1

Epidemiologic Profile

CHAPTER OUTLINE

Chapter 1

Introduction

PURPOSE OF CHAPTER

The purpose of this chapter is to present the epidemiology of HIV and AIDS in San Francisco. Epidemiologic profiles developed for previous San Francisco HIV Prevention Plans focused specifically on data relevant to prevention planning. This integrated profile, in accordance with guidelines for integrated profiles published by the Centers for Disease Control and Prevention (CDC) and the Health Resources and Services Administration (HRSA), has been expanded to meet the needs of both HIV prevention and HIV healthcare services planning.

HOW TO READ THIS CHAPTER

This chapter is organized to answer five core epidemiological questions mandated by the federal government and are described below. To understand the disproportionate effects of AIDS on various demographic groups, focus on Section II, p. 23. For information on HIV indicators and recent trends in HIV indicators, read Section III, p. 43. For information on service utilization, focus on Section IV, p. 49.

Those who wish to obtain epidemiologic information about a specific population can use the index at the back of the Plan.

Although the information in this chapter represents the best available, researchers have not thoroughly investigated all aspects of the local HIV epidemic. For example, there is less research available regarding transpersons and HIV in San Francisco compared with MSM. Therefore, some data should be interpreted with caution. Additional data limitations are presented on pp. 13-14.

DEVELOPMENT OF THE PROFILE – CORE EPIDEMIOLOGIC QUESTIONS

This profile was prepared in accordance with the "Integrated Guidelines for Developing Epidemiologic Profiles" published by the Centers for Disease Control and Prevention (CDC) and the Health Resources and Services Administration (HRSA) in 2004. According to the CDC, an integrated epidemiologic profile for prevention and care should address the following core questions:

1. What are the **demographic characteristics** of the general population in San Francisco? It is important to know the backgrounds of San Francisco residents – their gender, race/ethnicity, age, socioeconomic status, and access to health insurance – in order to understand how HIV and AIDS have impacted various groups.
   Sources of Data: U.S. Census Data, California Health Interview Survey

2. What is the **scope of the HIV/AIDS epidemic** in San Francisco? HIV and AIDS cases can be used to illustrate the overall burden of disease in San Francisco, the disproportionate impact of HIV/AIDS on particular populations, and trends in the epidemic. This information is useful for allocation of prevention and health care resources as well as program planning and implementation.
   Sources of Data: California HIV/AIDS Case Registry, HIV/AIDS surveillance, SFDPH 2006 Consensus Estimates

3. What are the **indicators of risk for HIV infection** in San Francisco? HIV indicators are diseases or conditions known to follow or precede the pattern of the HIV epidemic. In some cases, indicators can be used to predict trends in HIV infection, and they can also serve as markers of risk behaviors that are known to be associated with HIV infection.
   Sources of Data: STI Surveillance Data, National Health Behavioral Surveillance

4. What are the **patterns of service utilization of HIV-positive persons** in San Francisco? Understanding who is and is not accessing medical care services, and why, is important for prioritizing services and planning for outreach and recruitment.
   Sources of Data: HIV/AIDS surveillance, REGGIE System

5. What are the **number and characteristics of persons who know they are HIV-positive but who are not receiving HIV medical care?** Information about individuals living with HIV and not in care (i.e., people who have not had a medical care appointment for HIV in a 12-month period), including possible reasons why they are not accessing care can assist planners in developing strategies to reduce barriers to medical care.
   Sources of Data: HIV/AIDS surveillanc

TERMS & DEFINITIONS

DISPROPORTIONATELY REPRESENTED A population group, such as a racial/ethnic group, makes up a higher percentage of people living with HIV or AIDS compared with their percentage in the overall population.

ENDEMIC A disease persists in a community, without substantially increasing or decreasing over time.

EPIDEMIC The spread of disease is increasing.

EPIDEMIOLOGY The scientific study of disease distribution and the factors that cause diseases to spread in communities.

HIV INCIDENCE Refers to new HIV infections. Incidence can be expressed as the number of new infections in a year, or as the percentage of uninfected individuals who will become infected in a year.

HIV INDICATORS Diseases or conditions known to follow or precede the pattern of the HIV epidemic. Indicators can be used (in some cases) to predict trends in HIV infection, and they can also serve as markers of risk behaviors that are known to be associated with HIV infection.

HIV PREVALENCE Refers to people living with HIV, including people living with AIDS, at any given point in time. Prevalence can be expressed as the number of people living with HIV, but is more often expressed as the percentage of people who are living with HIV within a given population.

UNDER-REPRESENTED A population group, such as a racial/ethnic group, that makes up a lower percentage of people living with HIV.

The Epidemiologic Profile draws on multiple sources of information, including U.S. Census data, the AIDS case registry, other secondary data (e.g., on STIs), original research (e.g., behavioral studies), and estimates arrived at by consensus among researchers. The following are descriptions, strengths, and weaknesses of the data sources used in this chapter.

American Community Survey

All census data presented in this chapter are from the 2008 American Community Survey unless otherwise indicated. The American Community Survey (ACS) is part of the U.S. Census Bureau's decennial census program designed to give communities a snapshot of how they are changing. The ACS is a nationwide survey that collects and produces population and housing information every year instead of every ten years. More information about ACS can be found at http://www.census.gov/acs/www/.

Strengths and Limitations

The census is the most comprehensive source of information about the U.S. population and its characteristics. However, vulnerable and marginalized populations, such as homeless individuals and people living in poverty, may be undercounted. In addition, transpersons are not counted. The census does not collect information on behavioral risk populations; therefore, we do not know, for example, how many MSM live in San Francisco. Finally, the 2000 census collected racial/ethnic information in a way that allowed individuals to more fully represent their identities than in previous censuses. Therefore, the data can be presented in many ways, not just the way it is presented in this chapter.

AIDS Case Registry Data

An AIDS case registry is kept by each public health jurisdiction and contains basic demographic and mode of transmission information about those diagnosed with AIDS. Data on persons living with AIDS (PLWA) and recent AIDS cases is drawn from this source.

Strengths and Limitations

The AIDS Case Registry is the most complete source of data available regarding PLWA in San Francisco. Nevertheless, some groups may be under-represented in the AIDS case registry, such as Native Americans (e.g., some Native Americans have Spanish surnames and may be mistakenly classified as Latino) and transpersons (some transperson PLWA may be mistakenly classified as male or female, which may be in part due to reluctance to disclose identify for fear of discrimination in receiving treatment). Finally, AIDS case data is not a good indicator for trends in new HIV infections, as PLWA likely acquired HIV 5 to 15 years prior to their AIDS diagnosis. Therefore, HIV trend data, to the extent that it is available, must be taken into consideration as well.

HIV Case Names Reporting Registry Data

In April 2006, name-based HIV case reporting was implemented in the State of California. Data on persons living with HIV (PLWH) and recent HIV cases is available through this source.

Strengths and Limitations

As with the AIDS Case Registry, some groups may be under-represented such as Native Americans and transpersons.

Ryan White CARE Act Data Report (CADR)

The Ryan White CARE Act data provides demographic information and service utilization data on all Ryan White CARE Act clients. The HIV healthcare services reporting system in San Francisco is called the REGGIE System.

Strengths and Limitations

CADR is useful for obtaining aggregate demographic information on the total number of unduplicated clients served by providers in a region. It also provides utilization data on medical and

support services that are both funded and non-funded by the Ryan White CARE Act. Service utilization-based data, while providing in-depth information, is limited because it does not capture information about individuals who do not seek services. Individuals not connected to the service system may be affected even more strongly by HIV/AIDS and other health issues, as they may not have access to health care due to lack of insurance or other factors. Therefore, this data may be biased.

Other Secondary Data

Existing data on STIs and other related information was assembled from various government departments. This data is collected on an ongoing basis and is generally based on information derived from service utilization (e.g., number of individuals diagnosed with STIs). Much of this data appears in Section III in the tables that depict indicators of HIV infection for the various behavior risk populations (BRPs). (HIV indicators are diseases or conditions known to public health officials to follow the pattern of the HIV epidemic.)

Strengths and Limitations

As with any service utilization-based data, one of the limitations is that it does not capture information about individuals who do not seek services. Furthermore, some indicator data is very good for predicting HIV infection (e.g., STIs), but other indicator data is less reliable.

Original Research

HIV prevalence, HIV incidence, behavioral studies, and needs assessments either published in peer-reviewed journals or unpublished, provide information about how HIV and AIDS are affecting various populations in San Francisco.

Strengths and Limitations

These studies provide a great deal of detailed information about HIV and AIDS in specific populations. Each study can be biased due to limitations related to sample size, sampling method, what issues the study examines or does not examine, or other factors. Each study must be assessed for validity on its own. Finally, special research studies are usually limited to one time period so they do not provide information on trends over time. The studies used in this chapter were based on sound science, and their strengths outweigh their limitations.

HIV Consensus Estimates

In 2006, the SFDPH used the consensus process to gather data from researchers, epidemiologists, and HIV/AIDS experts. These experts submitted and discussed findings from all the HIV data sources just described, as well as others. They used the range of findings in these studies to estimate HIV prevalence and incidence in different populations.

Strengths and Limitations

The incidence estimates derived from this process are considered the best available and most comprehensive because they draw on a number of data sources, taking into account their strengths and limitations. These are the estimates upon which San Francisco's priority populations are determined. Despite their strengths, these figures are only estimates. Further, the existing estimates are for 2006, although researchers believe they are valid for 2007, 2008, and 2009. HIV prevalence and incidence estimates will be updated for upcoming years as additional data sources are available. As of this writing, an interim estimate is expected in 2010.

SECTION I

Demographic Characteristics of San Francisco[1]

Core Question 1:

What are the demographic characteristics of the general population in San Francisco?

San Francisco Demographic Highlights

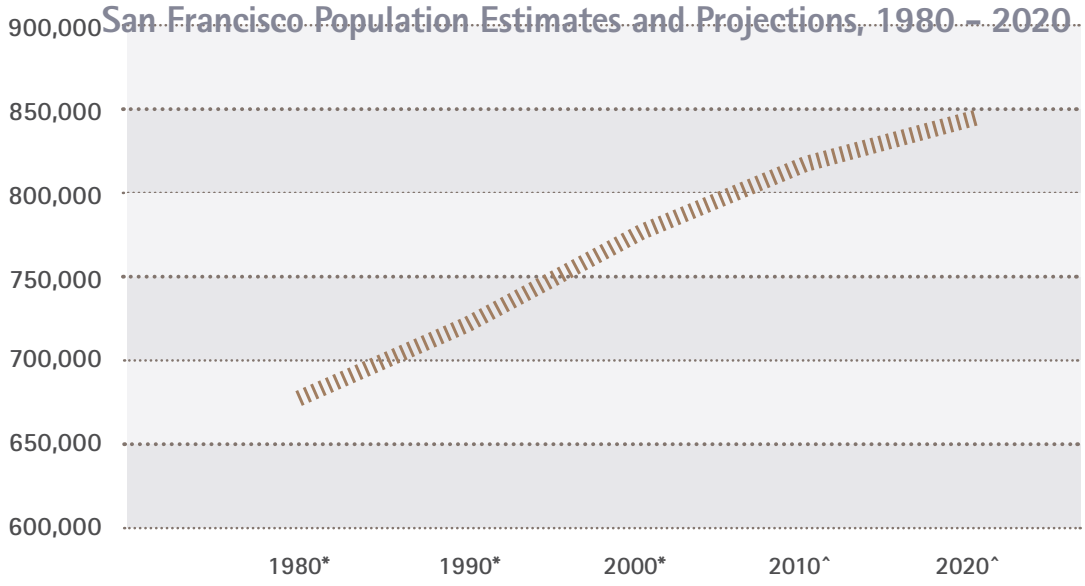
- San Francisco is the fourth largest city in California and the fourteenth largest in the nation, with an estimated population of 808,976 in 2008.
- San Francisco's population is nearly equally divided between males and females.
- Whites and Asians make up the largest racial/ethnic groups in San Francisco. More than half of the city's residents are people of color.
- Over three-quarters of San Francisco residents are above age 25, and over half are between ages 25 and 54. The median age is 40.
- Close to half of the city's population speaks a language other than English at home and over a third of San Francisco residents were born outside of the United States.
- Over 80% of the population has a high school diploma or higher, and half of the city's residents have a Bachelor's degree or higher.
- Approximately 11% of San Francisco residents are below the poverty line. The median annual household income is $73,798.

1 Wherever possible, demographic data are pulled from the U.S. Census Bureau 2008 American Community Survey. It should be noted that not all demographic data includes all San Francisco residents; therefore, totals in some exhibits may vary. In select cases, data are used from the California Department of Finance and the 2007 California Health Interview Survey. Please see sources cited after each individual data table.

POPULATION

As shown in Exhibit 1, San Francisco's population has grown steadily since 1980, with the U.S. Census Bureau estimating a population of 808,976 in 2008. The city's population is expected to increase through 2020, as projected by the California Department of Finance.

EXHIBIT 1



*Source: *U.S. Census Bureau Population Estimates; ^California Department of Finance Population Projections*

GENDER

As shown in Exhibit 2, San Francisco's population is nearly equally split between males and females. While the U.S. Census does not capture the number of transpersons living in the city, the size of the trans population in San Francisco is estimated at 2,511, which includes 1,883 transfemales and 628 transmales. This estimate is based on McFarland 2007 for transfemales and a study in the 1990s that found that there is about a 3 to 1 ratio of transfemales to transmales (Clements-Nolle et al 2001). It is important to note that the estimated number of transfemales has fluctuated since the study and it is uncertain whether or not this affects the estimates of the transmale population size.

EXHIBIT 2

Gender Identification Among San Francisco Population

GENDER	NUMBER	PERCENT
Male	412,449	51%
Female	396,527	49%
TOTAL	808,976	100%
Transpeople*	2,511*	≈0.3%

Source: U.S. Census Bureau, 2008 American Community Survey

**Trans population is an estimate based on McFarland 2007 and a study conducted in the 1990s that found a 3:1 ratio between transfemales and transmales (Clements-Nolle et al 2001). This estimate is not based on the U.S. Census Bureau.*

RACE/ETHNICITY

Exhibit 3 illustrates the racial breakdown of the San Francisco population. The largest racial groups are Whites (45%) and Asians (31%), followed by Latinos (14%) and African Americans (6%). Within the Asian population, the largest ethnic groups are Chinese (64%) and Filipino (14%) (Exhibit 4). Among the Hispanic/Latino population, the largest ethnic groups are Mexican (58%) and Central American populations (24%) (Exhibit 5). Of the 3% of the population that reported two or more races (multiracial), approximately one-third identified as White and Asian, 14% identified as White and African American/Black and 11% identified as White and American Indian/Alaska Native.

