Introduction

Since reporting began in 1983, 4,001 people have been reported as HIV positive in Contra Costa County, California. During that time, 1,924 county residents have died with HIV/AIDS. This surveillance brief presents new diagnoses between 2010 and 2014 and the prevalence of HIV in 2014 in Contra Costa. The intended audience includes policy makers, program planners, HIV service providers, community based organizations and the public.

The US Centers for Disease Control and Prevention (CDC) estimates that 1.2 million people aged 13 and older are living with HIV in the United States, including 156,300 (12.8%) people whose infections are not diagnosed. While the number of new HIV infections is down from its peak in the 1980s, roughly 40,000 new infections still occur every year in the United States. In California, an estimated 119,878 people are living with HIV and approximately 4,500 new infections occur every year. The lifetime risk of an HIV diagnosis in California is 1 in 102.2

As of December 31st, 2014, 2,075 people residing in Contra Costa had a confirmed HIV or AIDS diagnosis. Of these People Living with HIV/AIDS (PLWHA), 104 were diagnosed in 2014. Eighty-two percent of PLWHA in Contra Costa were men, and of that group 83% were identified as Men who have Sex with Men (MSM). Forty-nine percent of PLWHA were 50 or older, meaning that many experienced physical and mental health comorbidities associated with aging. There is a disproportionate burden of the epidemic in West County and among African Americans. A large majority of PLWHA (70%) are linked to care within 30 days of diagnosis and maintain viral suppression (70%). PLWHA are at significantly higher risk for diagnoses of sexually transmitted infections (STIs) than those not diagnosed as HIV positive.

81% have been virally suppressed at some point. 70% refers to the most recent viral load test after 2013.
Regional Distribution

West County residents are disproportionately affected by diagnosis of new HIV infections. Between 2009 and 2014, an average of 13.54 West County residents per 100,000 received positive HIV diagnoses annually. The rate of new infections for Contra Costa as a whole remained stable during that period, ranging between 8 and 10 new infections per 100,000 residents.

There are relatively more PLWHA in West County compared to Central or East County. As of December 31, 2014, the rate among West County males is 465 per 100,000 residents, which was 1.45 times greater than the rate of HIV among all males living in Contra Costa (321 per 100,000 residents).

In West County, 33% of residents had an income less than 200% of the federal poverty level and the unemployment rate was estimated to be 8.2%.

Nationally, among heterosexuals living in inner cities, living in poverty is the single most important demographic factor associated with HIV infection.

In the 2000’s, the number of people living in poverty in East County grew by more than 70%. This shift is likely to have an impact on the rates of disease, including HIV, in that part of the county in years to come.
Ethnic Distribution

African Americans bear the burden of the epidemic nationwide and in Contra Costa. New infection rates among African Americans are almost four times higher than the average rate within Contra Costa. For every 100,000 African American residents, there were 32 new diagnoses per year on average from 2010 to 2014. Contra Costa’s average rate of diagnosis was 8.6 new infections per 100,000 residents overall during that period.

As of December 31, 2014, there were 192 PLWHA per 100,000 residents in Contra Costa. The rate for African American residents was significantly higher for both men and women. African American men were three times as likely to be HIV infected as males countywide and African American women were six times as likely to be infected with HIV as females countywide, with rates of 981 and 404 per 100,000 residents respectively.
African Americans face a number of challenges that contribute to the higher rates of HIV diagnosis. The higher rate of PLWHA in African American communities and the fact that many people have sex partners of the same race or ethnicity means that African Americans face a greater likelihood of partnering with someone who is positive. African American communities continue to experience higher rates of other STIs compared with other racial or ethnic communities, and having an STI increases the chance of getting or transmitting HIV. Lack of awareness of HIV status impacts HIV rates, as does late diagnosis, which results in missed opportunities to get early medical care and prevent transmission. Many African Americans at risk for HIV fear discrimination and rejection and choose not to seek testing. Once engaged in care, racism and discrimination in healthcare settings have been shown to impact engagement and retention in care.
Mode of Exposure 2010-2014
Among Persons Newly Identified with HIV in Contra Costa County

Men who Have Sex with Men (MSM) - 68.6%
Injection Drug Users - 7.9%
MSM Who Inject Drugs - 4.4%
Heterosexual - 15.7%
Adult Risk Not Reported or Identified - 3.3%

Mode of Exposure
Men who have sex with men (MSM) account for the majority of new diagnoses. Between 2010 and 2014, 69% of new cases in Contra Costa were among MSM. Other risk factors such as injection drug use and MSM who inject drugs accounted for 3.3% and 4.4% of the exposure risk for newly diagnosed PLWHA, respectively. In 2014, 20% of newly diagnosed individuals did not report a risk factor and of this group 65% are women.

