



HIV Epidemiology

Annual Report
2014



San Francisco
Department of Public Health
Population Health Division



HIV Epidemiology

Annual Report **2014**



San Francisco
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HIV Epidemiology Section
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A Abbreviations

ART	Antiretroviral therapy
CDC	Centers for Disease Control and Prevention
CI	Confidence Interval
HSF	Healthy San Francisco
MMP	Medical Monitoring Project
MSM	Men who have sex with men
MSM-PWID	Men who have sex with men and who also inject drugs
NHBS	National HIV Behavioral Surveillance
OOJ	Out-of-jurisdiction
PLWH	Persons living with HIV
PrEP	Pre-exposure prophylaxis
PWID	People who inject drugs
SFDPH	San Francisco Department of Public Health
STD	Sexually transmitted diseases



Executive Summary

In 2014, San Francisco initiated a multi-sector effort to become the first municipal jurisdiction in the United States to achieve the Joint United Nations Program on HIV/AIDS (UNAIDS) vision of “Getting to Zero: Zero new HIV infections, Zero HIV deaths, and Zero HIV stigma.” Our “Getting to Zero” consortium is structured into four committees, each with representation from the San Francisco Department of Public Health (SFDPH), public and private medical care providers, the University of California San Francisco, community-based organizations, other San Francisco government agencies, and persons from affected populations.

- (1) The rapid antiretroviral treatment (ART) committee focuses on easy access to ART and same-day initiation for newly infected persons. New guidelines are based on evidence that the earliest possible treatment of HIV improves health outcomes. Treatment of early infection can also reduce onward HIV transmission during the period of greatest infectivity.
- (2) The pre-exposure prophylaxis (PrEP) committee targets expanding and monitoring PrEP use. PrEP can reduce the risk of HIV infection by 90% or more.
- (3) The retention and re-engagement committee aims to ensure uninterrupted and sustained receipt of HIV medical care for all HIV-infected persons. Continuous engagement in medical care includes treatment for patients to achieve and maintain viral suppression, thereby improving health outcomes and survival for people living with HIV and reducing their risk of onward HIV transmission.
- (4) The committee on stigma and discrimination against people living with HIV addresses the challenges faced by vulnerable populations with a focus on reducing barriers to HIV prevention, treatment and care.

San Francisco has a robust HIV surveillance system that will measure progress towards the Getting to Zero goals. Each year we present summaries and analyses of trends in new diagnoses, treatment, HIV-related morbidity and mortality, and special epidemiological studies in the HIV Epidemiology Annual Report. This current report on data available through 2014 shows treatment coverage at the highest recorded level and new HIV cases and AIDS deaths are at their lowest levels in decades. San Francisco is also a national leader on many of the key HIV care and prevention indicators, including linkage to HIV care shortly after diagnosis and viral suppression. These data provide optimism that we can achieve the Getting to Zero goals of 90% reduction in new HIV infections and deaths by 2020.

1

Overview of HIV in San Francisco

Since the epidemic began, HIV/AIDS surveillance has been conducted in San Francisco through active and passive methods and evaluated routinely. As of December 31, 2014, there were 15,979 San Francisco residents diagnosed with HIV infection who were alive (Table 1.1). These persons comprised 13% of California's living HIV cases and 2% of persons living with HIV (PLWH) reported nationally. Compared to cases reported in California and the United States, San Francisco living HIV cases were more likely to be male and white, and to occur among men who have sex with men (MSM), including MSM who also inject drugs intravenously (MSM-PWID).

Compared to all living HIV cases in San Francisco, newly diagnosed HIV cases in San Francisco had a similar gender distribution, a greater proportion of Latinos and Asian/Pacific Islanders, and a smaller proportion of MSM-PWID. Compared to newly diagnosed national HIV cases, newly diagnosed San Francisco cases were more likely to be male, white, and MSM. The number of newly diagnosed HIV cases may be revised upward in future reports due to reporting delay.

Table 1.1 Characteristics of persons living with HIV and persons newly diagnosed with HIV infection in San Francisco, California and the United States

	Living HIV Cases			Newly Diagnosed HIV Cases	
	San Francisco ¹ (N = 15,979) %	California ² (N = 119,878) %	United States ³ (N = 929,646) %	San Francisco ¹ , 2014 (N = 302) %	United States ³ , 2013 (N = 42,018) %
Gender					
Male	92%	87%	75%	93%	80%
Female	6%	12%	25%	5%	20%
Transgender ⁴	2%	1%	--	2%	--
Race/Ethnicity					
White	61%	43%	33%	45%	28%
African American	13%	18%	43%	11%	45%
Latino	18%	33%	20%	27%	23%
Asian/Pacific Islander	6%	4%	1%	13%	2%
Native American	1%	<1%	<1%	<1%	<1%
Other/Unknown	2%	2%	2%	4%	2%
Transmission Category					
MSM	74%	66%	43%	75%	52%
PWID	6%	7%	13%	6%	4%
MSM-PWID	15%	8%	5%	11%	2%
Heterosexual	3%	9%	19%	3%	11%
Other/Unidentified	2%	10%	20%	5%	31%

1 San Francisco data are reported through April 10, 2015 for cases diagnosed through December 31, 2014.

2 California data are reported through December 2014, for cases living as of December 31, 2013.

3 U.S. data are reported through June 30, 2014 and reflect cases diagnosed through December 31, 2013. U.S. data reflect unadjusted numbers for 50 states and 6 dependent areas and may be found in the CDC HIV Surveillance Report, 2013; vol. 25 at http://www.cdc.gov/hiv/library/reports/surveillance/2013/surveillance_Report_vol_25.html.

4 Transgender data are not reported by the United States. See Technical Notes "Transgender Status."



HIV infection stage 3 (AIDS) cases diagnosed each year among San Francisco residents reached a peak of 2,332 cases in 1992 and declined since then (Figure 1.1). Deaths among HIV infection stage 3 (AIDS) cases decreased dramatically beginning in 1995 due to the impact of combination antiretroviral therapies (ART). From 1999 and on, both cases and deaths have shown slight declines, however, reporting delays affect the numbers for recent years (2013 and 2014). The definition of HIV infection stage 3 (AIDS) cases was updated in 2014, and the case definition is applied to cases diagnosed in 2014 and onward (see Technical Notes “Stage of Disease at Diagnosis of HIV Infection”). The decrease in 2014 diagnosed stage 3 (AIDS) cases may be attributed in part to the updated case definition.

The number of San Franciscans living with HIV infection stage 3 (AIDS) has continued to rise since 1980 through 2013. This is due to effective ART and a lower number of deaths than new cases each year. In 2014, number of deaths in stage 3 (AIDS) cases was similar to number of stage 3 (AIDS) diagnoses. There were 9,567 San Francisco residents living with HIV infection stage 3 (AIDS) by the end of 2014.

Figure 1.1 HIV infection stage 3 (AIDS) cases, deaths, and prevalence, 1980-2014, San Francisco

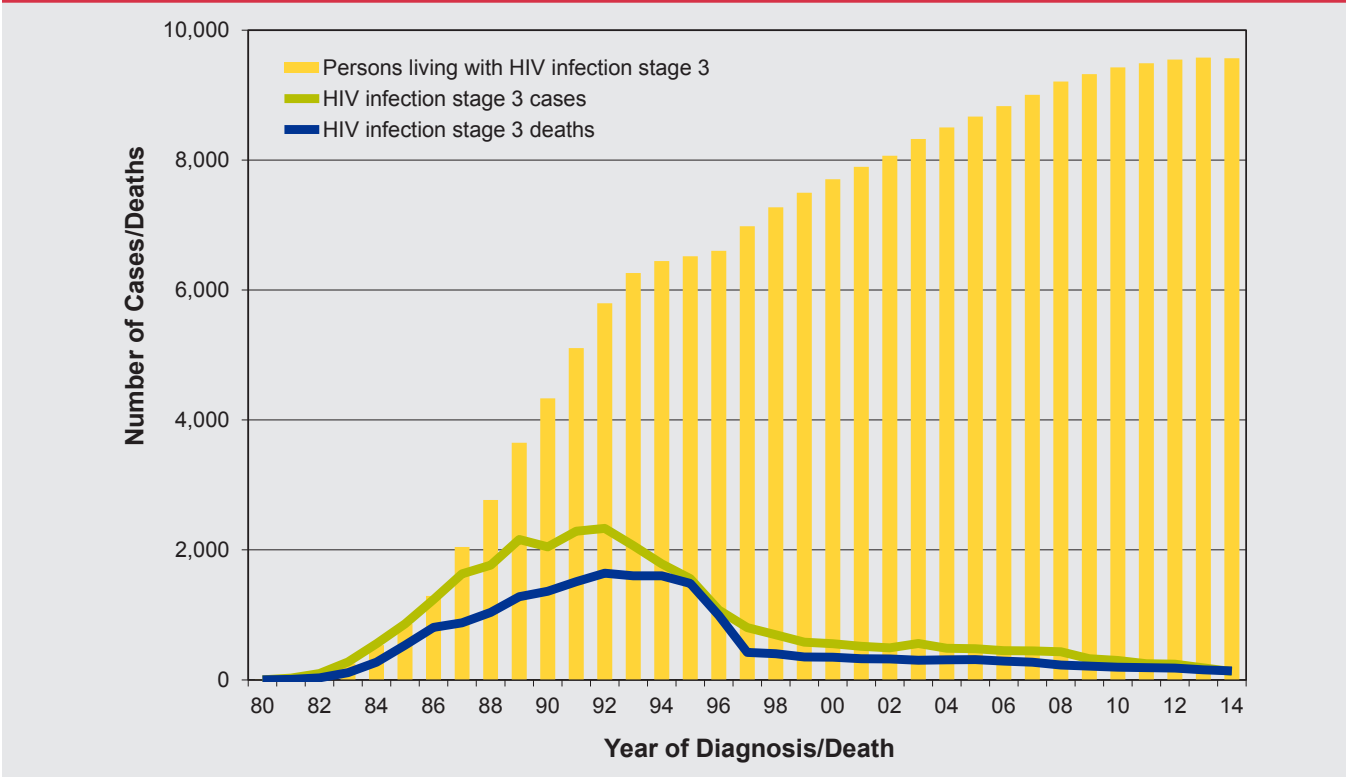
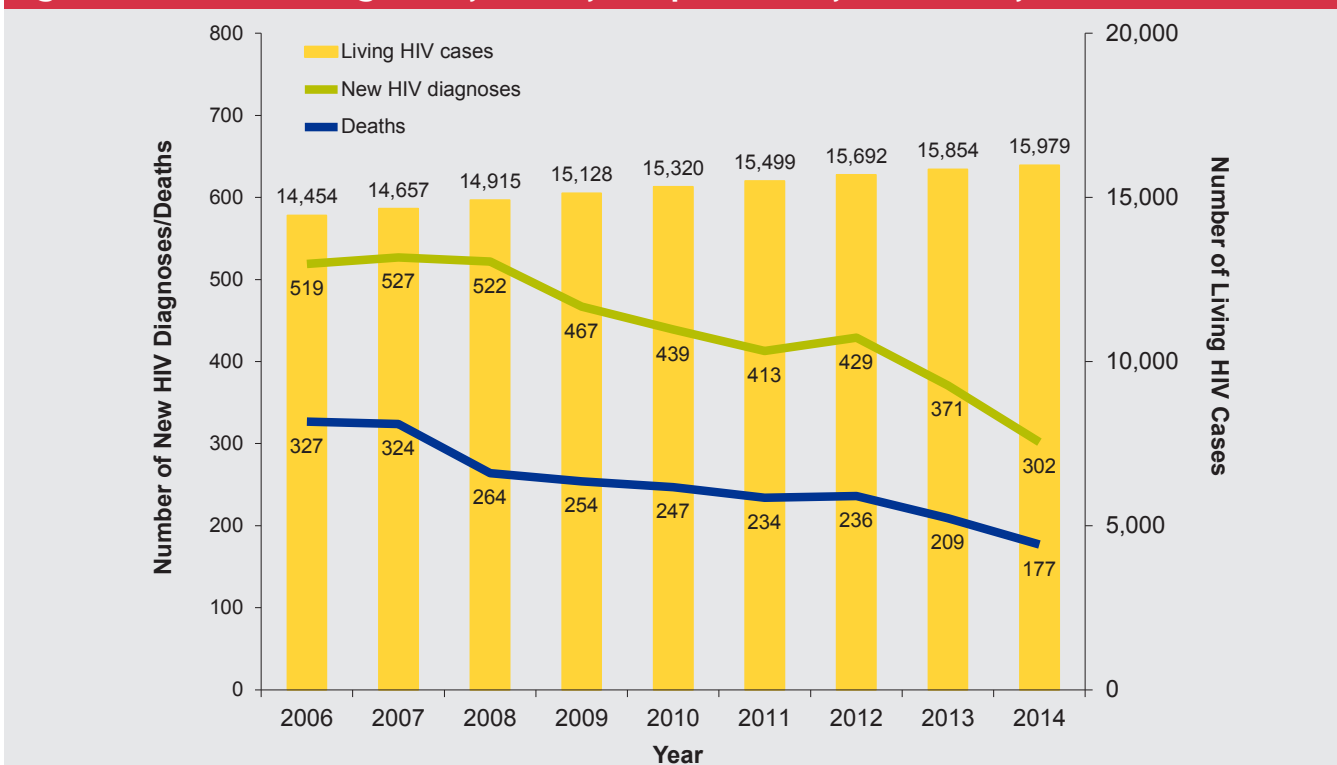


Figure 1.2 illustrates the number of persons newly diagnosed with HIV infection (green line), number of deaths each year (blue line), and number of PLWH between 2006 and 2014 (yellow bars). The number of new HIV diagnoses shown by year includes persons who were diagnosed in that year with HIV, persons initially diagnosed with HIV infection Stage 3 (AIDS), and persons initially diagnosed with HIV (stage 0, 1, 2, unknown) and developed stage 3 in a later year.

The number of new HIV diagnoses declined between 2007 and 2011, stabilized in 2012, and continued to decline through 2014. The number of deaths was steady from 2006 to 2007, declined through 2011 and then remained level in 2012. Death reporting for 2013 and 2014 is not complete. Also for recent years, the number of cases diagnosed may be underestimated due to reporting delays.

The number of living cases by year includes persons who were diagnosed with HIV during or prior to the year shown and not known to have died by the end of that year. PLWH increased from 14,454 in 2006 to 15,979 in 2014. The increasing number of living cases is a reflection of a steady addition of newly diagnosed cases over time coupled with a decline in deaths in each year. These data only include persons who have been diagnosed and reported to the health department. HIV-infected persons who are unaware of their infection and persons diagnosed with an anonymous HIV test are not included unless they also tested confidentially or entered care in San Francisco. These figures therefore may underestimate the true prevalence and incidence of HIV in the city.

Figure 1.2 New HIV diagnoses¹, deaths, and prevalence, 2006-2014, San Francisco



¹ See Technical Notes "Date of Initial HIV Diagnosis."

Table 1.2 shows the characteristics of persons diagnosed with HIV between 2006 and 2014. The majority were male, white, age 30-49 years, and MSM. Trends in race/ethnicity distributions show small increases in proportions of Latinos and Asian/Pacific Islanders since 2012. The proportion of new diagnoses among persons aged 25-29 years also increased in recent years, beginning in 2010. No children (<13 years) were diagnosed with HIV during these years. Proportions of annual diagnoses due to heterosexual transmission decreased starting 2011, while proportions of MSM who do not inject drugs have been increasing.

Table 1.2 Trends in persons diagnosed with HIV infection by demographic and risk characteristics, 2006-2014, San Francisco

	Year of Initial HIV Diagnosis ¹								
	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total Number	519	527	522	467	439	413	429	371	302
Gender									
Male	90%	87%	89%	91%	89%	88%	94%	91%	93%
Female	7%	8%	8%	5%	8%	10%	5%	6%	5%
Transfemale ²	3%	4%	3%	4%	3%	2%	1%	3%	2%
Race/Ethnicity									
White	54%	51%	49%	52%	48%	52%	49%	46%	45%
African American	14%	15%	16%	15%	14%	16%	10%	13%	11%
Latino	22%	20%	23%	21%	25%	20%	25%	25%	27%
Asian/Pacific Islander	6%	9%	8%	8%	8%	8%	11%	13%	13%
Native American	1%	0%	1%	0%	0%	0%	1%	1%	0%
Multi-race	3%	4%	3%	4%	5%	3%	2%	2%	4%
Unknown	0%	0%	0%	0%	0%	1%	1%	1%	0%
Age at HIV Diagnosis (years)									
13 - 17	<1%	<1%	1%	<1%	<1%	<1%	0%	0%	<1%
18 - 24	12%	10%	10%	12%	13%	11%	12%	13%	12%
25 - 29	13%	19%	16%	12%	13%	15%	17%	21%	17%
30 - 39	34%	36%	35%	31%	31%	26%	31%	29%	30%
40 - 49	28%	24%	29%	27%	28%	31%	29%	25%	24%
50+	14%	10%	9%	17%	15%	17%	11%	12%	17%
Transmission Category									
MSM	70%	66%	72%	71%	64%	72%	78%	77%	75%
PWID	8%	6%	6%	5%	8%	7%	3%	6%	6%
MSM-PWID	16%	17%	12%	16%	15%	11%	10%	10%	11%
Heterosexual	5%	8%	7%	5%	8%	6%	6%	5%	3%
Other/Unidentified	2%	3%	3%	3%	5%	3%	3%	2%	5%

1 Data include persons diagnosed with HIV infection in any stage and reported as of April 10, 2015. Percentages may not add to 100% due to rounding. See Technical Notes "Date of Initial HIV Diagnosis."

2 Transfemale data include all transgender cases. Transmale data are not released separately due to potential small population size. See Technical Notes "Transgender Status."

The number of PLWH continues to increase due to ongoing incidence of HIV combined with an increase in survival after diagnosis. Persons were counted as living in a year if their HIV diagnosis date was in or before that year and they were known to be alive at the end of the year. As of December 31, 2014, 15,979 San Francisco residents were living with HIV (Table 1.3). Demographic and risk characteristics of PLWH remained mostly stable between 2011 and 2014; cases were predominately white, aged 50 years and older, and MSM (including MSM-PWID). This table demonstrates aging of PLWH: the proportion of persons aged 50 years and older increased from 48% to 58% between 2011 and 2014, while the proportions of persons aged 30-39 and 40-49 years decreased.

Table 1.3 Trends in persons living with HIV by demographic and risk characteristics, 2011-2014¹, San Francisco

	2011		2012		2013		2014	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)
Gender								
Male	14,230	(92)	14,423	(92)	14,587	(92)	14,722	(92)
Female	907	(6)	911	(6)	906	(6)	901	(6)
Transfemale ²	362	(2)	358	(2)	361	(2)	356	(2)
Race/Ethnicity								
White	9,547	(62)	9,611	(61)	9,664	(61)	9,708	(61)
African American	2,023	(13)	2,022	(13)	2,027	(13)	2,014	(13)
Latino	2,702	(17)	2,777	(18)	2,840	(18)	2,894	(18)
Asian/Pacific Islander	779	(5)	825	(5)	870	(5)	904	(6)
Native American	74	(<1)	80	(1)	81	(1)	82	(1)
Multi-race	349	(2)	349	(2)	342	(2)	346	(2)
Unknown	25	(<1)	28	(<1)	30	(<1)	31	(<1)
Age in Years (at end of each year)								
0 - 12	4	(<1)	3	(<1)	3	(<1)	3	(<1)
13 - 17	12	(<1)	8	(<1)	4	(<1)	3	(<1)
18 - 24	160	(1)	160	(1)	148	(1)	124	(1)
25 - 29	446	(3)	457	(3)	465	(3)	452	(3)
30 - 39	1,992	(13)	1,923	(12)	1,874	(12)	1,837	(11)
40 - 49	5,448	(35)	5,127	(33)	4,769	(30)	4,358	(27)
50+	7,437	(48)	8,014	(51)	8,591	(54)	9,202	(58)
Transmission Category								
MSM	11,288	(73)	11,487	(73)	11,657	(74)	11,787	(74)
PWID	1,016	(7)	988	(6)	966	(6)	951	(6)
MSM-PWID	2,423	(16)	2,418	(15)	2,413	(15)	2,408	(15)
Heterosexual	495	(3)	512	(3)	526	(3)	526	(3)
Transfusion/Hemophilia	25	(<1)	25	(<1)	25	(<1)	25	(<1)
Other/Unidentified	252	(2)	262	(2)	267	(2)	282	(2)
Total	15,499		15,692		15,854		15,979	

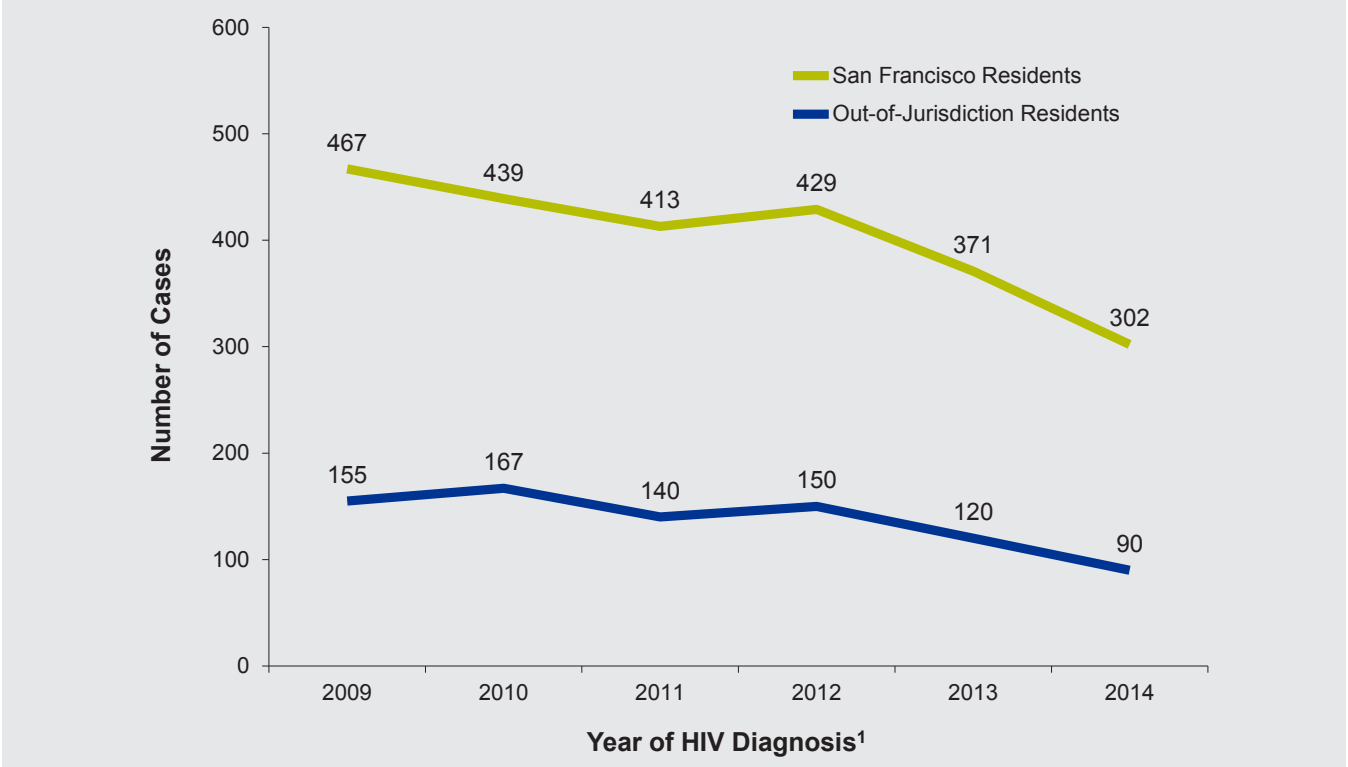
1 Persons living with HIV at the end of each year.