EXHIBIT 3

Racial Identification Among San Francisco Population

RACE	NUMBER	PERCENT*
White/Caucasian	366,491	45%
Asian**	251,121	31%
Latino/Hispanic**	114,303	14%
African American/Black	48,268	6%
Multiracial	20,825	3%
Native Hawaiian and Other Pacific Islander***	3,665	1%
Native American and Alaskan Native***	1,418	0.2%
Other	2,885	0.4%
TOTAL	808,976	100%

Source: U.S. Census Bureau, 2008 American Community Survey

**Percent does not total to 100 due to rounding.*

***See ethnic breakdown in the following tables.*

****Data by ethnicity cannot be displayed because the number of sample cases is too small.*

EXHIBIT 4

Ethnic Identification Among San Francisco's Asian and Pacific Islander Population

ETHNICITY	NUMBER	PERCENT*
Chinese (except Taiwanese)	161,912	64%
Filipino	35,543	14%
Vietnamese	16,825	7%
Japanese	9,386	4%
Other Asian	8,046	3%
Korean	7,597	3%
Asian Indian	6,655	3%
Other Asian, not specified	2,023	1%
Cambodian	961	0.4%
Thai	890	0.4%
Taiwanese	833	0.3%
Pakistani	778	0.3%
Laotian	342	0.1%
Hmong	173	0.1%
Indonesian	132	0.1%
Sri Lankan	81	0%
Malaysian	41	0%
Bangladeshi	0	0%
TOTAL	252,218	100%

Source: U.S. Census Bureau, 2008 American Community Survey

**Percent does not total to 100 due to rounding.*

EXHIBIT 5 Ethnic Identification Among San Francisco's Hispanic/Latino Population

ETHNICITY	NUMBER	PERCENT*
Mexican	65,744	58%
Puerto Rican	4,947	4%
Cuban	1,424	1%
Dominican (Dominican Republic)	203	0.2%
Central American:	27,577	24%
Salvadoran	*8,936*	*32%*
Nicaraguan	*8,347*	*30%*
Guatemalan	*6,892*	*25%*
Honduran	*1,587*	*6%*
Costa Rican	*1,365*	*5%*
Other Central American	274	1%
Panamanian	*176*	*1%*
South American:	7,112	6%
Peruvian	*2,561*	*36%*
Colombian	*1,577*	*22%*
Chilean	*1,194*	*17%*
Venezuelan	*698*	*10%*
Argentinean	*399*	*6%*
Ecuadorian	*392*	*6%*
Other South American	151	2%
Bolivian	*140*	*2%*
Other Hispanic or Latino:	7,296	6%
Spaniard	*3,076*	*42%*
All other Hispanic or Latino	*2,712*	*37%*
Spanish	*1,414*	*19%*
Spanish American	*94*	*1%*
TOTAL	114,303	100%

Source: U.S. Census Bureau, 2008 American Community Survey

**Percent does not total to 100 due to rounding.*

AGE

Exhibit 6 shows that more than three quarters of San Francisco residents are above age 25 and over half are between the ages of 25 and 54. The median age in San Francisco is 40 years.

EXHIBIT 6

Age of San Francisco Population

AGE RANGE	NUMBER	PERCENT*
0 to 19 years	134,400	17%
20 to 24 years	46,634	6%
25 to 34 years	125,891	16%
35 to 44 years	168,468	21%
45 to 54 years	121,355	15%
55 to 59 years	52,032	6%
60 to 64 years	40,721	5%
65 to 74 years	55,584	7%
75+ years	63,891	8%
TOTAL	808,976	100%

Source: U.S. Census Bureau, 2008 American Community Survey

**Percent does not total to 100 due to rounding.*

PRIMARY LANGUAGE

Close to half of the city's population (44%) speaks a language other than English at home (Exhibit 7). About a quarter of the city's residents speak Asian and Pacific Islander languages and 11% speak Spanish.

The most common Asian languages spoken in San Francisco are Cantonese and Tagalog. According to U.S. Census data, of those that speak Asian and Pacific Islander languages at home, over 60% speak English less than "very well" – a number that can be used to estimate the percentage of monolingual speakers. Of those who speak Spanish at home, close to half (47%) speak English less than "very well."

EXHIBIT 7

Language Spoken at Home for San Francisco Population Over Age 5

PRIMARY LANGUAGE	NUMBER	PERCENT
English only	427,373	56%
Language other than English	339,411	44%
Asian and Pacific Islander languages	*196,734*	*58%*
Spanish	*85,626*	*25%*
Other Indo-European languages	*51,337*	*15%*
Other languages	*5,714*	*2%*
TOTAL	766,784	100%

Source: U.S. Census Bureau, 2008 American Community Survey

Language Needs for City Services

The City and County of San Francisco provides language services to ensure access to city services and programs for clients with limited English proficiency. In 2008, 8,849 calls were made to the city's language line that provides access to on-demand telephone interpreters. The top five frequent languages requested were Spanish (35%), Cantonese (31%), Mandarin (8%), Vietnamese (8%), and Russian (5%).

COUNTRY OF ORIGIN

Over a third of San Francisco residents were born in another country. Of those, over 60% were born in an Asian country, nearly 20% were born in a Latin American country (Mexico, South and Central America and Islands of the Caribbean), and 15% were born in a European country (Exhibit 8).

Of the San Francisco residents born in an Asian country, most are from Eastern or Southeastern Asia. Of those born in Latin America, most are from Central American countries. Of those born in an African country, the majority are from Western or Eastern Africa.

EXHIBIT 8

Place of Birth for San Francisco's Foreign-born Population

PLACE OF BIRTH	NUMBER	PERCENT
Born in U.S.	525,683	65%
Foreign born	283,293	35%
Asia	*174,030*	*61%*
Latin America (Mexico, South and Central America and Islands of the Caribbean)	*53,358*	*19%*
Europe	*43,295*	*15%*
Canada	*5,145*	*2%*
Africa	*3,653*	*1%*
*Oceania**	*3,812*	*1%*
TOTAL	808,976	100%

Source: U.S. Census Bureau, 2008 American Community Survey

**Oceania refers to island groups in the South Pacific that include Polynesia, Mircronesia, Melanesia, and Australia.*

LEVEL OF EDUCATION

As shown in Exhibit 9, the majority of San Francisco residents have attained a high school education or higher (84%) and 51% of the population possess a Bachelor's degree or higher.

EXHIBIT 9

Educational Attainment of San Francisco Population Over Age 25

EDUCATION LEVEL	NUMBER	PERCENT
Less than 9th grade	56,139	9%
9th to 12th grade, no diploma	43,364	7%
High school graduate (includes equivalency)	87,683	14%
Some college, no degree	85,304	14%
Associate's degree	33,859	5%
Bachelor's degree	191,261	30%
Graduate or professional degree	130,332	21%
TOTAL	627,942	100%

Source: U.S. Census Bureau, 2008 American Community Survey

INCOME AND POVERTY STATUS

Exhibit 10 shows the annual household income of San Francisco residents. Approximately 64% of San Francisco households make over $50,000 a year and nearly half of all households (49%) make over $75,000 a year. However, about 20% of households make less than $25,000 per year. The median household income is $73,798. For a detailed discussion of income and poverty as important cofactors of HIV, see the Community Assessment Chapter, pp. 60-147.

EXHIBIT 10

Annual Household Income of San Francisco Population

ANNUAL HOUSEHOLD INCOME	NUMBER	PERCENT*
Less than $10,000	22,633	7%
$10,000 to $14,999	18,639	6%
$15,000 to $24,999	25,587	8%
$25,000 to $34,999	17,362	5%
$35,000 to $49,999	33,011	10%
$50,000 to $74,999	46,617	14%
$75,000 to $99,999	36,762	11%
$100,000 to $149,999	49,511	15%
$150,000 to $199,999	27,412	9%
$200,000 or more	45,805	14%
TOTAL	323,339	100%

Source: U.S. Census Bureau, 2008 American Community Survey

**Percent does not total to 100 due to rounding.*

Approximately 17% of San Franciscans – 132,030 people live below the poverty level. Exhibit 11 illustrates the number of people at different percentages of the federal poverty level.

EXHIBIT 11

Poverty Status of San Francisco Residents

ALL INDIVIDUALS BELOW:	NUMBER	PERCENT*
50% of poverty level	43,876	6%
100% of poverty level	88,154	11%
125% of poverty level	125,135	16%
150% of poverty level	152,301	19%
185% of poverty level	193,309	24%
200% of poverty level	206,190	26%

Source: U.S. Census Bureau, 2008 American Community Survey

**Percent does not total to 100 due to rounding.*

HEALTH INSURANCE STATUS

Data for this section was obtained from the 2007 California Health Interview Survey (CHIS), the largest state health survey in the U.S. CHIS provides a picture of the health and health care needs of California's diverse population. Administered every two years through a random-dial telephone survey, participants are asked about a wide range of health topics.

As shown in Exhibit 12, 92% of San Franciscans have some type of health insurance. Nearly two-thirds of insured individuals (63%) have employment-based health insurance. The next most common forms of health insurance coverage are Medicare in combination with other health insurance (8%); Medi-Cal (7%); private insurance (6%); Medicare and Medi-Cal together (3%); and Medicare only (2%).

Healthy San Francisco

- A portion of San Franciscans who are uninsured are accessing medical care services through the local initiative Healthy San Francisco. Healthy San Francisco enables residents to access affordable medical care and preventive care through a network of SFDPH clinics, community-based clinics, and private providers.
- Through Healthy San Francisco (HSF), participants are assigned a Medical Home and a primary physician. Participants also have access to specialty care, urgent and emergency care, laboratory, inpatient hospitalization, radiology, and pharmacy services.
- As of October 2008, more than 32,000 uninsured residents have enrolled in the program. More information about HSF is available online (http://healthysanfrancisco.org/).

EXHIBIT 12

Type of Health Insurance Coverage

INSURANCE COVERAGE	NUMBER	PERCENT
Uninsured	63,000	8%
Insured	726,000	92%
Employment-based	*493,000*	*63%*
Medicare & Others	*61,000*	*8%*
Medi-Cal	*58,000*	*7%*
Privately purchased	*46,000*	*6%*
Medicare & Medi-Cal	*27,000*	*3%*
Medicare only	*17,000*	*2%*
*Healthy Families/CHIP***	*14,000*	*2%*
*Other public**	*11,000*	*1%*
TOTAL	789,000	100%

Source: 2007 California Health Interview Survey

**Statistically unstable data.*

Core Question 2:

What is the scope of the HIV/AIDS epidemic in San Francisco?

HIV and AIDS in San Francisco:* An Overview

- San Francisco has had 28,114 people diagnosed with AIDS since the beginning of the epidemic to December 31, 2008, the third largest number after New York City and Los Angeles.
- As of December 2008, 15,757 individuals were living with HIV/AIDS in San Francisco, 9,248 of which were living AIDS cases, and 6,509 of which were living HIV non-AIDS cases.
- In California, San Francisco County ranks second to Los Angeles County in the number of people living with AIDS (PLWA) with 14% of California residents living with AIDS residing in San Francisco (Exhibit 18).
- Living HIV/AIDS cases are primarily concentrated in the Castro, Tenderloin, Western Addition, and Mission neighborhoods of San Francisco.
- The highest proportion of people living with HIV/AIDS (PLWHA) in San Francisco is male, White, between the ages of 40-59, and MSM (including MSM-IDU).
- Compared with their numbers in the general population, African Americans and Whites are disproportionately affected by HIV/AIDS. African Americans make up 6% of San Francisco's population, but represent 14% of both people living with HIV (PLWH) and PLWA with over 40% being MSM. Whites make up 45% of the city's population but represent 63% of PLWH and 65% of PLWA.
- Since the beginning of the epidemic, a total of 18,866 deaths occurred among all persons diagnosed with AIDS in San Francisco. In 2008, a total of 160 deaths occurred among people with AIDS.
- In 2008, a total of 7,046 unduplicated clients reported accessing a number of HIV services including client advocacy services (n=3,587, 51%), case management (n=2,792, 40%), and medical services (n=2,700, 38%).
- Between 2005 and 2007, a total of 1,884 individuals were newly diagnosed with HIV at SFDPH-supported testing sites. Among these, it is estimated that 84% confirmed entry into medical care and received a CD4 count within 12 months of diagnosis.

** Terms and acronyms are used according to data sources.*

Cumulative AIDS Cases, 1980–2008: 28,114

Cumulative AIDS Cases Nationally and Locally

In California, San Francisco County ranks second to Los Angeles County in the number of PLWA (Exhibit 13) and among California counties, San Francisco has had the highest number of people diagnosed with AIDS per 100,000 population since the epidemic began. Nationally, San Francisco ranks third in the cumulative number of AIDS cases among metropolitan areas.

EXHIBIT 13

California Counties with the Highest Number of Cumulative AIDS Cases, 1983–2008

COUNTY	TOTAL AIDS CASES REPORTED	PERCENT OF ALL CASES IN CALIFORNIA
Los Angeles†	54,805	36%
San Francisco†*	28,114	18%
San Diego†	13,813	9%
Orange	7,404	5%
Alameda	7,573	5%
Riverside	5,608	4%
Santa Clara	4,073	3%
San Bernardino	3,799	2%
Sacramento	3,704	2%
Kern	1,234	1%
SUBTOTAL	130,127	85%
TOTAL CALIFORNIA	152,318	-

Source: California Department of Public Health, Office of AIDS, HIV/AIDS Case Registry Section, data as of December 31, 2008, and San Francisco Department of Public Health, HIV/AIDS Epidemiology Annual Report 2008

†Indicates an Eligible Metropolitan Area (EMA). An EMA is an area identified by the U.S. Department of Health and Human Services to have been severely affected by HIV/AIDS. EMAs must have reported more than 2,000 AIDS cases in the most recent 5 years and have a population of at least 50,000.

**This number is for San Francisco County only and is not the total for the San Francisco Eligible Metropolitan Area which includes San Mateo and Marin counties.*

Cumulative AIDS Cases by Gender, Race/Ethnicity, and Mode of Transmission

The following section presents information on the cumulative number of HIV/AIDS cases by gender, race/ethnicity, age, and by mode of transmission. As of December 31, 2008, a cumulative total of 28,114 San Francisco residents were diagnosed with AIDS since the beginning of the epidemic. Men represent 94% of all reported AIDS cases since the epidemic began and women represent 4% of all AIDS cases in San Francisco. Transpersons make up 1% of all AIDS cases (Exhibit 14).

EXHIBIT 14

Cumulative AIDS Cases by Gender*

	REPORTED AIDS CASES (1980–2008)	
GENDER	NUMBER	PERCENT
Male	26,563	94%
Female	1,160	4%
Transfemales	386	1%
Transmales	<5	<1%
TOTAL	28,114	100%

Source: San Francisco Department of Public Health, HIV/AIDS Epidemiology Section, special data request, 2008

**Data are reported through March 1, 2009 for cases diagnosed through December 2008.*

Whites make up the majority of all reported AIDS cases through December 2008. African Americans represent 13% of AIDS cases followed by Latinos/Hispanics with 12% of AIDS cases (Exhibit 15). The highest percentage of AIDS cases reported through December 2008 is among 30-39 year olds (45%) followed by 40-49 year olds (32%) (Exhibit 16).

EXHIBIT 15

Cumulative AIDS Cases by Race/Ethnicity*

	REPORTED AIDS CASES (1980–2008)	
RACE/ETHNICITY	NUMBER	PERCENT
White/Caucasian	20,090	71%
African American/Black	3,610	13%
Latino/Hispanic	3,305	12%
Asian and Pacific Islander	918	3%
Native American/Alaskan Native	149	1%
Multiracial/Other/Unknown	42	<1%
TOTAL	28,114	100%

Source: San Francisco Department of Public Health, HIV/AIDS Epidemiology Annual Report 2008 and San Francisco Department of Public Health, HIV/AIDS Epidemiology Section, special data request, 2008

**Data are reported through March 1, 2009 for cases diagnosed through December 2008.*

EXHIBIT 16 Cumulative AIDS Cases by Age*

	REPORTED AIDS CASES (1980–2008)	
AGE	NUMBER	PERCENT**
0–19	75	<1%
20–24	574	2%
25–29	2,649	9%
30–39	12,511	45%
40–49	8,875	32%
50–59	2,712	10%
60+	718	3%
TOTAL	28,114	100%

Source: San Francisco Department of Public Health, HIV/AIDS Epidemiology Section, special data request, 2008

**Data are reported through March 1, 2009 for cases diagnosed through December 2008.*

***Percents do not total to 100 due to rounding.*

Mode of transmission for cumulative AIDS cases in San Francisco differs by race/ethnicity and gender. Among men, the most common mode of transmission for all AIDS cases through December 2008 is MSM within all race/ethnicity groups. MSM-IDU accounts for the second most frequent mode of transmission for all race/ethnicity groups except African Americans. Among African Americans diagnosed with AIDS, injection drug use among non-MSM (including lesbians or women who have sex with women) is the second leading mode of transmission (Exhibit 17).