Individual risk behavior alone does not account for the disproportionate burden of HIV among MSM. Other factors include higher prevalence of HIV among MSM, which leads to a greater likelihood of HIV exposure with each sexual encounter.
Age Distribution

From 2010 to 2014, the age groups most impacted by new HIV infections were 20- to 29-year-olds and 30- to 39-year-olds. Individuals between 20 and 39 years of age had a risk of acquiring HIV two times greater than the overall county rate. This reflects the nationwide epidemic and has implications for how and where prevention messages should be delivered. One factor impacting the epidemic among younger adults is the high rate of STIs among this group. While 25- to 29-year-olds accounted for 10.3% of Contra Costa’s syphilis infections in 2005 this group accounted for 22.7% of new syphilis infections in 2014. The presence of an STI greatly increases a person’s likelihood of acquiring or transmitting HIV. Additionally, young gay and bisexual men are more likely to choose older sex partners and older partners are more likely to be infected with HIV. Older partners with HIV are also more likely not to know their status. Between 2009 and 2014, 50% of 40-to 59-year-olds diagnosed with HIV were also diagnosed with AIDS within 12 months of their HIV diagnoses.

Life expectancy for PLWHA has greatly increased over the past 15 years. A 20-year-old PLWHA starting antiretroviral therapy (ART) and under regular medical care can now expected to live into their early 70s. Reflecting these gains, the rate of PLWHA age 60 or older in Contra Costa increased from 2011 to 2014. The rate of 50–to 59-year-olds also increased during this period, although not significantly.
HIV Testing

There are numerous locations within Contra Costa to get tested for HIV. From 2012 to 2014, 26.9% of the positive HIV tests were reported by a Kaiser Permanente site, followed by community clinics, where 14.4% of the positive tests were conducted. With expanded routine testing at community clinics such as LifeLong Brookside, more community members with HIV will be identified and linked to care. About 13% of the HIV positive population is not aware of their status. In Contra Costa, that translates to 310 residents who do not know they are HIV positive. HIV testing and linkage to care are critical, as about 90% of HIV transmissions in the United States are attributed to undiagnosed HIV and poor retention in care.16

Routine opt-out HIV testing will help to identify the undiagnosed community members in Contra Costa who are infected with HIV but not aware of their status, and help to reduce the rate of new infections. Reducing the number of “late testers”—individuals who receive an AIDS diagnoses within 12 months of their HIV diagnoses—is a continued goal of the HIV/AIDS Program. In Contra Costa, people older
than 40 are more likely to be late testers. Between 2012 and 2014, there was a decrease in late testers from 43% to 25% of those newly diagnosed. Because late testers miss the benefits of early treatment and also may have unwittingly transmitted the virus, efforts to routinize opt-out testing will continue to be prioritized.

Targeted testing within populations considered to be at high risk of exposure to HIV is also critical. It is estimated that among high-risk groups, 100 new HIV-positive results would be identified for every 5,705 tests, while among low-risk groups it would take 58,170 tests to identify 100 new positive results.
**Linkage to Care**

One goal of the National HIV/AIDS Strategy is to link newly diagnosed clients to care within 30 days of diagnosis, meaning the client has a CD4 or viral load test within 30 days of diagnosis. From 2010 to 2014, 70% of newly diagnosed, HIV-positive clients were linked to care within 30 days in Contra Costa. Fast linkage to care is important, as studies show that initiation of ARTs with a CD4 count from 350 to 500, rather than a lower count, is associated with a reduced risk of an AIDS-defining illness or death. Connecting newly diagnosed individuals to care within 30 days is closely tied to having a healthy HIV population and also to prevention, as lowering an individual's viral load with ARTs decreases the risk of transmitting the virus.
**Retention in Care**