2 Transfemale data include all transgender cases. Transmale data are not released separately due to potential small population size. See Technical Notes "Transgender Status."



In addition to reporting HIV cases who were residents of San Francisco at time of diagnosis, the San Francisco Department of Public Health (SFPDH) reports cases who resided outside San Francisco but were diagnosed by a provider or facility within San Francisco (out-of-jurisdiction residents). Figure 1.3 compares the annual case counts and trends of San Francisco residents and out-of-jurisdiction (OOJ) residents at diagnosis from 2009 to 2014. Case counts for recent years may be revised upward due to reporting delay. These data show that among all new cases reported to the SFPDH, a fair number resided outside of San Francisco at time of diagnosis.

Figure 1.3 New San Francisco HIV cases and new out-of-jurisdiction HIV cases diagnosed in San Francisco, 2009-2014, San Francisco



1 See Technical Notes “Date of Initial HIV Diagnosis.”

The overall number of PLWH in San Francisco is affected by 1) out-migration: San Francisco residents at diagnosis who moved out of San Francisco, and 2) in-migration: OOJ residents at diagnosis who received care in San Francisco. As of December 31, 2014, 15,979 San Francisco residents at diagnosis were still alive. Twenty-eight percent (N=4,432) of those residents were known to have moved out of San Francisco, and 11,547 San Francisco residents at diagnosis were still living in the city. Almost 4,000 OOJ residents received care in San Francisco during 2014.

After excluding persons that had moved out of San Francisco, the demographic and risk distribution of PLWH still in San Francisco was very similar to all living San Francisco residents. OOJ residents receiving care in San Francisco were younger compared to San Francisco residents, and OOJ residents had lower proportion of MSM-PWID.

Table 1.4 Characteristics of persons living with HIV as of December 2014 by residence status, San Francisco

	All living SF residents at diagnosis		SF residents at diagnosis, still in SF¹		OOJ residents at diagnosis, care in SF²	
	Number	(%)	Number	(%)	Number	(%)
Gender						
Male	14,722	(92)	10,544	(91)	3,686	(93)
Female	901	(6)	724	(6)	222	(6)
Transfemale ³	356	(2)	279	(2)	55	(1)
Race/Ethnicity						
White	9,708	(61)	6,789	(59)	2,332	(59)
African American	2,014	(13)	1,479	(13)	569	(14)
Latino	2,894	(18)	2,231	(19)	682	(17)
Asian/Pacific Islander	904	(6)	727	(6)	210	(5)
Native American	82	(1)	61	(1)	21	(1)
Other/Unknown	377	(2)	260	(2)	149	(4)
Age in Years (at end of each year)						
0 - 12	3	(<1)	<5	(<1)	6	(<1)
13 - 17	3	(<1)	<5	(<1)	4	(<1)
18 - 24	124	(1)	104	(1)	67	(2)
25 - 29	452	(3)	346	(3)	191	(5)
30 - 39	1,837	(11)	1,347	(12)	657	(17)
40 - 49	4,358	(27)	3,170	(27)	1,104	(28)
50+	9,202	(58)	6,577	(57)	1,934	(49)
Transmission Category						
MSM	11,787	(74)	8,373	(73)	3,015	(76)
PWID	951	(6)	731	(6)	187	(5)
MSM-PWID	2,408	(15)	1,790	(16)	418	(11)
Heterosexual	526	(3)	416	(4)	172	(4)
Transfusion/Hemophilia	25	(<1)	14	(<1)	15	(<1)
Other/Unidentified	282	(2)	223	(2)	156	(4)
Total	15,979		11,547		3,963	

1 PLWH who were San Francisco residents at diagnosis and not known to have moved out of San Francisco.

2 PLWH who were OOJ residents at diagnosis and received care in San Francisco in 2014.

3 Transfemale data include all transgender cases. Transmale data are not released separately due to potential small population size. See Technical Notes "Transgender Status."

Among living male HIV cases diagnosed in San Francisco, white MSM comprised the largest group (52%). White and African American male HIV cases had similar age distributions at the end of 2014, while Latino, Asian/Pacific Islander, and Native American males were younger (Table 1.5).

Among living female HIV cases, whites and African Americans made up the majority. Injection drug use was the predominant transmission category for white and African American women while heterosexual sex was the predominant transmission category for Latinas, Asian/Pacific Islander, and Native American women. African American females were older than other female racial/ethnic groups with 62% age 50 years or older.

Table 1.5 Characteristics of persons living with HIV as of December 2014, San Francisco

	White		African American		Latino		Asian/Pacific Islander & Native American		Total
	Number	(%)	Number	(%)	Number	(%)	Number	(%)	Number ¹
Male									
<i>Transmission Category</i>									
MSM	7,620	(81)	885	(58)	2,119	(82)	739	(84)	11,592
PWID	187	(2)	229	(15)	62	(2)	20	(2)	510
MSM-PWID	1457	(16)	312	(20)	315	(12)	88	(10)	2,253
Heterosexual	32	(<1)	68	(4)	53	(2)	12	(1)	168
Transfusion/Hemophilia	6	(<1)	3	(<1)	2	(<1)	3	(<1)	14
Other/Unidentified	67	(1)	41	(3)	49	(2)	15	(2)	185
<i>Age in Years (at end of 2014)</i>									
0 - 12	0	(0)	0	(0)	0	(0)	0	(0)	1
13 - 17	0	(0)	0	(0)	1	(0)	0	(0)	1
18 - 24	27	(<1)	21	(1)	34	(1)	16	(2)	101
25 - 29	159	(2)	58	(4)	131	(5)	42	(5)	406
30 - 39	751	(8)	136	(9)	491	(19)	188	(21)	1636
40 - 49	2,356	(25)	373	(24)	840	(32)	311	(35)	3,997
50 - 59	3,680	(39)	574	(37)	800	(31)	228	(26)	5,382
60 - 64	1,268	(14)	232	(15)	171	(7)	51	(6)	1,740
65+	1,128	(12)	144	(9)	132	(5)	41	(5)	1,458
Male Subtotal	9,369		1,538		2,600		877		14,722
Female									
<i>Transmission Category</i>									
PWID	158	(60)	194	(54)	58	(32)	15	(21)	441
Heterosexual	80	(30)	134	(37)	93	(51)	43	(61)	353
Transfusion/Hemophilia	5	(2)	2	(1)	2	(1)	2	(3)	11
Other/Unidentified	21	(8)	29	(8)	29	(16)	10	(14)	96
<i>Age in Years (at end of 2014)</i>									
0 - 12	0	(0)	1	(0)	1	(1)	0	(0)	2
13 - 17	0	(0)	0	(0)	2	(1)	0	(0)	2
18 - 24	3	(1)	4	(1)	7	(4)	1	(1)	17
25 - 29	6	(2)	7	(2)	10	(5)	1	(1)	24
30 - 39	33	(13)	37	(10)	31	(17)	15	(21)	124
40 - 49	83	(31)	85	(24)	46	(25)	22	(31)	243
50 - 59	99	(38)	145	(40)	48	(26)	22	(31)	323
60 - 64	22	(8)	50	(14)	19	(10)	8	(11)	99
65+	18	(7)	30	(8)	18	(10)	1	(1)	67
Female Subtotal	264		359		182		70		901
Transfemale²	75		117		112		39		356
Total	9,708		2,014		2,894		986		15,979

1 Includes persons with multiple race or whose racial/ethnic information is not available.

2 Transfemale data include all transgender cases. Transmale data are not released separately due to potential small population. See Technical Notes "Transgender Status."

HIV incidence estimates

The SFDPH serves as one of the 25 national HIV incidence surveillance sentinel sites monitoring the number and rates of new HIV infections. Estimates of new infections track the leading edge of the HIV epidemic and are critical for allocating resources and evaluating effectiveness of prevention programs.

To identify incident HIV cases, blood from persons newly diagnosed with HIV is retested using a laboratory assay (called BED) that classifies individuals as having either a recently acquired HIV infection or a long-standing infection. These results are used with a statistical adjustment for HIV testing history to estimate HIV incidence. We applied this method, developed by the CDC, to 2007-2013 data.

Overall, the estimated number of new HIV infections has remained relatively stable since 2007 (Figure 1.4). While there were fluctuations in the estimates, the confidence intervals overlap from year to year, indicating there were no large decreases or increases in HIV incidence over the last several years.

Figure 1.4 Estimated number of new HIV infections, 2007-2013, San Francisco



CI: Confidence Interval.

Table 1.6 presents the estimated rate per 100,000 of new infections by demographic and risk characteristics. The rate of infection among MSM is disproportionately high: 670 new infections per 100,000 MSM in 2013 compared to an overall rate of 50 in San Francisco. With caution given to the large margin of error, the data suggest higher incidence among African Americans and Latinos compared to whites for the years we are able to provide an estimate.

Table 1.6 Estimated rate of new HIV infections per 100,000 population¹ by demographic and risk characteristics in San Francisco, 2007-2013

	2007	2008	2009	2010	2011	2012	2013
	Rate per 100,000	Rate per 100,000	Rate per 100,000	Rate per 100,000	Rate per 100,000	Rate per 100,000	Rate per 100,000
	(95% CI)	(95% CI)	(95% CI)	(95% CI)	(95% CI)	(95% CI)	(95% CI)
Overall	69 (46 - 92)	68 (50 - 86)	52 (37 - 67)	50 (31 - 70)	60 (38 - 81)	63 (46 - 81)	50 (37 - 64)
Sex at Birth							
Male	125 (81 - 169)	128 (94 - 162)	99 (70 - 128)	88 (52 - 124)	113 (72 - 153)	119 (85 - 153)	98 (72 - 124)
Female	**	**	**	**	**	**	**
Race/Ethnicity							
White	81 (45 - 117)	85 (57 - 113)	62 (38 - 86)	51 (24 - 79)	72 (40 - 105)	70 (44 - 96)	55 (36 - 74)
African American	**	107 (29 - 186)	111 (32 - 190)	**	**	**	**
Latino	110 (37 - 184)	131 (69 - 194)	66 (22 - 110)	107 (34 - 179)	91 (23 - 159)	111 (53 - 196)	107 (57 - 158)
Other	34 (11 - 58)	**	**	**	**	26 (10 - 43)	**
Age (years)							
13-29	133 (65 - 202)	113 (64 - 163)	102 (54 - 149)	95 (35 - 155)	119 (48 - 189)	133 (76 - 190)	141 (89 - 192)
30-39	89 (45 - 133)	91 (56 - 126)	68 (37 - 98)	56 (19 - 92)	64 (25 - 104)	74 (40 - 107)	57 (30 - 83)
40-49	71 (20 - 122)	97 (52 - 143)	56 (21 - 91)	82 (32 - 133)	83 (33 - 133)	74 (37 - 110)	45 (21 - 70)
50+	**	**	**	**	**	**	**
Transmission Category²							
MSM	830 (535 - 1,124)	831 (602 - 1,059)	665 (463 - 867)	588 (339 - 836)	767 (487 - 1,047)	815 (581 - 1,050)	670 (487 - 853)
Non-MSM	**	**	**	**	**	**	**

** Incidence estimate not calculated due to incomplete data.

1 The population data by year, sex, race/ethnicity, and age are obtained from State of California, Department of Finance, Race/Ethnic Population with Age and Sex Detail, 2000-2050. Sacramento, CA, July 2007. The MSM and MSM-PWID population data are obtained from the 2011 HIV consensus estimates as of January 1, 2011 in the San Francisco 2010 HIV/AIDS Epidemiology Annual Report, July 2011.

2 MSM includes MSM-PWID; Non-MSM includes heterosexuals, non-MSM PWID, and other.

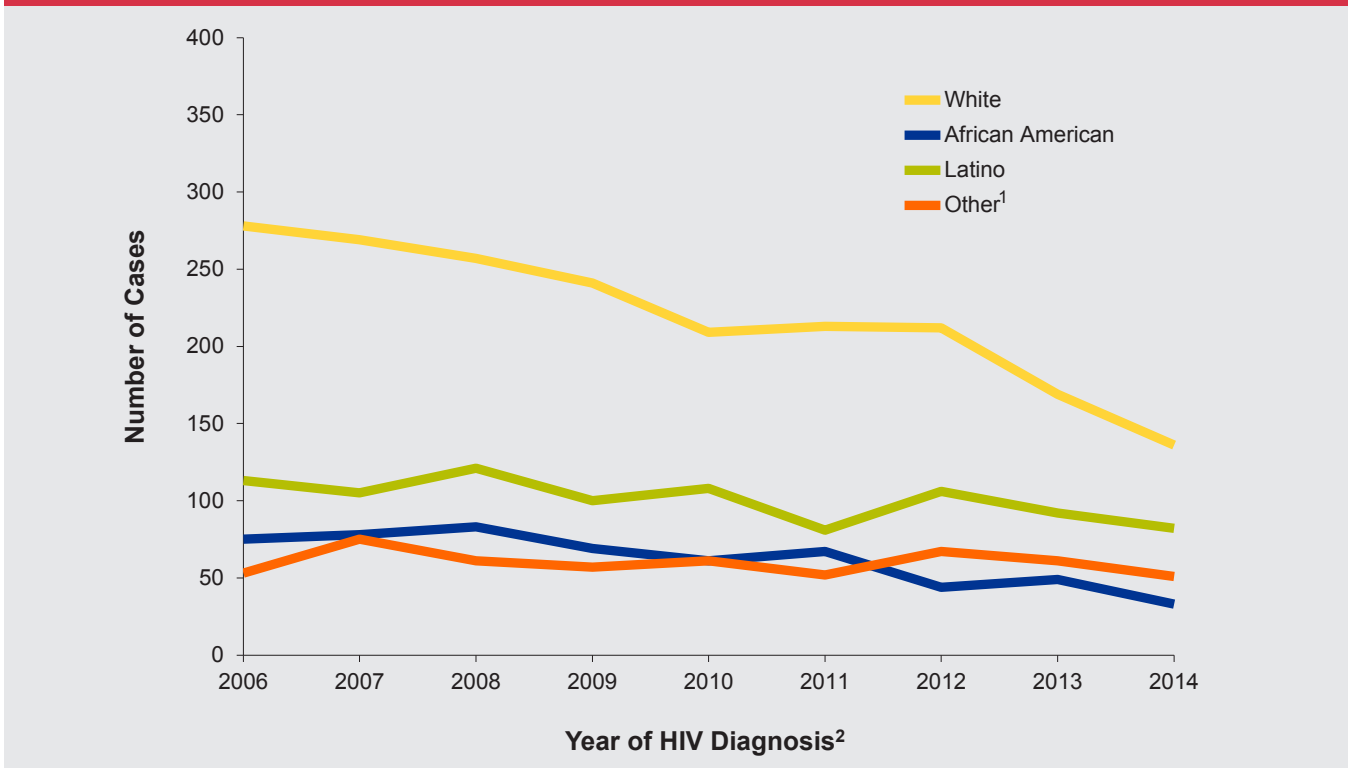
2

Trends in HIV Diagnoses

Race/ethnicity

Trends by racial/ethnic category for persons diagnosed with HIV infection show that, from 2006 to 2014, whites accounted for the majority of diagnosed cases (Figure 2.1). The number of white HIV cases declined for most of this time period, leveled off between 2010 and 2012, and continued to decline through 2014. The number of African American cases declined beginning in 2012 compared to previous years. Numbers of HIV cases for other racial/ethnic groups remained fairly stable.

Figure 2.1 Number of persons diagnosed with HIV infection by race/ethnicity, 2006-2014, San Francisco



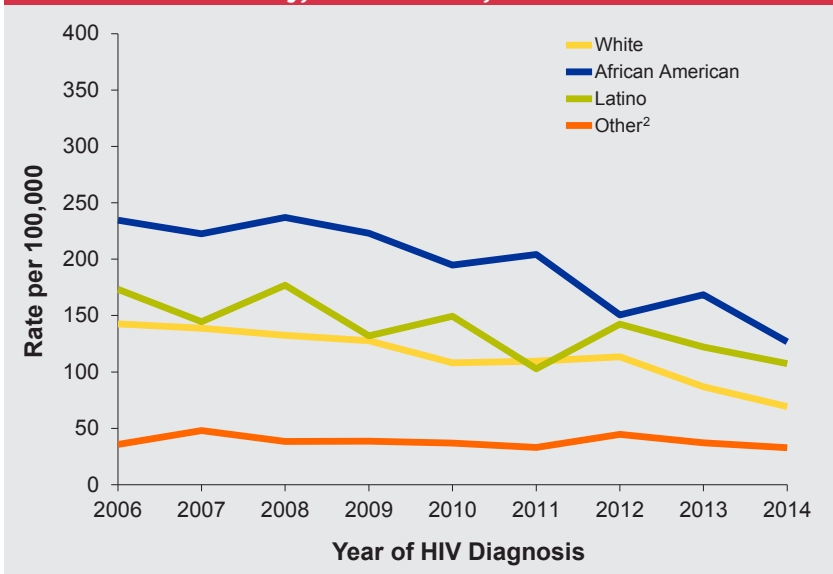
¹ Cases in the “Other” racial/ethnic category include 67% Asian/Pacific Islanders, 4% Native Americans, 25% multiple races, and 4% unknown.

² See Technical Notes “Date of Initial HIV Diagnosis.”



Among men, the annual rates of HIV diagnosis are highest in African Americans with a decreasing trend between 2006 and 2014 (Figure 2.2). There was also a declining trend in rates of HIV diagnosis for white men in this time period. HIV rates for Latino men have decreased since 2008, but have been consistently higher than those for white men except in 2011. Rates for men of other racial/ethnic groups remained fairly level between 2006 and 2004. In 2014, the rate of HIV diagnosis per 100,000 population was 127 among African American men, 107 among Latino men, and 69 among white men.

Figure 2.2 Annual rates¹ of men diagnosed with HIV infection per 100,000 population by race/ethnicity, 2006-2014, San Francisco

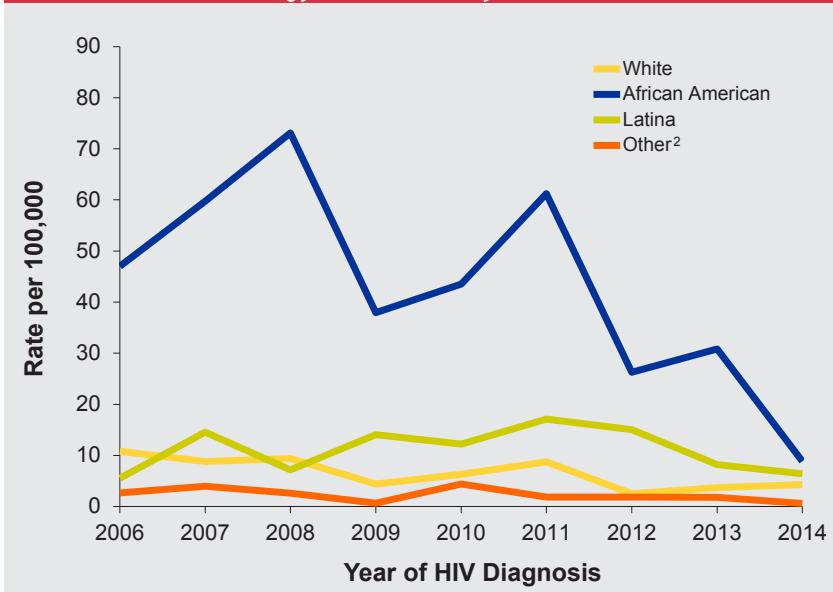


1 See Technical Notes “HIV Case Rates and HIV Mortality Rates.”

2 Cases in the “Other” race/ethnicity category include 68% Asian/Pacific Islanders, 4% Native Americans, 22% multiple races, and 3% unknown.

