

California HIV/AIDS Epidemiological Profile, 2009 Update

August 2012



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This 2009 update utilizes recent HIV/AIDS surveillance data to describe the scope of HIV/AIDS in California by selected demographics and is meant as a supplemental update to the five-year **Integrated Epidemiologic Profile of HIV/AIDS for California, 2001-2005** (<http://www.cdph.ca.gov/programs/aids/Documents/EPIProfile.pdf>).

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I. Key Highlights

Overall

- There were a total of 206,793 HIV-infected persons reported to California's surveillance system from 1983 to 2009. Of these cumulative cases, 110,966 (53.7 percent) were presumed to be living at the end of 2009.
- Among the 110,966 individuals living with HIV infection at the end of 2009, 38,659 cases (35 percent) were classified as HIV cases and 72,307 cases (65 percent) were classified as AIDS cases.
- In 2009, there were 5,380 persons newly diagnosed with HIV infection in California. This figure represents all cases diagnosed in 2009 and reported to California's HIV/AIDS surveillance system by February 22, 2012.
- California's epidemic differs from the national epidemic in terms of gender and race/ethnicity. Nationally, Blacks make up the largest number of new HIV/AIDS cases while in California the largest number is among Latinos. National figures also show that women constitute almost one-third of new cases annually, whereas in California that figure is less than 13 percent.
- While the proportion of California's newly diagnosed HIV cases that are Latino is double that of the Centers for Disease Control and Prevention's (CDC) national statistics, the rate of new diagnoses among Latinos appears to be lower in California than nationwide (14.5 per 100,000 population versus 22.8 per 100,000 population, respectively).
- The proportion of newly diagnosed cases in California that are Black is less than one-half that of the national figure (20.3 percent versus 51.5 percent, respectively). The rate of infection among Blacks in California is also lower than the rate nationwide (47.9 per 100,000 versus 66.6 per 100,000, respectively).
- The number of persons living with HIV infection continues to steadily increase every year. The increase is primarily due to individuals living longer with HIV infection as a result of improved treatment and medical care.
- The proportion of individuals newly diagnosed with HIV who were late testers (i.e., diagnosed with AIDS at the same time or within a year of first testing positive for HIV) has steadily decreased from 50 percent in 2000 to just under 35 percent in 2009.

Who

Gender

- Males represented the overwhelming majority (87 percent) of persons living with HIV infection in California as well as those newly diagnosed in 2009 (86 percent). The rates of both new diagnoses and persons living with HIV infection were seven times greater among males than females.

Race/Ethnicity

- HIV infection continues to disproportionately impact Black Californians. The rate of newly diagnosed HIV infection cases in 2009 was about five times greater among Blacks than Whites. The rate of HIV infection diagnoses among Black males was three times that of White males. This disparity was markedly greater among Black females whose rate of HIV infection diagnosis was 11 times that of White females. While Black females represented only 6 percent of California's female population, they accounted for more than one-third (35 percent) of new female HIV diagnoses in 2009.
- Latinos constitute the largest racial/ethnic group newly diagnosed with HIV infection in 2009 (2,050 versus 1,880 Whites and 1,091 Blacks). Latinos made up 38.1 percent of all newly diagnosed HIV infection cases in 2009, a greater proportion than the 30.8 percent of living cases. Newly diagnosed Latinos were significantly more likely to be simultaneously diagnosed with AIDS than other races. Although the newly diagnosed HIV infection rate is higher than Whites (14.5 per 100,000 versus 11.54 per 100,000), it is still significantly lower than Blacks (47.9 per 100,000).
- Whites are the largest racial/ethnic group currently living with HIV/AIDS, constituting 46 percent of all living cases. Latinos constitute 31 percent, Blacks 18 percent and other race/ethnicities constitute 5 percent.

Age

- Across all cumulative cases, individuals diagnosed in their thirties (30-39 year olds) constituted the largest proportion of cases (40 percent).
- Almost three-quarters (73 percent) of all individuals living with HIV infection at the end of 2009 were over 40 years of age and 34 percent were over 50 years old.
- The age at new diagnoses has shifted significantly since 2000. The proportion of newly diagnosed cases in the 20-29-year-old age group has increased significantly, while the proportion of 30-39 year olds has likewise significantly decreased. The difference may be attributed to an increase in testing among younger individuals or due to a true increase in the number of new infections in the younger age groups.
- A greater proportion of individuals diagnosed in older age groups (40+ years old) are concurrently diagnosed with AIDS (44 percent versus 28 percent among those under 40 years old). This would indicate that late testing is a greater factor than recent infection among this older age group.
- Blacks make up 43 percent of all newly diagnosed 13-19 year olds, a significantly greater percentage than their proportion of cases 20 years and older (43 percent versus 20 percent, $p < 0.01$).

How

Exposure Category

- The overwhelming majority of both living cases (74 percent) and new diagnoses (69 percent) continue to be among men who have sex with men (MSM).
- About 8 percent of living and 6 percent of newly diagnosed cases report injection drug use as their primary risk. Injection drugs users (IDUs) who also report MSM activity account for about 8 percent of living and 5 percent of newly diagnosed cases.
- MSM (including MSM/IDUs) were significantly less likely ($p < 0.01$) than all other transmission groups to be diagnosed with AIDS at the same time or within one year of first testing positive for HIV (30.9 percent versus 42.8 percent, respectively).

Where

Epidemiological Profile Regions

- HIV infection disproportionately impacts the state's major metropolitan areas (San Francisco, Greater Bay Area, Los Angeles, and other southern areas). The highest rates of new diagnoses and persons living with HIV infection, as well as the largest numbers of cases, were found in these areas.
- Los Angeles County continues to contribute the largest number of new cases, with 2,133 of the 5,380 total cases diagnosed in 2009 (39.6 percent).
- The number of new cases in the San Francisco Metropolitan Statistical Area (MSA) is almost one-fourth that in Los Angeles (553 cases). Yet, due to its smaller population, the rate of newly diagnosed HIV infection in San Francisco is significantly higher than that in Los Angeles (30 per 100,000 versus 20 per 100,000).
- The proportion of California cases diagnosed in San Francisco has decreased significantly since 2000, from 16 percent in 2000 to 10 percent in 2009.
- The proportions of California cases newly diagnosed in 2009 from the greater Bay Area, Central/San Joaquin Valley, and other Southern (non-Los Angeles) areas have significantly increased since 2000.

II. Introduction

a. Background

This **2009 HIV Epidemiological Update** utilizes HIV/AIDS surveillance data to describe the scope of HIV/AIDS in California by selected demographics and is meant as a supplemental update to the five-year **Integrated Epidemiologic Profile of HIV/AIDS for California, 2001-2005**

(<http://www.cdph.ca.gov/programs/aids/Documents/EPIProfile.pdf>). A primary focus of this update is California's 2009 confidential name-based HIV infection data, reflecting the first time these name reported data have been analyzed in an epidemiological profile. The subsequent five-year **Integrated Epidemiologic Profile of HIV/AIDS for California, 2006-2010** is expected to be published in 2012.

b. Data Source, Strengths, and Limitations

*Note: All data presented are from the California's HIV/AIDS surveillance system which contains surveillance information on all reported HIV/AIDS cases in the state, also referred to as the enhanced HIV/AIDS Reporting System (eHARS). HIV/AIDS surveillance data description, strengths, and limitations are described in the **Integrated Epidemiologic Profile of HIV/AIDS for California, 2001-2005** (pages 8-9) and the **2007 Update** (page 77).*

Code-based to Name-based Reporting

In 2006, the California HIV/AIDS surveillance system underwent a significant change from a code-based to a name-based HIV reporting protocol as a result of Senate Bill 699 (Soto, Chapter 20, Statutes of 2005). A thorough explanation of this can be found at: <http://www.cdph.ca.gov/programs/aids/Documents/STATSFig1and2.pdf>. Cases reported before name-based HIV reporting legislation was enacted were re-ascertained following conversion to name reporting (for more details of this process, access the California Department of Public Health, Center for Infectious Diseases, Office of AIDS (OA) HIV Reporting webpage at: <http://www.cdph.ca.gov/programs/aids/Pages/OAHIVReporting.aspx>). Because of technical issues around populating previously-reported HIV cases (described in the 2007 update), CDC estimates that it takes approximately four years from the date of name-based reporting implementation for the whole data system to reach maturity. Thus, it is assumed maturity was attained by the end of 2011 allowing the upcoming *2006-2010 Integrated HIV/AIDS Epidemiological Profile* (to be published in 2012) to include HIV data from prior years.

Under-reporting in HIV/AIDS Surveillance

California's eHARS is limited to persons who have been confidentially reported (i.e., by name). This means that infected persons who have not been tested, have tested only anonymously, or have tested by name but have not yet been reported, are not included in eHARS and thus, not included in this report. Therefore, numbers

presented in this update should be considered a minimum count of the true HIV-infected population and should be interpreted accordingly. Some reasons for under-reporting are reviewed below.

Case Reporting Delay

OA depends on local health jurisdictions (LHJs) to report unduplicated HIV/AIDS cases to the state. LHJs, in turn, depend on local health care providers and laboratories to report their HIV-positive test results. Naturally, a delay is expected between when the client was tested and when the positive test result reaches eHARS. CDC HIV Surveillance Guidelines estimate that anywhere between 85 percent and 95 percent of cases for a given year should be represented in eHARS by 12 months after the diagnosis year. For 2009, a California-specific reporting delay analysis indicated that >95 percent of the cases diagnosed in 2009 were reported and entered into eHARS by 12 months after the diagnosis date. The dataset used for the 2009 update was frozen February 22, 2012, allowing for a minimum of 25 months reporting time for diagnoses up to December 31, 2009.

HIV-infected, but Unaware Populations

CDC estimated the proportion of persons living with HIV/AIDS but unaware of their infection to be about 20 percent (<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6021a2.htm>). California-specific estimates and projections based on this estimate have been calculated and are also available (<http://www.cdph.ca.gov/programs/aids/Documents/SURVCAHIVPrevRoughEstTable.pdf>).

Incidence versus Newly Diagnosed

Because persons test at differing times after becoming infected, and many persons are not tested until HIV infection has already progressed to AIDS (concurrent diagnoses), the data presented in this report do not necessarily represent the characteristics of persons who have been recently *infected* with HIV, nor do they provide a true measure of HIV incidence.

Date of Diagnosis

The date of new HIV diagnosis does not indicate when persons were first infected because HIV diagnosis may take place months or years after infection. Given this limitation, measuring prevention achievements is best done by monitoring the number and characteristics of persons who become newly infected over time.

Incidence Measures

California is working with CDC to incorporate HIV Incidence Surveillance (HIS) into its surveillance system. The HIS Program is designed to produce population-based

incidence estimates using the Serologic Testing Algorithm for Recent HIV Seroconversion method (<http://www.cdph.ca.gov/programs/aids/Documents/HISSTARHSLabFlyer.pdf>).

Los Angeles and San Francisco Counties are currently providing their own county-specific HIS estimates. Incidence estimates for combined California counties outside of San Francisco and Los Angeles are being developed and will be published in the 2006-2010 epidemiological profile.

Trend Analysis

While methods for measuring new infections are being developed, the best current measure in understanding incidence is to look at trends among those newly diagnosed with HIV or AIDS. To evaluate trends over time, the number of persons newly diagnosed with HIV infection are examined and compared each year (regardless of status at diagnosis, see *Additional Technical Notes on Case Definition*). However, because our dataset was not yet considered mature at the time of this document preparation and because of the limitations described in the *Section III. Overall: Summary of HIV/AIDS surveillance data*, we are not able to accurately measure HIV infection trends. Thus, newly diagnosed HIV infection data in this update are limited to the year 2009. Some proportional comparisons between cumulative HIV infection cases, cases diagnosed in 2000, in 2005 and newly diagnosed cases (2009) are used to highlight possible new trends.

Death Ascertainment

Death events of cases in the California HIV surveillance system are ascertained two ways. Some deaths are reported to CDPH by LHJs while others are detected through record linkage with various sources of vital statistics. A full match of our records to state and national death records is currently underway for the 2006-2009 time period; therefore, deaths should be considered provisional. This should be kept in mind, particularly when interpreting prevalent cases, as cases without a death reported or detected through vital records match were assumed to be living. Death-specific calculation, such as population-specific death rates and survival analyses, are not included in this update.

c. Additional Technical Notes

Dataset Used

The dataset for this 2009 update includes all cases diagnosed with HIV infection by December 31, 2009 that had been reported into California's eHARS by February 22, 2012.

Case Definition

In 2008, the case definitions for HIV infection and AIDS were revised into a single case definition for HIV infection that includes AIDS and incorporates the HIV

infection classification system

(<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5710a1.htm>). For purposes of this report, the descriptor *HIV Infection* is used to represent initial diagnosis of HIV infection, regardless of clinical status (i.e., HIV versus AIDS) upon diagnosis. For clarification, AIDS incidence graphs include all newly diagnosed AIDS cases in any given year regardless of whether they have been previously reported as HIV. For prevalence data, cases are determined by their current/latest diagnosis (once classified as AIDS, the case remains defined as such regardless of subsequent CD4 counts). For new diagnosis data, cases are determined by their status at diagnosis (see below for discussion on prevalence and incidence).

