department of Finance, *Race/Ethnic Population with Age and Sex Detail, 1970–1989.* Sacramento, California, December 1998.
 - State of California, Department of Finance, *Race/Ethnic Population with Age and Sex Detail, 1990–1999.* Sacramento, CA, Revised May 2009.
 - State of California, Department of Finance, Race/Hispanics Population with Age and Gender Detail, 2000–2010. Sacramento, California, September 2012.
 - State of California, Department of Finance, Report P-3: State and County Population Projections by Race/Ethnicity, Detailed Age, and Gender, 2010-2060. Sacramento, California, December 2014.
 - State of California, Department of Finance, E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2014 and 2015. Sacramento, California, May 2015.
 - o U.S. Census Bureau, American Community Survey, 2014.
 - o Orange County Facts and Figures, 2014.

Chapters 1-3:

- Orange County HIV Disease Data:
 - HIV/AIDS Case Registry, Data as of January 31, 2015.
- Orange County HIV Disease Mortality Data:
 - o State of California, Department of Health Services, Center for Health Statistics.

Chapter 4:

- Counseling and Testing Data 2010
 - Local Evaluation Online (LEO), Data as of August 10, 2012.
- Counseling and Testing Data 2011-2014
 - o Local Evaluation Online (LEO), Data as of March 19, 2015.

Chapter 5:

- Expanded Testing 2012-2014
 - The Orange County Public Health Laboratory, AltaMed, and University of California, Irvine. Data as of February 23, 2015

Chapter 6:

- National HIV/AIDS Strategy
 - Except for Objective 2-2 and 2-4, which are limited to Ryan White Program data, all Orange County-specific analyses presented in this document were based on Orange County HIV case and incidence surveillance data, as reported through January 31, 2014 and January 31, 2015. California-specific analysis were based on 2010 California HIV case and incidence surveillance data, including data from all 61 local health jurisdictions (LHJs) in California, as reported to the California Department of Public Health (CDPH) through December 27, 2012. All analysis (except objectives 1-1 and 1-2) were restricted to persons aged 13 years and older.
 - $\circ \quad \text{NHAS: } http://aids.gov/federal-resources/national-hiv-aids-strategy/nhas.pdf.}$
 - o CDPH's Office of AIDS Integrated HIV Surveillance, Prevention, and Care Plan: http://www.cdph.ca.gov/programs/aids/Documents/IntegratedPlan.pdf.

HIV Disease Surveillance Statistics, 2014, County of Orange, Health Care Agency

- o 2010 National Data for Comparison for Goals 2 and 3
 - Objectives 2-1; 3-1; 3-2; and 3-3
 - Source: Centers for Disease Control and Prevention. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data-United States and six U.S. dependent areas—2010. *HIV Surveillance Supplemental Report* 2013;18 (No.2, part B). http://www.cdc.gov/hiv/library/reports/surveillance/2010/surveillance_Report_v_ol_18_no_2.html. Published January 2013. [Accessed November 18, 2013].
 - Objective 2-2 and 2-4
 - Source: National Office of AIDS Policy. NHAS for the United States. <u>http://www.aids.gov/federal-resources/policies/national-hiv-aids-</u> <u>strategy/nhas.pdf</u>. Published July 2010.

APPENDIX VI: OTHER PUBLICATIONS

□ HIV/AIDS Plans and Reports:

- o <u>http://ochealthinfo.com/phs/about/dcepi/hiv/info/reports</u>
- □ HIV/AIDS Fact Sheet:
 - o <u>http://ochealthinfo.com/phs/about/dcepi/hiv/info/stats</u>