In San Francisco, rates of HIV diagnosis are significantly lower among women compared to men. For the period of 2006 to 2014, although annual rates of HIV diagnosis were higher for African American women compared to other racial/ethnic groups, the overall trend has been declining (Figure 2.3). Annual rates of diagnosis for white women have been under 10 per 100,000 since 2007. Rates for Latina women peaked in 2011 and have been declining since then. In 2014, the rate of HIV diagnosis per 100,000 population was 9 for African American women, 6 for Latina women, and 4 for white women.

Figure 2.3 Annual rates¹ of women diagnosed with HIV infection per 100,000 population by race/ethnicity, 2006-2014, San Francisco



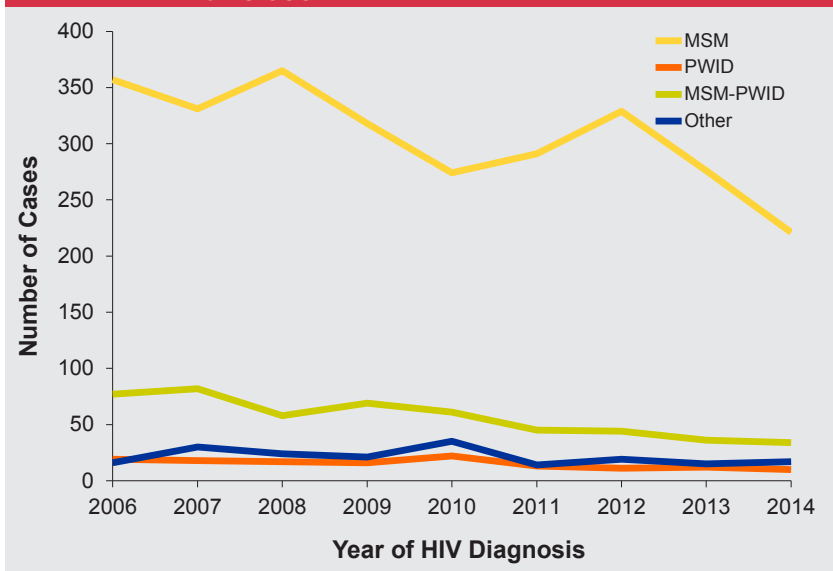
1 See Technical Notes “HIV Case Rates and HIV Mortality Rates.”

2 Cases in the “Other” race/ethnicity category include 56% Asian/Pacific Islanders, 3% Native Americans, 34% multiple races, and 6% unknown.

Transmission category

Most males diagnosed with HIV infection in San Francisco are MSM. After declines in the numbers of MSM non-PWID diagnosed in 2009 and 2010, the annual number fluctuated (Figure 2.4). In recent years, trends in the number of male PWID cases (both MSM and heterosexual) declined. In 2014, 78% of male HIV cases were MSM non-PWID, 12% were MSM-PWID, and 4% were heterosexual PWID.

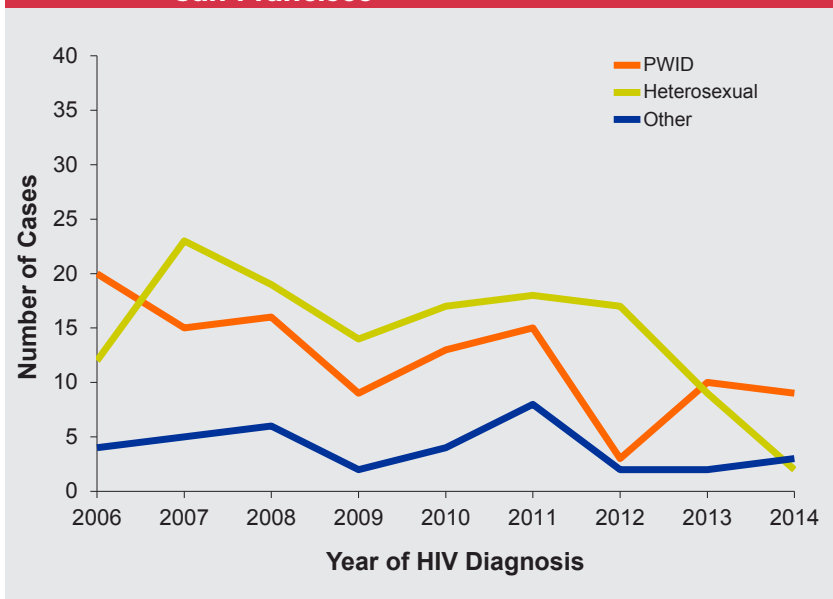
Figure 2.4 Number of men diagnosed with HIV infection¹ by transmission category, 2006-2014, San Francisco



¹ Excludes transfemale cases diagnosed with HIV infection. Includes persons with HIV by year of their initial HIV diagnosis.

From 2007 to 2013, the number of annual female cases diagnosed with HIV infection due to heterosexual contact showed a trend similar to that for PWID cases, with heterosexual cases slightly exceeding PWID cases most years (Figure 2.5). In 2014, 64% of female cases acquired HIV through injecting drugs and 14% through heterosexual contact.

Figure 2.5 Number of women diagnosed with HIV infection¹ by transmission category, 2006-2014, San Francisco



¹ Excludes transmale cases diagnosed with HIV infection. Includes persons with HIV by year of their initial HIV diagnosis.

Age

Table 2.1 shows the annual number of HIV diagnoses between 2011 and 2014 by gender and age at HIV diagnosis. Among males, the proportion of cases in the 40-49 years age group decreased each year in this time period. Overall, most new diagnoses occurred among males in the 30-39 years age group, followed by the number of diagnoses in males 40-49 years of age.

In this time period, the annual number of female HIV diagnoses has declined. The age distribution among female cases diagnosed annually differs sharply from males, with more than 60% of annual diagnoses occurring in women aged 40 years and older. Few women under 30 years of age were newly diagnosed with HIV in recent years.

Table 2.1 Number of persons diagnosed with HIV infection by gender¹ and age at diagnosis, 2011-2014, San Francisco

	Year of Initial HIV Diagnosis ²							
	2011		2012		2013		2014	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)
Male (Age in years)								
0 - 12	0	(0)	0	(0)	0	(0)	0	(0)
13 - 17	1	(0)	0	(0)	0	(0)	1	(0)
18 - 24	37	(10)	50	(12)	47	(14)	31	(11)
25 - 29	60	(17)	68	(17)	73	(22)	47	(17)
30 - 39	99	(27)	129	(32)	100	(29)	88	(31)
40 - 49	110	(30)	113	(28)	84	(25)	69	(24)
50+	56	(15)	43	(11)	35	(10)	46	(16)
Male Subtotal	363	(100)	403	(100)	339	(100)	282	(100)
Female (Age in years)								
0 - 12	0	(0)	0	(0)	0	(0)	0	(0)
13 - 17	0	(0)	0	(0)	0	(0)	0	(0)
18 - 24	4	(10)	2	(9)	1	(5)	1	(7)
25 - 29	3	(7)	2	(9)	2	(10)	2	(14)
30 - 39	5	(12)	2	(9)	3	(14)	2	(14)
40 - 49	16	(39)	10	(45)	6	(29)	4	(29)
50+	13	(32)	6	(27)	9	(43)	5	(36)
Female Subtotal	41	(100)	22	(100)	21	(100)	14	(100)

¹ Transgender data by age are not presented in the table due to small numbers and potential small population.

² See Technical Notes "Date of Initial HIV Diagnosis."

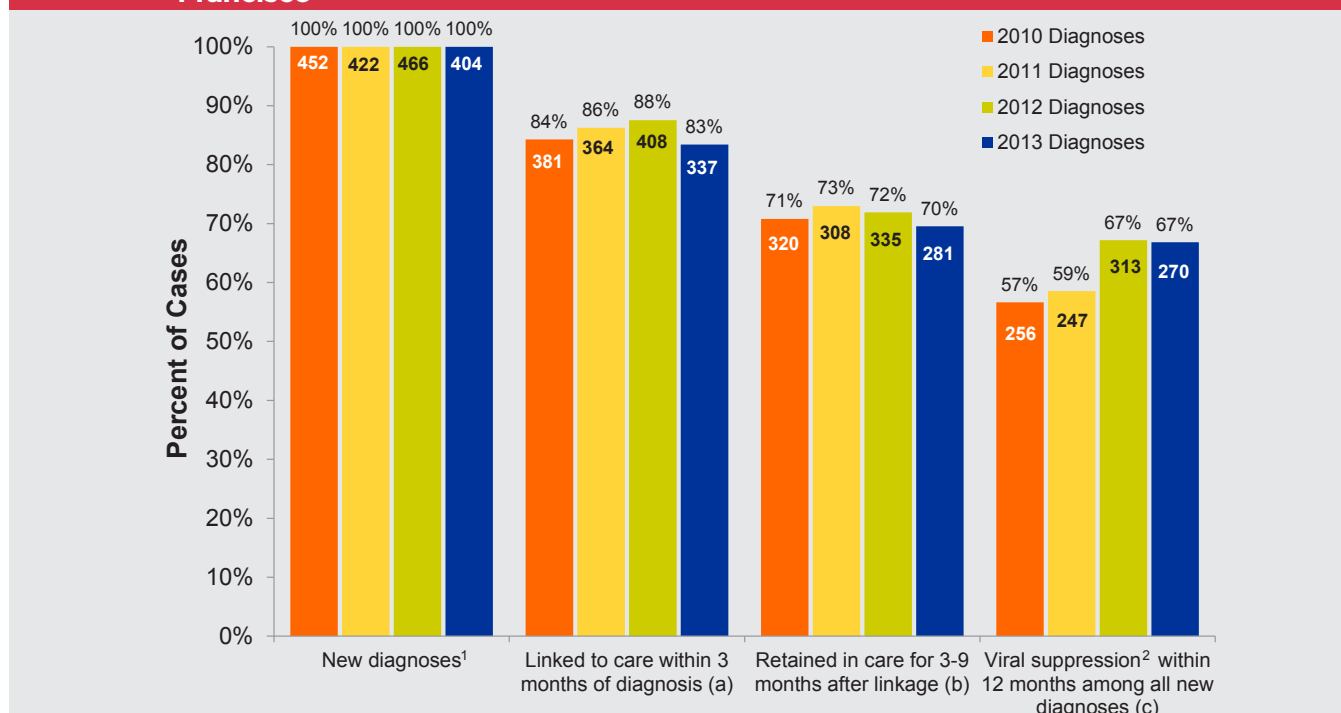
3 Spectrum of Engagement in HIV Prevention and Care

Continuum of HIV care among persons newly diagnosed with HIV

To improve health outcomes for HIV-infected persons, rapid entry into care, ongoing engagement in care, and use of ART to achieve viral suppression are required. The SFDPH monitors these outcomes using reports of CD4 and viral load tests as indicators of care, and viral load test results to measure viral suppression (defined as a viral load of 200 copies/mL or less). For the four years from 2010 to 2013, the number of persons newly diagnosed with HIV fluctuated and ranged between 452 and 404 (Figure 3.1). The proportion of newly diagnosed persons who entered care within three months of diagnosis increased between 2010 and 2012 but decreased in 2013 to a level comparable to that in 2010^(a). However, not all persons who entered care continued to receive care; 70%-73% of persons diagnosed in 2010 to 2013 remained in care three to nine months after initial linkage to care (i.e., had a second visit after their first medical visit)^(b). The proportion of newly diagnosed persons who achieved viral suppression within 12 months increased from 57% in 2010 to 67% in 2012 and 2013^(c).

Because not all newly diagnosed San Francisco residents receive care in the city and some move outside of San Francisco, our ability to measure these care outcomes is partially limited. For example, about 15% of newly diagnosed persons in the four-year period were known to have moved outside of San Francisco after diagnosis. The decrease in the proportion of timely linkage to care in 2013 could be due in part to a greater number of cases who moved soon after diagnosis in that year.

Figure 3.1 Continuum of HIV care among persons diagnosed with HIV infection, 2010-2013, San Francisco



1 Number of new diagnoses shown each year is based on the evidence of a confirmed HIV test and does not take into account patient self-report of HIV infection.

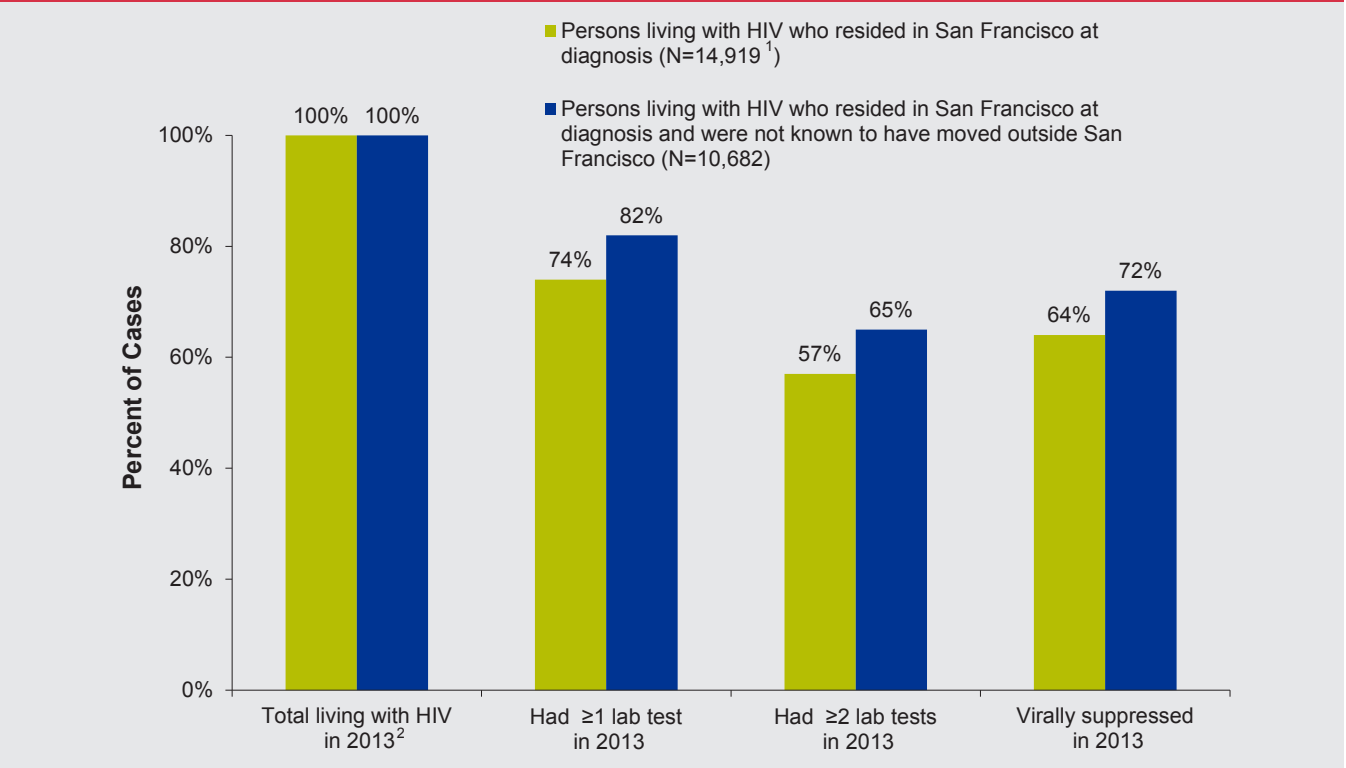
2 Defined as the latest viral load test during the specified period \leq 200 copies/mL.



Continuum of HIV care among persons living with HIV

There were 14,919 persons living with HIV (PLWH) as of December 31, 2013 who were diagnosed through the end of 2012 and who resided in San Francisco at time of diagnosis. Of these, 74% had at least one CD4 or viral load test (received care), 57% had two or more laboratory tests at least three months apart (retained in care), and 64% achieved viral suppression in 2013 (Figure 3.2). After excluding 4,237 persons who were known to have moved outside of San Francisco, there were 10,682 San Francisco residents living with HIV who were not known to have moved outside of San Francisco. Of these, 82% received care, 65% were retained in care and 72% were virally suppressed in 2013.

Figure 3.2 Continuum of HIV care among persons living with HIV, 2013, San Francisco



1 Residents of San Francisco at time of diagnosis; includes 4,237 cases who were known to have moved outside San Francisco after diagnosis.
2 Includes San Francisco residents at diagnosis living with HIV at the end of 2013 and diagnosed by the end of 2012. Excludes persons who were non-San Francisco residents at time of HIV diagnosis but San Francisco residents at AIDS diagnosis.

HIV care and prevention indicators

Table 3.1 shows key HIV care and prevention indicators among persons with HIV in San Francisco. Between 2011 and 2013, the proportion of late stage HIV diagnosis, defined as a new case who developed HIV infection stage 3 (AIDS) within three months of HIV diagnosis, decreased from 24% to 18%. The proportion of new cases linked to care within three months of diagnosis decreased in 2013. An indicator of a trend towards initiation of ART earlier in the course of disease is evident by the increase in the median CD4 count at time of ART initiation from 638 cells/ μ L in 2011 to 678 cells/ μ L in 2013 among newly diagnosed persons with a CD4 count greater than 500 cells/ μ L. The proportions of persons who were virally suppressed within 12 months of their HIV diagnosis remained at the same level of 67% in 2012 and 2013. The care outcome measures for living HIV cases remained relatively stable between 2011 and 2013. Among persons living with HIV and in care (with at least one viral load test), the proportion who were virally suppressed slightly increased from 87% in 2011 to 89% in 2013.

Table 3.1 Care and prevention indicators among persons newly diagnosed with HIV and living with HIV, 2011-2013, San Francisco

Indicators	Year		
	2011	2012	2013
New HIV diagnoses¹	N=422	N=466	N=404
Proportion developed AIDS within 3 months of diagnosis	24%	21%	18%
Proportion linked to care within 3 months of diagnosis	86%	88%	83%
Proportion virally suppressed ² within 12 months of diagnosis	59%	67%	67%
Median CD4 count (cells/ μ L) at treatment initiation among those diagnosed with a CD4 count >500 cells/ μ L	638	637	678
Living HIV cases³	N=14,461	N=14,649	N=14,919
Proportion of cases who had ≥ 1 CD4/viral load test	75%	74%	74%
Proportion received ≥ 2 tests among those with ≥ 1 test	79%	78%	78%
Proportion virally suppressed ² among living cases	63%	63%	64%
Proportion virally suppressed among those with ≥ 1 viral load test	87%	88%	89%

1 Includes persons diagnosed each year based on a confirmed HIV test and does not take into account patient self-report of HIV infection.

2 Defined as the latest viral load test during the specified period ≤ 200 copies/mL.

3 Includes persons who were living with HIV at the end of each year and diagnosed as of the end of the previous year. Excludes persons who were non-San Francisco residents at time of HIV diagnosis but San Francisco residents at AIDS diagnosis.



Care indicators among persons with HIV by demographic and risk characteristics

Although the majority of San Franciscans with HIV were linked to care, retained in care and achieved viral suppression, there are noticeable differences in these care indicators by demographic and risk characteristics. Among persons who were diagnosed with HIV in 2013, a lower proportion of women, transwomen, African Americans, and PWID (including MSM-PWID) were linked to and retained in care and achieved viral suppression (Table 3.2).

Table 3.2 Care indicators among persons newly diagnosed with HIV in 2013 by demographic and risk characteristics, San Francisco

Characteristics	Number of diagnoses ¹	% Linked to care within 3 months of diagnosis ²	% Retained in care 3-9 months after linkage ²	% Virally suppressed within 12 months of diagnosis ²
Total	404	83%	70%	67%
Gender				
Male	368	85%	71%	68%
Female	27	70%	59%	48%
Transfemale	9	78%	56%	56%
Race/Ethnicity				
White	182	85%	70%	64%
African American	53	77%	68%	60%
Latino	101	83%	69%	74%
Asian/Pacific Islander	52	87%	73%	69%
Other/Unknown	16	75%	63%	63%
Age at Diagnosis				
13-24	53	79%	64%	72%
25-29	81	84%	68%	58%
30-39	115	91%	73%	73%
40-49	101	79%	70%	67%
50+	54	78%	69%	61%
Transmission Category				
MSM	306	86%	73%	71%
PWID	25	56%	36%	40%
MSM-PWID	41	76%	59%	56%
Heterosexual	22	91%	86%	64%
Other/Unidentified	10	80%	70%	70%

1 Includes persons diagnosed in 2013 based on a confirmed HIV test and does not take into account patient self-report of HIV infection.

2 Percent of total diagnoses.

Among PLWH in 2013 who were San Francisco residents at time of diagnosis, the proportion who achieved viral suppression was lower among women, transwomen, African Americans, younger persons, and people who inject drugs (Table 3.3).