IDU accounts for the majority of female AIDS cases for all race/ethnic groups except Asian and Pacific Islanders. The most frequent mode of transmission for Asian and Pacific Islanders is heterosexual contact followed by IDU (Exhibit 17).

As with female AIDS cases, IDU was also a frequent mode of transmission among transfemale AIDS cases, particularly for Whites (56%), African Americans (69%), and Latinos (44%).

EXHIBIT 17 **Cumulative AIDS Cases by Gender, Mode of Transmission, and Race/Ethnicity, 1980–2008**

	WHITE		AFRICAN AMERICAN		LATINO		ASIAN AND PACIFIC ISLANDER		NATIVE AMERICAN	
MALE	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
MSM	16,039	82 %	1,538	52%	2,375	78%	680	84%	69	52%
IDU (Non-MSM)	515	3 %	687	23%	167	6%	25	3%	10	8%
MSM-IDU	2,893	15 %	594	20%	382	13%	61	7%	49	37%
Heterosexual	32	<1%	54	2%	31	1%	11	1%	2	2%
Transfusion/ Hemophilia	50	<1%	17	1%	22	1%	14	2%	0	0%
Other/Unidentified	67	<1%	57	2%	58	2%	23	3%	2	2%
SUBTOTAL	19,596		2,947		3,035		814		132	
FEMALE										
IDU	252	66%	379	71%	72	46%	21	30%	11	85%
Heterosexual	84	22%	120	22%	61	39%	31	45%	2	15%
Transfusion/ Hemophilia	29	8%	13	2%	10	6%	11	16%	0	0%
Other/Unidentified	18	5%	25	5%	12	8%	6	9%	0	0%
SUBTOTAL	383		537		155		69		13	
TRANSFEMALE										
IDU	62	56%	87	69%	50	44%	11	39%	#	#
Non-IDU	48	44%	39	31%	64	56%	24	61%	#	#
SUBTOTAL	110		126		114		35		#	#

Source: San Francisco Department of Public Health, HIV/AIDS Epidemiology Annual Report 2008

 # Data not released due to small population size.

PEOPLE LIVING WITH HIV/AIDS

HIV Prevalence, 2008: 6,509

AIDS Prevalence, 2008: 9,248

As of December 2008, 15,757 individuals were living with HIV/AIDS in San Francisco, 9,248 of which were living with AIDS, and 6,509 of which were living with HIV non-AIDS. This includes both code-based and name-based HIV cases. The total number of PLWHA increased from 13,649 in 2002, a possible indicator that persons with HIV/AIDS may be living longer due to antiretroviral treatments.

People Living With AIDS in California and Citywide

As shown in Exhibit 18, San Francisco County ranks second to Los Angeles County in the number of people living with AIDS (PLWA), with 14% of California residents living with AIDS residing in San Francisco. Nearly half of PLWA in the nine Bay Area counties live in San Francisco, and almost a third (27%) of all PLWA in California live in the Bay Area (Exhibit 19).

EXHIBIT 18 California Counties with the Highest Number of PLWA, 2008

COUNTY	NUMBER OF PERSONS LIVING WITH AIDS	PERCENT OF ALL CASES IN CALIFORNIA
Los Angeles†	23,729	36%
San Francisco†*	9,248	14%
San Diego†	6,678	10%
Orange	3,812	6%
Alameda	3,418	5%
Riverside	3,185	5%
Santa Clara	1,966	3%
San Bernardino	1,759	3%
Sacramento	1,685	3%
Kern	1,234	2%
SUBTOTAL	56,714	85%
TOTAL CALIFORNIA	66,360	-

Source: California Department of Public Health, Office of AIDS, HIV/AIDS Case Registry Section, data as of December 31, 2008 and San Francisco Department of Public Health, HIV/AIDS Epidemiology Annual Report 2008

†Indicates an Eligible Metropolitan Area (EMA). An EMA is an area identified by the U.S. Department of Health and Human Services to have been severely affected by HIV/AIDS. EMAs must have reported more than 2,000 AIDS cases in the most recent 5 years and have a population of at least 50,000.

**This number is for San Francisco County only and is not the total for the San Francisco Eligible Metropolitan Area which includes San Mateo and Marin counties.*

EXHIBIT 19 PLWA in the San Francisco Bay Area, 2008

COUNTY	NUMBER OF PERSONS LIVING WITH AIDS	PERCENT OF ALL CASES IN BAY AREA
San Francisco**	9,248	48%
Alameda	3,418	18%
Santa Clara	1,966	10%
Contra Costa	1,095	6%
San Mateo	887	5%
Marin	662	3%
Sonoma	877	5%
Solano	823	4%
Napa	96	<1%
TOTAL SAN FRANCISCO BAY AREA	19,072	27%*
TOTAL CALIFORNIA	66,360	100%

Source: California Department of Public Health, Office of AIDS, HIV/AIDS Case Registry Section, data as of December 31, 2008

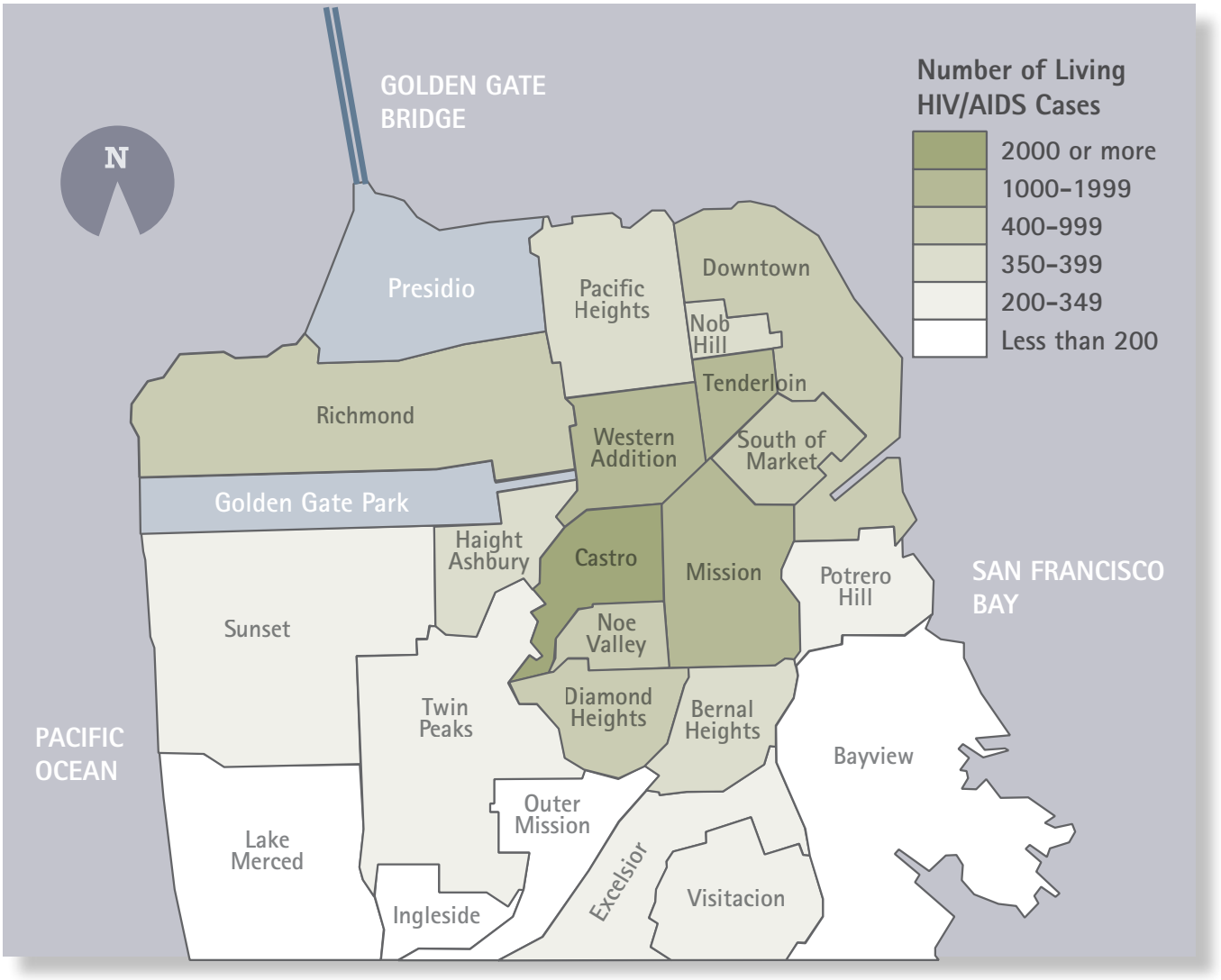
**This is the percent of all California AIDS cases that are among people living in the Bay Area.*

***This number is for San Francisco County only and is not the total for the San Francisco Eligible Metropolitan Area which includes San Mateo and Marin counties.*

Geographic Distribution of HIV/AIDS

Exhibit 20 illustrates the geographic distribution of persons living with HIV/AIDS in San Francisco by neighborhood. People living with HIV/AIDS are primarily concentrated in the Castro, Mission, Western Addition, and Tenderloin.

EXHIBIT 20 **People Living with HIV/AIDS by San Francisco Neighborhood, 2008***



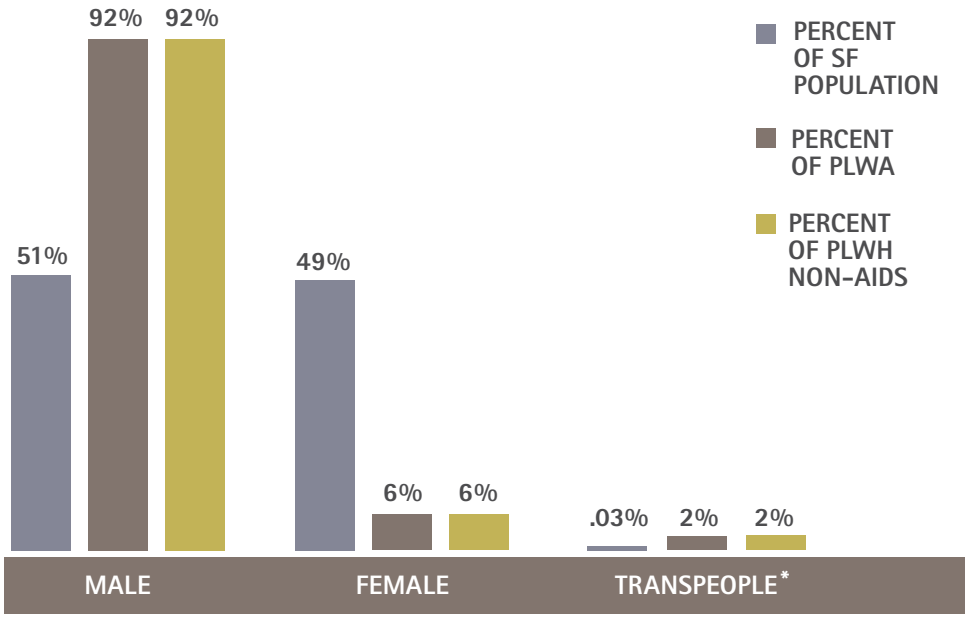
Source: San Francisco Department of Public Health, HIV/AIDS Epidemiology Annual Report 2008

**Data includes persons who were San Francisco residents at the time of their HIV/AIDS diagnosis and not known to have died by the end of 2008.*

People Living with HIV/AIDS by Gender and Race/Ethnicity

Although men and women comprise equal proportions of the population in San Francisco, men represent 92% of both people living with AIDS (PLWA) and people living with HIV (PLWH). Women represent 6% of both PLWA and PLWH. Transpersons, a majority of whom are transfemales, make up approximately .03% of the general population, but disproportionately represent 2% of both PLWA and PLWH (Exhibit 21).

EXHIBIT 21 **PLWA and PLWH non-AIDS by Gender, 2008**

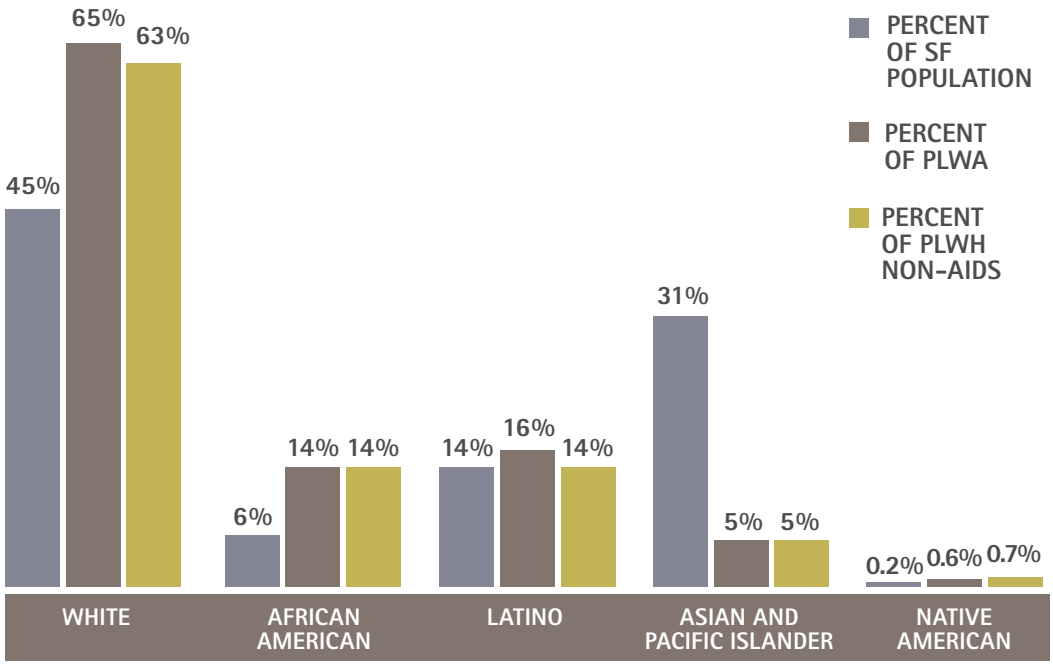


Source: San Francisco Department of Public Health, HIV/AIDS Epidemiology Annual Report 2008

**Transpopulation is an estimate based on McFarland 2007 and a study conducted in the 1990s that found a 3:1 ratio between transfemales and transmales (Clements-Nolle et al 2001). This estimate is not based on the U.S. Census Bureau.*

All racial/ethnic groups in San Francisco are affected by HIV and AIDS. However, African Americans and Whites continue to be disproportionately affected compared with their numbers in the general population (Exhibit 22). African Americans make up 6% of San Francisco's population but represent 14% of both PLWH and PLWA in San Francisco. Whites make up 45% of the city's population but represent 63% of PLWH and 65% of PLWA. The number of Latinos living with HIV and AIDS is proportionate to their numbers in the general San Francisco population. They comprise 14% of the population and 14% of PLWH and 16% of PLWA (Exhibit 22). Asian and Pacific Islanders represent 31% of the general population, but they make up only 5% of both PLWH and PLWA. Native Americans make up only 0.2% of San Francisco's population and a very small proportion of PLWH and PLWA. Native Americans might be disproportionately affected by HIV compared with their numbers in the general population in San Francisco. However, this is difficult to assess over time due to small numbers.