Cumulative, Prevalent, and Newly Diagnosed Cases

For the purposes of this update, *cumulative* cases include all HIV or AIDS cases reported to California's eHARS. This can include cases diagnosed in California but moved outside of California, cases diagnosed outside of California but moved into California, and deceased cases. *Prevalent* cases are all cases presumed to be currently living in California. For our purposes, cases with missing vital status information were presumed to be still living and those living cases with missing current address information and were diagnosed in California are presumed to be still in California. *Newly diagnosed* cases (sometimes called 'incident diagnoses') represent cases diagnosed in California in any given year. These definitions may account for differences in numbers, percentages, and rates when comparing with other data sources. The majority of this document focuses on prevalent and newly diagnosed cases.

Rates

Rates are given for both prevalent cases and new diagnoses. All rates in this report are per 100,000 population (crude rates) and are calculated using population estimates published by the California Department of Finance (<http://www.dof.ca.gov/research/demographic>). Prevalence rate is presented as all those living with HIV or AIDS per 100,000 population (as estimated for 2009). The new diagnosis rate is all those newly diagnosed with HIV or AIDS in a given year (i.e., 2009). Because census population surveys used for the 2009 population estimate do not collect information on the number of transgenders in the general population, rates stratified by gender use *gender* as the numerator (male, female, transgender) and *sex* (male and female only) as the denominator. The number of transgender persons is relatively small (1.2 percent of living cases and 1.4 percent of newly diagnosed cases) so as to have minimal effect on the resulting rates. Aside from rates presented by age group, rates presented in this update are not age-adjusted. The 2006-2010 Integrated Epidemiological Profile will provide age-adjusted rates based on the 2010 U.S. Census recommendation for standard population weights.

Statistics

Independent samples T-tests were used to describe significant differences at $\alpha=0.05$. P values are provided where tests performed.

Status at Diagnosis/“Late Testers”

Because newly diagnosed HIV infections do not necessarily imply a recent infection (see discussions above), concurrent diagnosis with HIV and AIDS has been considered a marker for testing later in the course of HIV infection. For the purpose of this report, “late testers” are defined as people who are newly diagnosed with HIV infection (i.e., not previously known to have HIV) and who receive an AIDS diagnosis either at the same time or within a year of their initial HIV diagnosis. Late testing may serve as a proxy for the level of both care-seeking and access to health care/HIV testing.

Age Groups

There are two age variables used in this report, age at diagnosis and current age (as of December 31, 2009). Current age was calculated by subtracting date of birth from December 31, 2009. Age group categories are as follows: <13, 13-19, 20-29, 30-39, 40-49, 50-59, and 60+ years. Current age is used when showing prevalent cases to highlight the current impact/burden of the disease. The reported age at diagnosis is used when describing newly diagnosed cases.

Race/Ethnicity

Data are collected on race and Hispanic ethnicity separately and were combined to create the following mutually exclusive categories: White, non-Hispanic; Black, non-Hispanic; Latino (Hispanic); American Indian/Alaska Native, non-Hispanic; Asian/Pacific Islander, non-Hispanic; multi-race, non-Hispanic, and unknown/other. For the current update, Asian and Pacific Islander categories were combined. In compliance with recent recommendations, these categories will be represented separately in future Epidemiological Profiles.

Risk Behavior Categories

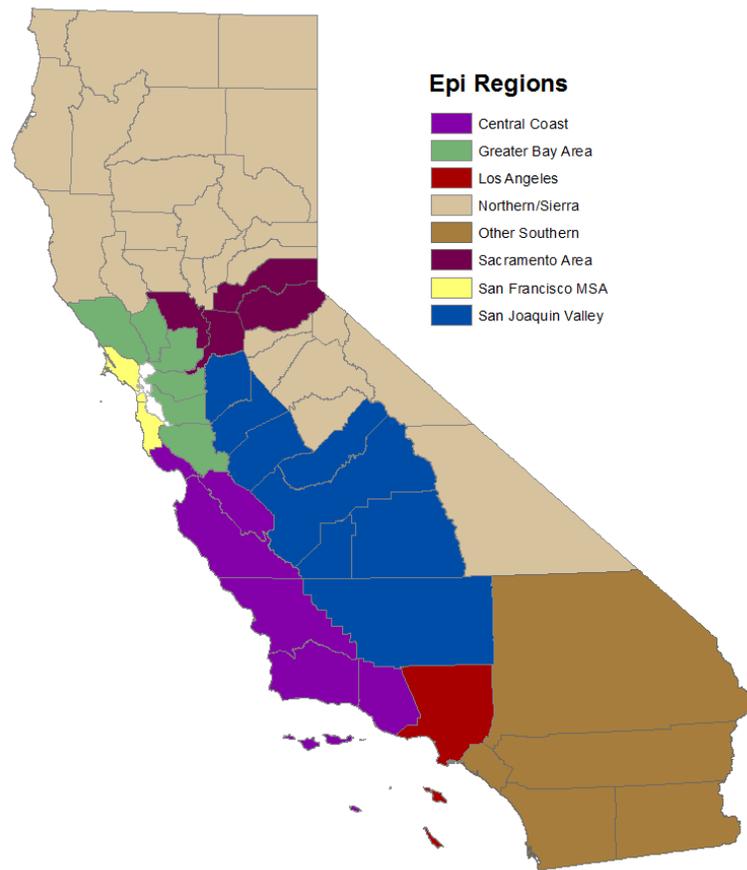
While current surveillance reporting includes collecting information on many behaviors associated with HIV transmission, the specific HIV transmission route in individuals who have engaged in more than one transmission behavior cannot be definitively determined. Thus, for the purposes of analysis and interpretation, cases are assigned to a single risk category based on a hierarchy designated by CDC. This hierarchy takes into account the efficiency of HIV transmission associated with each behavior as well as the probability of exposure to an infected person within the population. The exclusive categories are as follows: men who have sex with men (MSM); IDUs; MSM/IDUs; hemophilia/coagulation disorders; high-risk heterosexual

contact (sex with IDUs, MSM, or HIV-positive person); receipt of HIV-infected blood or blood components; and no identified/reported risk (NIR/NRR).

Geographic Areas

In order to describe geographic distribution, this update uses the Geographic Regions described in the 2001-2005 HIV/AIDS Epidemiological Profile and defined by the University of California, Los Angeles (UCLA), Center for Health Policy Research [**Source:** Brown ER, et.al. The State of Health Insurance in California: Findings from the 2001 California Health Interview Survey. UCLA Center for Health Policy Research. June 2002 (<http://www.healthpolicy.ucla.edu>)]. One exception to the defined regions is that San Francisco MSA has been separated from the Greater Bay Area to provide an eighth region (See Map below). *Note:* Individuals diagnosed with HIV in correctional settings have been included in the counts and rates of the region where their facility of diagnosis is located and currently incarcerated HIV-infected inmates are included in the counts and rates of the region within which the correctional facility is located. This should be considered when interpreting geographic representation.

Map of California Epidemiological Regions

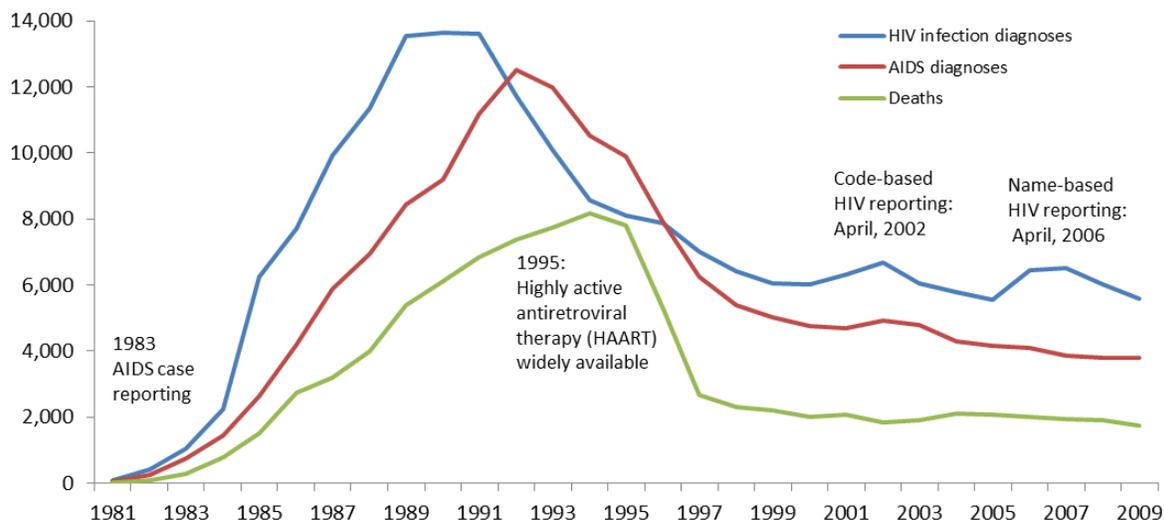


- **Central Coast Counties:** Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz, Ventura.
- **Greater Bay Area Counties:** Alameda, Contra Costa, Napa, Santa Clara, Solano, Sonoma
- **Los Angeles:** Los Angeles County only.
- **Northern/Sierra Counties:** Alpine, Amador, Butte, Calaveras, Colusa, Del Norte, Glenn, Humboldt, Inyo, Lake, Lassen, Mariposa, Mendocino, Modoc, Mono, Nevada, Plumas, Shasta, Sierra, Siskiyou, Sutter, Tehama, Trinity, Tuolumne, Yuba.
- **Other Southern California Counties:** San Bernardino, Orange, Riverside, San Diego, Imperial.
- **Sacramento Area Counties:** El Dorado, Placer, Sacramento, Yolo.
- **San Francisco MSA:** Marin, San Francisco, San Mateo.
- **San Joaquin (Central) Valley Counties:** Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare.

III. Overall: Summary of HIV/AIDS Surveillance Data

The data shown in Figure 1 represents all name-reported cases diagnosed by December 31, 2009 and entered into eHARS by February 22, 2012.

Figure 1. HIV infection, AIDS diagnoses and deaths among HIV/AIDS cases



Includes all HIV/AIDS cases reported to California's surveillance system regardless of diagnosis or current residence.

Figure 1 shows the historical trend in all newly diagnosed cases regardless of clinical status at diagnosis (in blue) and the trend in newly diagnosed AIDS cases, regardless of whether they had been previously reported as HIV. A steep incline in HIV infection diagnoses in the 1980s is directly followed by a slightly less-steep incline in AIDS diagnoses. This is followed by a steep decline and a leveling off of new cases due to effective behavioral prevention efforts and initiation of antiretroviral therapy regimens. Of note is the inconsistency in the HIV infection data in the later years (2000-2009). It is important to point out that policy shifts can have large effects on case numbers. For example, in 2002 HIV (non-AIDS) became reportable for the first time by a confidential non-name code (see *II. Introduction, Sections a and b*). As a result, that year displays a measurable uptick in diagnosed HIV and AIDS cases likely due to more close scrutiny of medical records and reporting diligence. Similarly, legislation was passed that made HIV reportable by name in April 2006 and an even more pronounced increase was seen in that year and subsequent years, with the data appearing to normalize by 2009. Some inconsistencies in the data prior to 2009 may be resolved upon further maturity of the data system. For these reasons and additional reasons described above, all numbers presented should be interpreted with caution.

Cumulative and Living Cases by HIV Status

By the end of 2009, there were a total of 206,793 HIV infection cases reported to OA by February 22, 2012. Of these cumulative cases, 54 percent were presumed to be living with HIV infection at the end of 2009 (Figure 2a). Among those living with HIV infection, 38,659 cases were classified as HIV (non-AIDS) cases and 72,307 cases were classified as AIDS cases (Figure 2b).

Figure 2a.
Cumulative HIV/AIDS cases by
current HIV status
California, 1983-2009

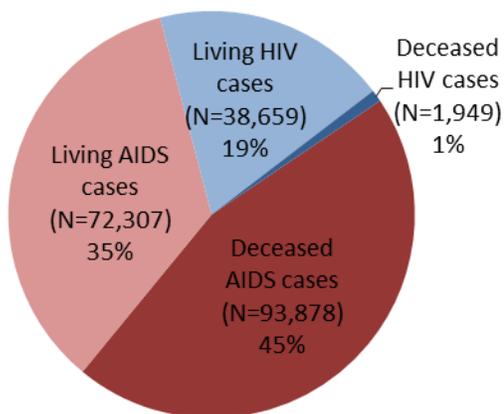
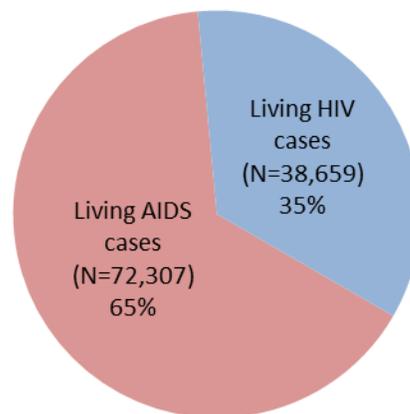


Figure 2b.
Living HIV/AIDS cases by
current HIV status
California, 2009

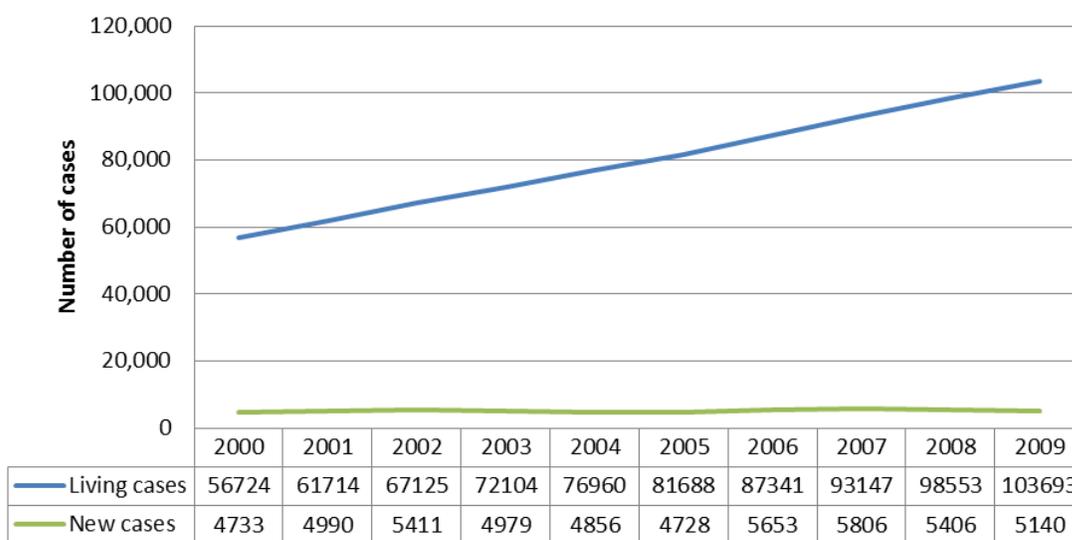


IV. Prevalent Cases: People Living with HIV Infection in California

Measuring the prevalence of any disease is important in understanding the impact that disease has on populations and geographic areas. It helps identify which services are currently needed and where.