Table 3.3 Care indicators among persons living with HIV in 2013 who resided in San Francisco at diagnosis, by demographic and risk characteristics

Characteristics	Number of living cases ¹	% with ≥ 1 CD4 or viral load test in 2013 ²	% with ≥ 2 CD4 or viral load tests in 2013 ²	% Virally suppressed (most recent viral load test in 2013) ²
Total	14,919	74%	57%	64%
Gender				
Male	13,736	73%	57%	64%
Female	857	77%	59%	61%
Transfemale	326	79%	63%	60%
Race/Ethnicity				
White	9,210	74%	57%	65%
African American	1,874	76%	58%	60%
Latino	2,636	71%	57%	61%
Asian/Pacific Islander	799	76%	56%	68%
Other/Unknown	400	78%	58%	62%
Age as of 12/31/2013				
13-24	93	81%	59%	55%
25-29	360	72%	49%	51%
30-39	1,631	69%	50%	56%
40-49	4,485	72%	53%	60%
50+	8,350	75%	61%	68%
Transmission Category				
MSM	10,998	73%	57%	66%
PWID	912	75%	57%	55%
MSM-PWID	2,248	76%	57%	58%
Heterosexual	489	77%	60%	65%
Other/Unidentified	272	56%	41%	48%

1 Includes San Francisco residents at diagnosis living with HIV at the end of 2013 and diagnosed by the end of 2012. Excludes persons who were non-San Francisco residents at time of HIV diagnosis but San Francisco residents at AIDS diagnosis.

2 Percent of total living cases.

Among the 14,919 PLWH in 2013 who were San Francisco residents at diagnosis, 4,237 were known to have moved outside of San Francisco at some point after diagnosis. Because care information for those who moved to and received care in another jurisdiction is incomplete, we excluded these cases and assessed care indicators only among San Francisco residents based on their most recent residence (N=10,682). Similar to that observed among all PLWH in Table 3.3 (San Francisco residents at diagnosis regardless of whether or not they have moved after diagnosis), the proportion of San Francisco residents living with HIV (not known to have moved outside of San Francisco) who achieved viral suppression was lower among women, transwomen, African Americans, younger persons, and people who inject drugs (Table 3.4).

Table 3.4 Care indicators among persons living with HIV in 2013 who resided in San Francisco at diagnosis and were not known to have moved outside San Francisco, by demographic and risk characteristics

Characteristics	Number of living cases ¹	% with >= 1 CD4 or viral load test in 2013 ²	% with >=2 CD4 or viral load tests in 2013 ²	% Virally suppressed (most recent viral load test in 2013) ²
Total	10,682	82%	65%	72%
Gender				
Male	9,737	82%	65%	72%
Female	685	82%	64%	65%
Transfemale	260	84%	68%	65%
Race/Ethnicity				
White	6,391	83%	66%	75%
African American	1,377	82%	65%	65%
Latino	2,006	77%	62%	67%
Asian/Pacific Islander	637	80%	60%	72%
Other/Unknown	271	84%	65%	69%
Age as of 12/31/2013				
13-24	67	79%	54%	49%
25-29	260	73%	51%	54%
30-39	1,179	75%	55%	61%
40-49	3,195	80%	61%	68%
50+	5,981	84%	70%	76%
Transmission Category				
MSM	7,725	82%	66%	75%
PWID	697	82%	64%	60%
MSM-PWID	1,670	83%	65%	65%
Heterosexual	384	82%	64%	70%
Other/Unidentified	206	57%	41%	49%

1 Includes San Francisco residents at diagnosis living with HIV at year-end 2013 and diagnosed by year-end 2012. Excludes persons who were known to have moved out of San Francisco, persons who were non-San Francisco residents at time of HIV diagnosis but San Francisco residents at AIDS diagnosis.

2 Percent of total living cases.

Comparison of San Francisco HIV indicators with California and the United States

Table 3.5 displays the available HIV prevention and care indicators data for San Francisco, California, and the United States. Awareness of HIV status in San Francisco is very high (93%) compared to California (89%) and the U.S. (87%). The proportion of persons with a late HIV diagnosis in San Francisco is lower than California and the U.S. in 2013. Access to HIV care and viral suppression are higher in San Francisco compared to California and the U.S. The higher proportion of persons with laboratory tests in San Francisco may reflect greater completeness of reporting CD4 and viral load test results in San Francisco compared to California and the U.S. The death rates per 1,000 persons with HIV or AIDS in San Francisco are lower than California and the U.S. in 2012.

Table 3.5 Comparison of HIV prevention and care indicators for San Francisco, California, and the United States

Indicators	San Francisco	California ²	United States ²
Awareness of HIV status¹			
Estimated % aware of HIV infection	93%	89% (2012)	87% (2012)
Late HIV diagnosis			
% diagnosed with AIDS within 3 months of HIV diagnosis, 2013	18%	22%	24%
HIV care access and outcome			
% linked to care within 3 months of HIV diagnosis, 2013	83%	79%	82%
% living HIV cases who had ≥1 laboratory test, 2012	74%	69%	68%
% living HIV cases who had ≥2 laboratory tests, 2012	58%	52%	54%
% virally suppressed among all living HIV cases, 2012	63%	52%	50%
% virally suppressed among those who with viral load tests, 2012	88%	84%	79%
HIV mortality			
Death rate per 1,000 persons with HIV, 2012	14.0	15.7	19.4
Death rate per 1,000 persons with AIDS, 2012	20.0	21.2	27.0

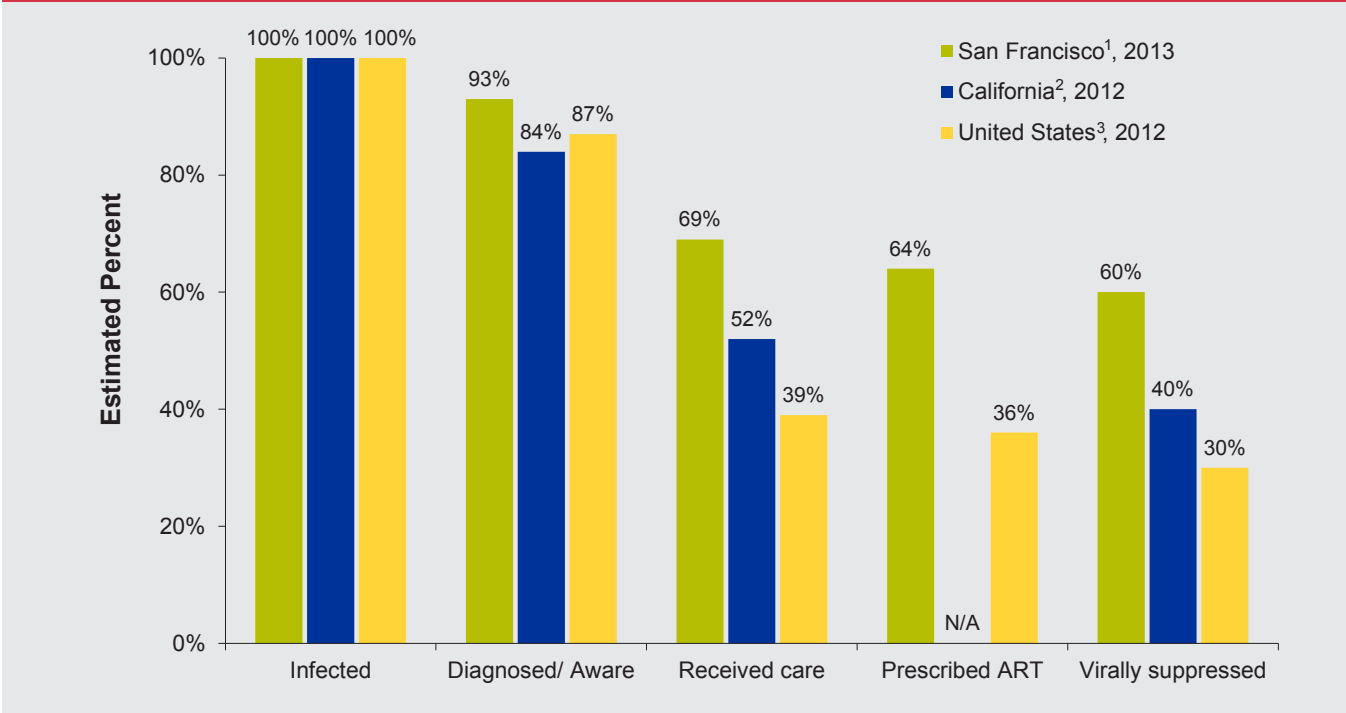
¹ The estimated percent aware of HIV infection for San Francisco was derived from the National HIV Behavioral Surveillance (MSM 2014, HET 2013, PWID 2012) and the Transwomen Empowered to Advance Community Health study, 2nd round (TEACH2 2013). The California and U.S. estimates were derived from the National HIV Surveillance System: Prevalence of Diagnosed and Undiagnosed HIV Infection - United States, 2008-2012. CDC MMWR June 26, 2015/64(24);657-662.

² The U.S. and California data are from CDC HIV Surveillance Supplemental Report 2015;20(No.2); published July 2015.



Figure 3.3 shows the continuum of HIV care among persons living with HIV including those aware of their HIV infection (diagnosed) as well as those infected and not aware (undiagnosed). Although data methods and sources used to derive these estimates may differ, Figure 3.3 represents the most recent available data in the same methodological framework for San Francisco, California and the U.S. These findings point to a need to focus on improving care outcomes nationwide.

Figure 3.3 Continuum of HIV care among persons living with diagnosed or undiagnosed HIV infection - San Francisco, California, United States



1 The estimated percent received care and virally suppressed among all infected was derived by applying the 93% diagnosed/aware to the 74% who had ≥ 1 lab test and 64% who were virally suppressed among those living with HIV diagnosis as shown in Table 3.3, respectively. Among those received care in 2013, 93% were known to have received ART. This 93% was then applied to the estimated 69% received care to derive the estimated 64% prescribed ART among all infected.

2 California data source: The Continuum of HIV Care in California - 2012. <http://www.cdph.ca.gov/programs/aids/Documents/HIVCareContinuum-2012.pdf>; posted December 1, 2014.

3 U.S. data source: CDC HIV Surveillance Supplemental Report 2015;20(No.2); published July 2015.

Use of antiretroviral therapy

Table 3.6 shows estimates of antiretroviral therapy (ART) use among PLWH as of December 31, 2014. Information on ART use is obtained from medical chart review. Persons with a medical record indicating that they were prescribed ART are assumed to have received it (see Technical Notes “Estimate of ART Use”). The lower level estimate shown in the table was calculated among all living HIV cases (N=15,979). The upper level estimate was calculated among living cases for whom a chart review was completed between January 2013 and March 2015 (N=7,778). Persons without follow-up information within the last two years or those known to have moved out of San Francisco were excluded from the upper level estimate calculation. Overall, 87%-94% of PLWH received ART. ART use was lower among women and transwomen, persons with race/ethnicity other than white, PWID, the homeless, and persons with public or no health insurance.

Table 3.6 Estimate of ART use among persons living with HIV by demographic, risk, and socioeconomic characteristics, December 2014, San Francisco

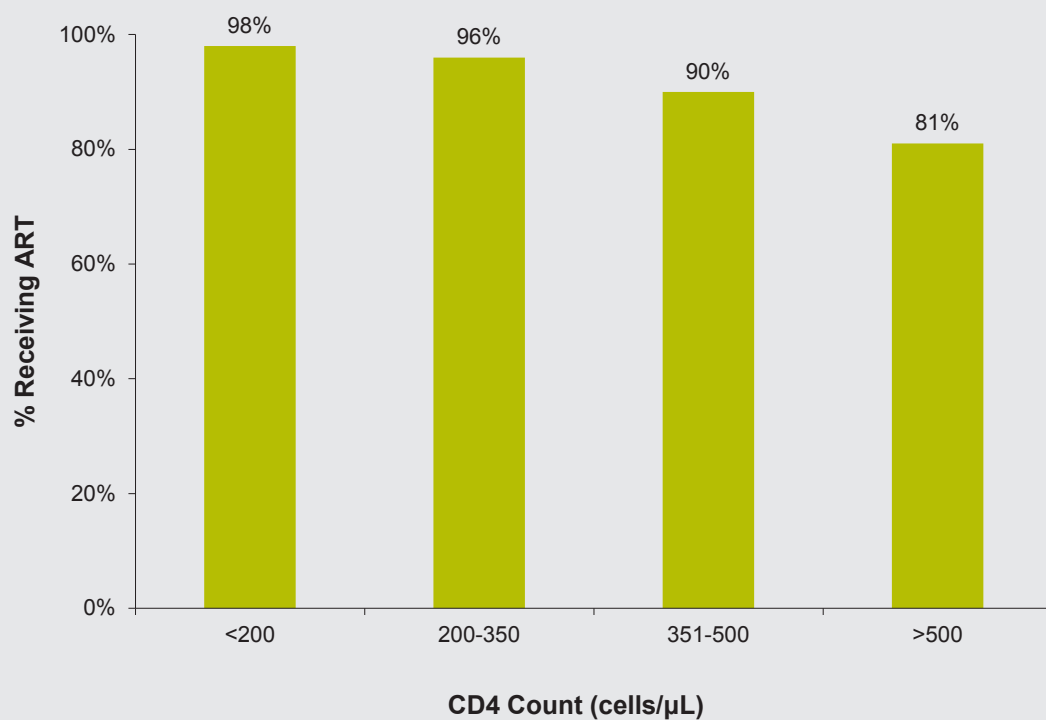
	Percent Receiving ART	
	Lower Level Estimate	Upper Level Estimate
Overall	87%	94%
Gender		
Male	87%	95%
Female	85%	92%
Transfemale ¹	85%	92%
Race/Ethnicity		
White	89%	95%
African American	83%	93%
Latino	85%	94%
Asian/Pacific Islander	83%	92%
Native American	77%	92%
Multiple race	85%	90%
Transmission Category		
MSM	87%	95%
PWID	83%	93%
MSM-PWID	87%	94%
Heterosexual	87%	92%
Housing Status, Most Recent		
Housed	88%	95%
Homeless	69%	85%
Insurance at HIV/AIDS Diagnosis		
Private	92%	96%
Public	87%	93%
None	83%	93%

¹ Transfemale data include all transgender cases. Transmale data are not released separately due to the potential small population size. See Technical Notes “Transgender Status.”



Figure 3.4 shows ART use by the lowest CD4 count ever reported (“nadir CD4”) among PLWH who have had follow-up information within the last two years, whose chart review was completed between January 2013 and March 2015 and who are not known to have moved out of San Francisco (N=7,778). The proportion receiving ART was greater among persons with lower CD4 count: 98% of cases with a CD4 count below 200 cells/ μ L, 96% with a CD4 count between 200-350 cells/ μ L, 90% with a CD4 count between 351-500 cells/ μ L, and 81% with a CD4 count above 500 cells/ μ L received ART. Of note, the proportion receiving ART among PLWH through December 2013 with a CD4 count above 500 cell/ μ L was 70% (2013 HIV Epidemiology Annual Report).

Figure 3.4 Estimate of ART use¹ among living HIV cases with chart review by nadir CD4 level, December 2014, San Francisco



¹ See Technical Notes “Estimate of ART Use.”

Among persons diagnosed with HIV between 2008 and 2013, the median CD4 count at HIV diagnosis increased from 394 cells/ μ L in 2008 to 443 cells/ μ L in 2013 (Table 3.7). The median CD4 count at ART initiation increased from 387 cells/ μ L in 2008 to 436 cells/ μ L in 2013 among persons whose CD4 count at diagnosis was between 351-500 cells/ μ L, and increased from 529 cells/ μ L in 2008 to 678 cells/ μ L in 2013 among persons whose CD4 count at diagnosis was >500 cells/ μ L. Among persons whose CD4 count at diagnosis was <351 cells/ μ L, the median CD4 count at ART initiation remained relatively stable over time.

Table 3.7 Trends in median CD4 count at time of diagnosis and at time of ART initiation among persons newly diagnosed with HIV, 2008-2013, San Francisco

Year of HIV diagnosis	Number of total cases ¹	Median CD4 count at HIV diagnosis ² (cells/ μ L)	Median CD4 count at ART initiation by CD4 count at diagnosis (cells/ μ L) among persons initiating ART ³			
			<200	200-350	351-500	>500
2008	523	394	102	282	387	529
2009	474	409	76	278	412	552
2010	452	411	100	297	432	565
2011	422	438	85	280	419	638
2012	466	422	112	295	437	637
2013	404	443	79	275	436	678

1 Includes persons diagnosed each year based on a confirmed HIV test and does not take into account patient self-report of HIV infection (N=2,741).

2 Median CD4 count at HIV diagnosis was calculated among persons whose CD4 count at HIV diagnosis was available (N=2,325).

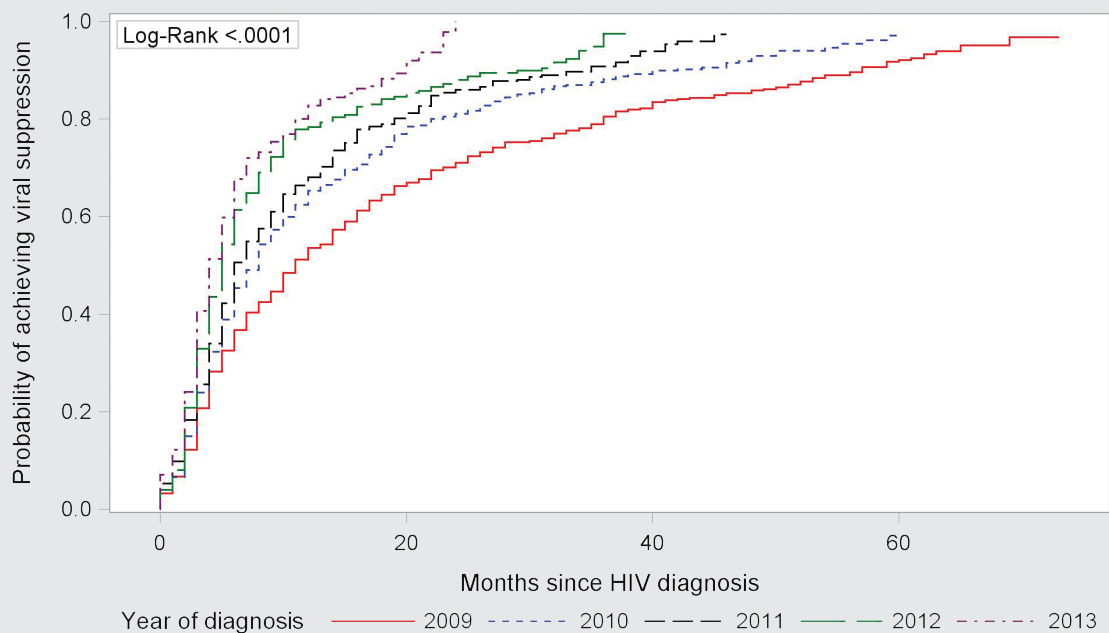
3 Median CD4 count at ART initiation was calculated among persons who started ART and whose CD4 count at HIV diagnosis and CD4 count at ART initiation were available (N=1,732).



Trends in time from HIV diagnosis to viral suppression

Viral suppression is associated with improved health and prevention outcomes including greater survival and reduced onward HIV transmission. The treatment goal for HIV-infected persons is rapid achievement of and sustained viral suppression (HIV concentrations less than or equal to 200 copies/mL). The time from HIV diagnosis to viral suppression has significantly decreased among persons diagnosed in more recent years. Among persons diagnosed with HIV in 2009, half achieved viral suppression within 11 months following diagnosis (median time) (Figure 3.5). The median number of months between diagnosis and viral suppression decreased steadily in each of the following years: eight months among persons diagnosed in 2010, six months for persons diagnosed in 2011, five months for persons diagnosed in 2012, and four months among persons diagnosed in 2013.