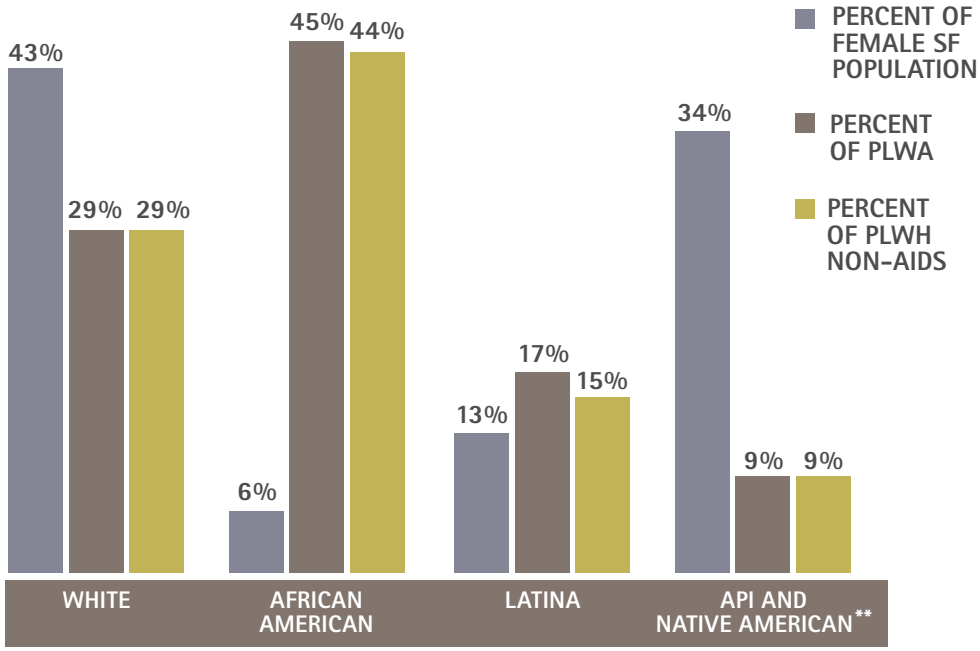
EXHIBIT 22 PLWA and PLWH non-AIDS by Race/Ethnicity, 2008



Source: San Francisco Department of Public Health, HIV/AIDS Epidemiology Annual Report 2008 and U.S. Census Bureau, 2008 American Community Survey

As shown in Exhibit 23, a large proportion of female PLWH and PLWA are African American, followed by White (both at 29%) and Latino (17% and 15%). As in the general population, African American women are dramatically affected by HIV and AIDS compared with their population in the city. Although African American women make up only 6% of the general population, 45% of female PLWA and 44% of PLWH are African American.

EXHIBIT 23 Race/Ethnicity of Female PLWA and PLWH non-AIDS, 2008*



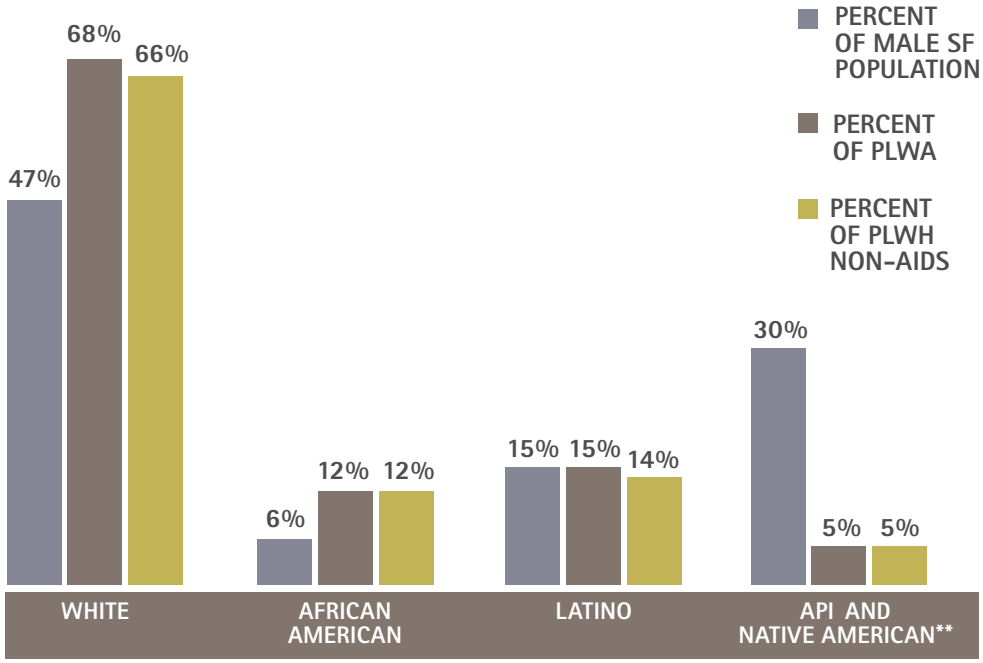
Source: San Francisco Department of Public Health, HIV/AIDS Epidemiology Annual Report 2008 and U.S. Census Bureau, 2008 American Community Survey

**Other race/ethnicity categories are not included in the exhibit due to small population size.*

***Data for Native American by gender are combined with Asian and Pacific Islander due to small population size.*

Among men, the majority of PLWH and PLWA are White (68% and 66% respectively). Latinos make up the second largest ethnic group for both male PLWH (14%) and PLWA (15%) (Exhibit 24). African Americans make up only 6% of the male population in San Francisco. Despite their small number in the population, African American men represent 12% of all male PLWH and PLWA.

EXHIBIT 24 Race/Ethnicity of Male PLWA and PLWH non-AIDS, 2008*



Source: San Francisco Department of Public Health, HIV/AIDS Epidemiology Annual Report 2008 and U.S. Census Bureau, 2008 American Community Survey

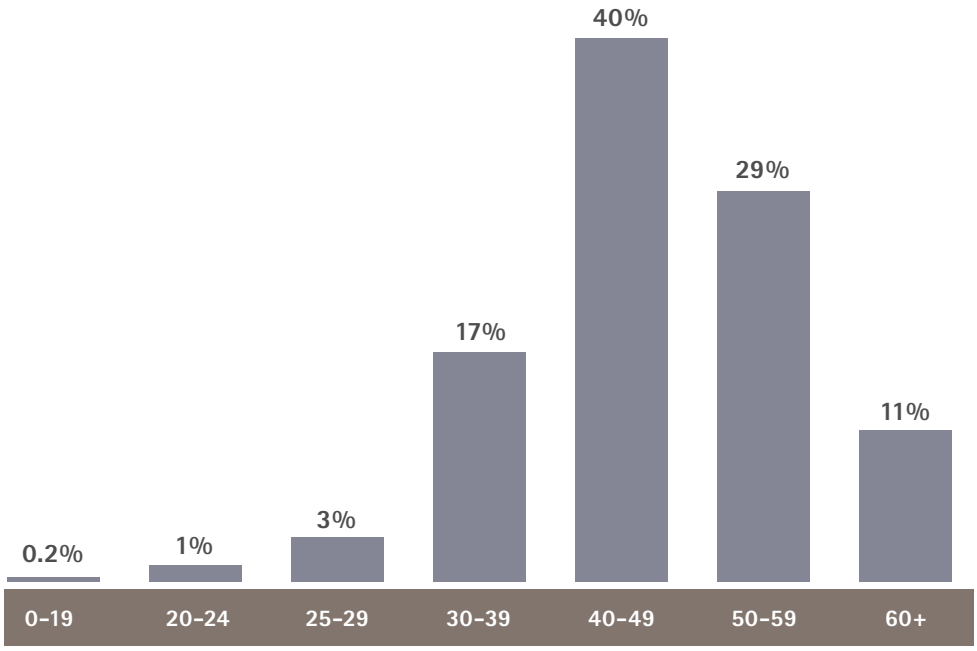
**Other race/ethnicity categories are not included in the exhibit due to small population size.*

***Data for Native American by gender are combined with Asian and Pacific Islander due to small population size.*

People Living with HIV/AIDS by Age

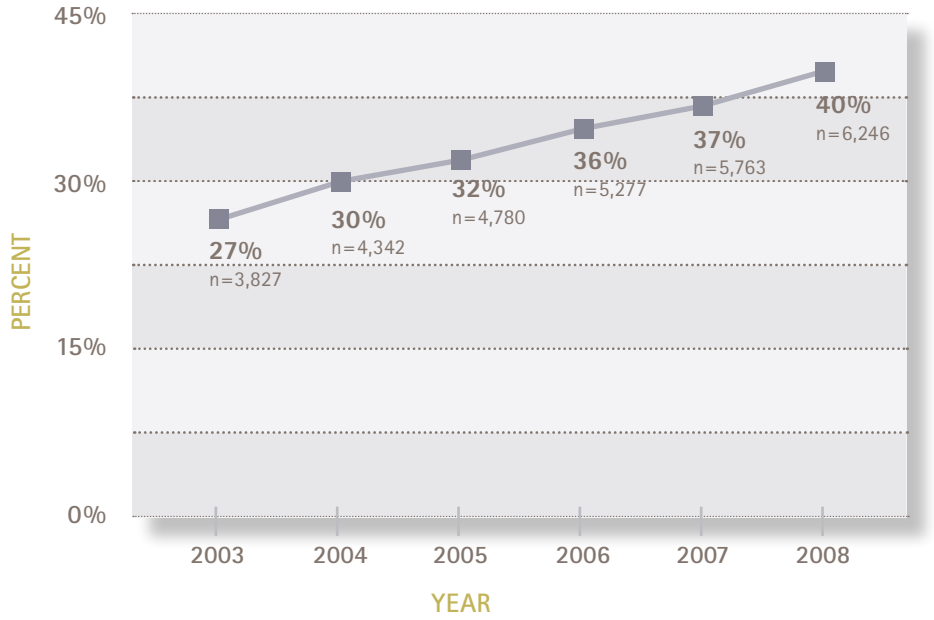
The majority of people living with HIV/AIDS (PLWHA) in San Francisco are between the ages of 30-59 years (86%) (Exhibit 25). The proportion of PLWHA who are age 50 and older (40%) is growing, likely due to the success of antiretroviral treatments. Between 2003 and 2008, the number of PLWHA age 50+ has increased steadily from 27% to 40% (Exhibit 26). Youth age 24 and under make up 23% of San Francisco's population but less than 2% of PLWHA. It is important to note that while youth represent a small proportion of PLWHA, it is likely that PLWHA between the ages of 20-30 years old were infected when they were much younger.

EXHIBIT 25 **Age of Persons Living with HIV/AIDS, December 2008**



Source: San Francisco Department of Public Health, HIV/AIDS Epidemiology Annual Report 2008

EXHIBIT 26 **PLWHA Age 50 and Older, 2003–2008**



Source: San Francisco Department of Public Health, HIV/AIDS Epidemiology Annual Report 2008

People Living with HIV/AIDS by Mode of Transmission

A large proportion of PLWHA was exposed to HIV infection via MSM sexual contact (71%) followed by IDUs (20%). Among the estimated PLWHA who were exposed to HIV through IDU, more than half were MSM (61%) (Exhibit 27). The most frequent mode of transmission for male PLWHA was MSM across all race/ethnicities. Among females, IDU and heterosexual contact were the most frequent mode of transmission for PLWHA.

EXHIBIT 27 PLWHA by Gender, Mode of Transmission, and Race/Ethnicity, 2008

	WHITE		AFRICAN AMERICAN		LATINO		ASIAN AND PACIFIC ISLANDER & NATIVE AMERICAN		TOTAL NUMBER**
MALE	NUMBER		NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	
MSM	7,895	81%	900	53%	1,771	82%	612	82%	11,285
IDU (non-MSM)	304	3%	332	20%	71	3%	26	3%	739
MSM-IDU	1,318	14%	291	17%	211	10%	70	9%	1,906
Heterosexual	26	<1%	60	4%	37	12%	11	1%	139
Other	9	<1%	6	<1%	8	<1%	7	1%	31
No reported risk	145	1%	95	6%	61	3%	21	3%	401
SUBTOTAL	9,697		1,686		2,159		747		14,501
FEMALE									
IDU	161	61%	232	57%	57	40%	24	30%	480
Heterosexual	66	25%	124	30%	61	42%	44	56%	300
Other	8	3%	8	2%	9	6%	4	5%	31
No reported risk*	31	12%	43	11%	17	12%	7	9%	105
SUBTOTAL	266		407		144		79		916
TRANSPEOPLE									
Transpeople	78		119		94		44		340
TOTAL	10,041		2,212		2,397		870		15,757

Source: San Francisco Department of Public Health, HIV/AIDS Epidemiology Annual Report 2008

**Larger proportions of PLWH non-AIDS cases were reported without risk information compared to living AIDS cases. Risk information is expected to be more complete in the future as name-based HIV reporting system matures (SFDPH 2008e).*

***Includes persons with multiple race or whose race/ethnicity information is not available.*

HIV Cases Diagnosed in 2008: 434

The following section provides information on the number of newly diagnosed HIV cases in 2008. Data includes persons with a diagnosis of HIV/non-AIDS, an initial diagnosis of HIV/non-AIDS and later diagnosed with AIDS, and concurrent diagnosis of HIV and AIDS. In 2008, 434 persons were diagnosed with HIV.

Characteristics of Persons Newly Diagnosed with HIV

The tables below show the number and characteristics of persons whose initial HIV diagnosis occurred in 2008. The number includes both code-based and name-based HIV cases reported to SFDPH and does not include HIV-positive persons who are not aware of their infection or cases that have not yet been reported, and therefore should be interpreted with caution. The majority of persons diagnosed with HIV in 2008 were male (n=391, 90%); half were White (n=215, 50%) followed by Latino (n=96, 22%) and African American (n=68, 16%) (Exhibits 28 and 29).

African Americans and Whites are disproportionately affected by HIV. African Americans make up 6% of San Francisco's population but represent 16% of new HIV diagnoses in 2008. Whites make up 45% of the population and represent half of new HIV cases in 2008. A large proportion of persons newly diagnosed with HIV in 2008 were between the ages of 25-49 (80%) at age of diagnosis (Exhibit 30). MSM sexual contact (70%) was the primary mode of transmission for new HIV infection in 2008, followed by IDU (including MSM-IDU) (17%) (Exhibit 31).

EXHIBIT 28

2008 HIV Cases by Gender

GENDER	NUMBER	PERCENT
Male	391	90%
Female	33	8%
Transfemale (MTF)	10	2%
Transmale (FTM)	0	-
TOTAL	434	100%

Source: San Francisco Department of Public Health, special data request, May 2009

EXHIBIT 29

2008 HIV Cases by Race/Ethnicity

RACE/ETHNICITY	NUMBER	PERCENT*
White	215	50%
Latino	96	22%
African American/Black	68	16%
Asian and Pacific Islander	37	9%
Native American/Alaskan Native	2	<1%
Multiracial	3	1%
Unknown	13	3%
TOTAL	434	100%

Source: San Francisco Department of Public Health, special data request, May 2009

**Percents do not total to 100 due to rounding.*

EXHIBIT 30

2008 HIV Cases by Age

AGE AT HIV DIAGNOSIS	NUMBER	PERCENT
0–19	10	2%
20–24	34	8%
25–29	71	16%
30–39	153	35%
40–49	125	29%
50–59	34	8%
60+	7	2%
TOTAL	434	100%

Source: San Francisco Department of Public Health, special data request, May 2009

EXHIBIT 31

2008 HIV Cases by Mode of Transmission

MODE OF TRANSMISSION	NUMBER	PERCENT
MSM	304	70%
IDU	29	7%
MSM-IDU	43	10%
Heterosexual contact	26	6%
Other/No identified risk	32	7%
TOTAL	434	100%

Source: San Francisco Department of Public Health, special data request, May 2009

HIV PREVALENCE AND INCIDENCE ESTIMATES

The SFDPH periodically estimates population size, HIV incidence, and BRPs in San Francisco. This section provides the 2006 HIV incidence and prevalence estimates by BRP in San Francisco[2]. It includes the estimated population size of each BRP, the projected number and rate of new HIV infections, HIV prevalence estimates, and comparisons to the 2001 estimates. While the estimates presented here are for 2006, researchers believe they are valid for the period 2007–2009. These numbers are calculated approximately every five years by SFDPH for the HPPC using a rigorous consensus-based process. More than 50 sources of data were used and a range of methodologies employed to determine the most plausible estimates in an expedient manner. The complete report, "HIV in San Francisco: Estimated Size of Populations at Risk, HIV Prevalence and HIV Incidence for 2006" developed by Dr. Willi McFarland can be obtained from SFDPH.