Of the 110,966 individuals living with HIV or AIDS shown in Figure 2 above, 103,693 individuals were presumed to be living in California at the end of 2009 (according to most recent residence information). Thus, all prevalent data analyses are based on this population.

Figure 3. Living and newly diagnosed HIV infection cases in California, 2000-2009



The number of individuals living with HIV infection has increased steadily each year due to relatively steady new infection rates coupled with successful antiretroviral therapies for people living with HIV infection. The number of individuals newly diagnosed with HIV infection increased from 2000 to 2002, decreased to 2005 and then increased again to 2007 (see discussion on HIV infection inconsistencies in *II. Introduction, Sections b and c and III. Overall: Summary of HIV/AIDS Surveillance Data*, pages 6-12). Overall, the average number of new cases across this period (2000-2009) remained steady.

Table 1. Living† HIV and AIDS cases by gender, race/ethnicity, current age and exposure category, 2009

	HIV (non-AIDS)*			AIDS**			HIV/AIDS***		
	N	%	Rate‡	N	%	Rate‡	N	%	Rate‡
GENDER									
Male	31,052	86.1%	160.8	59,161	87.5%	306.4	90,213	87.0%	467.3
Female	4,595	12.7%	23.7	7,680	11.4%	39.6	12,275	11.8%	63.3
Transgender	406	1.1%	-	799	1.2%	-	1,205	1.2%	-
RACE/ETHNICITY									
White	17,236	47.8%	104.9	30,287	44.8%	184.3	47,523	45.8%	289.2
Black	6,454	17.9%	283.2	12,487	18.5%	547.9	18,941	18.3%	831.1
Latino	10,394	28.8%	73.3	21,586	31.9%	152.2	31,980	30.8%	225.5
Asian/PI	1,337	3.7%	28.2	2,316	3.4%	48.8	3,653	3.5%	77.0
AI/AN	165	0.5%	70.1	280	0.4%	118.9	445	0.4%	189.0
Multirace	467	1.3%	57.5	664	1.0%	81.8	1,131	1.1%	139.3
CURRENT AGE									
< 13	130	0.4%	1.8	50	0.1%	0.7	180	0.2%	2.6
13-19	298	0.8%	7.1	223	0.3%	5.3	521	0.5%	12.4
20-29	4,862	13.5%	89.4	2,772	4.1%	51.0	7,634	7.4%	140.4
30-39	8,826	24.5%	169.3	10,607	15.7%	203.4	19,433	18.7%	372.7
40-49	12,614	35.0%	220.2	27,794	41.1%	485.3	40,408	39.0%	705.5
50+	9,323	25.9%	84.2	26,194	38.7%	236.7	35,517	34.3%	320.9
EXPOSURE CATEGORY									
MSM	24,765	68.7%	-	43,195	63.9%	-	67,960	65.5%	-
IDU	2,085	5.8%	-	5,977	8.8%	-	8,062	7.8%	-
MSM/IDU	2,378	6.6%	-	6,126	9.1%	-	8,504	8.2%	-
Heterosexual	3,189	8.8%	-	6,475	9.6%	-	9,664	9.3%	-
Blood/other	72	0.2%	-	384	0.6%	-	456	0.4%	-
NIR/NRR	3,293	9.1%	-	5,168	7.6%	-	8,461	8.2%	-
Perinatal	271	0.8%	-	315	0.5%	-	586	0.6%	-
TOTAL	36,053	100.0%	93.2	67,640	100.0%	174.8	103,693	100.0%	268.0

Cases reported by Feb 22, 2012 and diagnosed by Dec 31, 2009

†Includes persons currently living with HIV infection (regardless of diagnosis state) whose last known residence is in California

*Cases which remained HIV cases on Feb 22, 2012

**Cases classified as AIDS by Feb 22, 2012

***The sum of HIV cases and AIDS cases

‡ Rates per 100,000 persons are based on 2009 population estimates from the California Department of Finance

Dash (-) indicates the rate could not be calculated due to unknown population denominators

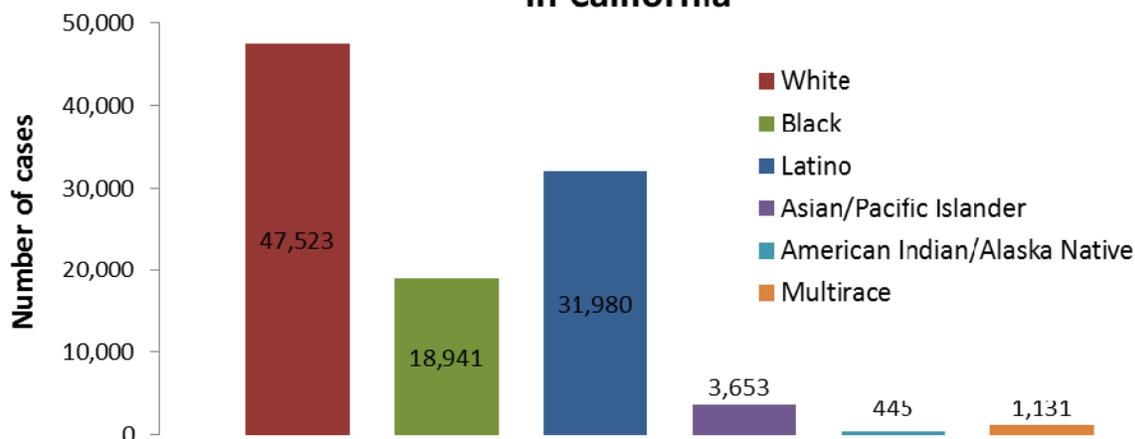
There were 19 cases with unknown race/ethnicity

At the end of 2009, there were 268 people living with HIV infection for every 100,000 Californians (Table 1). The overwhelming majority of these individuals were men (87 percent). The rate of prevalent cases among males (467.3 per 100,000) in California was nearly seven times higher than that for females (63.3 per 100,000). While transgendered individuals are reported as just over 1 percent of the population living with HIV, measurement of this population as a demographic is limited and thus, their burden of disease may be underrepresented. The highest rate of prevalent HIV infection cases among age groups was 705.5 per 100,000 among 40-49 year olds.

Among risk categories, MSM constitute the greatest proportion of living cases (65.5 percent), followed by heterosexuals (9.3 percent), MSM/IDUs (8.2 percent) and non-MSM/IDUs (7.8 percent). The vast majority of people living with HIV/AIDS in California are over 40 years old (73.3 percent). Whites comprised the largest racial/ethnic proportion (45.8 percent) of those living with HIV/AIDS in California, followed by Latinos (30.8 percent), and Blacks (18.3 percent).

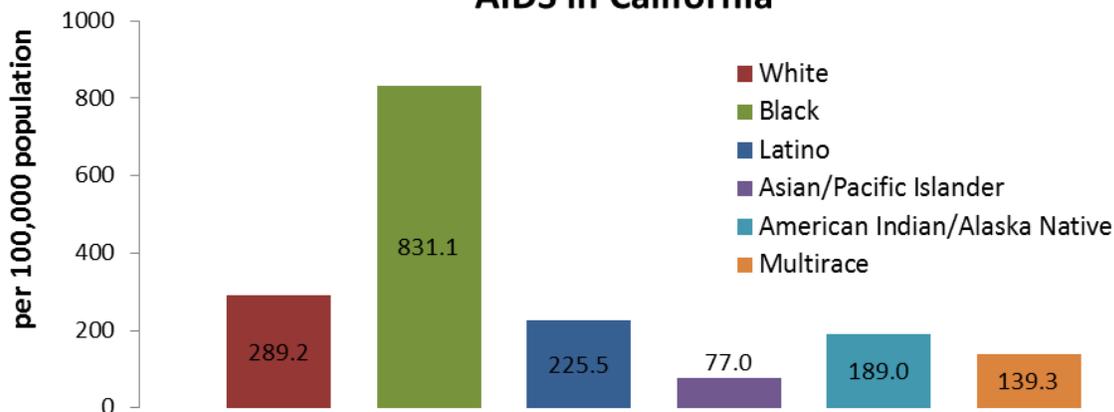
Key Prevalence Demographics: Race/Ethnicity

Figure 4. Number of individuals living with HIV or AIDS in California



There are more Whites living with HIV infection (47,523) than other race/ethnicities, followed by Latinos, with 31,980 and Blacks with 18,941 (Figure 4). However, in terms of prevalence rates (Figure 5), the disparity among Black Californians is highly evident, with 831 of every 100,000 Blacks living with HIV infection. This number is almost three times that of Whites (289 per 100,000) and more than three times that of Latinos (226 per 100,000). Also of note is how, due to their small overall population size, the burden among Native Americans/Alaska Natives becomes more evident when displaying rates versus total number of cases.

Figure 5. Prevalence rate of individuals living with HIV or AIDS in California



Race/Ethnicity by Gender

The HIV/AIDS prevalence rate among Blacks becomes even more pronounced when stratified by gender as shown in Table 2. There are 1,283 Black men living with HIV infection for every 100,000, or over 1 percent of the Black male population in California. Among males, Whites make up almost one-half of the living cases (48.8 percent) followed by Latinos (30.4 percent), and Blacks (15.8 percent). Latinos make up a significantly greater proportion of AIDS cases than HIV cases (31.7 percent versus 28.0 percent, $p < 0.05$). Blacks have similar HIV and AIDS proportions and Whites make up a significantly greater proportion of HIV cases than AIDS cases ($p < 0.05$).

Black females account for over one-third (34.7 percent) of females living with HIV infection and their prevalence rate is nine times that of White women (365.8 and 39.1, respectively). The proportions of HIV cases and AIDS cases among females of different races are similar.

Latino transgenders account for almost 40 percent ($n=465$) of the transgender population living with HIV infection, followed by Blacks at 32.2 percent ($n=388$) and Whites at 21.4 percent ($n=258$). Asian/Pacific Islanders make up a greater proportion of transgenders living with HIV (5.4 percent) than they do males (3.4 percent) or females (4.0 percent) living with HIV.