Figure 3.5 Kaplan-Meier estimates of time from HIV diagnosis to viral suppression among persons diagnosed with HIV infection by year of diagnosis, 2009-2013, San Francisco



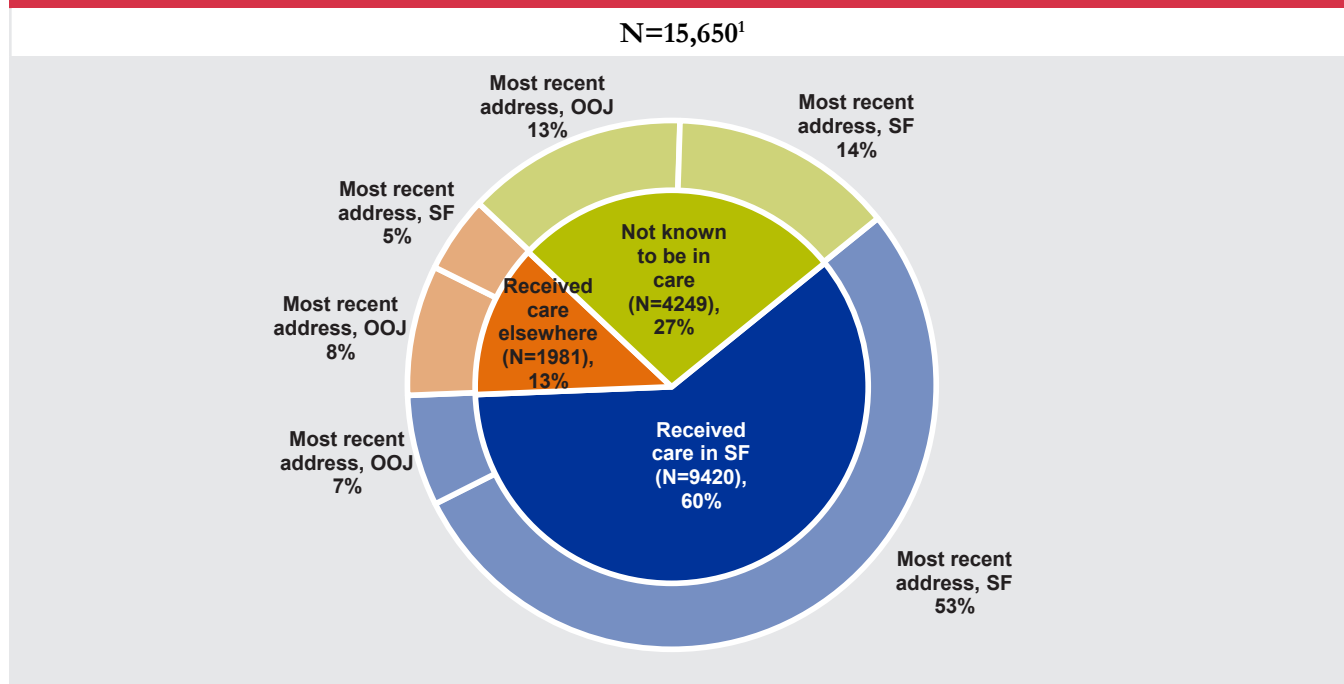
	Median time between diagnosis and viral suppression (months)	Total cases included	No. virally suppressed as of 4/10/2015	No. (%) censored at the last lab test date
2009	11	455	380	75 (16%)
2010	8	431	373	58 (13%)
2011	6	400	351	49 (12%)
2012	5	433	369	64 (15%)
2013	4	367	302	65 (18%)

Residence status and receipt of HIV care among persons living with HIV

All persons diagnosed with HIV are reported to the county in which they reside at diagnosis. However, because some individuals receive care in a county other than the one in which they were diagnosed and some individuals move after diagnosis, the residence at time of diagnosis cannot provide an accurate assessment of persons receiving care in a given jurisdiction. We used surveillance data to note the movement of patients in and out of San Francisco to access HIV care in relation to their initial residence at diagnosis and most recent residence. We defined two types of patterns: 1) San Francisco cases (residents at time of HIV diagnosis) who moved out of San Francisco following their diagnosis to receive care, and 2) cases who were not San Francisco residents at time of diagnosis (also referred to as out-of-jurisdiction (OOJ) cases, see Technical Notes) who are receiving care in San Francisco. Residence information is collected at time of diagnosis and updated through routine medical chart reviews and laboratory reports. We also used LexisNexis, a national database that consists of 37 million public records with address information, to update addresses for those cases without any available follow-up information.

We examined the 15,650 San Francisco HIV cases who were diagnosed through December 31, 2013 and alive as of December 31, 2014 (Figure 3.6). Those who received at least one CD4 or viral load test in 2014 were considered to be currently in care. Overall, 11,401 (73%) received care in 2014 (60% received care in San Francisco and 13% received care elsewhere). Among the 4,249 (27%) who were not known to be in care, 14% have a last known San Francisco address; these cases should be prioritized for assistance with re-entry into care.

Figure 3.6 Persons living with HIV in 2014 who resided in San Francisco at diagnosis by care and most recent residence status

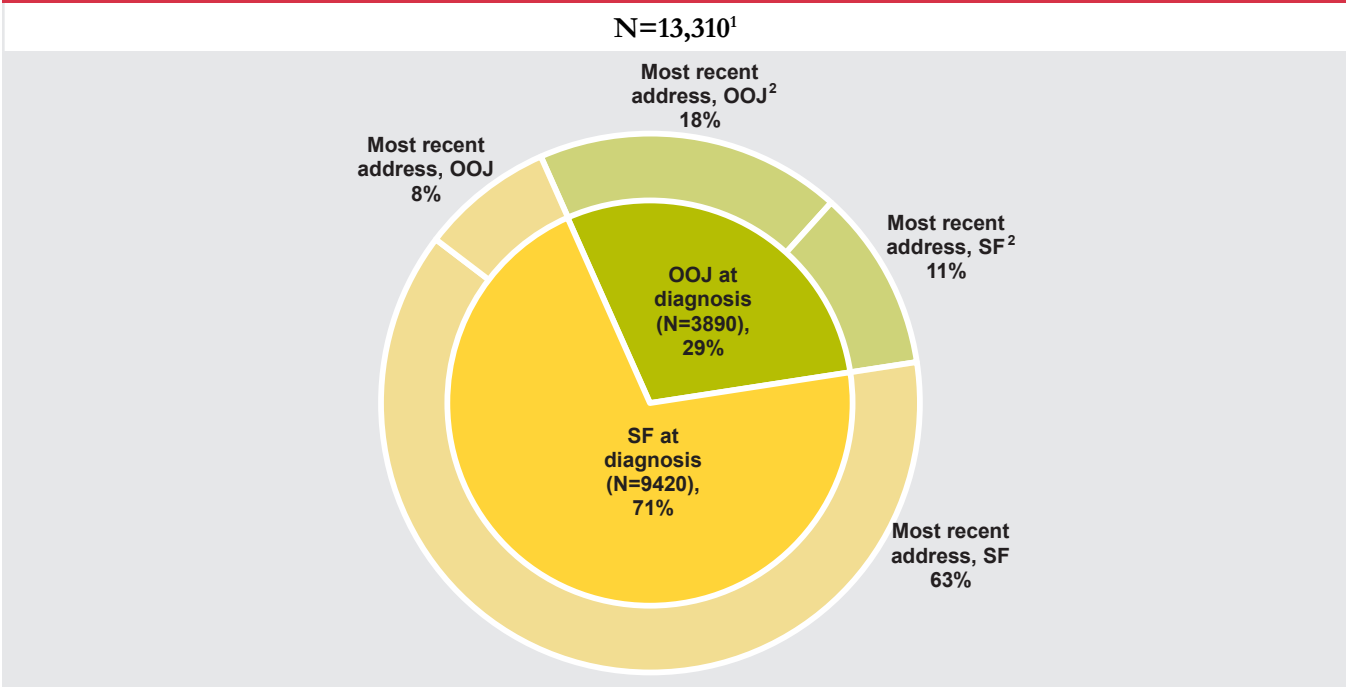


¹ Include persons who are alive as of December 2014 and have been diagnosed as of December 2013.



In addition to monitoring receipt of care and residence status among San Francisco cases, we assess the total number of PLWH who received care in San Francisco including San Francisco cases and OOJ cases. We examined HIV-related laboratory tests performed in 2014 in San Francisco and identified the proportion of OOJ cases who received care in San Francisco. The laboratory tests were matched with the HIV case registry to determine the residence at time of diagnosis. Among the 13,310 persons who received care in San Francisco in 2014, 9,420 (71%) were San Francisco residents at time of diagnosis and 29% were OOJ cases (Figure 3.7). Although OOJ cases receiving care in San Francisco reflects some level of in-migration, the collection of current address information for OOJ cases is less complete than that for San Francisco cases. The full extent of care utilization and HIV case migration patterns cannot be fully understood until more complete laboratory and residence information is collected and shared between jurisdictions.

Figure 3.7 Persons living with HIV in 2014 who received care in San Francisco by residence at diagnosis and most recent residence status



1 Include persons who are alive as of December 2014 and have been diagnosed as of December 2013.
 2 Most recent address for OOJ residents at diagnosis is less complete because the update on address information is not conducted regularly and consistently.

Medical Monitoring Project (MMP)

Table 3.8 describes selected clinical outcomes and care utilization among San Francisco MMP participants during the 2009 and 2010 MMP data collection cycles compared to results from the national MMP participants for the same time period (see Technical Notes, Medical Monitoring Project).

Overall, recommended clinical guidelines for people living with HIV were met for the majority of people living with HIV. Almost all patients in San Francisco and the U.S. had one usual place, such as a physician's office or clinic, where they received most of their HIV medical care. A higher percentage of San Francisco MMP patients had a viral load test measured at least once every six months compared to the U.S. and had at least one CD4+ cell count annually. ART prescription and viral suppression at the most recent test was high both locally and nationally but a higher percentage of San Franciscans had all viral load tests undetectable in the 12 months before interview. Additionally, testing for sexually transmitted diseases among sexually active participants was more frequent in San Francisco than in the U.S.

Table 3.8 Selected clinical characteristics among MMP participants in San Francisco compared to MMP participants nationally, 2009-2010

	San Francisco		United States
	Number	Percent	Percent ¹
Total sample	419	100%	
Stage of disease			
Stage 3: Clinical AIDS or CD4+lymphocyte <200 cells/uL	273	64.2%	67.6%
Had usual place of care	418	99.8%	99.7%
Laboratory measures of CD4+ lymphocyte and HIV viral load tests in the 12 months before the interview			
Geometric mean CD4 cell count ≥500 cells/uL	226	56.6%	44.3%
Lowest CD4+ cell count ≥500 cells/uL	169	41.9%	34.6%
≥3 Outpatient lab tests for CD4+ cell count or HIV viral load	317	75.9%	69.6%
≥3 Outpatient lab tests for CD4+ cell count count	298	71.4%	65.0%
≥3 Outpatient lab tests for HIV viral load	270	65.5%	62.3%
Viral load measured at least once every 6 months	333	80.4%	76.5%
CD4+ cell count measured at least once annually	410	98.2%	96.8%
Viral Suppression (most recent HIV viral load undetectable ³)	330	79.6%	71.6%
All HIV viral load measurements in the past 12 months undetectable	290	70.1%	57.7%
Antiretroviral treatment prescription documented in the medical chart			
ART prescription	378	89.3%	88.7%
Testing for selected sexually transmitted diseases among sexually active participants			
Received Gonorrhea testing	137	42.0%	23.2%
Received Chlamydia testing	138	42.4%	23.9%
Received Syphilis testing	257	77.2%	55.0%
Received testing for all three STDs	125	38.1%	19.7%

1 Percent only presented for national MMP. Number of participants not presented in the CDC MMWR surveillance summary² for all variables.

2 Blair J.M., Fagan J.L., Frazier E.L., et al. Behavioral and Clinical Characteristics of Persons Receiving Medical Care for HIV Infection - Medical Monitoring Project, United States, 2009. MMWR Surveillance Summary. 2014 Jun 20;63 Suppl 5:1-22.

3 Undetectable defined as ≤200 copies/mL.

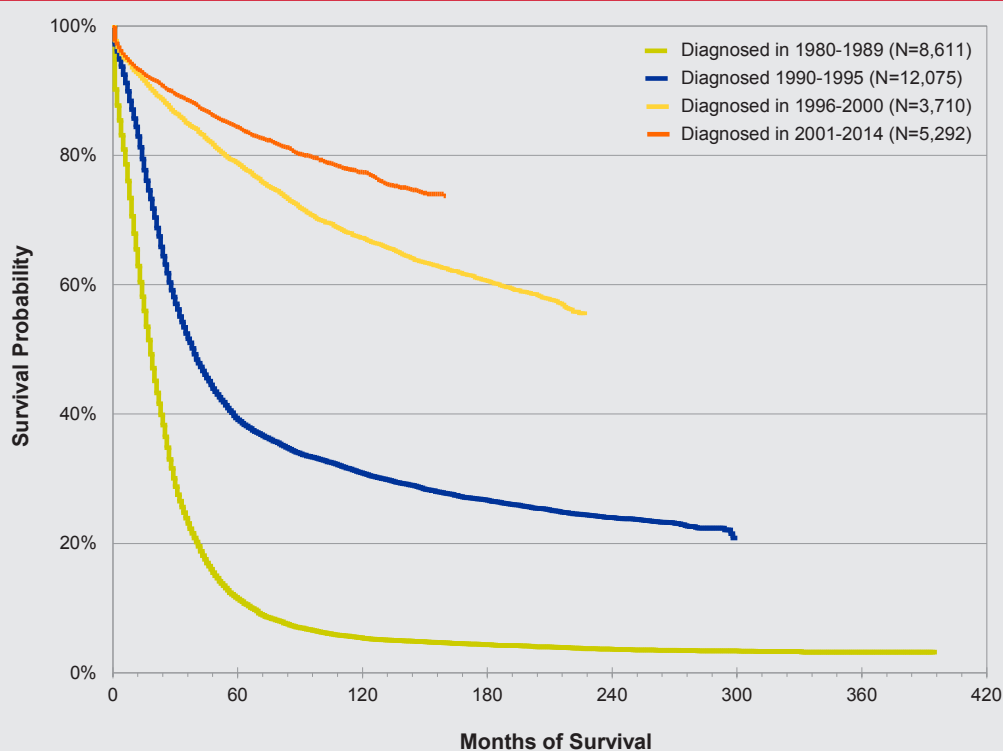
4

Survival among Persons with HIV Infection Stage 3 (AIDS)

The Kaplan-Meier survival curves in Figure 4.1 demonstrate continual improvement in survival after HIV infection stage 3 (AIDS) since the 1980s. Survival was poor for persons diagnosed in the first ten years of the epidemic (1980-1989) with a median survival time (survival probability of 50%) of 18 months after HIV infection stage 3 (AIDS). Between 1990 and 1995, survival improved; median survival time was 38 months.

Survival among HIV infection stage 3 (AIDS) cases diagnosed in the latter two time periods continued to improve with the widespread availability of highly active antiretroviral therapy (ART). For AIDS diagnoses from 1996 to 2000, the survival probability at five years (60 months) after AIDS diagnosis was 79%. HIV infection stage 3 (AIDS) diagnoses in the most recent time period, 2001 to 2014, had a survival probability of 84% at five years.

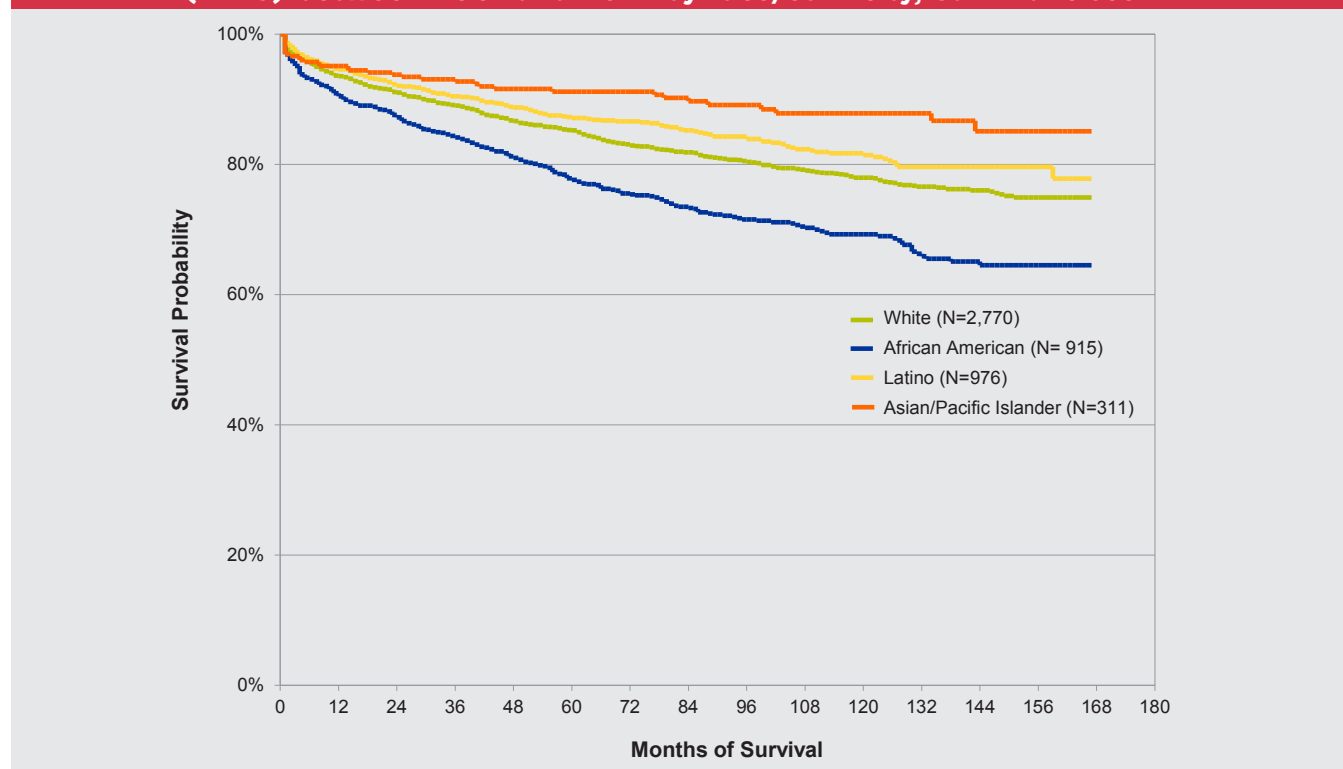
Figure 4.1 Kaplan-Meier survival¹ curves for persons diagnosed with HIV infection stage 3 (AIDS) in four time periods, San Francisco



¹ See Technical Notes "HIV infection stage 3 (AIDS) Survival."

Survival after HIV infection stage 3 (AIDS) diagnosis is worse for African Americans compared to whites, Latinos, and Asian/Pacific Islanders (Figure 4.2). Among persons diagnosed between 2001 and 2014, the three-year (36 months) survival probability of African Americans after AIDS was 84%, compared to 89% for whites, 90% for Latinos, and 93% for Asian/Pacific Islanders. A similar pattern was observed among national stage 3 (AIDS) cases diagnosed 2004-2009 at three years after AIDS (CDC HIV Surveillance Report, 2013). In San Francisco, the five-year survival probability of African Americans after AIDS was 78%, compared to 85% for whites, 87% for Latinos, and 91% for Asian/Pacific Islanders.

Figure 4.2 Kaplan-Meier survival¹ curves for persons diagnosed with HIV infection stage 3 (AIDS) between 2001 and 2014 by race/ethnicity, San Francisco

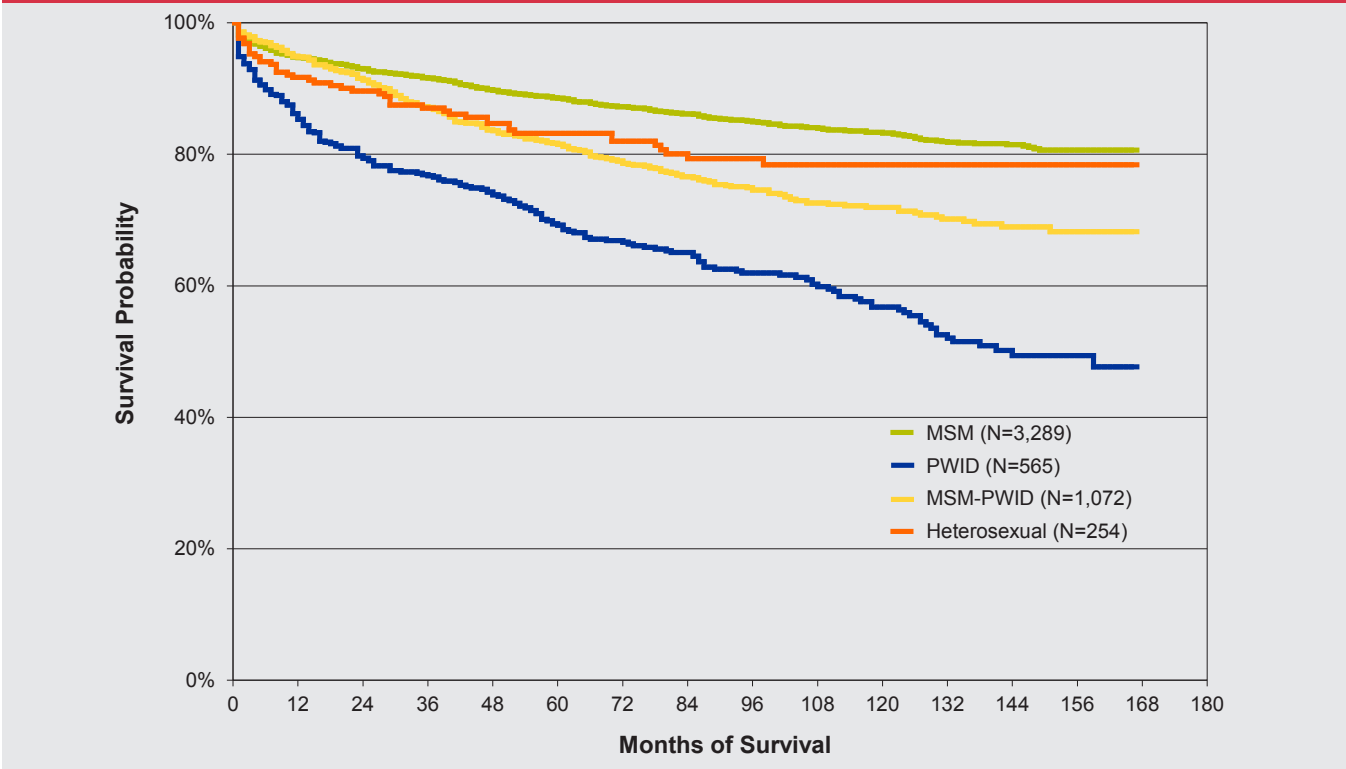


¹ See Technical Notes "HIV infection stage 3 (AIDS) Survival."