The following exhibit summarizes the HIV/AIDS consensus estimates by BRP in San Francisco for the years 2001 and 2006. The arrows indicate whether the number appears to be increasing, decreasing, or remaining stable between 2001 and 2006. Overall, there was a 10% decrease in the estimated number of new HIV infections in 2006 compared to 2001— from 1,084 in 2001 to 977 in 2006. This modest decrease is in fact a much greater success than it appears, because it marks the reversal of an increasing trend from 1995 to 2001. Moreover, had the estimate of the MSM population not increased so substantially, the number of new infections would have declined by even more.

2 Consensus estimates are updated approximately every five years as additional data sources are available. Prior to 2006, the last HIV consensus estimate was derived for 2001. As of this writing, an interim estimate is expected in 2010.

The true success of San Francisco is revealed when examining the incidence rates, as opposed to the incidence numbers. The HIV incidence rate, or the percentage of uninfected persons who will become infected with HIV in a given year, declined in virtually all of the BRPs. These decreases ranged from slight among non-IDU females and non-IDU, non-MSM males, to substantial among transfemales and transfemale-IDU. If the incidence rates from 2001 had continued, San Francisco would have had 1,301 new infections in 2006 instead of the estimated 977 – or 33.2% more infections.

MSM continue to have the highest HIV incidence number of all the BRPs. However, the increase in the number of new infections is due to the increase in estimated population size, not a rise in the epidemic. Although transfemales and transfemale-IDUs have the two smallest population sizes among the BRPs, they have the two highest HIV incidence rates.

EXHIBIT 32 2001 vs. 2006 Consensus Estimates by BRP[3]

POPULATION		INCIDENCE NUMBER	INCIDENCE RATE	PREVALENCE NUMBER	PREVALENCE PERCENT	POPULATION SIZE
MSM non-IDU	2001	748	2.2%	12,786	27.3%	46,800
	2006	772	1.75%	14,205	24.3%	58,343
MSM-IDU	2001	87	4.6%	2,080	52.2%	3,982
	2006	79	2.58%	2,196	42.0%	5,234
Transfemale non-IDU	2001	102	6.2%	513	23.8%	2,160
	2006	42	3.78%	327	22.8%	1,434
Male IDU (non-MSM)	2001	45	0.6%	900	10.0%	9,000
	2006	31	0.51%	954	13.5%	7,076
Female IDU	2001	48	1.1%	485	10.0%	4,850
	2006	18	0.51%	423	10.5%	4,030
Transfemale IDU	2001	40	13.2%	537	63.9%	840
	2006	16	6.08%	194	43.2%	449
Female non-IDU[a]	2001	10	<0.1%	334	<0.1%	331,163
	2006	12	<0.1%	298	<0.1%	325,801
Male non-IDU (non-MSM)[b]	2001	2	<0.1%	82	<0.1%	283,928
	2006	5	<0.1%	82	<0.1%	266,441
Perinatal[c]	2001	2	-	49	-	-
	2006	2	-	27	-	-
Blood product exposure[d]	2001	0	-	51	-	-
	2006	0	-	29	-	-
TOTAL[e]	2001	1,084		17,817	2.6%	682,723
	2006	977		18,735	2.8%	668,808

a These numbers represent all females 15 years old and older excluding IDUs. For 2001, the estimated size of the female non-IDU population at risk is 5,000. For 2006, the estimated size of the female non-IDU population at risk is 8,999, and among the at-risk group, the prevalence is 3.3% and the incidence rate is 0.14%.

b These numbers represent all males 15 years old and older excluding MSM, IDUs, and transpersons. For 2001, the estimated size of the male non-IDU (non-MSM) population at risk is 2,000. For 2006, the estimated size of the male non-IDU (non-MSM) population at risk is 2,585, and among the at-risk group, the prevalence is 3.2% and the incidence rate is 0.19%.

c The number of infants born to HIV-positive mothers is estimated at 13 out of a total of 8,579 births in San Francisco in 2006; there are 27 persons living in San Francisco whose HIV was acquired through mother-to-child transmission.

d The hypothetical population of persons who might be exposed to blood products is not estimated; there are 29 persons living in San Francisco who acquired HIV through exposure to infected blood products.

e The estimated population size for San Francisco adults aged 15 and older was 682,723 in 2001 and 668,808 in 2006. The HIV prevalence estimates provided represent the prevalence among adults aged 15 and older. The overall HIV prevalence in San Francisco, based on the total population including those under 15, was 2.3% in 2001 and 2.5% in 2006.

3 Consensus estimates are derived for populations that roughly correspond to the HPPC's BRP model as defined in the 2004 HIV Prevention Plan. The complete report, "HIV in San Francisco: Estimated Size of Populations at Risk, HIV Prevalence and HIV Incidence for 2006" developed by Dr. Willi McFarland (SFDPH 2007) can be obtained from SFDPH.

AIDS MORTALITY

Cumulative Deaths in Persons with AIDS: 18,866

Deaths in Persons with AIDS in 2008: 160

AIDS mortality data is important because it shows who might or might not be accessing or benefiting from current medical and other interventions. Since the beginning of the epidemic, a total of 18,866 deaths occurred among all AIDS cases in San Francisco. In 2008, a total of 160 deaths occurred among people with AIDS.

AIDS mortality data from 2008 is presented in this section. However, reporting of deaths in recent years is not yet complete due to reporting delay. Thus, the numbers presented in this section are incomplete and may be adjusted in subsequent years as data becomes available. Additionally, deaths that occurred outside of San Francisco are identified through matching with the National Death Index (NDI) which is not yet complete for 2007 and 2008. For complete AIDS mortality data from previous years, refer to pp. 20-26 of the HIV/AIDS Annual Report (2008).

AIDS Mortality by Gender, Race/Ethnicity, and Age

In 2008, the largest number of deaths of persons with AIDS occurred among men (80%) and Whites (64%). However, the HIV/AIDS-related mortality rate for African Americans was higher compared to other racial/ethnic groups (Exhibits 33 and 34). In regard to age, most AIDS deaths occurred among persons between the ages of 40-59 years. According to San Francisco AIDS surveillance data, the largest number of cumulative AIDS deaths occurred in the 30-39 age group. It is only recently that most AIDS deaths have shifted to the 40-49 year old age group, followed by the 50-59 year old age group (Exhibit 35).

Mortality and HIV Case Fatality Rates

- Mortality rates look at what proportion of a general population (e.g., San Francisco population) die of a particular disease.
- Case fatality rates examine a smaller population, such as people living with HIV/AIDS. It can be useful in determining over time, what proportion of all people living with HIV/AIDS die as a cause of HIV/AIDS.

EXHIBIT 33

Deaths in Persons with AIDS by Gender, 2008

GENDER	NUMBER OF DEATHS IN PERSONS WITH AIDS	PERCENT OF TOTAL DEATHS IN PERSONS WITH AIDS	MORTALITY RATE (PER 100,000 ESTIMATED SF POPULATION)	HIV CASE FATALITY RATES (PER 100 LIVING CASES)*
Male	128	80%	31	0.9
Female	21	13%	5.3	2.3
Transpeople **	11	7%	#	3.2
OVERALL	160	100%	-	-

Source: San Francisco Department of Public Health, HIV/AIDS Epidemiology Annual Report 2008

**Case fatality rate is calculated by dividing the number of deaths in a subgroup by the total number of living cases in that subgroup and multiplying by 100.*

***Transpeople is not broken down by transmales and transfemales due to small sample size.*

 # Data not available.

EXHIBIT 34 Deaths in Persons with AIDS by Race/Ethnicity, 2008

RACE/ETHNICITY	NUMBER OF DEATHS IN PERSONS WITH AIDS	PERCENT OF TOTAL DEATHS IN PERSONS WITH AIDS	MORTALITY RATE (PER 100,000 ESTIMATED POPULATION)	CASE FATALITY RATES (PER 100 LIVING CASES)*
White/Caucasian	102	64%	29	1.0
African American/Black	36	23%	75	1.6
Latino/Hispanic	17	11%	15	0.7
Other**	5	3%	#	0.5
TOTAL	160	100%	-	-

Source: San Francisco Department of Public Health, HIV/AIDS Epidemiology Annual Report 2008

**Case fatality rate is calculated by dividing the number of deaths in a subgroup by the total number of living cases in that subgroup and multiplying by 100.*

***Other includes Asian and Pacific Islander, Native American, and multiracial due to small sample numbers.*

 # Data not available.

EXHIBIT 35 Deaths in Persons with AIDS by Age, 2008

AGE	NUMBER OF DEATHS IN PERSONS WITH AIDS	PERCENT OF TOTAL DEATHS IN PERSONS WITH AIDS	MORTALITY RATE (PER 100,000 ESTIMATED POPULATION)	CASE FATALITY RATES (PER 100 LIVING CASES)*
0–19	0	0%	0	0
20–24	0	0%	0	0
25–29	1	0.6%	#	0.2
30–39	11	7%	#	0.4
40–49	57	36%	#	0.9
50–59	59	37%	#	1.3
60+	32	20%	20	1.9
TOTAL	160	100%	-	-

Source: San Francisco Department of Public Health, special data request, September 2009

**Case fatality rate is calculated by dividing the number of deaths in a subgroup by the total number of living cases in that subgroup and multiplying by 100.*

 # Data not available.

AIDS Mortality by Mode of Transmission

More than half of AIDS-related deaths in 2007 occurred among the MSM (54%). Deaths among persons with AIDS who were exposed to HIV/AIDS through IDU or MSM-IDU accounted for 21%-22% of deaths. (Exhibit 36).

EXHIBIT 36 **Deaths in Persons with AIDS by Mode of Transmission, 2008**

MODE OF TRANSMISSION	NUMBER OF DEATHS IN PERSONS WITH AIDS	PERCENT OF TOTAL DEATHS IN PERSONS WITH AIDS	MORTALITY RATE (PER 100,000 ESTIMATED POPULATION)	CASE FATALITY RATES (PER 100 LIVING CASES)*
MSM	99	54%	#	0.9
IDU (non-MSM)	38	21%	#	3.1
MSM-IDU	40	22%	#	2.0
Heterosexual	4	2%	#	0.9
Other/Unknown**	3	2%	#	0.6
TOTAL	184	100%	-	-

Source: San Francisco Department of Public Health, HIV/AIDS Epidemiology Annual Report 2008

**Case fatality rate is calculated by dividing the number of deaths in a subgroup by the total number of living cases in that subgroup and multiplying by 100.*

***Includes cases with no identifiable risk.*

 # Data not available.

Underlying Causes of Death among Persons with AIDS

In 1995-1998, the proportion of deaths in which HIV/AIDS was listed as the underlying cause of death was 92%. This decreased in 1999-2002 and has remained level at 82% through 2003-2006. During this time period (2003-2006), heart disease (20%), liver disease (14%), viral hepatitis (14%), and pneumonia (13%) were listed as other frequently occurring underlying causes of death among persons with AIDS (Exhibit 37).

EXHIBIT 37 **Top Eight Underlying Causes of Death among Persons with AIDS, 1995-2006**

UNDERLYING CAUSE OF DEATH	YEAR OF DEATH		
	1995-1998 N=3,215 NUMBER (PERCENT)	1999-2002 N=1,295 NUMBER (PERCENT)	2003-2006 N=1,161 NUMBER (PERCENT)
HIV/AIDS	2,971 (92)	1,103 (85)	957 (82)
Heart disease	483 (15)	252 (20)	230 (20)
Liver disease	218 (7)	206 (16)	160 (14)
Viral hepatitis	125 (4)	163 (13)	159 (14)
Pneumonia	496 (15)	200 (15)	152 (13)
Non-AIDS cancer (e.g., lung cancer, liver cancer, anal cancer, & Hodgkins lymphoma)	209 (7)	117 (9)	154 (13)
Septicemia	219 (7)	123 (10)	134 (12)
Renal disease	133 (4)	105 (8)	123 (11)

Source: San Francisco Department of Public Health, HIV/AIDS Epidemiology Annual Report 2008

This section highlights disparities in the distribution of HIV/AIDS inferred from epidemiological data for San Francisco. For more information on each of the populations discussed below, see Section I of the Community Assessment Chapter (pp. 62-114).

Gender and Race/Ethnicity

Males are disproportionately affected by HIV/AIDS. Although men make up 51% of San Francisco's population, they represent 92% of the PLWA and 94% of all AIDS cases reported to date (Exhibit 14). In 2008, males accounted for 90% of new HIV diagnoses in San Francisco (Exhibit 28).

Transpersons are also disproportionately affected by HIV/AIDS. Transpeople are disproportionately affected compared with their small numbers in the general population. Transpersons make up less than 1% of the total population in San Francisco, the majority of whom are transfemales, but account for 2% of PLWHA and 1% of AIDS cases to date (Exhibit 14 and Exhibit 21).

African Americans and Whites are greatly impacted by HIV/AIDS. All racial/ethnic groups in San Francisco are affected by HIV and AIDS in San Francisco. However, African Americans and Whites continue to be disproportionately affected. African Americans make up 6% of San Francisco's population, but account for 14% of PLWHA and 13% of all AIDS cases reported to date. Additionally, the AIDS mortality rate for African Americans in 2007 was higher compared to other racial/ethnic groups. Whites make up 45% of the population and represent 65% of PLWA and 63% of PLWH. Overall, Whites comprise 71% of cumulative AIDS cases in San Francisco (Exhibit 15 and 22). Among Whites, males are disproportionately affected by HIV/AIDS. Both African American men and women are disproportionately affected by HIV and AIDS compared to their number in the general population (Exhibits 23 and 24).

Women of color represent a large proportion of PLWA. African American women, in particular, are disproportionately affected by HIV/AIDS. In San Francisco, over 70% of females living with AIDS are women of color. Additionally, 45% are African American women (Exhibit 23).

It is likely that AIDS cases and PLWHA are undercounted among the Native American population in San Francisco. The number of Native Americans living in San Francisco is small and the number of PLWHA is few among this group. Native Americans might be disproportionately affected by HIV compared with their numbers in the general population in San Francisco, but due to small numbers, it is difficult to assess the impact of HIV/AIDS and trends over time. However, as in other jurisdictions, it is possible that Native Americans are undercounted due to misclassification of Native Americans into other racial/ethnic groups.

The number of Latinos living with HIV and AIDS is proportionate to their numbers in the population. Among PLWA and PLWH Latinos make up the second largest racial/ethnic group in San Francisco. In 2008, Latinos had the second highest incidence (22%) of new HIV diagnoses after Whites (50%) (Exhibit 29).