Table 2. Race/ethnicity of living† HIV and AIDS cases by gender, 2009

	HIV (non-AIDS)*			AIDS**			HIV/AIDS***		
	N	%	Rate‡	N	%	Rate‡	N	%	Rate‡
Male	31,052			59,161			90,213		
White	15,915	51.3%	195.2	28,112	47.5%	344.7	44,027	48.8%	539.9
Black	4,769	15.4%	428.2	9,521	16.1%	854.8	14,290	15.8%	1,282.9
Latino	8,687	28.0%	120.0	18,747	31.7%	258.9	27,434	30.4%	378.9
Asian/PI	1,141	3.7%	50.1	1,954	3.3%	85.7	3,095	3.4%	135.8
AI/AN	146	0.5%	126.1	232	0.4%	200.4	378	0.4%	326.5
Multirace	394	1.3%	98.2	576	1.0%	143.5	970	1.1%	241.6
Unk/Other	0	0.0%	-	19	0.0%	-	19	0.0%	-
Female	4,595			7,680			12,275		
White	1,232	26.8%	14.9	2,006	26.1%	24.2	3,238	26.4%	39.1
Black	1,552	33.8%	133.2	2,711	35.3%	232.7	4,263	34.7%	365.8
Latino	1,554	33.8%	22.4	2,527	32.9%	36.4	4,081	33.2%	58.8
Asian/PI	177	3.9%	7.2	317	4.1%	12.8	494	4.0%	20.0
AI/AN	17	0.4%	14.2	44	0.6%	36.8	61	0.5%	51.0
Multirace	63	1.4%	15.3	75	1.0%	18.3	138	1.1%	33.6
Unk/Other	0	0.0%	-	0	0.0%	-	0	0.0%	-
Transgender	406			799			1,205		
White	89	21.9%	-	169	21.1%	-	258	21.4%	-
Black	133	32.7%	-	255	31.9%	-	388	32.2%	-
Latino	153	37.6%	-	312	39.0%	-	465	38.6%	-
Asian/PI	19	4.9%	-	46	5.9%	-	65	5.4%	-
AI/AN	2	0.5%	-	4	0.5%	-	6	0.5%	-
Multirace	10	2.5%	-	13	1.6%	-	23	1.9%	-
Unk/Other	0	0.0%	-	0	0.0%	-	0	0.0%	-
Total	36,053 100.0%			67,640 100.0%			103,693 100.0%		

Cases reported by Feb 22, 2012 and diagnosed by Dec 31, 2009

†Includes persons currently living with HIV infection (regardless of diagnosis state) whose last known residence is in California

*Cases which remained HIV cases on Feb 22, 2012

**Cases classified as AIDS by Feb 22, 2012

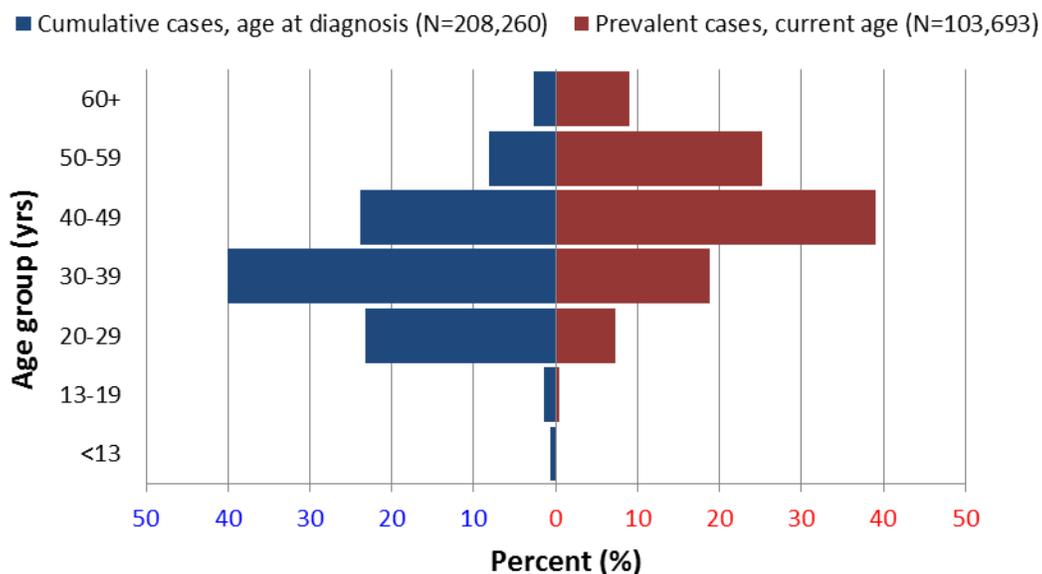
***The sum of HIV cases and AIDS cases

‡ Rates per 100,000 persons are based on 2009 population estimates from the California Department of Finance

Dash (-) indicates the rate could not be calculated due to unknown population denominators

Key Prevalence Demographics: Age Distribution

Figure 6. Distribution of HIV/AIDS cases by age group, cumulative and prevalent



The overwhelming majority of individuals currently living with HIV infection are over 40 years old, with the most populous group being 40-49 year olds. Figure 6 juxtaposes the age distributions of cumulative cases at age of diagnosis with the current age of those cumulative cases who are currently living. As cumulative cases age, it is expected that the concentration of cases shift to the higher age groups for prevalent cases.

Figure 7. HIV infection status by current age of living cases[‡]

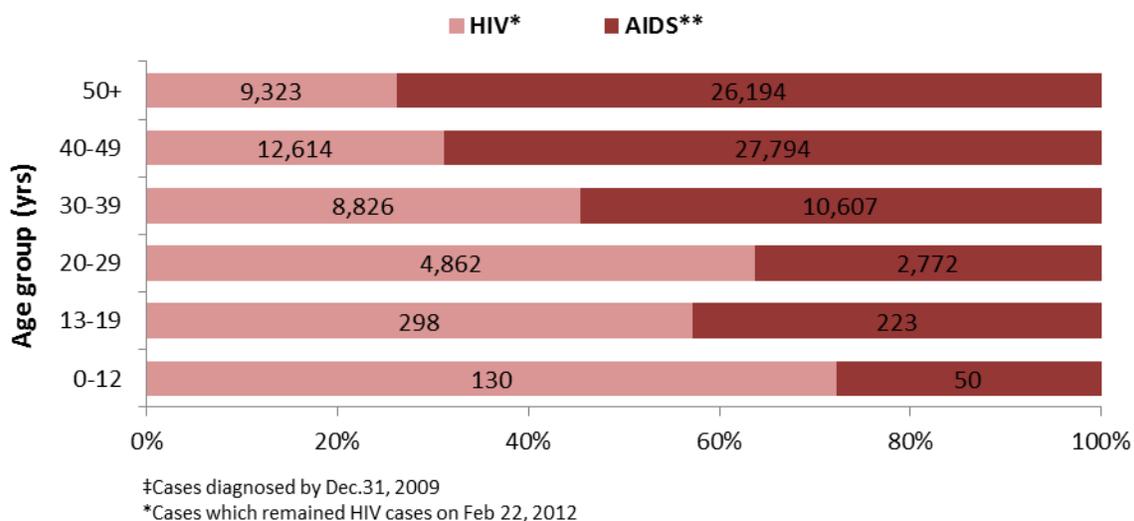


Figure 7 shows the HIV status distribution within each current age group. In general, as age group increases an increasing proportion of individuals are living with an AIDS diagnosis. As expected, a larger proportion of living cases in the older age groups (40+) have been classified as AIDS and likewise, a larger proportion of cases in the younger age groups is living with an HIV (non-AIDS) status. Three-quarters (73 percent) of individuals over the age of 50 and two-thirds (69 percent) of those 40-49 years old are living with an AIDS diagnosis (Figure 7). Conversely, just over one-third (36 percent) of all 20-29 year olds living with HIV have been given an AIDS diagnosis. Forty-three percent of those in the 13-19 age group are classified as AIDS cases, a slightly higher percentage than the 20-29 year old age group. This is likely due to perinatal diagnoses and longevity of HIV infection.

Age Distribution by Race/Ethnicity

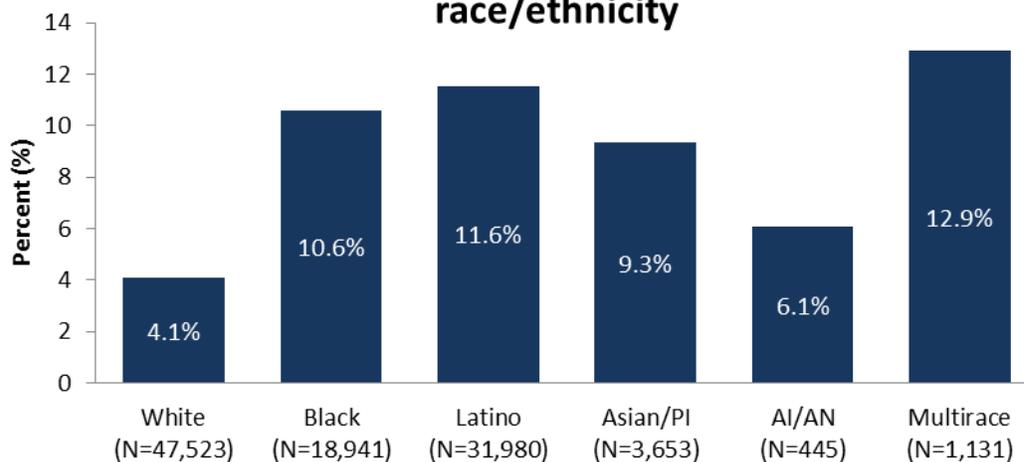
Table 3. Living HIV infection cases by race/ethnicity and current age group

RACE/ETHNICITY	Age group (yrs)													
	0-12		13-19		20-29		30-39		40-49		50-59		60+	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
White (N=47,523)	22	0.1	85	0.2	1,857	3.9	6,215	13.1	19,105	40.2	14,507	30.5	5,732	12.1
Black (N=18,941)	55	0.3	197	1.0	1,806	9.5	3,323	17.5	7,010	37.0	5,024	26.5	1,526	8.1
Latino (N=31,980)	88	0.3	220	0.7	3,475	10.9	8,540	26.7	12,365	38.7	5,558	17.4	1,734	5.4
Asian/PI (N=3,653)	7	0.2	10	0.3	331	9.1	1,014	27.8	1,310	35.9	724	19.8	257	7.0
AI/AN (N=445)	0	0.0	1	0.2	26	5.8	93	20.9	198	44.5	102	22.9	25	5.6
Multirace (N=1,131)	8	0.7	7	0.6	139	12.3	248	21.9	413	36.5	253	22.4	63	5.6

N=19, Unknown race/ethnicity

The current age distribution of persons currently living with HIV varies by race/ethnicity (Table 3). A significantly smaller proportion of whites living with HIV infection were under 40 years old at the end of 2009 compared to all other race/ethnicities (17.3 percent versus 29.7 percent, $p < 0.01$). In contrast to Whites, 24 percent of living Black and American Indian/Alaska Native cases and over 30 percent of Latino, Asian/Pacific Islander, and multi-race cases were younger than 40 (33.2 percent, 31.1 percent, and 34.9 percent, respectively).

Figure 8. Percentage of individuals living with HIV/AIDS who are under 30 years old by race/ethnicity



Compared to other race/ethnicities, a significantly smaller percentage of Whites living with HIV is under 30 years old (Figure 8; $p < 0.01$). Likewise, the fact that there is a larger proportion of non-White individuals living with HIV who are in the younger age groups has especially important implications for targeting Prevention with Positives programs.

V. Newly Diagnosed HIV Infection Cases, 2009

Recently diagnosed cases give a more current sense of the HIV epidemic than prevalent cases. Here, we look at all HIV infection cases diagnosed in 2009. Because HIV trend data are not yet available, proportional comparisons to cumulative cases, and cases diagnosed in 2000 and/or 2005 are made when highlighting any perceived demographic or geographic shifts.

Demographics of newly diagnosed cases

Table 4 displays basic demographics of newly diagnosed cases. The data are further stratified by diagnosis status.

Table 4. Newly diagnosed HIV and AIDS cases by gender, race/ethnicity, age at diagnosis and exposure category, 2009

	HIV (non-AIDS)*			AIDS**			HIV/AIDS***		
	N	%	Rate‡	N	%	Rate‡	N	%	Rate‡
GENDER									
Male	3,026	85.8%	15.7	1,614	87.0%	8.4	4,640	86.2%	24.0
Female	448	12.7%	2.3	217	11.7%	1.1	665	12.4%	3.4
Transgender	51	1.4%	-	24	1.3%	-	75	1.4%	-
RACE/ETHNICITY									
White	1,281	36.3%	7.8	599	32.3%	3.6	1,880	34.9%	11.4
Black	763	21.6%	33.5	328	17.7%	14.4	1,091	20.3%	47.9
Latino	1,240	35.2%	8.7	810	43.7%	5.7	2,050	38.1%	14.5
Asian/PI	181	5.1%	3.8	87	4.7%	1.8	268	5.0%	5.6
AI/AN	15	0.4%	6.4	8	0.4%	3.4	23	0.4%	9.8
Multirace	45	1.3%	5.5	23	1.2%	2.8	68	1.3%	8.4
AGE AT DIAGNOSIS									
< 13	9	0.3%	<i>a</i>	2	0.1%	<i>a</i>	11	0.2%	0.2
13-19	132	3.7%	3.1	15	0.8%	0.4	147	2.7%	3.5
20-29	1,143	32.4%	21.0	351	18.9%	6.5	1,494	27.8%	27.5
30-39	1,010	28.7%	19.4	527	28.4%	10.1	1,537	28.6%	29.5
40-49	807	22.9%	14.1	564	30.4%	9.8	1,371	25.5%	23.9
50+	424	12.0%	3.8	396	21.3%	3.6	820	15.2%	7.4
MODE OF EXPOSURE									
MSM	2,338	66.3%	-	1,084	58.4%	-	3,422	63.6%	-
IDU	180	5.1%	-	119	6.4%	-	299	5.6%	-
MSM/IDU	182	5.2%	-	82	4.4%	-	264	4.9%	-
Heterosexual	260	7.4%	-	186	10.0%	-	446	8.3%	-
Blood/Other	0	0.0%	-	0	0.0%	-	0	0.0%	-
NIR/NRR	556	15.8%	-	382	20.6%	-	938	17.4%	-
Perinatal	9	0.3%	-	2	0.1%	-	11	0.2%	-
TOTAL	3,525	100.0%	9.1	1,855	100.0%	4.8	5,380	100.0%	13.9

Cases reported by Feb 22, 2012 and diagnosed by Dec 31, 2009

†Includes persons diagnosed with HIV infection in California in 2009 regardless of current residence

*Cases diagnosed as HIV (non-AIDS) which remained HIV cases at least one year

**Cases classified as AIDS at diagnosis or within one year of diagnosis

***The sum of HIV cases and AIDS cases

‡ Rates per 100,000 persons are based on 2009 population estimates from the California Department of Finance

Dash (-) indicates the rate could not be calculated due to unknown population denominators

a Indicates rate not calculated due to small case number

Overall

In 2009, there were 5,380 people newly diagnosed with HIV infection, or 13.9 new diagnoses for every 100,000 Californians (Table 4). The overwhelming majority of both newly diagnosed HIV and concurrently diagnosed HIV/AIDS cases are male (85.8 percent and 87.0 percent, respectively). Transgendered individuals were 1.4 percent of the newly diagnosed HIV infection cases. As stated previously, limitations in measurement among this population may result in underestimations.