Survival after HIV infection stage 3 (AIDS) diagnosis has been better for MSM and heterosexuals compared to MSM-PWID and heterosexual PWID. For HIV infection stage 3 (AIDS) cases diagnosed from 2001 to 2014, the five-year survival probability was 89% for MSM, 83% for heterosexuals, 82% for MSM-PWID, and 69% for heterosexual PWID (Figure 4.3). Worse survival among PWID partly reflects higher death rates from causes associated with drug use such as overdose, liver disease, and other infections.

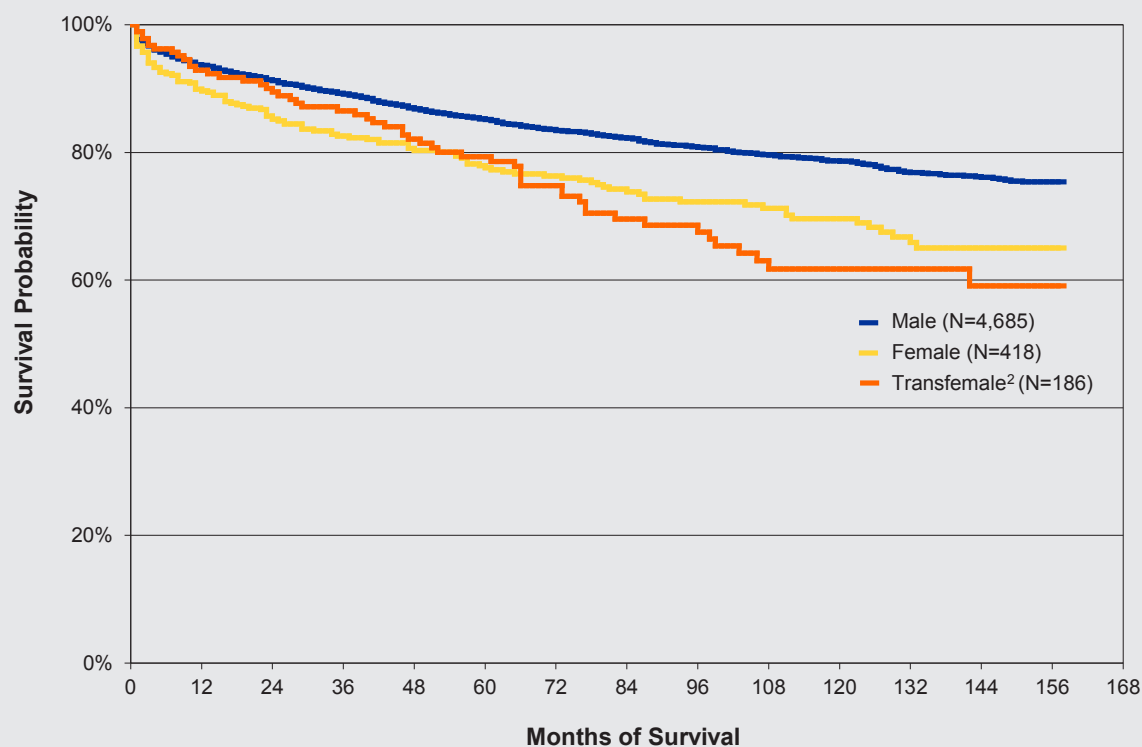
Figure 4.3 Kaplan-Meier survival¹ curves for persons diagnosed with HIV infection stage 3 (AIDS) between 2001 and 2014 by transmission category, San Francisco



¹ See Technical Notes “HIV infection stage 3 (AIDS) Survival.”

Male HIV infection stage 3 (AIDS) cases have better survival than female and transfemale cases (Figure 4.4). The five-year survival probability among cases diagnosed from 2001 to 2014 was 85% for males, and 79% for transfemales, and 78% for females. The differences in survival by gender are consistent with lower use of highly active ART and higher proportion of PWID among female and transfemale HIV infection stage 3 (AIDS) cases.

Figure 4.4 Kaplan-Meier survival¹ curves for persons diagnosed with HIV infection stage 3 (AIDS) between 2001 and 2014 by gender, San Francisco



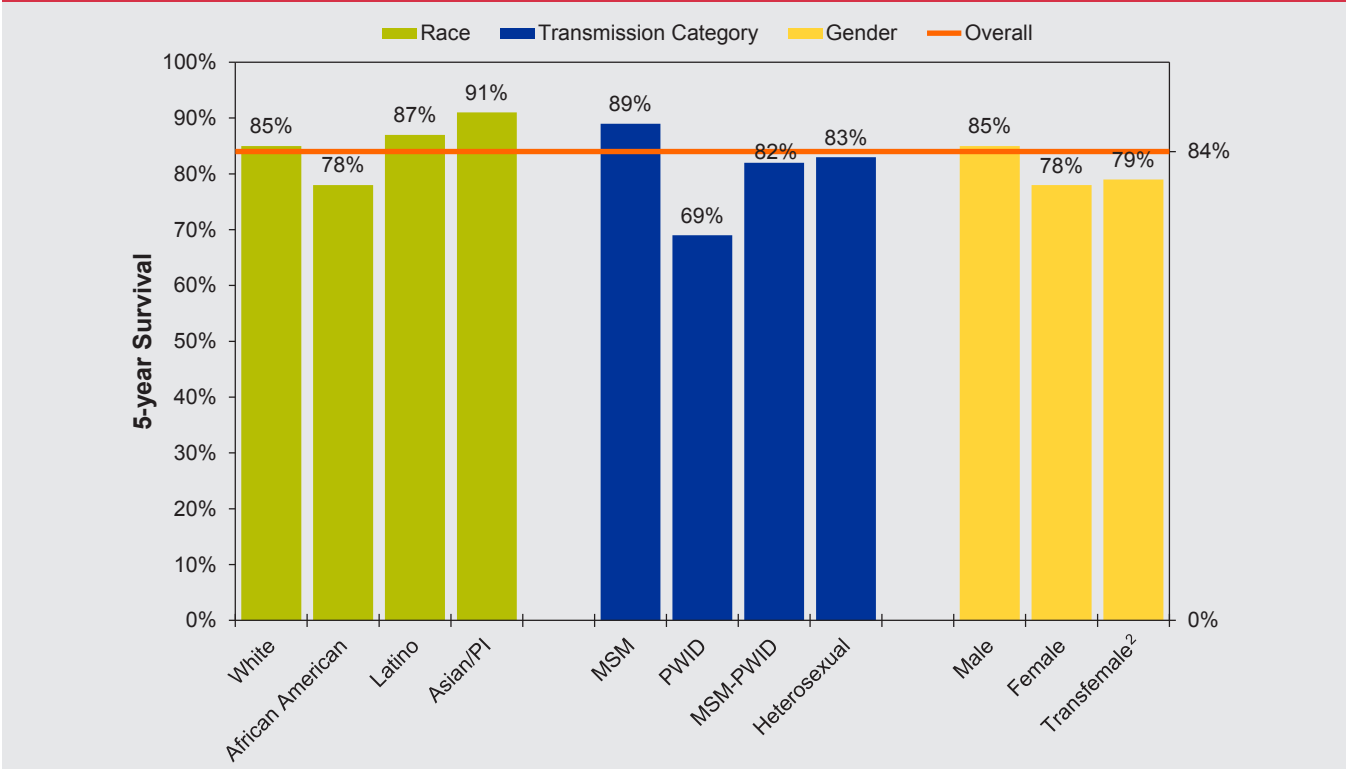
¹ See Technical Notes “HIV infection stage 3 (AIDS) Survival.”

² Transfemale data include all transgender cases. Transmale data are not released separately due to potential small population size. See Technical Notes “Transgender Status.”



The overall five-year survival probability after HIV infection stage 3 (AIDS) for persons diagnosed between 2001 and 2014 was 84% (Figure 4.5). Differences in survival occurred across race/ethnicity, transmission category, and gender groups. African Americans, PWID, MSM-PWID, women, and transfemale persons had lower five-year survival probabilities compared to other groups.

Figure 4.5 Five-year survival probability¹ after HIV infection stage 3 (AIDS) for persons diagnosed between 2001 and 2014 by race/ethnicity, transmission category, and gender, San Francisco



1 Calculated from Kaplan-Meier method.
 2 Transfemale data include all transgender cases. Transmale data are not released separately due to potential small population size. See Technical Notes “Transgender Status.”

5

Trends in HIV Mortality

As of December 31, 2014, the cumulative number of deaths that have occurred among San Francisco HIV cases was 20,699 (Table 5.1). The proportion of deaths was stable by gender, racial/ethnic groups, and transmission category. The majority of deaths during each year continues to occur among persons aged 50 years and older (61% to 76%) and persons with HIV infection stage 3 (AIDS) (78% to 86%).

Table 5.1 Deaths in persons diagnosed with HIV infection, by demographic and risk characteristics, 2011-2014, San Francisco

	Year of Death				Cumulative Totals as of 12/31/2014
	2011	2012	2013 ¹	2014 ¹	
	Number (%)	Number (%)	Number (%)	Number (%)	
Gender					
Male	209 (89)	210 (89)	175 (84)	147 (83)	19,614
Female	18 (8)	18 (8)	26 (12)	19 (11)	819
Transfemale ²	7 (3)	8 (3)	8 (4)	11 (6)	266
Race/Ethnicity					
White	128 (55)	148 (63)	116 (56)	92 (52)	15,107
African American	54 (23)	45 (19)	44 (21)	46 (26)	2,625
Latino	32 (14)	31 (13)	29 (14)	28 (16)	2,172
Other	20 (9)	12 (5)	20 (10)	11 (6)	795
Transmission Category					
MSM	130 (56)	134 (57)	115 (55)	96 (54)	15,151
PWID	37 (16)	42 (18)	44 (21)	34 (19)	1,696
MSM-PWID	60 (26)	49 (21)	43 (21)	39 (22)	3,305
Heterosexual	4 (2)	7 (3)	4 (2)	8 (5)	230
Other/Unidentified	3 (1)	4 (2)	3 (1)	0 (0)	317
Age at Death (years)					
0 - 29	3 (1)	2 (1)	3 (1)	3 (2)	1,103
30 - 39	25 (11)	12 (5)	12 (6)	9 (5)	7,330
40 - 49	63 (27)	57 (24)	37 (18)	30 (17)	7,578
50 - 59	81 (35)	83 (35)	78 (37)	61 (34)	3,257
60+	62 (26)	82 (35)	79 (38)	74 (42)	1,431
HIV Disease Stage					
Stage 0, 1, 2, or unknown	33 (14)	43 (18)	46 (22)	33 (19)	490
Stage 3 (AIDS)	201 (86)	193 (82)	163 (78)	144 (81)	20,209
Total	234 (100)	236 (100)	209 (100)	177 (100)	20,699

¹ Data in recent years are incomplete due to reporting delays. In addition, deaths that occurred outside of San Francisco are primarily identified through matching with the National Death Index (NDI), which is complete through December 31, 2012.

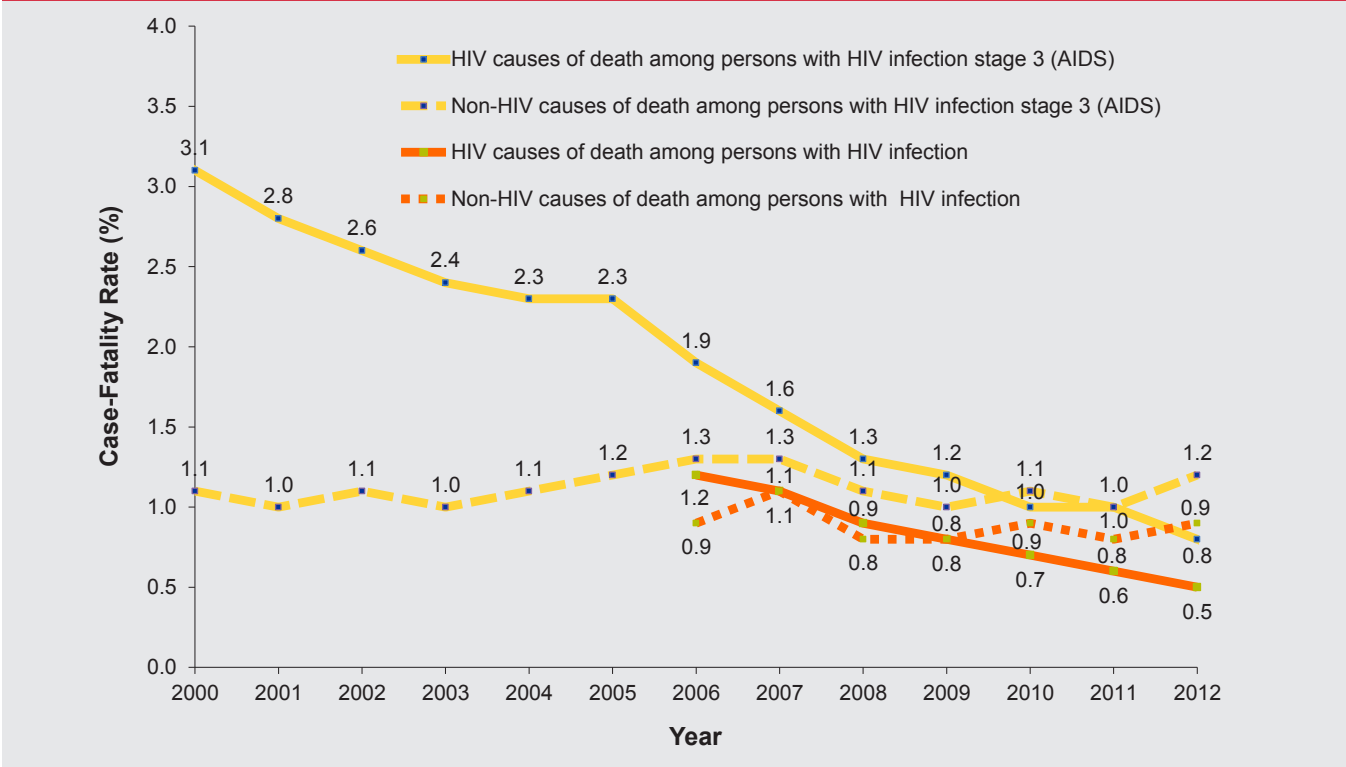
² Transfemale data include all transgender cases. Transmale data are not released separately due to potential small population size. See Technical Notes "Transgender Status."



The trend in case-fatality rates in persons diagnosed with HIV infection was examined by the single, underlying cause of death for each person. Cause of death information was available for deaths through 2012. The case-fatality rate due to HIV-related causes among persons with HIV infection stage 3 (AIDS) declined from 3.1 per 100 persons in 2000 to 0.8 per 100 persons for 2012 (Figure 5.1). Non-HIV-related causes of death among persons with HIV infection stage 3 (AIDS) fluctuated between 1.0 and 1.3 deaths per 100 persons from 2000 to 2012.

When deaths in all stages of HIV infection were evaluated, case-fatality rates for HIV-related causes declined steadily since 2006; the rate was 0.5 per 100 persons in 2012. Case-fatality rates for non-HIV causes were fairly stable.

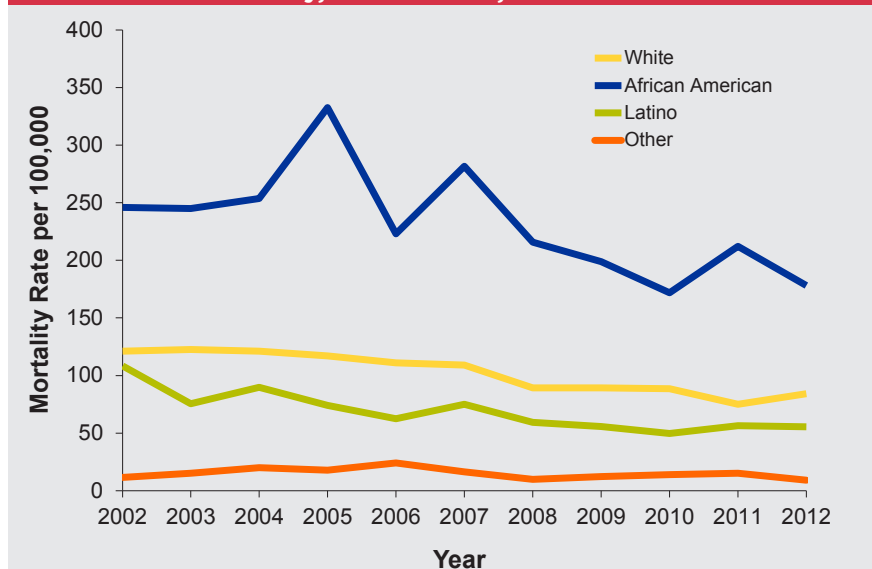
Figure 5.1 Case-fatality rates¹ due to HIV-related and non-HIV-related causes among persons diagnosed with HIV infection, 2000-2012, San Francisco



¹ Case-fatality rates are calculated as the number of persons with HIV infection stage 3 (AIDS), or all HIV infection stages, who died each year divided by the number of total HIV infection stage 3 (AIDS), or HIV infection all stage, cases alive during that year. See Technical Notes for “Causes of Death.”

African American males experienced the highest HIV mortality rates in San Francisco from 2002-2012 compared to all other racial/ethnic groups (Figure 5.2). Since its peak in 2005, the male African American mortality rate decreased by almost half from 333 per 100,000 down to 178 per 100,000 in 2012. Despite this decrease, the mortality rate of African American men with HIV was at least 2.1 times higher than that of white men and 3.2 times higher than that of Latino men in 2012.

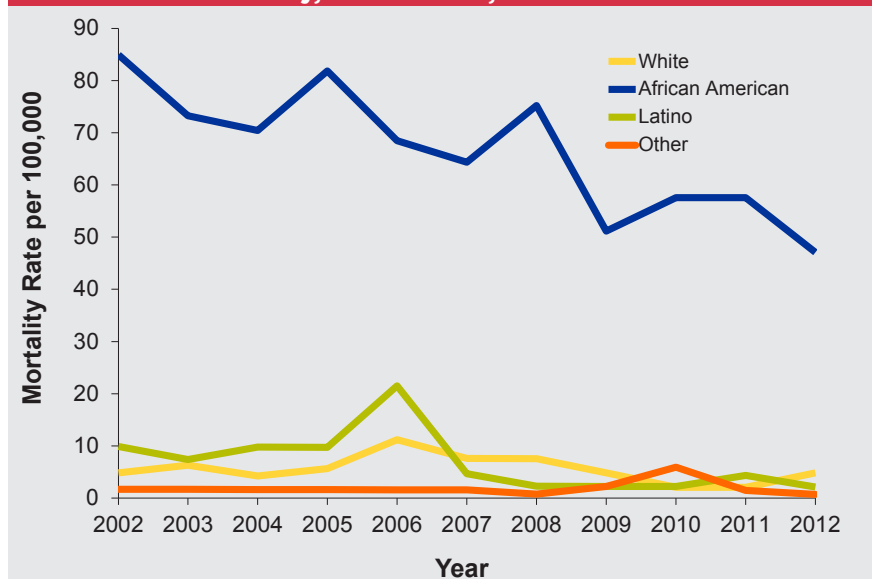
Figure 5.2 Mortality rates¹ among men diagnosed with HIV infection per 100,000 population by race/ethnicity, 2002-2012, San Francisco



¹ Mortality rates are calculated as the number of HIV cases who died each year divided by the population by sex and race/ethnicity. See Technical Notes for "HIV Case Rates and HIV Mortality Rates."

Gender and racial disparities are still evident when examining HIV mortality rates. Overall, San Francisco women with HIV died at significantly lower rates than their male counterparts from 2002-2012. Among women with HIV, African American mortality rates were disproportionately higher than all other racial/ethnic groups (Figure 5.3). By 2012, the mortality rate of African American women with HIV was 9.4 times greater than that of white women.

Figure 5.3 Mortality rates¹ among women diagnosed with HIV infection per 100,000 population by race/ethnicity, 2002-2012, San Francisco



¹ Mortality rates are calculated as the number of HIV cases who died each year divided by the population by sex and race/ethnicity. See Technical Notes for "HIV Case Rates and HIV Mortality Rates."



Underlying causes of death among persons with HIV continue to shift towards non-HIV related causes. The proportion of deaths in which HIV was listed as the underlying cause of death decreased from 67.9% of deaths among HIV cases occurring in 2001-2004 to 43.8% in 2009-2012 (Table 5.2). Other frequently occurring underlying causes of death in 2009-2012 included non-AIDS cancers (13.6%), drug overdose (11%), heart disease (8.7%), and suicide (4.0%). The proportions of these non-HIV-related causes increased over the three time periods.