Age

The number of PLWHA who are age 50 and older is growing. This age group was the fastest growing age category of PLWHA, rising from 27% to 40% between 2003 and 2008 (Exhibit 26).

Mode of Transmission

MSM-IDU account for more than half of all IDU-associated HIV and AIDS cases in San Francisco. MSM-IDU make up 65% of all IDU-associated cumulative AIDS cases reported to date (Exhibit 17). Of the estimated 3,125 PLWHA who were exposed to HIV through injection drug use, 61% were MSM-IDU (Exhibit 27).

Among male PLWHA, MSM non-IDU was the most frequent mode of transmission across all race/ethnicities. MSM non-IDU comprises 78% of all male PLWHA (Exhibit 27). Of the estimated 2,212 African American PLWHA, over 40% are MSM (Exhibit 27).

Among women living with HIV/AIDS the most frequent mode of transmission is IDU and heterosexual contact. Over half of female PLWHA were exposed to HIV infection through injection drug use (52%) and about a third were exposed through heterosexual contact (33%) (Exhibit 27).

Incarcerated Individuals

SPECIAL POPULATIONS FOR CONSIDERATION

Nationally, HIV prevalence is five times higher among inmates than the general population. Approximately one-quarter of PLWHA passes through the correctional system, and nationwide, it has been estimated that 2.3% of inmates are HIV-positive (Springer et al 2005). Recent HIV prevalence data for inmates is not available for San Francisco, but there is data on the number of PLWHA who have a history of being incarcerated in the San Francisco jail system. At the end of 2006, 1,292 (9%) individuals living with HIV/AIDS had a history of incarceration in county jail. Among these, about three-quarters are IDUs and 16% are MSM non-IDUs (Exhibit 21). Outside of jail or prison, incarcerated individuals are likely to be impacted by many other factors in their lives that increase their risk for HIV, including substance use, untreated mental illness, homelessness, poverty, and prostitution. A full discussion of incarceration as a cofactor for HIV/AIDS is available in the Community Assessment Chapter, pp. 135-137.

Core Question 3:

What are the indicators of risk for HIV infection in San Francisco?

Drivers

- Some HIV indicators such as gonorrhea and methamphetamine use are also drivers of HIV.
- Drivers are factors that independently increase risk for HIV and are associated with a substantial number of new infections throughout San Francisco. (For more on drivers, see the Community Assessment Chapter, Section II: Drivers, pp. 115–124).

HIV indicators are defined as diseases or conditions known to follow or precede the pattern of HIV infection. HIV indicators may signal high-risk behavior taking place among a population. In some cases, HIV indicators can be used to predict trends in HIV infection. Some of the HIV indicators presented in this section are also considered drivers, such as gonorrhea and methamphetamine use (see the Community Assessment Chapter: Section II: Drivers, pp. 115-124). Other indicators such as syphilis and chlamydia are not considered to be drivers because they are not associated with large proportions of new infections in San Francisco. Additionally, some of the HIV indicators presented in this section such as sexually transmitted infections (e.g., gonorrhea) and substance use (e.g., cocaine/crack use) are also considered cofactors (For more on cofactors, see the Community Assessment Chapter, Section III: HIV Cofactors, pp. 125-147).

The following indicator data is presented by risk group. The IDU BRP has been broken down into subpopulations of IDU and grouped with other BRPs with which it shares similar indicators. For example, FSM-IDU is pulled out from the IDU BRP and grouped with FSM because they share similar indicators.

MSM, MSM/F, MSM-IDU, MSM/F-IDU[4]

Sexually Transmitted Infections. Both gonorrhea and syphilis infection are biological markers for high risk sexual behavior. Gonorrhea has been identified as a driver of HIV in San Francisco (see the Community Assessment Chapter: Section II: Drivers, pp. 115 - 124). Among men particularly, rectal gonorrhea is an indicator of unprotected receptive anal sex. Male rectal gonorrhea has increased steadily in the last several years, but started to level off in 2007 (Exhibit 38). A decrease in the number of infections with gonorrhea continued to decline in 2008. After a steep increase between 1998 and 2004, early syphilis infections among MSM began to decline in 2005 (HIV/AIDS Annual Report 2007); however, STI data shows an increase in the number of infections for 2008. Analysis of subsequent years will be necessary to determine whether this increase signals an upward trend.

Sexual Partners and Behavior. Outreach survey data from the Stop AIDS Project suggests an overall trend of increasing unprotected anal intercourse (UAI) for both self-reported HIV-positive MSM and HIV-negative MSM. Among MSM living with HIV, data also suggests an increase in UAI with one or more sex partners whose HIV status was not known to them.

Substance Use. Substance use is strongly associated with risk for HIV acquisition. Methamphetamine use among MSM decreased from 21% in 2004 to 13% in 2008, while cocaine/crack use increased from 21% to 29%. Use of poppers remained stable.

4 Behavioral risk populations or BRPs are categories that describe behavioral risk for HIV and are used to identify who is at risk. These abbreviations refer to BRPs as defined in the Priority Setting Chapter, pp. 156-157.

EXHIBIT 38 Trends in HIV Indicators for MSM, MSM/F, MSM-IDU, MSM/F-IDU

INDICATOR	TREND	DATA		DATA SOURCE
SEXUALLY TRANSMITTED INFECTIONS (STIs)				
Male rectal gonorrhea	Decreasing	2004 – 340 cases 2005 – 409 cases 2006 – 520 cases 2007 – 467 cases 2008 – 422 cases		STD Prevention & Control surveillance data
Primary and secondary syphilis	Decreasing, increase in 2008	2004 – 325 cases 2005 – 216 cases 2006 – 220 cases 2007 – 186 cases 2008 – 309 cases		STD Prevention & Control surveillance data
SEXUAL PARTNERS AND BEHAVIORS				
Mean number of sex partners in past 2 months*	No change	2003 – 5.38 2004 – 5.41 2005 – 5.68 2006 – 5.50 (1st half)		City Clinic data†
Mean number of sex partners in past 3 months*	No change	2006 – 7.34 (2nd half) 2007 – 6.36 partners 2008 – 6.74 partners		City Clinic data†
Unprotected anal sex in the past 6 months	HIV- Increasing HIV+ Increasing	HIV+ 2004: 54% 2005: 46% 2006: 57% 2007: 67%	HIV- 2004: 33% 2005: 37% 2006: 44% 2007: 43%	STOP AIDS Project
Unprotected anal sex with at least one partner of unknown serostatus in past 6 months	HIV- Decreasing HIV+ Increasing	HIV+ 2004: 21% 2005: 9% 2006: 13% 2007: 18%	HIV- 2004: 4% 2005: 12% 2006: 10% 2007: 9%	STOP AIDS Project
SUBSTANCE USE				
Percent reporting methamphetamine use in past 12 months	Decreasing	2004 – 21% 2008 – 13%		National Health Behavior Surveillance (NHBS) ††
Percent reporting poppers use in past 12 months	No change	2004 – 18% 2008 – 19%		NHBS
Percent reporting heavy alcohol use in past 12 months**	Inconclusive	2004 – Not available 2008 – 89%		NHBS
Percent reporting cocaine/crack use in past 12 months	Increasing	2004 – 21% 2008 – 29%		NHBS

**Prior to the 2nd half of 2006, information was collected on the number of sex partners in the past 6 months. Starting in 2007, this measure was changed to look at the number of sex partners in the past 3 months.*

***Alcohol use was not measured in 2004.*

†City Clinic data only represents those who seek testing and services at City Clinic, thus data is not generalizable to the larger population, and should be interpreted with caution.

††The National HIV Behavioral Surveillance System (NHBS) is a multisite project funded by the CDC. Established to identify behaviors that place individuals at-risk for contracting HIV/AIDS, NHBS collects data in 21 metropolitan areas, including San Francisco, that have the highest prevalence of HIV/AIDS cases.

Trends in HIV Indicators for MSF and MSF-IDU[5]

Sexually Transmitted Infections. In recent years, syphilis infections have remained relatively low among heterosexual men compared to MSM. Similar to MSM, there was an increase in the incidence of syphilis among MSF in 2008 (Exhibit 39).

Sexual Partners and Behavior. Recent data also indicate slight increases in the number of sexual partners among MSF signaling an ongoing need to monitor risk behaviors and HIV transmission among this group.

EXHIBIT 39 **Trends in HIV Indicators for MSF, MSF-IDU**

INDICATOR	TREND	DATA	DATA SOURCE
SEXUALLY TRANSMITTED INFECTIONS (STIs)			
Primary and secondary syphilis	Decreasing, increase in 2008	2004 – 23 cases 2005 – 27 cases 2006 – 18 cases 2007 – 13 cases 2008 – 25 cases	STD Prevention & Control surveillance data
SEXUAL PARTNERS			
Mean number of sex partners in past 2 months*	May be increasing slightly	2003 – 2.04 2004 – 2.05 2005 – 1.97 2006 – 2.18 (1st half)	City Clinic data†
Mean number of sex partners in past 3 months*	No change	2006 – 2.56 (2nd half) 2007 – 2.58 2008 – 2.39	City Clinic data†

** Prior to the 2nd half of 2006, information was collected on the number of sex partners in the past 2 months. Starting in 2007, this measure was changed to look at the number of sex partners in the past 3 months.*

† City Clinic data only represents those who seek testing and services at City Clinic, thus data is not generalizable to the larger population, and should be interpreted with caution.

5 Behavioral risk populations or BRPs are categories that describe behavioral risk for HIV and are used to identify who is at risk. These abbreviations refer to BRPs as defined in the Priority Setting Chapter, pp. 156-157.

Trends in HIV Indicators for FSM and FSM-IDU[6]

Sexually Transmitted Infections. Chlamydia is considered a cofactor for HIV infection in San Francisco (for more on chlamydia, see the Community Assessment Chapter 2, Section III: Cofactors, pp. 125 - 147). While STI data shows no clear trend in either chlamydia or gonorrhea among women, infection rates continue to be high (Exhibit 40).

Sexual Partners and Behavior. Although the mean number of sexual partners among FSM decreased between 2003-2005, there has been a steady increase in recent years starting in 2006 (Exhibit 40).

EXHIBIT 40

Trends in HIV Indicators for FSM, FSM-IDU

INDICATOR	TREND	DATA	DATA SOURCE
SEXUALLY TRANSMITTED INFECTIONS (STIs)			
Chlamydia	No clear trend	2004 – 1778 2005 – 1769 2006 – 2054 2007 – 1872 2008 – 1909	STD Prevention & Control surveillance data
Gonorrhea	Decreasing	2004 – 231 2005 – 348 2006 – 331 2007 – 269 2008 – 289	STD Prevention & Control surveillance data
SEXUAL PARTNERS			
Mean number of sex partners in past 2 months*	Decreasing, increase in 2006	2003 – 2.67 2004 – 2.06 2005 – 1.97 2006 – 2.63 (1st half)	City Clinic data†
Mean number of sex partners in past 3 months*	Increasing	2006 – 2.98 (2nd half) 2007 – 3.15 2008 – 4.14	City Clinic data†

** Prior to the 2nd half of 2006, information was collected on the number of sex partners in the past 6 months. Starting in 2007, this measure was changed to look at the number of sex partners in the past 3 months.*

† City Clinic data only represents those who seek testing and services at City Clinic, thus data is not generalizable to the larger population, and should be interpreted with caution.

6 Behavioral risk populations or BRPs are categories that describe behavioral risk for HIV and are used to identify who is at risk. These abbreviations refer to BRPs as defined in the Priority Setting Chapter, pp. 156-157.

HIV Indicators for TMSM and TFSM[7]

Unlike for other BRPs, there is very few trend data for transmales and transfemales. Currently, data collection on transpersons is limited. First, transmales and transfemales are not differentiated in the data. Additionally, data specifically on the sexual partners of transpersons is not collected (e.g., transmales who have sex with males (TMSM) or transfemales who have sex with males (TFSM)). An important HIV indicator is unprotected receptive anal sex. The rates of unprotected receptive anal sex among transfemales, as determined by four original studies, is discussed in the Community Assessment Chapter (see Transfemales section, pp. 75-78).

Sexually Transmitted Infections. Primary and secondary syphilis among transpersons living in San Francisco remains low (Exhibit 41).

Sexual Partners and Behavior. The mean number of sexual partners among transpersons appears to be increasing. However, small sample size leads to wide variation in data; therefore, this data does not point to any definitive conclusions and should be interpreted with caution (Exhibit 41).

EXHIBIT 41

Trends in HIV Indicators for Trans Population

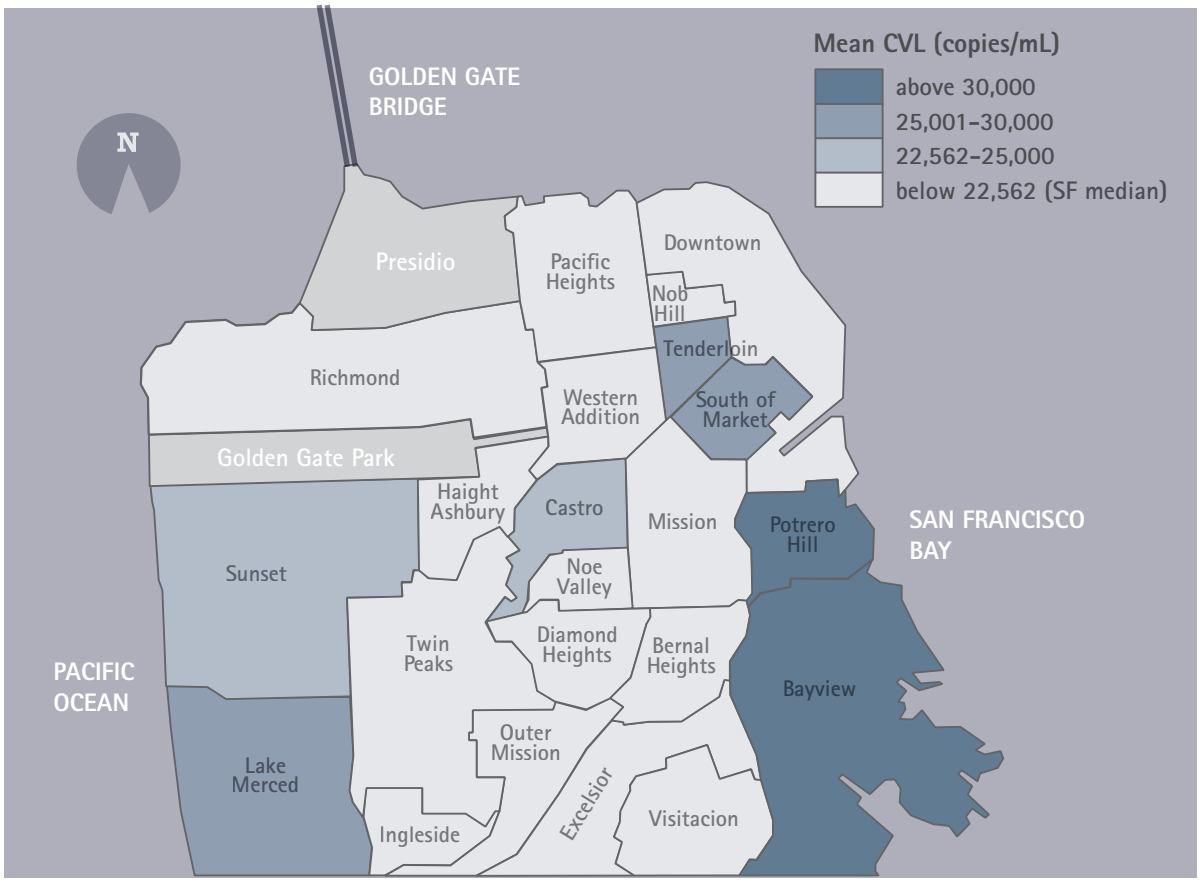
INDICATOR	TREND	DATA	DATA SOURCE
SEXUALLY TRANSMITTED INFECTIONS (STIs)			
Primary and secondary syphilis	Remains low	2004–2008 – 9 cases	STD Prevention & Control surveillance data
SEXUAL PARTNERS			
Mean number of sex partners in past 6 months*	Unclear, possibly increasing	2003 – 6.18 2004 – 7.05 2005 – 12.67 2006 – 16.18 (1st half)	City Clinic data†
Mean number of sex partners in past 3 months*	Unclear, possibly increasing	2006 – 13.8 (2nd half) 2007 – 17.78 2008 – 25.13	City Clinic data†

** Prior to the 2nd half of 2006, information was collected on the number of sex partners in the past 6 months. Starting in 2007, this measure was changed to look at the number of sex partners in the past 3 months.*

† City Clinic data only represents those who seek testing and services at City Clinic, thus data is not generalizable to the larger population and should be interpreted with caution.