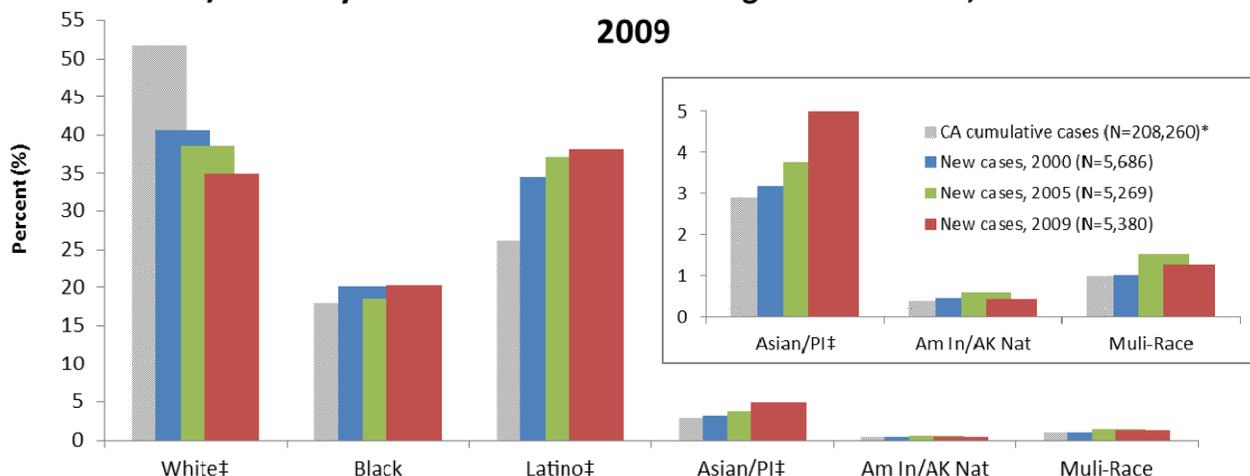
Latinos comprised the largest racial/ethnic proportion (38.1 percent) of those newly diagnosed with HIV/AIDS in California, followed by Whites (34.9 percent) and Blacks (20.3 percent). The rate of HIV infection diagnosis among Blacks (47.9 per 100,000) tripled that of the next highest rate (Latinos, 14.5 per 100,000). American Indian/Alaska Natives constitute the smallest percentage (0.4 percent) of newly diagnosed cases, but their rate of diagnosis is fourth highest (9.8 per 100,000). In 2009, Latinos were the only racial/ethnic group to have a greater percentage of AIDS cases than HIV cases (44.8 percent and 34.7 percent, respectively; numbers not shown in table).

Over 17 percent of newly diagnosed cases had NIR/NRR. Among known risk categories, MSM constitute the greatest proportion of newly diagnosed cases (63.6 percent), followed by heterosexuals (8.3 percent), IDUs (5.6 percent), and MSM/IDUs (4.9 percent). The majority of the people newly diagnosed with HIV/AIDS in California are under 40 years old (59.3 percent). The highest rate of new diagnoses was among 30-39 year olds (29.5 per 100,000).

Key Demographics of Newly Diagnosed Cases: Race/Ethnicity

Figure 9 shows the distribution of HIV infection cases diagnosed in California in 2000, 2005, and 2009, along with cumulative cases. A quick look in comparison to cumulative cases shows us how the overall picture of the epidemic has shifted from a predominately White to predominately non-White demographic. Comparing distributions from years 2000, 2005, and 2009, the proportion of newly diagnosed HIV infection cases that is White has decreased significantly from 41 percent in 2000 to 35 percent in 2009. Correspondingly, the proportions of Latino cases and Asian/Pacific Islander cases have increased from 34 percent to 38 percent and from 3.2 percent to 5.0 percent, respectively. The proportions of Blacks, American Indian/Alaska Native, and multi-race remained consistent.

Figure 9. Distribution of newly diagnosed HIV infection cases by race/ethnicity: Cumulative and new diagnoses in 2000, 2005 and 2009



*Includes cumulative cases diagnosed in California as of Dec.31, 2009
 ‡P<0.01, 2000 v 2009

Race/Ethnicity by Gender

Racial/ethnic disparities in new diagnoses are further clarified when stratified by gender (Table 5). Among males, females, and transgenders, Latinos constitute the largest number of the newly diagnosed cases in 2009 (38.2 percent, 37.0 percent, and 44.0 percent, respectively). For both males and females, Latinos are statistically more likely than all other races to have an AIDS case diagnosis versus HIV (non-AIDS) ($p < 0.001$). Among newly diagnosed transgenders, non-Whites outnumber Whites six to one (65 cases versus 10 cases, respectively). For both males and females, Blacks have the highest rates of newly diagnosed HIV infection (74.9 and 19.8 per 100,000, respectively) although the degree of disparities differ (see Figures 11 and 13 below).

Table 5. Race/ethnicity of newly diagnosed HIV and AIDS cases by gender, 2009

	HIV (non-AIDS)*			AIDS**			HIV/AIDS***		
	N	%	Rate‡	N	%	Rate‡	N	%	Rate‡
Male	3,026			1,614			4,640		
White	1,166	38.5%	14.3	554	34.3%	6.8	1,720	37.1%	21.1
Black	590	19.5%	53.0	244	15.1%	21.9	834	18.0%	74.9
Latino	1,059	35.0%	14.6	712	44.1%	9.8	1,771	38.2%	24.5
Asian/PI	158	5.2%	6.9	80	5.0%	3.5	238	5.1%	10.4
AI/AN	15	0.5%	13.0	7	0.4%	<i>a</i>	22	0.5%	19.0
Multirace	38	1.3%	9.5	17	1.1%	4.2	55	1.2%	13.7
Unk/Other	0	0.0%	-		0.0%	-	0	0.0%	-
Female	448			217			665		
White	109	24.3%	1.3	41	18.9%	0.5	150	22.6%	1.8
Black	157	35.0%	13.5	74	34.1%	6.4	231	34.7%	19.8
Latino	156	34.8%	2.2	90	41.5%	1.3	246	37.0%	3.5
Asian/PI	20	4.5%	0.8	6	2.8%	<i>a</i>	26	3.9%	1.1
AI/AN	0	0.0%	-	1	0.5%	<i>a</i>	1	0.2%	<i>a</i>
Multirace	6	1.3%	<i>a</i>	5	2.3%	<i>a</i>	11	1.7%	2.7
Unk/Other	0	0.0%	-	0	0.0%	-	0	0.0%	-
Transgender	51			24			75		
White	6	11.8%	-	4	16.7%	-	10	13.3%	-
Black	16	31.4%	-	10	41.7%	-	26	34.7%	-
Latino	25	49.0%	-	8	33.3%	-	33	44.0%	-
Asian/PI	3	5.9%	-	1	4.2%	-	4	5.3%	-
AI/AN	0	0.0%	-	0	0.0%	-	0	0.0%	-
Multirace	1	2.0%	-	1	4.2%	-	2	2.7%	-
Unk/Other	0	0.0%	-	0	0.0%	-	0	0.0%	-
TOTAL	3,525	100.0%		1,855	100.0%		5,380	100.0%	

Cases reported by Feb 22, 2012 and diagnosed by Dec 31, 2009

†Includes persons diagnosed with HIV infection in California in 2009 regardless of current residence

*Cases diagnosed as HIV (non-AIDS) which remained HIV cases at least one year

**Cases classified as AIDS at diagnosis or within one year of diagnosis

***The sum of HIV cases and AIDS cases

‡ Rates per 100,000 persons are based on 2009 population estimates from the California Department of Finance

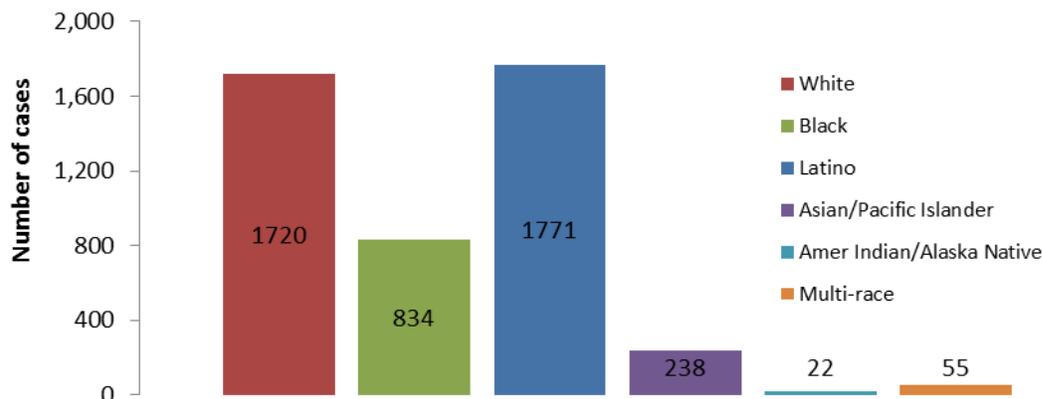
Dash (-) indicates the rate could not be calculated due to unknown population denominators

a Indicates rate not calculated due to small case number

Race/ethnicity: males

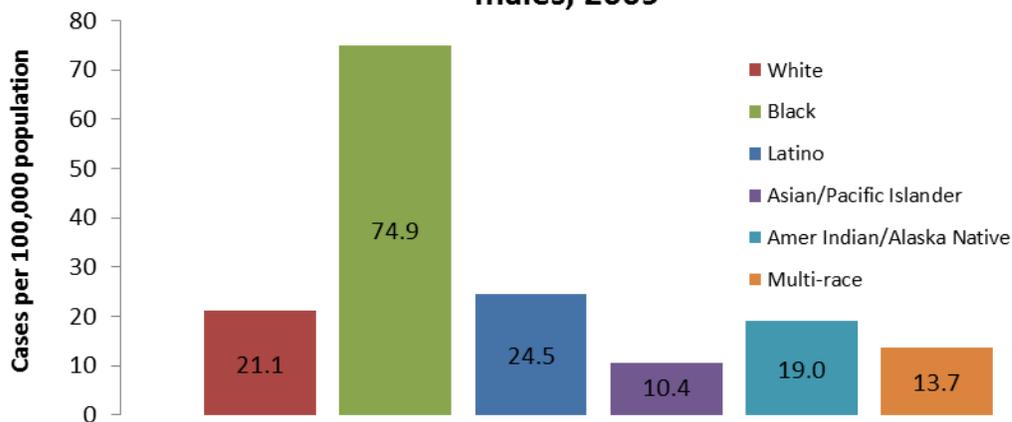
The figures below graphically display information from Table 5 to highlight disproportionate racial/ethnic distribution of new HIV diagnoses in California..

Figure 10. Number of newly diagnosed cases of HIV infection among males, 2009



Among males, more Latinos (N=1,771) were diagnosed with HIV infection than other race/ethnicities in 2009, followed by Whites with 1,720 and Blacks with 834 cases (Figure 10).

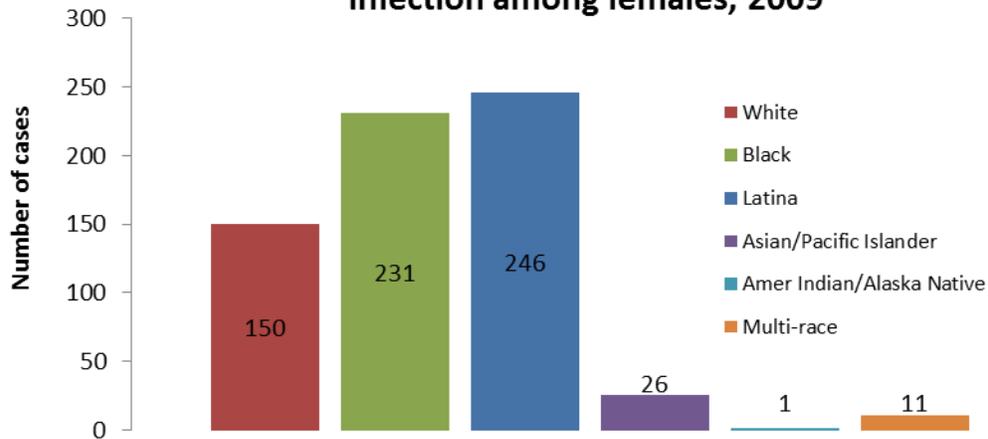
Figure 11. Rate of new HIV infection diagnoses among males, 2009



However, while Blacks have the third highest number of newly diagnosed cases in 2009 (Figure 10), their number in relation to their population (74.9 per 100,000) is three times that of the next highest rate, Latinos (24.5 per 100,000) and almost four times that of Whites (21.1 per 100,000). The burden among Native Americans/Alaska Natives also becomes more evident when displaying rates (Figure 11).