Table 5.2 Underlying causes of death among persons diagnosed with HIV infection¹, 2001-2012, San Francisco

Underlying Cause of Death ²	Year of Death					
	2001-2004		2005-2008		2009-2012	
	N=1,325		N=1,242		N=943	
	Number	(%)	Number	(%)	Number	(%)
HIV	900	(67.9)	676	(54.4)	413	(43.8)
Non-AIDS cancer	96	(7.2)	132	(10.6)	128	(13.6)
Lung cancer	28	(2.1)	50	(4.0)	32	(3.4)
Liver cancer	14	(1.1)	24	(1.9)	19	(2.0)
Colon cancer	3	(0.2)	8	(0.6)	7	(0.7)
Anal cancer	5	(0.4)	6	(0.5)	6	(0.6)
Hodgkins lymphoma	1	(0.1)	2	(0.2)	1	(0.1)
Drug overdose	37	(2.8)	77	(6.2)	104	(11.0)
Heart disease	74	(5.6)	95	(7.6)	82	(8.7)
Coronary heart disease	52	(3.9)	51	(4.1)	40	(4.2)
Cardiomyopathy	5	(0.4)	7	(0.6)	4	(0.4)
Suicide	24	(1.8)	48	(3.9)	38	(4.0)
Liver disease	34	(2.6)	27	(2.2)	22	(2.3)
Liver cirrhosis	16	(1.2)	14	(1.1)	12	(1.3)
Alcoholic liver disease	14	(1.1)	11	(0.9)	9	(1.0)
Chronic obstructive lung disease	20	(1.5)	24	(1.9)	18	(1.9)
Mental disorders due to substance use	32	(2.4)	33	(2.7)	12	(1.3)
Cerebrovascular disease	14	(1.1)	6	(0.5)	11	(1.2)
Diabetes	3	(0.2)	7	(0.6)	7	(0.7)
Viral hepatitis	11	(0.8)	11	(0.9)	6	(0.6)
Diseases of arteries	4	(0.3)	1	(0.1)	4	(0.4)
Renal disease	3	(0.2)	7	(0.6)	4	(0.4)
Septicemia	3	(0.2)	3	(0.2)	3	(0.3)
Pancreatitis	3	(0.2)	1	(0.1)	1	(0.1)

1 Deceased cases diagnosed with HIV infection that lack cause of death information are not represented in this table.

2 See Technical Notes "Causes of Death."

Table 5.3 shows both underlying and contributory causes of death among persons diagnosed with HIV infection. Similar to the trend in underlying causes of death, the proportion of deaths with HIV-related causes fell from 83.5% in 2001-2004 to 65.9% in 2009-2012. Several non-HIV related causes had persistent proportional increases across the three time periods. Among these selected causes, deaths due to heart disease showed the largest percentage increase between recent time periods 2005-2008 and 2009-2012.

Table 5.3 Multiple causes of death among persons diagnosed with HIV infection¹, 2001-2012, San Francisco

Multiple Causes of Death ²	Year of Death					
	2001-2004		2005-2008		2009-2012	
	N=1,325		N=1,242		N=943	
	Number	(%)	Number	(%)	Number	(%)
HIV	1,107	(83.5)	889	(71.6)	621	(65.9)
Heart disease	279	(21.1)	271	(21.8)	263	(27.9)
Coronary heart disease	84	(6.3)	84	(6.8)	77	(8.2)
Cardiomyopathy	27	(2.0)	18	(1.4)	25	(2.7)
Non-AIDS cancer	136	(10.3)	183	(14.7)	171	(18.1)
Lung cancer	31	(2.3)	53	(4.3)	39	(4.1)
Liver cancer	17	(1.3)	27	(2.2)	27	(2.9)
Anal cancer	9	(0.7)	8	(0.6)	10	(1.1)
Colon cancer	4	(0.3)	9	(0.7)	7	(0.7)
Hodgkins lymphoma	5	(0.4)	9	(0.7)	6	(0.6)
Liver disease	220	(16.6)	158	(12.7)	128	(13.6)
Liver cirrhosis	94	(7.1)	77	(6.2)	67	(7.1)
Alcoholic liver disease	17	(1.3)	13	(1.0)	9	(1.0)
Viral hepatitis	199	(15.0)	154	(12.4)	118	(12.5)
Drug overdose	45	(3.4)	85	(6.8)	110	(11.7)
Pneumonia	193	(14.6)	153	(12.3)	106	(11.2)
Mental disorders due to substance use	99	(7.5)	124	(10.0)	96	(10.2)
Renal disease	131	(9.9)	133	(10.7)	96	(10.2)
Septicemia	146	(11.0)	133	(10.7)	85	(9.0)
Chronic obstructive lung disease	64	(4.8)	75	(6.0)	63	(6.7)
Diabetes	28	(2.1)	50	(4.0)	50	(5.3)
Suicide	25	(1.9)	48	(3.9)	38	(4.0)
Cerebrovascular disease	39	(2.9)	37	(3.0)	30	(3.2)
Diseases of arteries	9	(0.7)	8	(0.6)	8	(0.8)
Aspergillosis	7	(0.5)	7	(0.6)	1	(0.4)

¹ Deceased cases diagnosed with HIV infection that lack cause of death information are not represented in this table.

² Includes underlying and contributory causes of death. Individuals may have more than one cause of death. See Technical Notes "Causes of Death."

6

Health Insurance Status at Time of HIV Diagnosis

Insurance status at time of initial HIV diagnosis differs by racial/ethnic group. Over 40% of whites had private insurance in all years examined. In 2011, the proportion of whites without insurance increased while the proportion of those with public insurance decreased. In contrast, over 40% of African Americans were publicly insured throughout 2010-2014. Neither type of insurance was predominant for Latinos or other racial/ethnic groups, although Latino cases had the highest proportions with no insurance coverage.

Figure 6.1 Trends in health insurance status at time of HIV diagnosis by race/ethnicity, 2010-2014, San Francisco

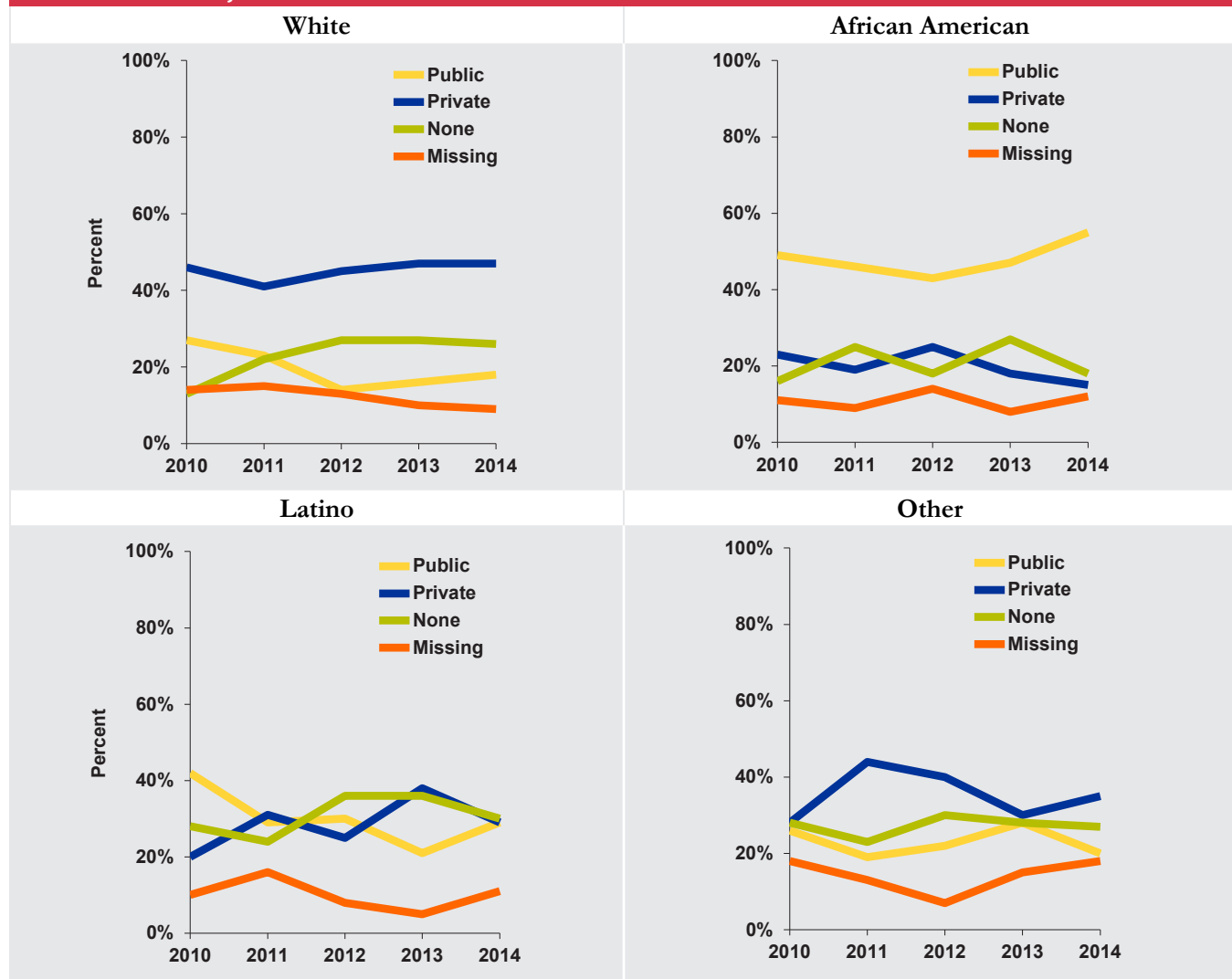
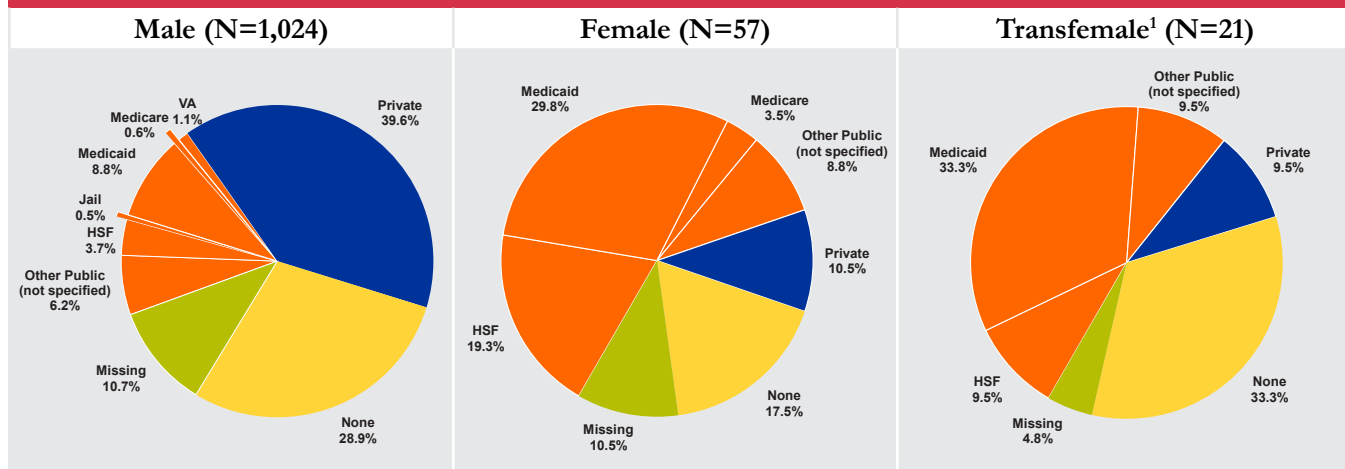


Figure 6.2 shows the distribution of insurance types by gender for HIV cases diagnosed between 2012 and 2014. Compared to males, female and transfemale cases diagnosed during this time period had higher proportions with public insurance. At diagnosis, females and transfemales had similarly high proportions using Medicaid, a state-sponsored insurance for persons meeting financial criteria. In addition, Healthy San Francisco (HSF), the county-sponsored health access program for residents that became available in 2008, was used by 19% of females at time of diagnosis. One-third of transfemales had no health insurance at time of diagnosis.

Figure 6.2 Health insurance status at time of HIV diagnosis by gender, 2012-2014, San Francisco

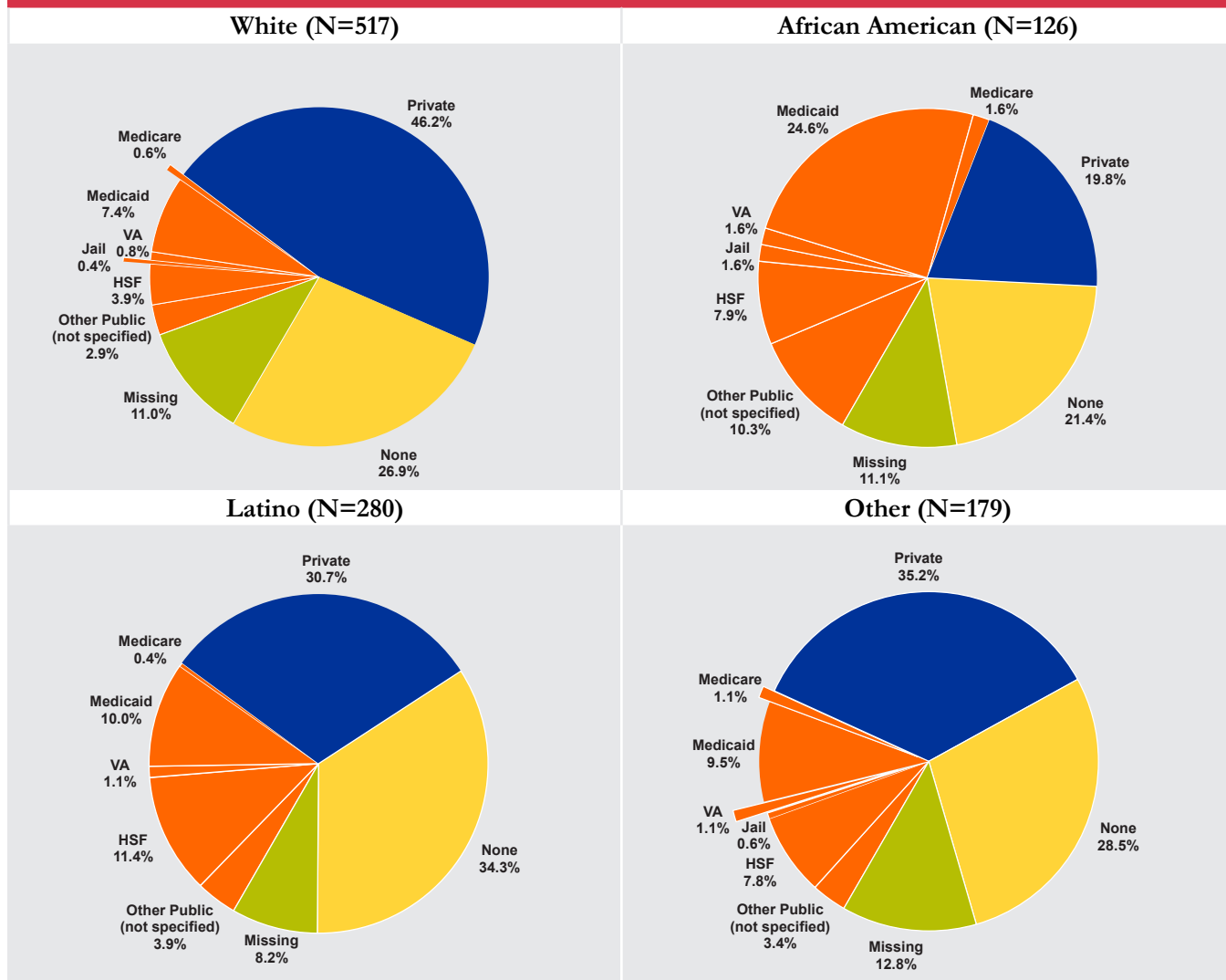


¹ Transfemale data include all transgender cases. Transmale data are not released separately due to potential small population size. See Technical Notes “Transgender Status.”



Figure 6.3 shows the distribution of insurance types by racial/ethnic groups for HIV cases diagnosed between 2012 and 2014. Sixty-two percent of white cases were insured, 68% of African Americans and 59% of other racial/ethnic (non-Latino) cases were insured at diagnosis. African American cases utilized publicly-funded insurance types more at time of diagnosis. Latino cases had the highest proportion with no health care coverage at time of diagnosis (34%). Latinos had the highest proportion using HSF for health care coverage at time of diagnosis (11%).

Figure 6.3 Health insurance status at time of HIV diagnosis by race/ethnicity, 2012-2014, San Francisco



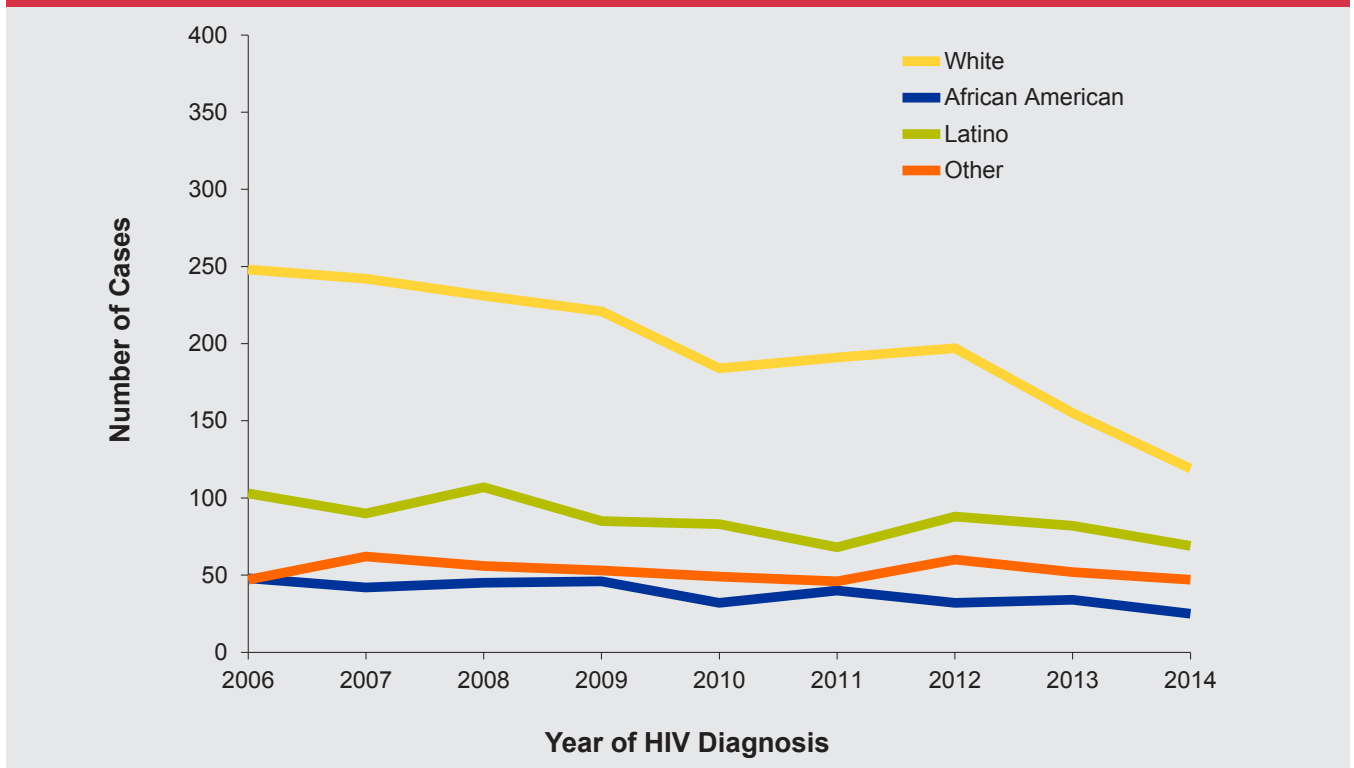
7

HIV among Men who Have Sex with Men

HIV surveillance data

Whites account for the largest number of HIV cases by race/ethnicity among MSM in San Francisco (Figure 7.1). The number of white MSM newly diagnosed with HIV declined from 2006 to 2010, leveled off through 2012, and continued to decline through 2014. The number of MSM newly diagnosed with HIV among Latinos, African Americans and other racial/ethnic groups were fairly stable between 2006 and 2014.

Figure 7.1 Number of MSM diagnosed with HIV infection¹ by race/ethnicity, 2006-2014, San Francisco



¹ Includes MSM and MSM-PWID with HIV infection by year of their initial HIV diagnosis. See Technical Notes "Date of Initial HIV Diagnosis."