In addition to linking newly diagnosed individuals to care quickly, Contra Costa aims to retain PLWHA in care throughout their lifetimes. The goal is for patients to have two medical appointments per year with an HIV specialist, at which their CD4 and viral load lab values are tested. Having had one of these tests done in the previous 12 months is used as a marker for clients retained in care. Between 2011 and 2014, in-care PLWHA increased in Contra Costa from 59% to 78%. This increase is due in part to improved data collection. Retention in care for patients with HIV is critical, because patients actively engaged and retained in care are more likely to take antiretroviral medication, achieve an undetectable viral load and ultimately live longer. A recent national study concluded that patients not retained in care were 2.36 times more likely to die than those who were retained in care, as defined by attending four clinic visits in the previous 24 months. Regular clinic visits also provide opportunities to receive counseling to address psychosocial issues faced by many PLWHA, as well as preventive health services such as vaccinations and STI screening.
Contra Costa County PLWHA - Viral Suppression Status

The Virally Suppressed category only includes patients whose last viral load test occurred during the year of study. Patients with tests prior to Jan 1 of the year of study are grouped in No Viral Load Test.

Viral Suppression

From 2011 to 2014, viral suppression among Contra Costa’s PLWHA increased from 50% to 70%. Nationally, only 30% of PLWHA are virally suppressed. Having a suppressed viral load means that the HIV virus exists in such low amounts in the blood that it is “undetectable” and therefore less transmittable. A recent study found that among heterosexual couples, viral suppression reduced the risk of sexually transmitting the virus to an uninfected partner by 96%. \(^{16}\)

Significantly more of Contra Costa’s PLWHA were virally suppressed in 2014 among all ethnicities compared to 2011. For African Americans, the prevalence of viral suppression increased from 41% to 65% and the prevalence of Hispanic PLWHA who were virally suppressed went from 51% to 71%. Viral suppression among whites increased from 55% to 72%. A possible reason why ethnic minorities are closing the gap is the increased access to health insurance due to the Affordable Care Act. Nationwide, coverage gains from 2013 to 2014 were larger among poor and low-income individuals and people of color, groups that had high uninsured rates prior to 2014. Among racial and ethnic groups, Hispanics and African Americans had the largest declines in uninsured rates, 5.4% and 5.1% respectively, and all people of color generally had larger coverage gains than whites. \(^{17}\)
The Virally Suppressed category only includes patients whose last viral load test occurred in 2011 or 2014.

HIV/STI Co-Infections

The rates of all STIs are higher among PLWHA when compared to Contra Costa’s general population. In 2014, the rate of gonorrhea, for example, was 27 times higher. The rate of syphilis was 95 times higher.

In the United States, people who get syphilis, gonorrhea, and herpes often also have HIV or are more likely to get HIV in the future. Behaviors that put someone at risk for one infection (not using condoms, multiple partners, anonymous partners) often put them at risk for other infections.

Also, when someone acquires an STI, it is often transmitted by someone at elevated risk for other STIs and HIV. Finally, a sore or inflammation from an STI may allow HIV infection to enter the body more easily than intact skin. Reasons why PLWHA are more likely to contract another STI are still being studied. Possible reasons include higher rates of unprotected anal intercourse with casual partners and increased frequency of HIV serosorting and oral sex. HIV-infected men are also less likely to be in regular relationships than uninfected men.14,19
2014 STI Age-Adjusted* Rates per 100,000, Contra Costa Residents

- **Total Syphilis**: 1,119
- **Early Syphilis**: 452
- **Secondary Syphilis**: 498
- **Primary Syphilis**: 169
- **Gonorrhea**: 2,698
- **Chlamydia**: 423

*age-adjusted by 2010 Census Population

**HIV Population Rate**  **General Population Rate**

---

**Closing the Gaps**

For more than 30 years, the Contra Costa Health Services HIV/AIDS Program has worked to prevent and screen for HIV and support the county’s HIV-positive community members. The program collaborates closely with community-based agencies as well as HIV specialty providers to ensure that the highest-risk populations are reached with prevention and treatment services. Among other services, the HIV/AIDS Program offers medical case management for all PLWHA living in Contra Costa as well as services aimed at reducing new infections. Prevention services include targeted testing for high-risk individuals, Pre-Exposure Prophylaxis (PrEP) navigation and Partner Services, a program which assists HIV-positive people in notifying their sexual or needle sharing partners about their possible exposure to HIV. For more information about the HIV/AIDS Program and the services available in Contra Costa, visit: [cchealth.org/aids/](http://cchealth.org/aids/)
Endnotes


Source: U.S. Census Bureau. 2010-2014 American Community Survey 5-Year Estimates