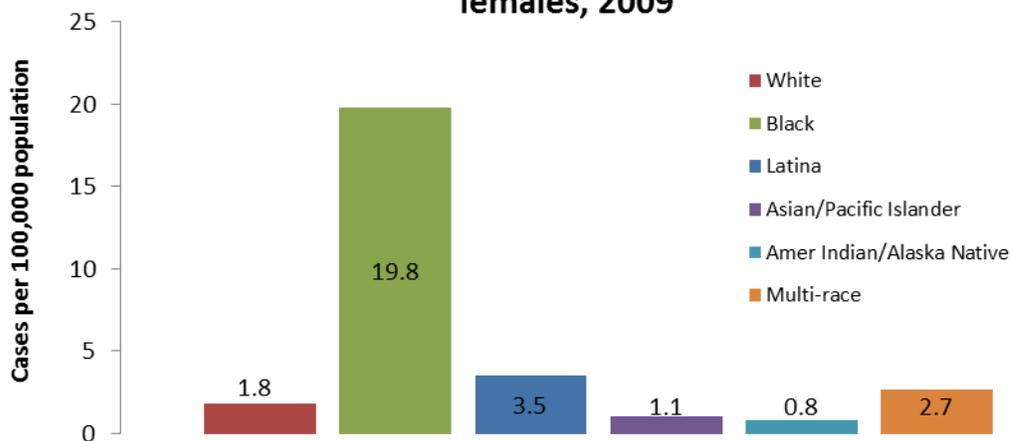
Race/Ethnicity: Females

Figure 12. Number of newly diagnosed cases of HIV infection among females, 2009



The racial/ethnic disparity in HIV acquisition is most evident for Black women. Among newly diagnosed females in 2009, Blacks and Latinas constitute the highest numbers of cases (N=231 and 246, respectively) (Figure 12).

Figure 13. Rate of new HIV infection diagnoses among females, 2009

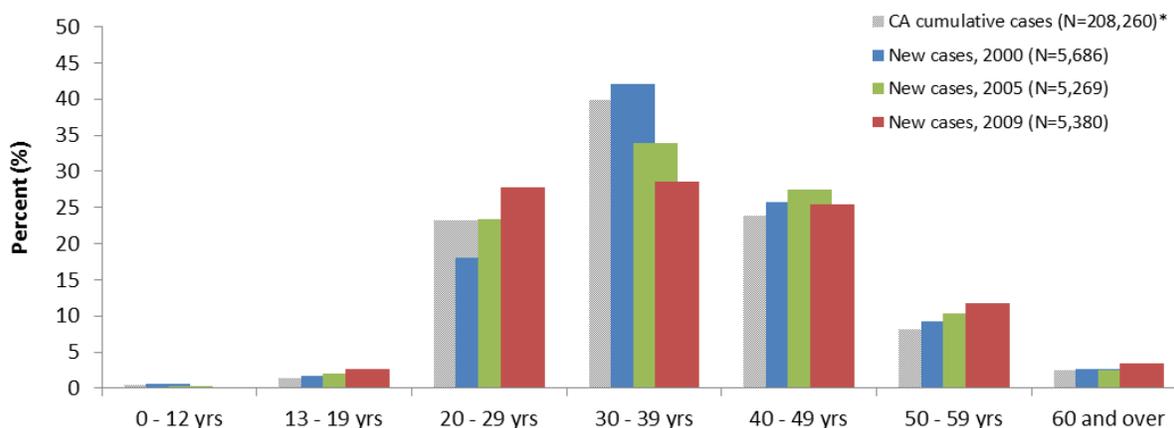


The rate of diagnosis of Black women for 2009 was ten times that of White women and over five times that of Latinas (19.8 per 100,000 versus 1.8 and 3.5 and per 100,000, respectively) (Figure 13).

Key Demographics: Age at Diagnosis

Below is the age group distribution of HIV infection cases newly diagnosed in 2009 compared with the distribution of those diagnosed in 2000 and 2005. Distribution of cumulative cases is also shown for historical perspective.

Figure 14. Distribution of newly diagnosed HIV Infection cases by age at diagnosis: Cumulative and new diagnoses in 2000, 2005 and 2009



*Includes cumulative cases diagnosed in California as of Dec. 31, 2009
 p<0.01, 2000 v 2009 all age groups except 40-49 yrs

The age at new HIV diagnoses has shifted since 2000 (Figure 14). The proportion of newly diagnosed cases in the 20-29-year-old age group has increased significantly, while the proportion of 30-39 year olds has likewise significantly decreased. The difference may be attributed to an increase in testing among younger individuals or it may be due to a true increase in the number of new infections at a younger age.

Table 6. Age at diagnosis of newly diagnosed HIV infection cases by race/ethnicity and gender, 2009

RACE/ETHNICITY	Age group (yrs)											
	13-19		20-29		30-39		40-49		50-59		60+	
	N	%	N	%	N	%	N	%	N	%	N	%
White (N=1,880)	28	1.5	377	20.1	461	24.5	604	32.1	321	17.1	89	4.7
Black (N=1,091)	63	5.8	336	30.8	259	23.7	250	22.9	140	12.8	37	3.4
Latino (N=2,050)	51	2.5	686	33.5	684	33.4	433	21.1	144	7.0	47	2.3
Asian/PI (N=268)	4	1.5	70	26.1	101	37.7	62	23.1	24	9.0	7	2.6
AI/AN (N=23)	0	0.0	5	21.7	9	39.1	7	30.4	2	8.7	0	0.0
Multirace (N=68)	1	1.5	20	29.4	23	33.8	15	22.1	5	7.4	4	5.9

The age distribution of newly diagnosed HIV infection cases varies by race/ethnicity (Table 6). A greater proportion of all non-White cases were under 30 years old when diagnosed with HIV infection than their White counterparts (Black=37 percent, Latino=36 percent, Asian/Pacific Islander=28 percent, and multi-race=31 percent compared with 22 percent for Whites). That there is a larger proportion of non-White people newly diagnosed with HIV infection who are in the younger (<30 yrs) age groups has important implications for targeted prevention programs.

Figure 15. Racial/ethnic distribution of newly diagnosed HIV infection cases by age at diagnosis, 2009

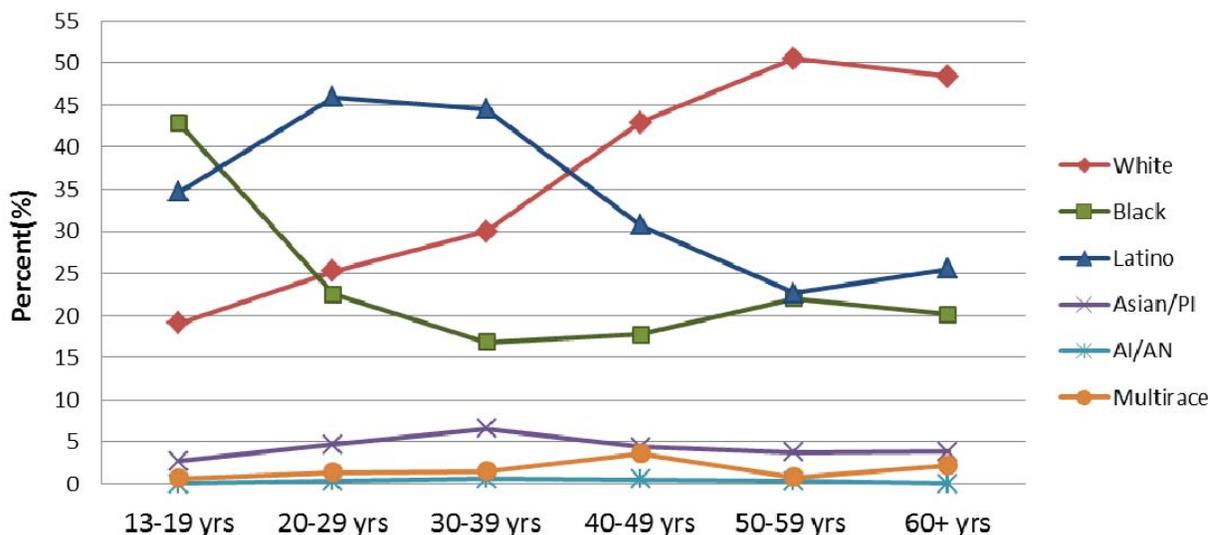
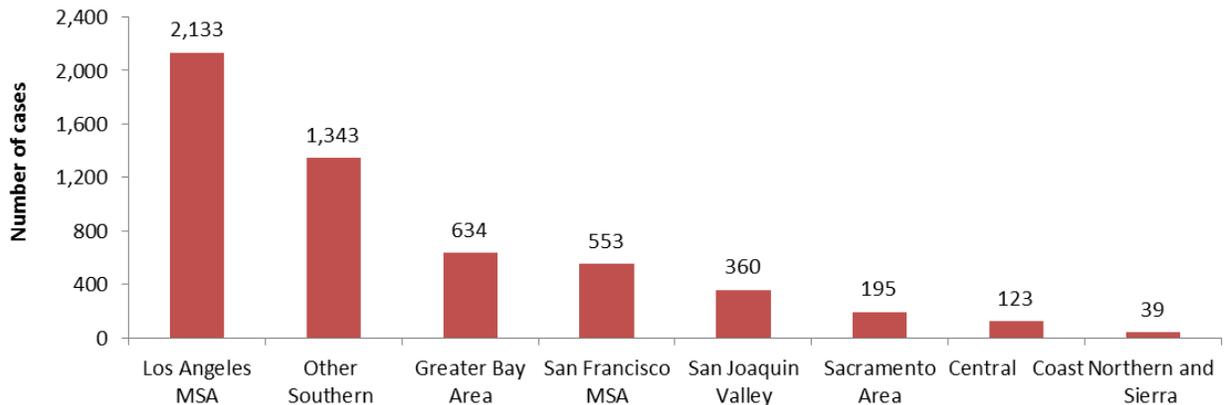


Figure 15 highlights the racial/ethnic differences in the distribution of newly diagnosed HIV infection cases within each age group. Unlike all other race/ethnicities, Whites make up an increasing percentage of newly diagnosed HIV infection cases as the age groups increase (red line), with their smallest share being among 13-19 year olds (N=28, 19 percent) and their largest share among 50-59 year olds (N=321, 50 percent). Conversely, Latinos (blue line) make up a relatively greater proportion of younger age groups (<40 years). Blacks (green line) make up the greatest percentage of teenage cases (43 percent) and their proportion decreases with increasing age groups. Of the 63 Black 13-19 year olds, over three-quarters (N=48) were MSM and 12 had NIR/NRR.

VI. Geographic Distribution

a. Epidemiological Profile Regions

Figure 16. HIV infection cases diagnosed by region, 2009



Los Angeles County had the largest number of HIV infection cases newly diagnosed in 2009 with 2,133 cases (Figure 16). The second largest was the southern region, followed by the Greater Bay Area and San Francisco MSA. The overwhelming majority (87 percent) of HIV infection cases were diagnosed in these four regions.

Figure 17. HIV infection diagnosis rate by region, 2009

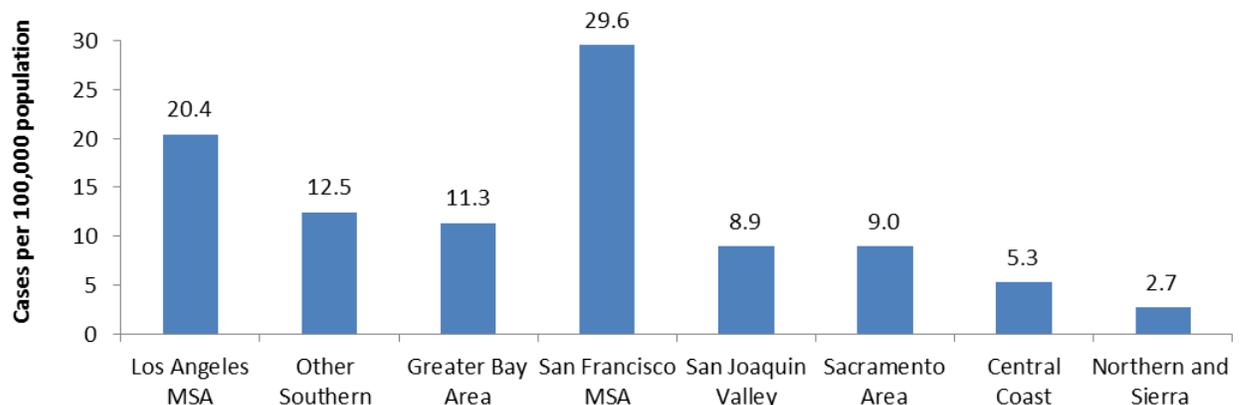
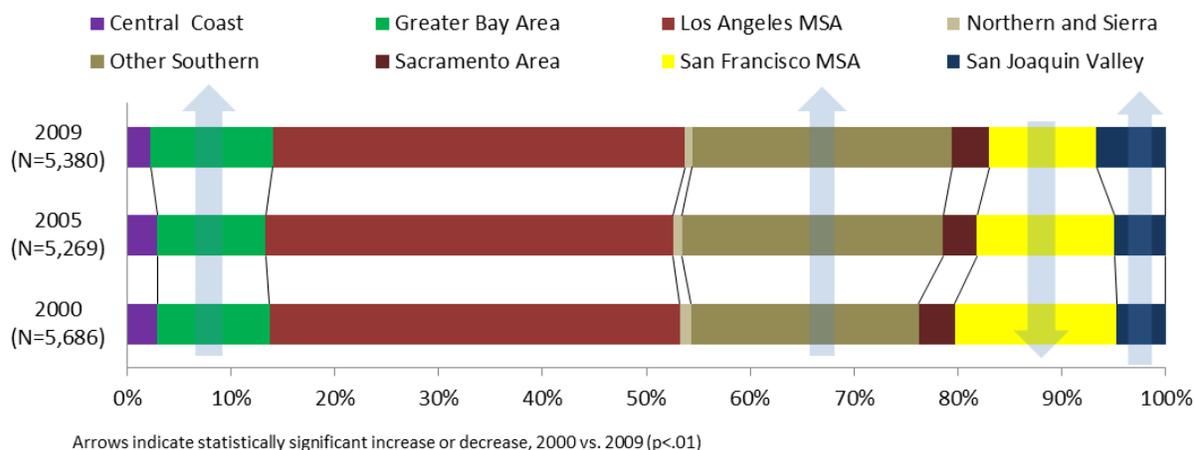


Figure 17 displays HIV infection rates. San Francisco County has the highest rate at 29.6 per 100,000 residents. That is significantly higher than the next highest new diagnosis rate (Los Angeles, 20.4; $p < 0.001$).