7 Behavioral risk populations or BRPs are categories that describe behavioral risk for HIV and are used to identify who is at risk. These abbreviations refer to BRPs as defined in the Priority Setting Chapter, pp. 156-157.

EXHIBIT 42 **Spatial Distribution of Mean CVL in San Francisco, 2005–2007**



Source: San Francisco Department of Public Health, special request, October 2009

What is Community Viral Load?

COMMUNITY VIRAL LOAD

Community viral load (CVL) is a population-based marker of HIV. Here it is defined as the mean of the most recent individual viral loads of HIV-infected individuals in a particular community. The San Francisco Department of Public Health (SFDPH) routinely collects viral load information as part of HIV surveillance.

What does CVL measure?

The SFDPH has recently begun to look at CVL as a possible biologic indicator of the health of people living with HIV/AIDS in the county. It is hoped that in the future, by looking at CVL levels for a particular community or population, providers and planning groups can assess how to better prioritize both prevention and treatment resources, and that CVL will serve as a sensitive barometer of the success of these efforts.

What do Initial CVL Studies in San Francisco Show?

An initial analysis of CVL in San Francisco was conducted using HIV/AIDS surveillance data from 2006-2007. The mean CVL in San Francisco is around 20,000 copies/mL. Initial analysis shows that the disparities in CVL match our understanding of the disparities in the HIV epidemic based on socioeconomic status, race/ethnicity, use of antiretroviral therapy, transmission risk category, trans status, hepatitis C-coinfection, and engagement in health care. Exhibit 42 shows the geographic distribution (by neighborhood) of the mean community viral load in San Francisco. Three of the four neighborhoods of Potrero Hill, Bayview, South of Market, and the Tenderloin that have the highest mean CVL in the city have the lowest median household incomes in San Francisco. The CVL for the homeless population is double the overall San Francisco mean CVL. It is important to note that this definition of CVL is the mean load of individuals in a given neighborhood, but does not reflect the total burden of HIV in the neighborhood.

For instance, individuals in the Castro have a relatively low mean viral load, but the burden of HIV in the Castro remains high because of the high number of HIV cases there. The SFDPH is currently exploring how the total CVL within a neighborhood compare with the mean viral loads shown here.

What are Some of the Limitations of CVL Data?

CVL analyses include only those individuals in the HIV surveillance registry. It does not include persons who are acutely infected with HIV, persons who have not received a diagnosis (about 15-17% of PLWHA), and those persons who have missing viral load information.

What's Next?

CVL is a novel approach for looking at the health of a community affected by HIV/AIDS. Further studies are necessary to refine this approach and ensure that it provides accurate and useful information for providers and planning groups. The SFDPH is currently examining trends in CVL over time and the relationship between CVL and new HIV infections.

SECTION IV

Service Utilization and Access to Services

Core Question 4:

What are the patterns of service utilization of HIV-positive persons in San Francisco?

Core Question 5:

What are the number and characteristics of persons who know they are HIV-positive but who are not receiving primary HIV medical care?

This section provides some information on utilization of HIV/AIDS services in San Francisco and characteristics of PLWHA accessing primary HIV medical care. Understanding who is and is not accessing HIV medical care and why is important for prioritizing services and planning for outreach and recruitment. In addition, information about people living with HIV who are not in medical care, including possible reasons why they are not accessing medical care, can assist planners in developing strategies to reduce barriers to care. Information in this section is derived from the following data sources:

REGGIE System. The REGGIE System is San Francisco's HIV healthcare services data reporting system. Data regarding the most utilized HIV services was obtained from this source and includes both Ryan White CARE-funded services as well as services that are not funded by this funding stream. Due to limitations in data collection, the REGGIE System does not include PLWHA utilizing HIV services provided by private clinics and medical settings such as Kaiser Permanente.

HIV Prevention Programs Core Variables Data. San Francisco HIV prevention programs funded by SFDPH collect data (known as core variables data) on clients who participated in one or more prevention interventions on a quarterly basis. In this section, the core variables data is used to examine participation in prevention with positives programs.

HIV/AIDS Surveillance Data. Information about antiretroviral use, access to HIV medical care, and unmet need for HIV medical care among PLWH was obtained through analysis of HIV/AIDS surveillance data. This data includes information obtained from laboratory

reporting of viral load and CD4 test results, medical record chart reviews, data from Medi-Cal, the AIDS Drug Assistance Program (ADAP), and Kaiser Permanente Northern California.

2008 HIV/AIDS CARE Needs Assessment. In 2008, the San Francisco HIV Health Services Planning Council (CARE Council) conducted a needs assessment to identify the needs of priority populations living with HIV/AIDS in the San Francisco Eligible Metropolitan Area (SF EMA). Data from the needs assessment was used in this section to describe factors affecting access to HIV services among PLWHA.

Utilization of HIV Services

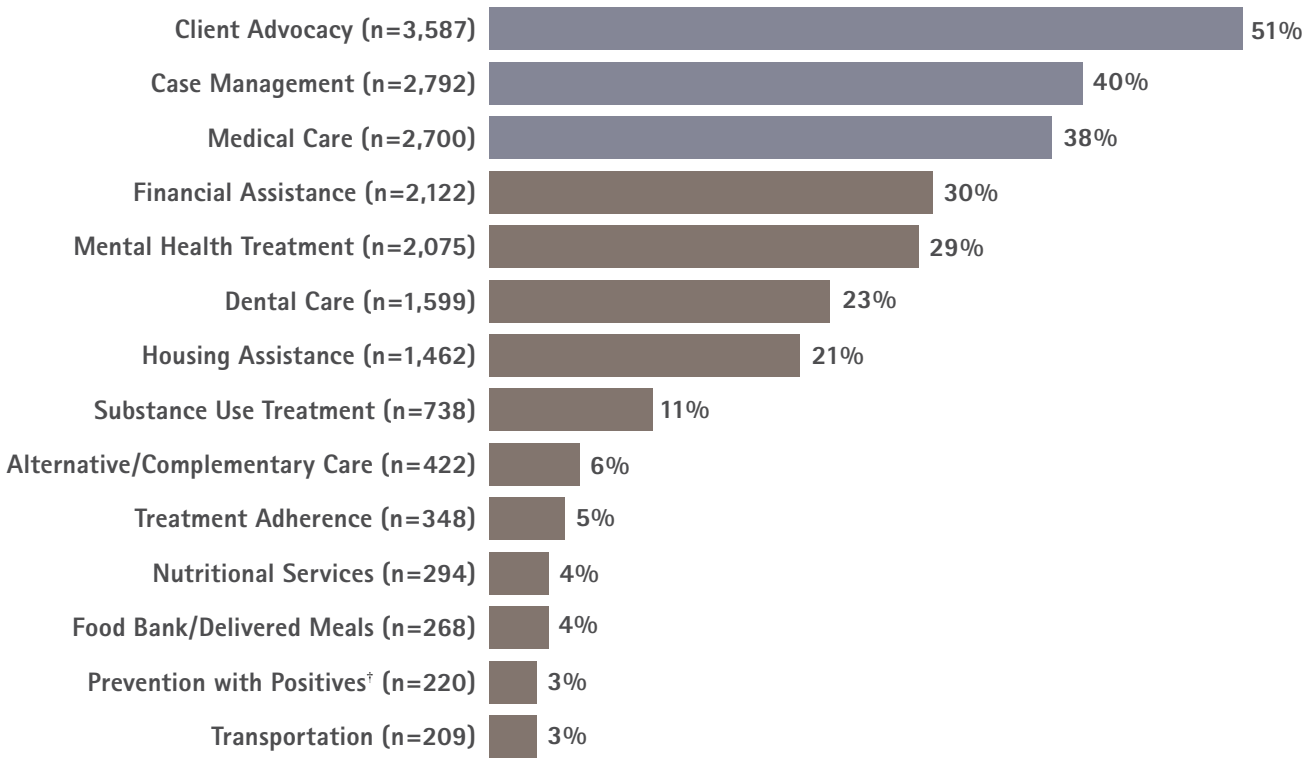
SERVICE UTILIZATION AMONG PLWHA

Exhibit 43 illustrates utilization of medical care, dental health care, mental health services, case management services, and substance use services among a sample of people living with HIV/AIDS in San Francisco. It also includes information on utilization of services such as financial assistance, housing assistance, and client advocacy. Data is presented by number and percent of unduplicated clients (UDC) who utilized a particular service category in 2008. Clients may be counted in more than one service category; thus, UDC counts are overestimates. Among the 7,046 UDC reported in 2008, more than half received some level of client advocacy services (n=3587, 51%), which include benefits counseling, treatment advocacy, and peer advocacy. Forty percent (n=2,792) received some level of case management and 38% (n=2,700) received medical services. Some of the clients also received nutritional services (n=294, 4%), prevention services (n=220, 3%), and transportation assistance (n=209, 3%).

EXHIBIT 43

Number* and Percent of Unduplicated Clients (UDC) for Most Utilized Services, San Francisco, 2008

N= 7,046 Total UDC



Source: HIV Health Services, special data request, April 2009.

**Represents the number of unduplicated clients who utilized particular service category. This number includes both clients who were eligible to receive services and those clients who were determined to be ineligible for services after an initial encounter and assessment of eligibility.*

†This number represents only a fraction of the total number of PWP services because providers are not required to report this service in the HIV Health Services database REGGIE.

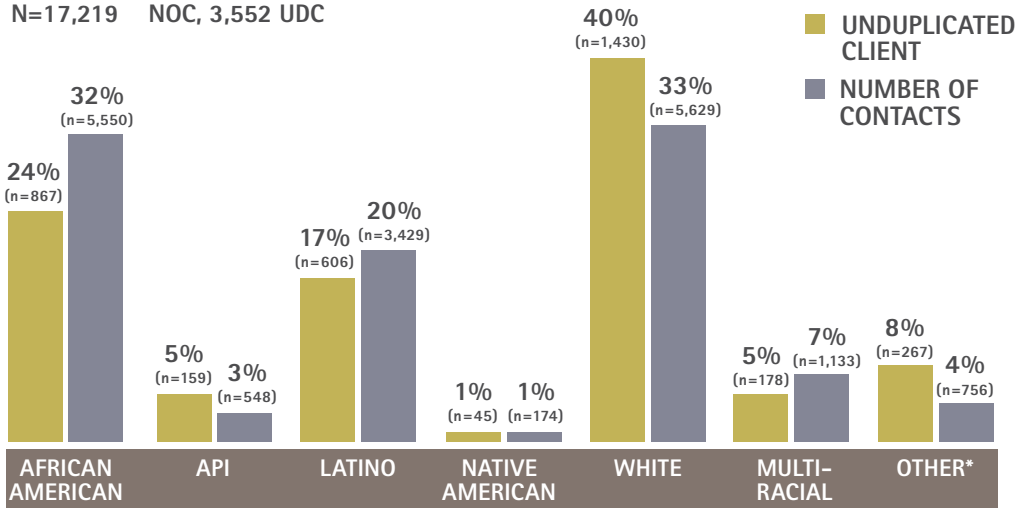
Participation in PWP Programs

PWP is one of five highlighted areas in this plan (see the Strategies and Interventions Chapter, Section V: Prevention with Positives, pp. 192-195). This section provides information about participants of PWP programs funded by the HIV Prevention Section of SFDPH during the 2008-2009 fiscal year. This includes clients participating in individual risk reduction counseling, prevention case management, single session groups, and multiple session workshops provided by 24 agencies who administer a total of 39 community-based HIV prevention programs. More information about PWP can be found in the Strategies and Interventions Chapter, Section V: Prevention with Positives (pp. 192-195).

During the 2008-2009 fiscal year (July 2008-June 2009), a total of 3,552 unduplicated individuals participated in PWP programs in San Francisco. The following exhibits depict participation in PWP programs by race/ethnicity and age. Information on both unduplicated clients (UDC) and number of contacts (NOC) are provided. Because clients might participate in a program at more than one agency and thus be counted twice, UDC counts are overestimates of the total number of individuals served. Most of the PWP program participants were White (n=1,430, 40%) followed by African American (n= 867, 24%), and Latino (n= 606, 17%) (Exhibit 44). Additionally, most participants during this quarter were between the ages of 40-49 years of age (n=1,413, 40%) (Exhibit 45).

EXHIBIT 44

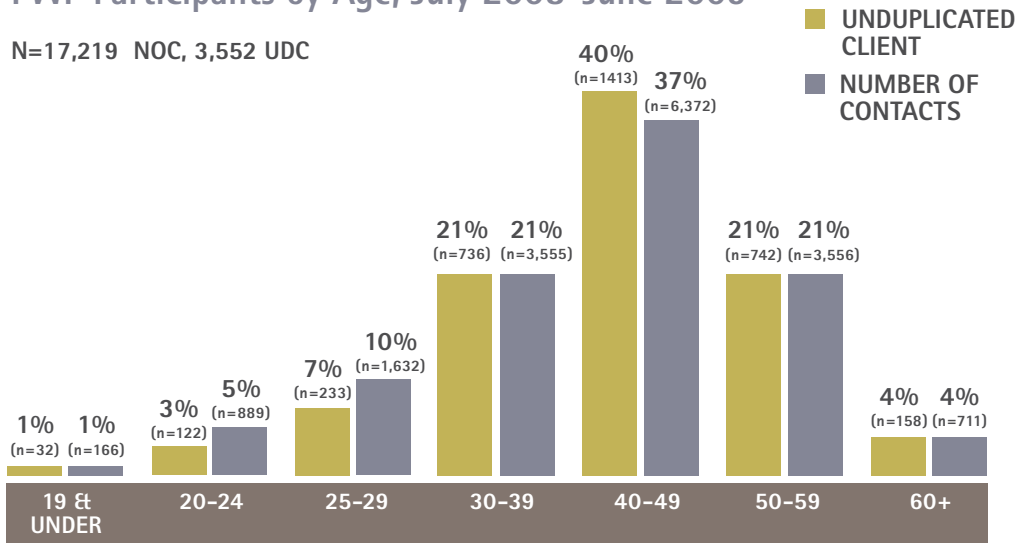
PWP Participants by Race/Ethnicity, July 2008–June 2009



Source: San Francisco Department of Public Health, special data request December 2009
** Other category includes data with missing race/ethnicity information.*

EXHIBIT 45

PWP Participants by Age, July 2008–June 2009*



Source: San Francisco Department of Public Health, Core Variables Quarterly Report, October-December 2008
** Individuals who did not report age were categorized as "missing" and are not included above.*

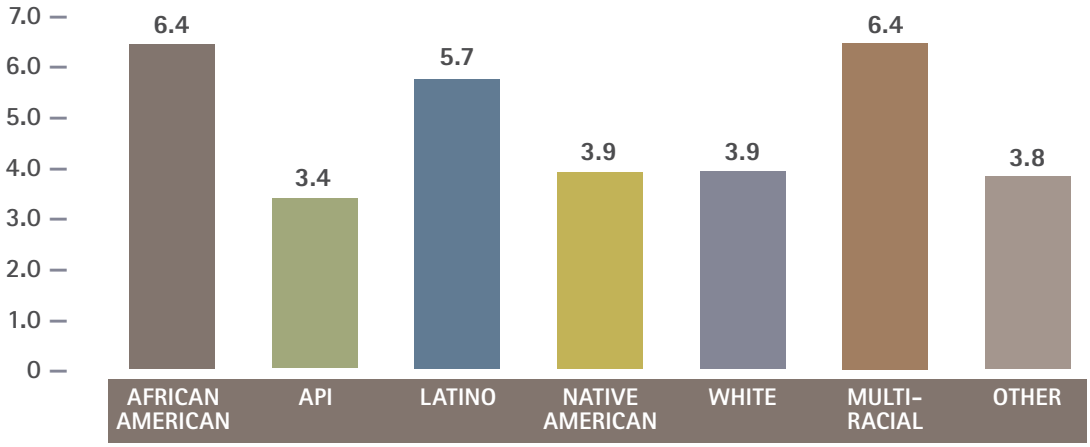
The following exhibits depict the average number of contacts made by PWP participants by race/ethnicity and age. Overall, the average number of contacts during the fourth quarter of 2008 was 3.0 contacts (Exhibit 46). African American, Latino, and multiracial groups made contacts with PWP programs more than the average. The average number of contacts for Asian and Pacific Islanders and Native Americans, on the other hand, were about two times less than the overall average. Persons under 30 years of age made contacts with PWP programs more than the average (Exhibit 47).