Figure 18. Distribution of newly diagnosed HIV infection cases by region: 2000, 2005, and 2009



Comparing the distribution of cases across Epidemiological Profile Regions (see Map of California Epidemiological Regions, page 11) for 2000, 2005, and 2009 (Figure 18), the Greater Bay Area, the Central Valley, and the southern regions have shown a significant increase in proportion of newly diagnosed cases across time. Only one region, San Francisco MSA, has shown a marked decrease (16 percent to 10 percent) in its proportion of cases across the same time period.

b. Prevalence and New Diagnoses Maps by County

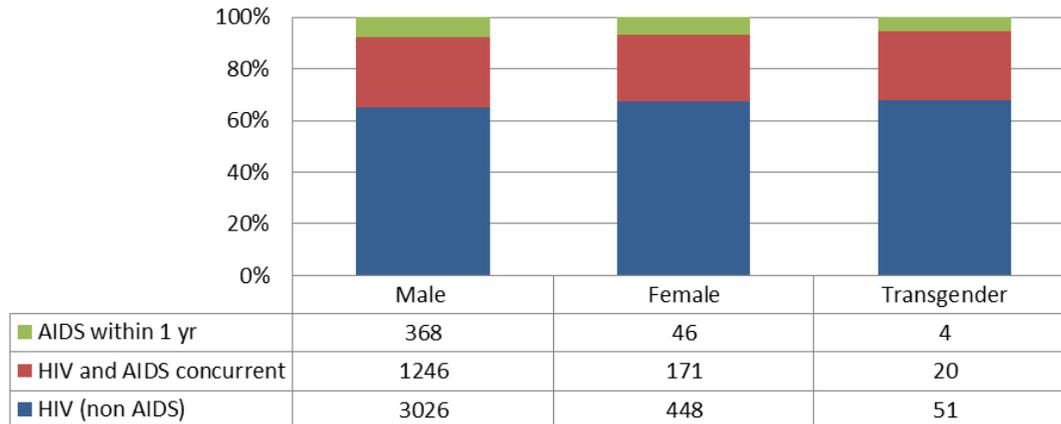
Figure 19 displays a map of the number of individuals living with HIV infection by county (left) and a corresponding map of the prevalence rate (cases per 100,000 population) of HIV infection (right). Los Angeles had the highest prevalence of HIV/AIDS cases with an estimated 38,674 cases by the end 2009 followed by San Francisco (n=13,386), San Diego (n=11,156), Orange (n=6,483), and Alameda (n=4,647) Counties. It is expected that counties with higher populations sizes will also have higher HIV/AIDS numbers, thus it is also important to look at cases in relation to population size (rates). The right-hand map confirms that the cases are concentrated in the these urban areas, but that other less populated counties, such as Marin, Solano, Kern, Riverside, Sonoma, and Sacramento counties are also bearing a burden relative to their population size.

The next figure (Figure 20) shows the number of new HIV infection diagnoses in 2009 (left) along with a corresponding rate map (right). Los Angeles has, by far, the greatest number of new infections in 2009 (n=2,133) compared with the next highest counties, San Diego (n=584) and San Francisco (n=482). However, San Francisco has the greatest rate of new diagnosis, with 56.9 cases per 100,000 population versus the next highest rates of 20.6 per 100,000 population for Los Angeles and 18.3 for San Diego. Mapping 2009 newly diagnosed cases as a rate highlights

additional areas of more recent HIV transmission, particularly Alameda (17.0 per 100,000), the Central Valley Counties of Fresno, Kern, and Madera (11.0, 12.6 and 13.2 per 100,000 respectively) and Sacramento, Solano, and Contra Costa Counties (11.6, 10.8 and 10.7 per 100,000 respectively). (Counties with correctional facilities may have elevated case numbers and rates.)

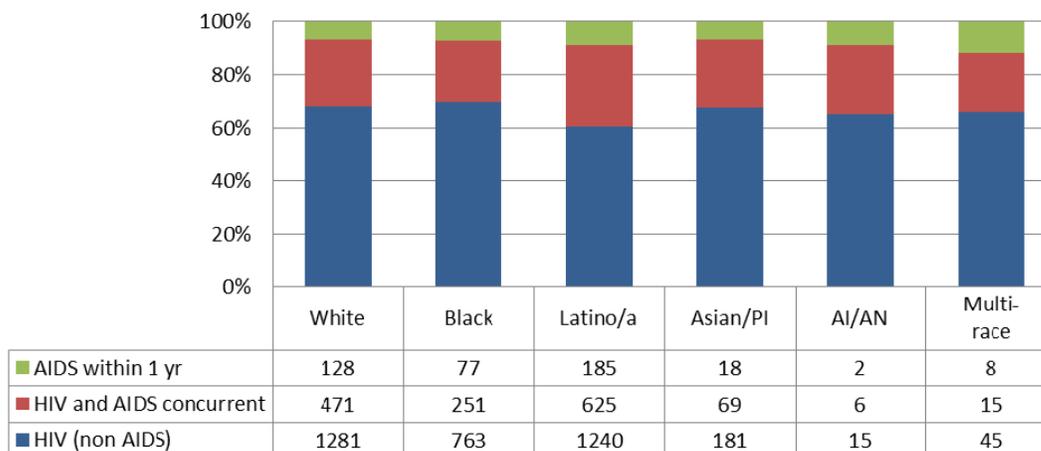
VII. Late Testers: Who are They?

Figure 21. Status of HIV infection upon diagnosis by gender, 2009 newly diagnosed cases



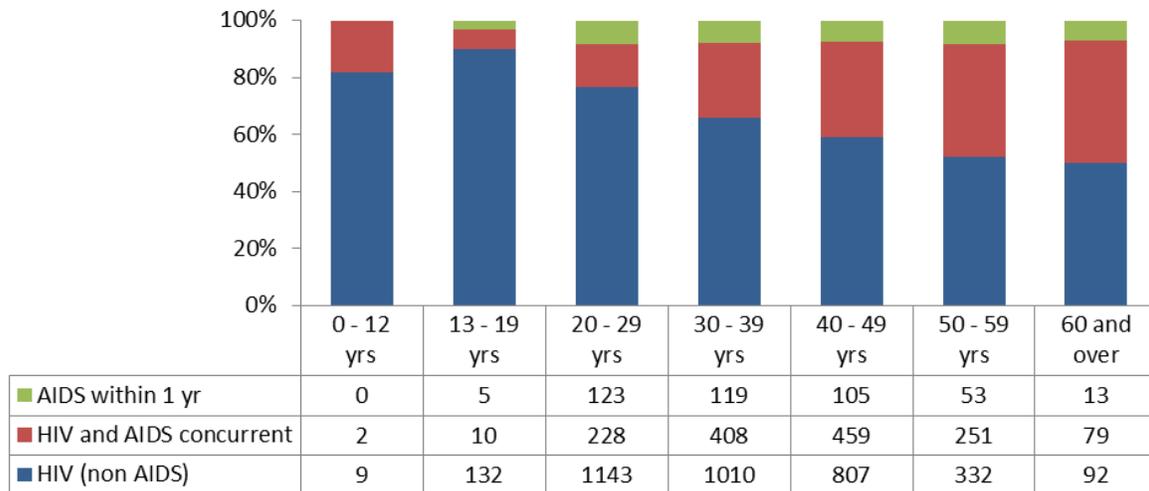
Male. Males newly diagnosed with HIV infection in 2009 were only slightly more likely than females and transgenders to be “late testers” ($p>0.05$) with 34.8 percent simultaneously diagnosed with HIV and AIDS or progressing to AIDS within one year of their HIV. Just 32 percent of transgenders and 32.6 percent of females testing newly positive in 2009 met the criteria for late testers.

Figure 22. Status of HIV infection upon diagnosis by race/ethnicity, 2009 newly diagnosed cases



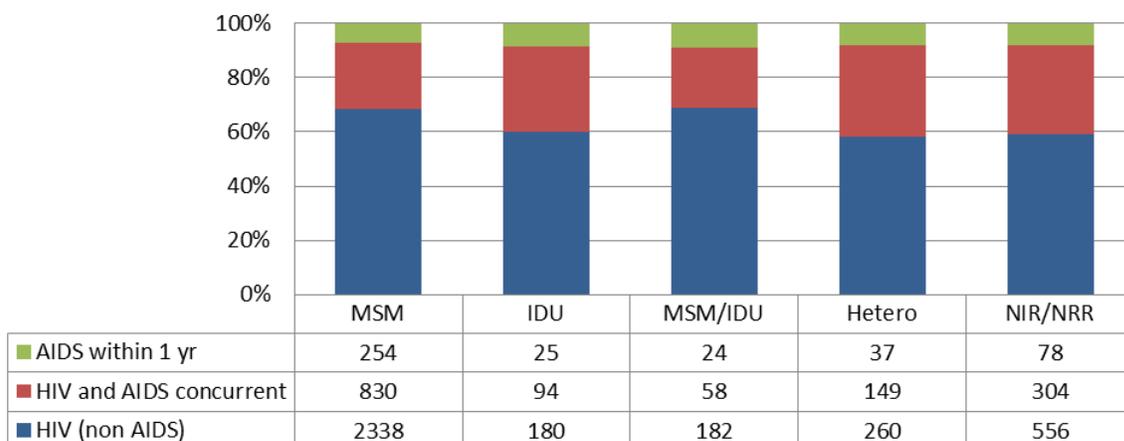
Latino. In 2009, Latinos were more likely than all other race/ethnicities (39.5 percent versus 31.4 percent, $p<0.01$) to be diagnosed with AIDS at the time of or within one year of their initial HIV diagnosis.

Figure 23. Status of HIV infection upon diagnosis by age group, 2009 newly diagnosed cases



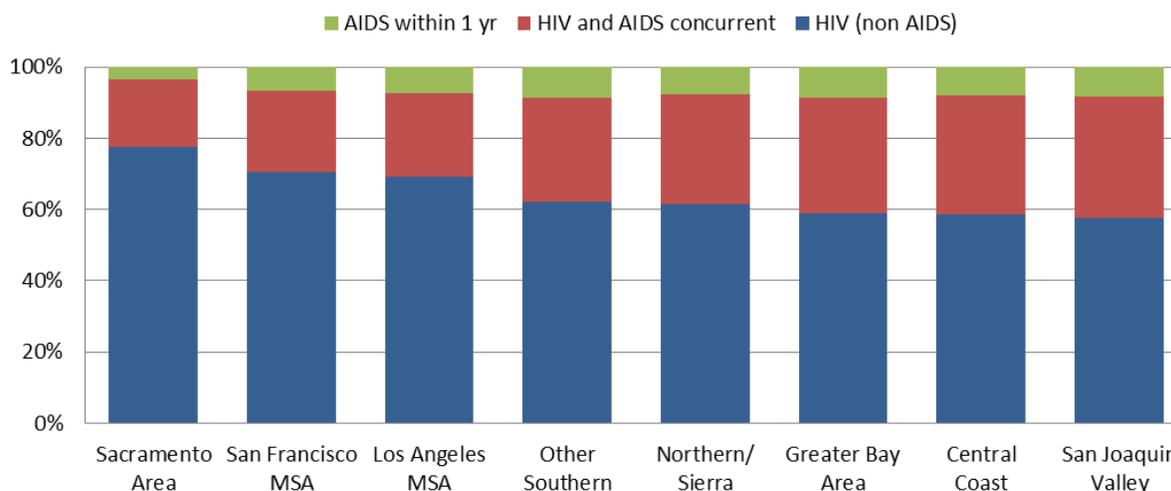
Older. As age at HIV diagnosis increases, the proportion of cases diagnosed concurrently with AIDS also increases. Those diagnosed in older age groups (40+ years of age) were significantly more likely to have already progressed to AIDS at the time of or within one year of that initial 2009 HIV diagnosis than younger age groups (43.8 percent versus 28.1 percent, $p < 0.0001$). While age has been shown to be a factor in disease progression, it is likely that late testers in the older age groups were infected younger, in which case it is actually *younger* individuals who are not recognizing their need to test early enough.

Figure 24. Status of HIV infection upon diagnosis by transmission category, 2009 newly diagnosed cases



Non-MSM. MSM and MSM/IDUs were significantly *less* likely ($p < 0.01$) to have progressed to AIDS by the time of or within one year of initially testing HIV positive compared to all other risk groups (31.6 percent versus 40.8 percent, respectively).