EXHIBIT 46

Average Number of Contacts of PWP Participants by Race/Ethnicity, July 2008–June 2009

n=17,219 NOC, 3,552 UDC

Average NOC = 4.8 contacts



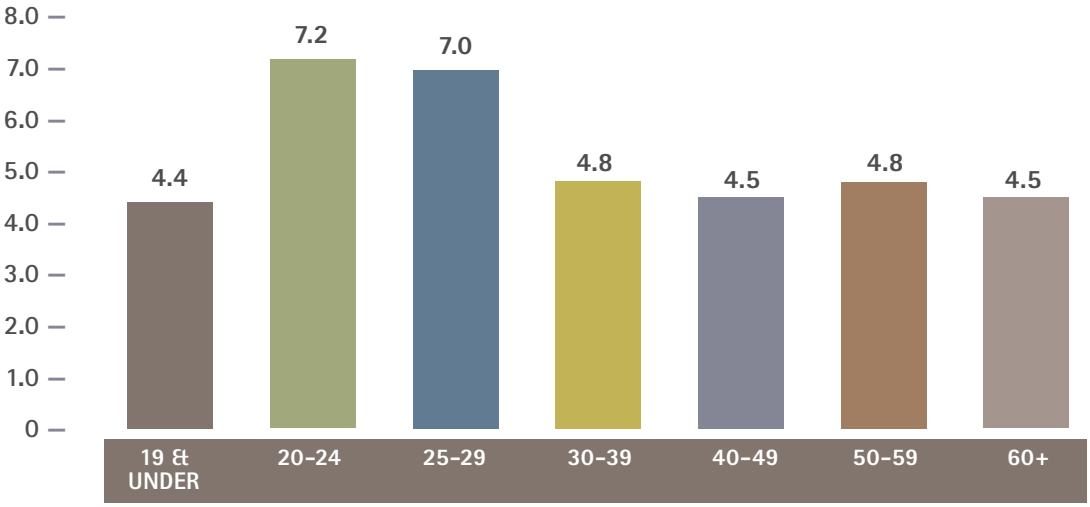
Source: San Francisco Department of Public Health, special data request, December 2009

EXHIBIT 47

Average Number of Contacts of PWP Participants by Age, July 2008–June 2009

n=17,219 NOC, 3,552 UDC

Average NOC = 4.8 contacts



Source: San Francisco Department of Public Health, Core Variables Quarterly Report, October-December 2008

Antiretroviral Therapy Use (ART)

ART use among persons living with AIDS: It is estimated that between 88% and 92% of persons living with AIDS were receiving antiretroviral therapy (ART) as of December 31, 2008. When comparing ART use across different sectors of the population, ART use appeared slightly lower among females, transpersons, African Americans and Latinos. In addition, use of ART among Native Americans and IDUs was lower compared to other groups.

ART use among persons living with HIV, non-AIDS (CD4 count between 200 and 350): Overall, about 70% of persons with HIV who were eligible for ART treatment received ART. Lower percentages of females and transpersons received ART compared to males. People of color, especially African Americans and Asians, also had lower rates of ART use. IDUs had the lowest rate of ART use of all populations.

ACCESS TO HIV MEDICAL CARE

Between 2005 and 2007, it is estimated that 84% of newly infected patients diagnosed at SFDPH testing sites had confirmed entry into medical care, receiving medical care within 12 months of their HIV diagnosis. The following sections describe the number and characteristics of PLWHA accessing HIV medical care as well as those with unmet need for HIV medical care as estimated by the SFDPH HIV Epidemiology Section.

Number and Characteristics of PLWHA in HIV Medical Care

In order to assess the number and percentage of PLWHA receiving care, an initial CD4 test within 12 months of diagnosis was used as a marker for entry into medical care (Exhibit 48).

Of the estimated 1,884 persons diagnosed with HIV from 2005 to 2007, 84% received a CD4 count within 12 months of diagnosis. When comparing across different sectors of the population, about equal percentages of males and females were accessing care (88% and 85%, respectively). Whites had the highest rate of entry into medical care (88%), followed by Asian and Pacific Islanders (84%) and African Americans (81%). The lowest rates of entry into medical care were among Latinos (80%) and individuals in the "Other" race/ethnicity category (63%). Comparing across age groups, older individuals 50 years old and older tended to have higher rates of entry into medical care.

EXHIBIT 48 **Characteristics of PLWHA Accessing HIV Medical Care**

	NUMBER OF HIV CASES DIAGNOSED FROM 2005–2007	PERCENT RECEIVING AT LEAST ONE CD4 TEST WITHIN 12 MONTHS OF DIAGNOSIS
TOTAL	1,884	84%
HIV DISEASE STATUS		
HIV and AIDS diagnosed in same month	288	99%
AIDS diagnosed more than one month after HIV diagnosis	313	93%
HIV, not AIDS	1,283	78%
GENDER*		
Male	1,741	88%
Female	143	85%
RACE/ETHNICITY**		
White	1,042	88%
Asian and Pacific Islander	113	84%
African American	285	81%
Latino	373	80%
Other	71	63%
AGE		
13–29	424	82%
30–39	687	85%
40–49	546	84%
50+	227	86%
MODE OF TRANSMISSION		
MSM	1,293	85%
IDU	142	87%
MSM–IDU	226	83%
Heterosexual	103	92%
Other/no reported risk	120	61%

Source: San Francisco Department of Public Health, HIV/AIDS Epidemiology Annual Report 2008

**Data for transgender not available.*

***Native American and multiracial data is grouped with "Other" due to small sample size.*

Number and Characteristics of PLWHA with Unmet Need for HIV Medical Care

PLWHA were identified as having their primary medical care needs met if they had received ART or had at least one CD4 count or viral load test within 12 months. Exhibit 49 illustrates the numbers and percentages of individuals identified as having unmet need for HIV medical care, broken down by population. Overall, 21% of all PLWHA in San Francisco were identified as having unmet need. This includes a total of 825 (8%) PLWA and 3,286 (36%) PLWH who did not receive medical care. Unmet need was higher among African Americans and those less than 40 years old. IDUs and heterosexuals were also found to have higher unmet need for medical care compared to other groups.

Estimating Unmet Need for HIV Medical Care

- Unmet need for care is defined as not having had a laboratory test or receipt of antiretroviral therapy during a 12-month period.
- Estimation of unmet need for medical care for PLWA and PLWH in San Francisco included analysis of care data from laboratory reporting of viral load and CD4 results, medical record chart reviews, and data from Medi-Cal, the AIDS Drug Assistance Program (ADAP), the AIDS Regional Information and Evaluation Systems (ARIES), and Kaiser Permanente Northern California.
- Unmet need estimates include both San Francisco residents and non-residents diagnosed with HIV/AIDS in San Francisco. Estimates do not include undiagnosed or unreported cases.

Source: San Francisco Department of Public Health, HIV/AIDS Epidemiology Annual Report 2008

EXHIBIT 49

Characteristics of PLWHA with Unmet Need for HIV Medical Care, July 2006–June 2007

	PLWA (N=10,028)		PLWH (N=9,061)		PLWHA (N=19,089)	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
TOTAL	825	8%	3,286	36%	4,111	21%
GENDER*						
Male	782	8%	3,017	35%	3,799	21%
Female	43	7%	269	37%	312	23%
RACE/ETHNICITY**						
White	399	6%	1,937	34%	2,336	19%
African American	190	13%	547	40%	737	26%
Latino	159	10%	465	35%	624	21%
Asian and Pacific Islander	52	11%	174	37%	226	24%
Other	25	27%	163	43%	188	40%
AGE (AS OF JUNE 2007)***						
20–29	20	10%	373	51%	393	42%
30–39	163	12%	956	41%	1,119	30%
40–49	148	3%	1,238	34%	1,386	17%
50–59	372	12%	557	30%	929	18%
60+	99	9%	131	23%	230	14%
MODE OF TRANSMISSION						
MSM	581	8%	2,172	32%	2,753	20%
IDU	76	9%	381	61%	457	30%
MSM-IDU	96	7%	510	51%	606	25%
Heterosexual	31	10%	143	53%	174	31%
Other/unidentified risk	41	17%	80	12%	121	14%

Source: San Francisco Department of Public Health, HIV/AIDS Epidemiology Annual Report 2008

**Data for transpersons not available*
***Native American and multiracial data is grouped with "Other" due to small sample size.*
**** The age category 0-19 years was omitted due to small sample size.*

Factors Affecting Access to HIV Medical Care Services

In 2008, the San Francisco HIV Health Services Planning Council (CARE Council) conducted a needs assessment[8] to identify the needs of priority populations living with HIV/AIDS in the SF EMA. As part of the needs assessment, a client survey was administered to 248 severe needs PLWHA within the San Francisco EMA, which includes Marin and San Mateo counties. One of the client survey questions asked participants to determine whether certain factors, such as transportation, affect access to HIV medical care services. Forty-four percent of all survey respondents faced difficulty obtaining a service due to transportation issues; 13% reported always having a problem. Availability of services, namely service hours of operation, was also a problem for respondents. Approximately 42% of participants "sometimes" or "always" had challenges obtaining services due to service hours. Analyses of the data showed that service hours affected older participants more often than they did younger respondents.

Challenges and Barriers to Obtaining HIV/AIDS Services (n=248)

CHALLENGES AND BARRIERS	ALWAYS	SOMETIMES	NEVER
Transportation	13%	31%	57%
Service hours	7%	35%	59%
Cultural sensitivity	4%	15%	81%
Language	3%	10%	87%

Source: 2008 San Francisco EMA HIV/AIDS Health Services Needs Assessment (SFDPH 2008f)

Note: This data includes survey participants living and/or receiving HIV services in Marin and San Mateo counties.

As part of the needs assessment, a total of six focus groups were conducted with three special populations (Marin County residents, monolingual Spanish-speaking residents, and people age 50 or older) to gather in-depth, qualitative information about their use of HIV/AIDS related services, continued service needs, and challenges/barriers encountered when receiving services. Focus group participants were asked whether they experienced any barriers or challenges to receiving HIV/AIDS-related services. While participants did not report any barriers to receiving medical care, the following were excerpted from the report to illustrate key challenges faced by participants to accessing HIV services.

Awareness of available services and benefits. Participants agreed that they do not have sufficient information about the services and benefits for which they may be eligible and noted that this information should be publicized and disseminated widely. Participants also spoke about the difficulty of navigating the system of services and benefits, especially with respect to prescription drug coverage under Medicare Part D.

Eligibility for services and benefits. In addition to the challenges of finding out about available services, participants explained that due to income requirements for services such as free dental care and AIDS Drug Assistance Program (ADAP), middle-income individuals often face challenges obtaining needed medications and care.

Moreover, individuals with unmet needs in San Francisco face other multiple barriers to entering HIV care, including chronic mental illness or substance use, recent incarceration, poverty, homelessness, complications related to aging, and competing needs such as food, shelter, and child care. These factors point to the importance of helping individuals living with HIV achieve personal stability so they can access care on a more consistent basis, as well as the importance of linking underserved populations quickly from HIV testing to care (SFDPH 2008c).

8 The complete report, "2008 San Francisco EMA HIV/AIDS Health Services Needs Assessment" (SFDPH 2008) may be obtained online (http://www.sfcarecouncil.org/Documents/docs/SF%20Final%20Report%20FINAL%20DRAFT%20092208.pdf).

IMPLICATIONS FOR HIV PREVENTION AND CARE OF PLWHA

San Francisco's HIV prevention and care services continue to have an impact on the lives of people living with and affected by HIV/AIDS. PLWHA in San Francisco have access to a client-centered continuum of care. Ryan White CARE services alone reach over 6,800 people each year with medical care, case management, and other much-needed social and support services. Overall, the number of new HIV infections in the city has decreased, largely due to successful HIV prevention strategies that focus on populations at highest risk for acquiring and transmitting HIV, and address the disproportionate effects of HIV and AIDS. As in most communities, HIV and AIDS are not distributed evenly across all populations. In San Francisco, the populations disproportionately affected compared with their numbers in the population include African Americans, Whites, and transpersons. Among Whites, men are disproportionately affected while both African American men and women are disproportionately affected by HIV/AIDS compared to their numbers in the population. Transpersons represent a small percentage of San Francisco's population, but are profoundly affected by high HIV prevalence and incidence. Planning and implementing prevention and care services should include special attention to populations who are disproportionately affected by HIV and AIDS and/or who are increasingly affected by HIV and AIDS in recent years. Moreover, some populations experience substantial barriers to accessing care services, such as stigma and discrimination, as well as social and economic hardships that have been shown to be linked to HIV risk. Special consideration should be taken to ensure that both the prevention and care needs of such populations are addressed.

NEED FOR IMPROVED DATA COLLECTION

Improved data collection is needed for some populations to ensure that providers are better informed and have the most complete data possible when planning and prioritizing care and prevention services.

Trans Population. Trans status is inconsistently collected and reported across different data systems (e.g., HIV/AIDS surveillance data, STI surveillance data, as well as service utilization data systems), resulting in incomplete data for these populations. In San Francisco, a workgroup comprised of SFDPH representatives, providers, planners, and stakeholders have convened to assess the way in which a number of variables for demographic data (e.g., race/ethnicity, sex/gender, sexual orientation) are being collected. An important goal of the Community Assessment, System Program/Evaluation, and Research (CASPER) workgroup is to yield improved data on trans communities by developing principles for the collection of sex and gender demographic variables that are more inclusive of trans and intersex identities.

Native Americans. Native Americans are often misclassified into other racial categories resulting in an undercount of the total number of PLWHA among this group. Improved collection of data on Native Americans is necessary to ensure effective prevention and care services for this population.