Figure 25. Status of HIV infection upon diagnosis by geographic area, 2009 newly diagnosed cases



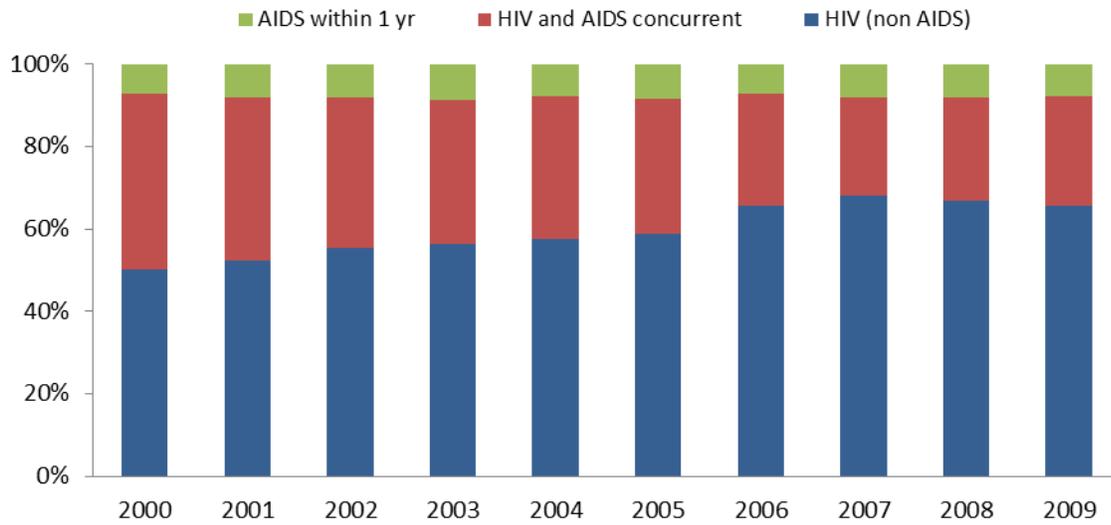
They are all across the state. The regions with the highest percentage of “late testers” were the San Joaquin Valley (42.5 percent), the Central Coast region (41.4 percent), and the Greater Bay Area (41.2 percent) followed by the Northern/Sierra areas (38.5 percent) and other southern counties (38.0 percent). The region with the smallest percentage of “late testers” was the Sacramento Area with 22.6 percent. San Francisco MSA had 30.0 percent and Los Angeles County had 31.0 percent “late testers.”

The percentage of “late testing” is higher among groups who may not consider themselves at risk for HIV and who thus may not be actively seeking testing, such as Latinos, heterosexuals, and those with no reported or an unknown risk. Because the “late testers” of tomorrow are the “unaware” populations of today, there have been renewed efforts in California and nationally to address this undiagnosed population. These findings are consistent with a recent publication concluding the need for more opt-out testing in routine medical settings in order to reach these populations. (Who are California’s Late HIV Testers? An Analysis of State AIDS Surveillance Data, 2000-2006. Public Health Reports. May-June 2011. Vol 126, p 338-343.)

Trends in “Late Testing”

Figure 26 shows a clear increase from 2000 to 2009 in the percentage of HIV infection cases that were classified as HIV cases and remained so one year after diagnosis (HIV cases in blue). This suggests that the proportion of cases that are “late testers” is shrinking, a goal of both California and the nation.

Figure 26. Trend in proportion of cases diagnosed with HIV and AIDS concurrently (late testers), 2000-2009

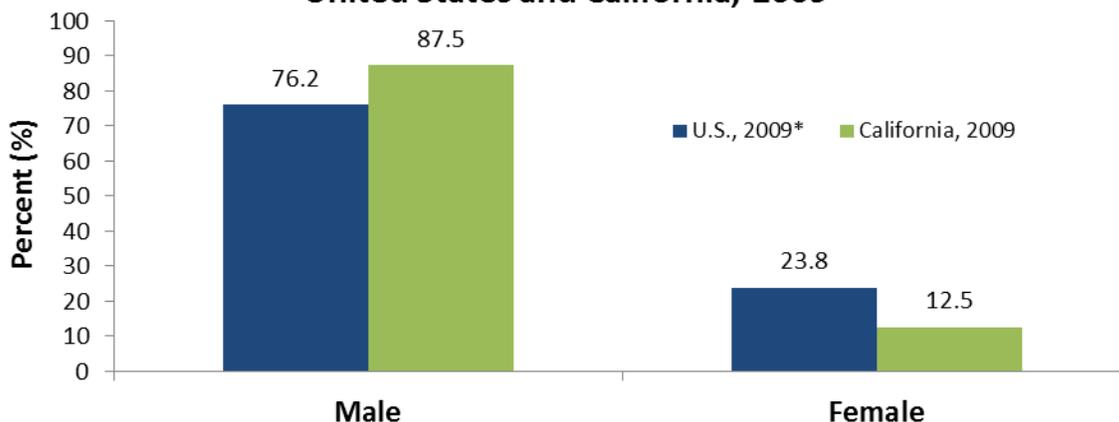


VIII. How Does California Compare to the National Epidemic?

To compare California’s 2009 HIV infection case proportions and rates, data from CDC’s HIV Surveillance Report, Volume 21 was used. The data used for this report was compiled from the 40 states with laws or regulations requiring confidential name-based HIV infection reporting since at least January 2006. Because California did not adopt name-based reporting until April 2006, California HIV data were excluded from these HIV infection reporting statistics, thus allowing for valid comparisons. Additional states not included in the HIV surveillance data are Delaware, Hawaii, Massachusetts, Maryland, Montana, Oregon, Rhode Island, Vermont, and Washington, as well as Washington, D.C.

California’s newly diagnosed HIV cases differ in demographic distribution from the national cases reported by CDC for 2009 (Figures 27, 28). In the national figures, a greater proportion of HIV infection cases diagnosed in 2009 were female compared with California case proportions (23.8 percent versus 12.5 percent, Figure 27).

Figure 27. Gender[†] distribution of newly diagnosed cases: United States and California, 2009

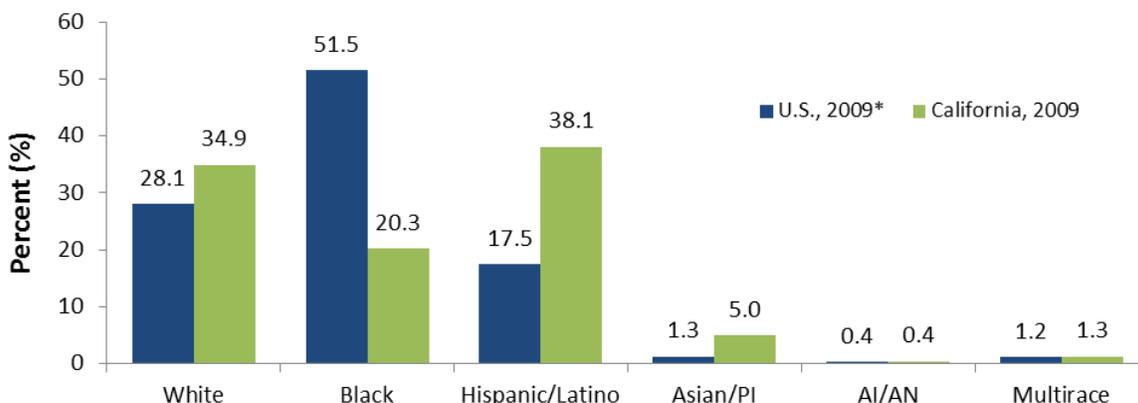


[†]Based on gender at birth therefore transgendered category not included in this graph

*Data Source: CDC HIV/AIDS Surveillance report: HIV Infection and AIDS in the United States and Dependent Areas, 2009 (Note: Nine states, including California, are excluded from national statistics)

Another notable difference is Black versus Latino distribution of cases. The percent of U.S. cases that is Black is over twice that of California’s (51.5 percent and 20.3 percent, respectively). The proportion of California cases that is Latino (38.1 percent) is twice that of the U.S. proportion (17.5 percent) as is the case with Asian/Pacific Islanders (5.0 percent versus 1.3 percent) (Figure 28). However, California has a relatively smaller Black population and larger Latino and Asian/Pacific Islander populations overall. Thus, to account for population size, HIV infection rates (per 100,000 population) were examined (Figures 29 and 30).

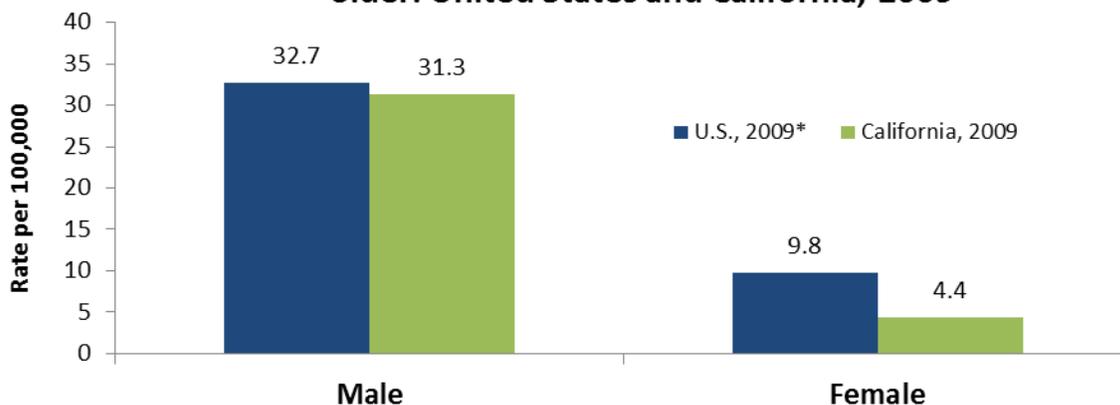
Figure 28. Racial/ethnic distribution of newly diagnosed cases : United States and California, 2009



*Data Source: CDC HIV/AIDS Surveillance report: HIV Infection and AIDS in the United States and Dependent Areas, 2009 (Note: Nine states, including California, are excluded from national statistics)

In order to be compatible with the CDC HIV Surveillance Report for 2009, the rates for gender were examined for those 13 years old and older while the rate comparisons for race/ethnicity included all ages.

Figure 29. Rate of new diagnoses by gender[†], aged 13 years and older: United States and California, 2009

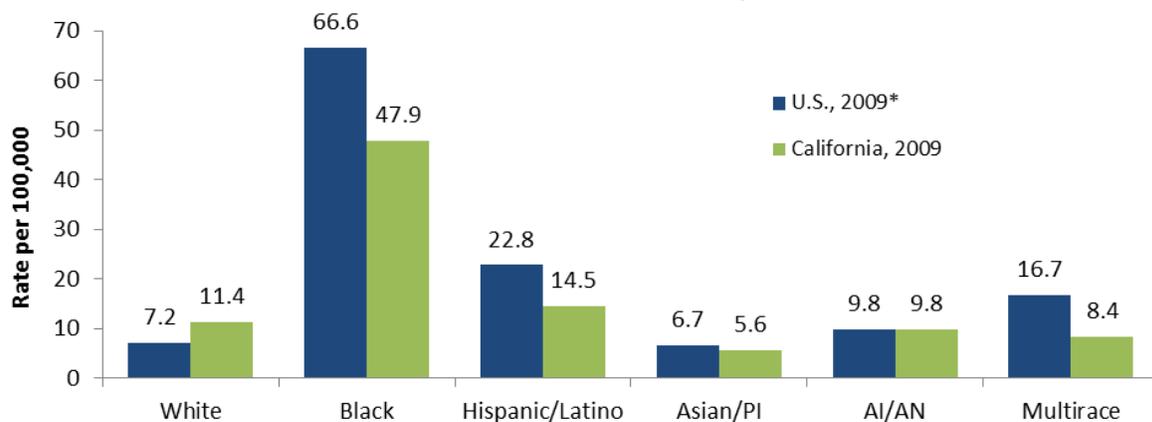


[†]Based on gender at birth therefore transgendered category not included in this graph

*Data Source: CDC HIV/AIDS Surveillance report: HIV Infection and AIDS in the United States and Dependent Areas, 2009 (Note: Nine states, including California, are excluded from national statistics)

Among the population 13 years old and older, California females are diagnosed at a lower rate than females from the rest of the US (4.4 per 100,000 versus 9.8 per 100,000, respectively) while diagnosis rates among males are comparable across both geographic samples (31.3 per 100,000 versus 32.7 per 100,000).

Figure 30. Rate of new diagnoses by race/ethnicity: United States and California, 2009



*Data Source: CDC HIV/AIDS Surveillance report: HIV Infection and AIDS in the United States and Dependent Areas, 2009 (Note: Nine states, including California, are excluded from national statistics)

A comparison among racial and ethnic populations indicates that California rates are lower overall among non-White groups and higher among Whites. Blacks and multi-race Californians are diagnosed at a lower rate than their U.S. counterparts (47.9 per 100,000 versus 66.6 per 100,000 for Blacks and 8.4 per 100,000 versus 16.7 per 100,000 for multi-race, respectively) and are equivalent for American Indian/Alaska Natives (9.8 per 100,000). Conversely, California rates are higher among Whites (11.4 per 100,000 versus 7.2 per 100,000). Of particular note is the Latino rate comparison. While Latinos comprise a much greater proportion of California’s HIV/AIDS cases (38.1 percent versus 17.5 percent), the rate of new diagnoses in the population is actually lower than that of the U.S. statistic (14.5 per 100,000 versus 22.8 per 100,000).

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