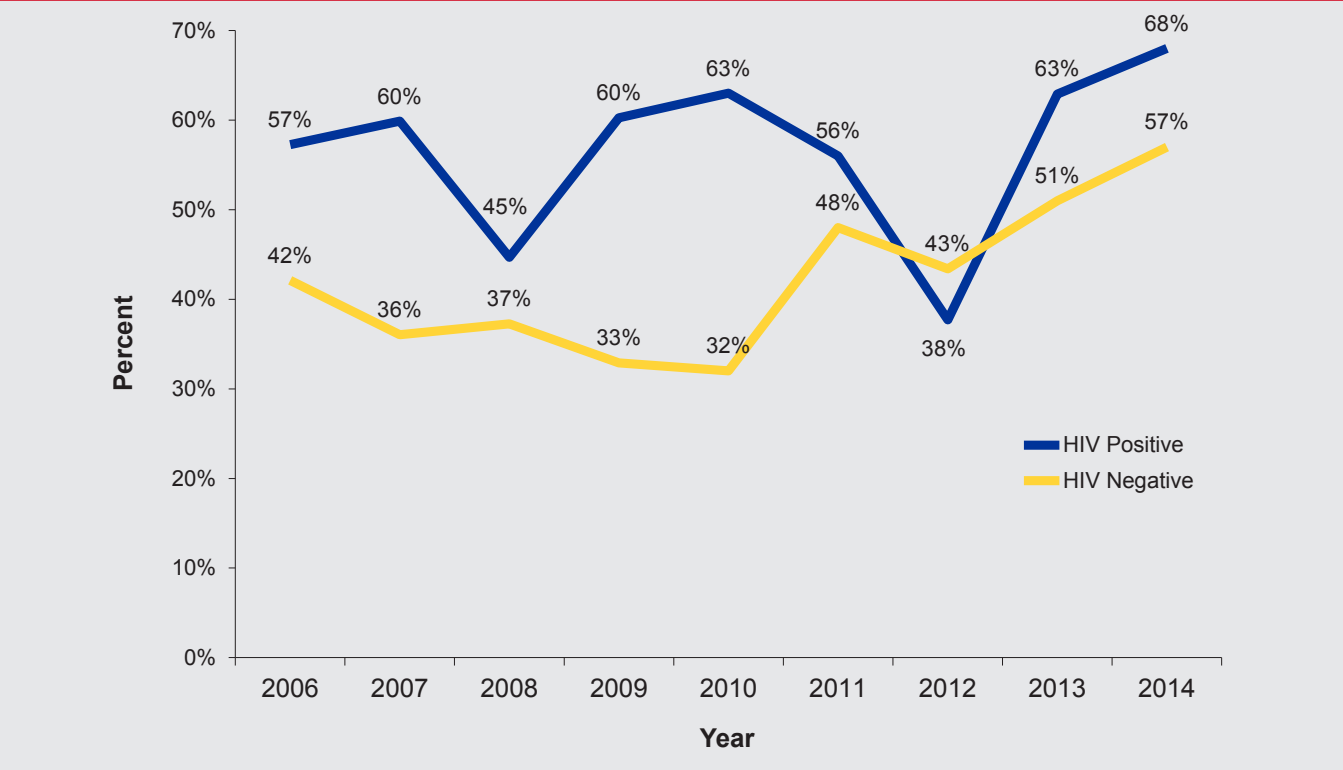


HIV sexual behavior data

The STOP AIDS Project collects information on sexual behaviors and self-reported HIV status of MSM who participate in their outreach prevention activities in San Francisco. These data are collected anonymously to track trends in HIV-related risk behavior. Such data may not be representative of all MSM in San Francisco. In this section, trends in condomless anal intercourse in the past six months are assessed for MSM who are 18 years and older and reside in San Francisco.

Figure 7.2 shows trends in reported condomless anal intercourse (either insertive or receptive) by self-reported HIV serostatus. Between 2006 and 2014, the percent of HIV negative MSM who reported condomless anal intercourse steadily declined from 42% in 2006 to 32% in 2010, but rose to a high of 57% in 2014. Among HIV positive men, the percent condomless anal intercourse has remained between 57% and 68% except for two lows, 45% in 2008 and 38% in 2012. Caution must be given to low numbers of MSM interviewed, especially among HIV positive men each year, which may influence the fluctuating proportions.

Figure 7.2 Percent of MSM reporting condomless anal intercourse in the last six months by self-reported HIV status, the STOP AIDS Project, 2006-2014, San Francisco



Sexually transmitted diseases among MSM

Sexually transmitted diseases (STD) serve as a marker of condomless sex and some have been shown to increase HIV transmission. Figure 7.3 shows trends in male rectal gonorrhea and male gonococcal proctitis among MSM in San Francisco from 2005 through 2014 by HIV serostatus. Data on male rectal gonorrhea originate from case reporting by laboratories and health providers throughout the city. Data on male gonococcal proctitis originate from the municipal STD clinic only and represent men with symptomatic infection. Among men, rectal gonorrhea is a biological marker for condomless receptive anal sex.

The last five years has seen an increase in reported cases of male rectal gonorrhea. The stable numbers of cases of male gonococcal proctitis suggest that some of the increase in reported male rectal gonorrhea may be due to increased screening or reporting.

Data may underestimate true levels of infections due to several factors, including lack of rectal screening by many health providers, underreporting, and a large proportion of asymptomatic cases.

Figure 7.3 Male rectal gonorrhea and male gonococcal proctitis among MSM by HIV serostatus, 2005-2014, San Francisco

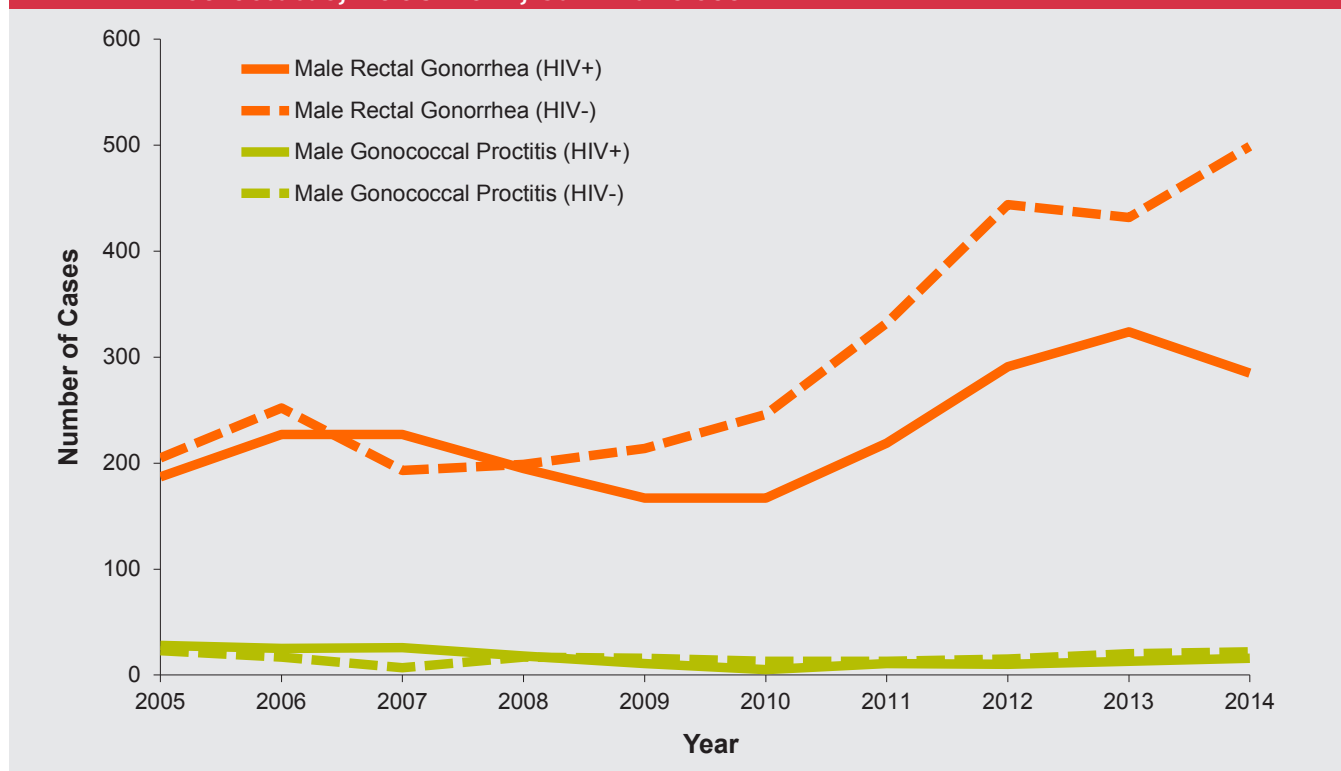
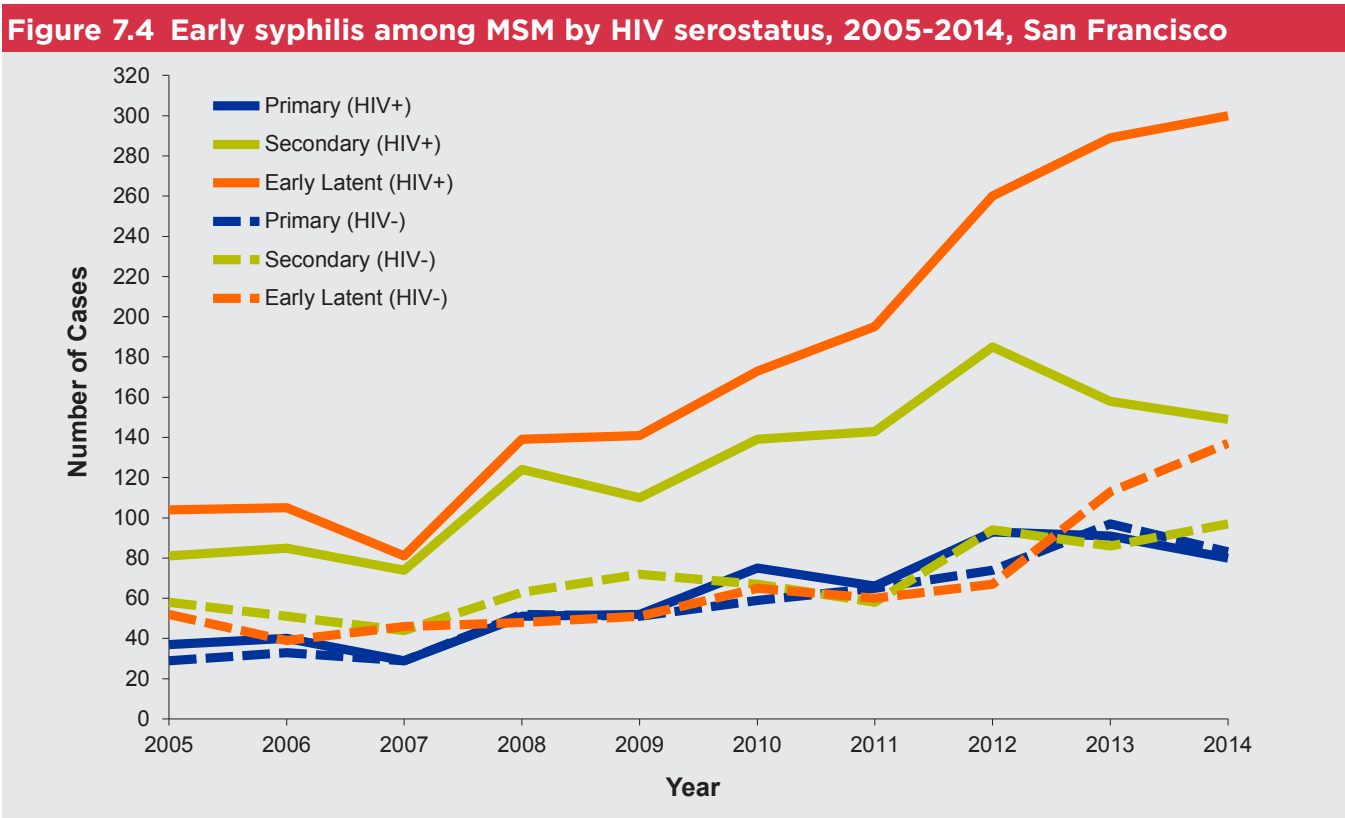




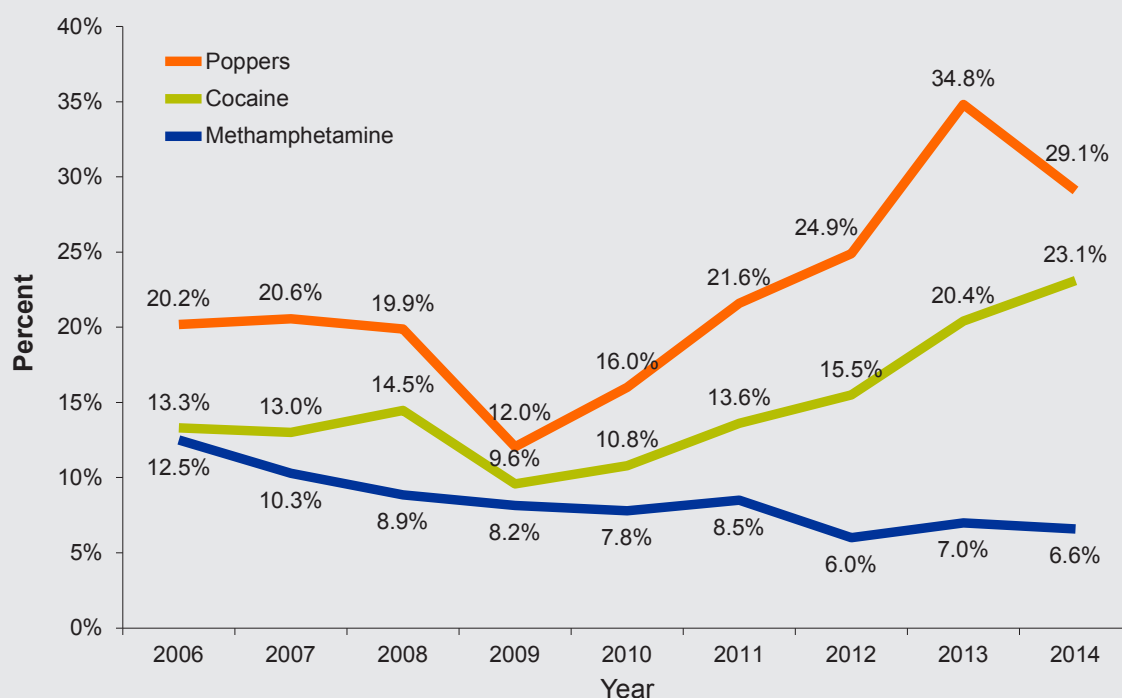
Figure 7.4 shows trends in early syphilis cases (primary, secondary, and early latent) among MSM in San Francisco from 2005 through 2014 by HIV serostatus. Data originate from case reporting by laboratories and health providers throughout the city and from the municipal STD clinic, the site where most of the patients were diagnosed. Like gonorrhea, syphilis is a biological marker for condomless sex. The increase from 2007 to 2014 in early latent is dramatic, especially among HIV-positive MSM who account for a greater proportion of early syphilis cases than HIV-negative MSM.



Substance use

The STOP AIDS Project records substance use among San Francisco MSM. Figure 7.5 shows the percent of MSM who used methamphetamines, “poppers,” or cocaine in the past six months for the years 2006 to 2014. The most recent years show an increase in cocaine use to 23.1% and an increase in poppers use between 2009 and 2013 with a decrease to 29.1% in 2014. Methamphetamine use has declined since 2006 and remains stable for past three years to 6.6% in 2014.

Figure 7.5 Substance use among MSM, the STOP AIDS Project, 2006-2014, San Francisco



National HIV behavioral surveillance (NHBS) data

NHBS is conducted among MSM every three years in San Francisco. During the 2014 round of NHBS, HIV negative men were asked about pre-exposure prophylaxis (PrEP) use in the past 12 months. Overall, PrEP use (10%) among HIV negative MSM was higher than expected from other estimates. Table 7.1 illustrates the demographic characteristics of all HIV negative men, HIV negative men eligible for PrEP and HIV negative men who used PrEP in the past 12 months. The majority of HIV negative men were 25-44 years old, white, had some college or greater educational attainment, had incomes of 50,000 USD per year or higher and had health insurance. Men using PrEP were more likely to be white than other racial/ethnic groups. No other differences in PrEP uses were found.

Eighty-eight percent of PrEP users were white and only 3.7% of each African American, Latino and other race/ethnicity were PrEP users. Considering that whites make up 48% of new HIV diagnoses while African Americans comprise 10% and Latinos 25% of new diagnoses, PrEP use needs to be expanded among African American and Latino MSM.

Table 7.1 Demographic characteristics of HIV-negative MSM, MSM eligible for PrEP and MSM using PrEP, 2014, San Francisco

	All HIV Negative Men		Meets PrEP Criteria			Using PrEP		
	Number	(%)	Number	(Row % of HIV Negative Men)	p value	Number	(Row % of HIV Negative Men)	p value
Total	268	100	176	(65.7)		27	(10.1)	
Age								
18 - 24	28	(10.4)	22	(78.6)	0.00	0	(0.0)	0.28
25 - 34	106	(39.6)	79	(74.5)		12	(11.3)	
35 - 44	54	(20.1)	40	(74.1)		8	(14.8)	
45 - 54	46	(17.2)	25	(54.3)		4	(8.7)	
55+	34	(12.7)	10	(29.4)		3	(8.8)	
Race/Ethnicity								
Asian	22	(8.3)	14	(63.6)	0.20	1	(4.5)	0.02
African American	15	(5.6)	12	(80.0)		1	(6.7)	
Latino	60	(22.6)	39	(65.0)		1	(1.7)	
White	152	(57.1)	98	(64.5)		24	(15.8)	
Other	5	(1.9)	1	(20.0)		0	(0.0)	
Mixed	12	(4.5)	10	(83.3)		0	(0.0)	
Education								
Grade 12 or lower	37	(13.8)	26	(70.3)	0.34	1	(2.7)	0.33
Some college	79	(29.5)	57	(72.2)		7	(8.9)	
Bachelor's degree	92	(34.3)	55	(59.8)		11	(12.0)	
Any post-graduate studies	60	(22.4)	38	(63.3)		8	(13.3)	
Income (USD per year)								
≤ 25,000	67	(25.2)	47	(70.1)	0.70	6	(9.0)	0.24
25,000 - 50,000	59	(22.2)	38	(64.4)		3	(5.1)	
≥ 50,000	140	(52.6)	90	(64.3)		18	(12.9)	
Health Insurance								
Yes	236	(88.1)	151	(64.0)	0.16	24	(10.2)	1.00
No	32	(11.9)	25	(78.1)		3	(9.4)	

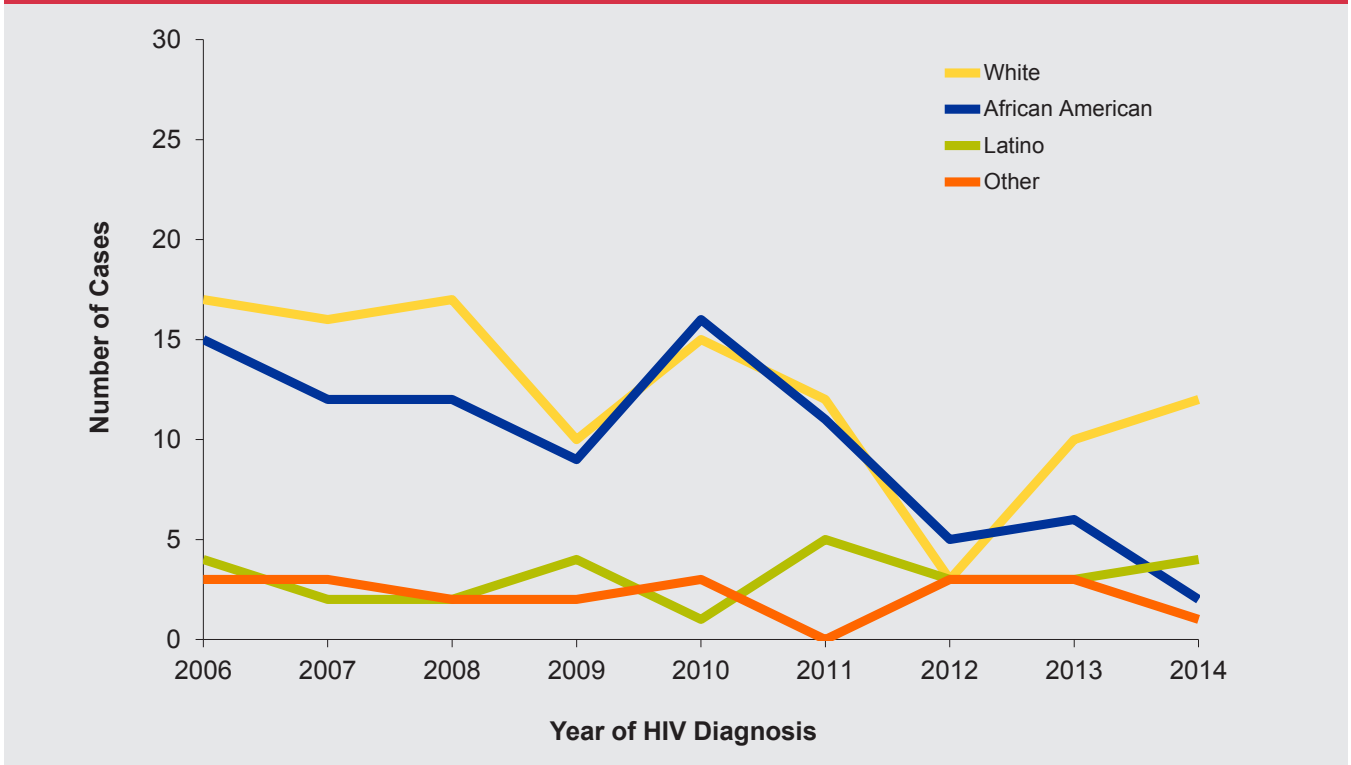


HIV among People who Inject Drugs

HIV surveillance data

Since 2006, the proportion of HIV cases diagnosed annually who were non-MSM PWID ranged from 3% to 8%. From 2006 to 2014, whites accounted for 45% of cases in this transmission category (Figure 8.1). Trends in whites and African Americans were similar from 2006 to 2012. White cases increased in 2013 and 2014, while African American cases appeared to be level in 2012 and 2013.

Figure 8.1 Number of non-MSM PWID diagnosed with HIV infection¹ by race/ethnicity, 2006-2014, San Francisco

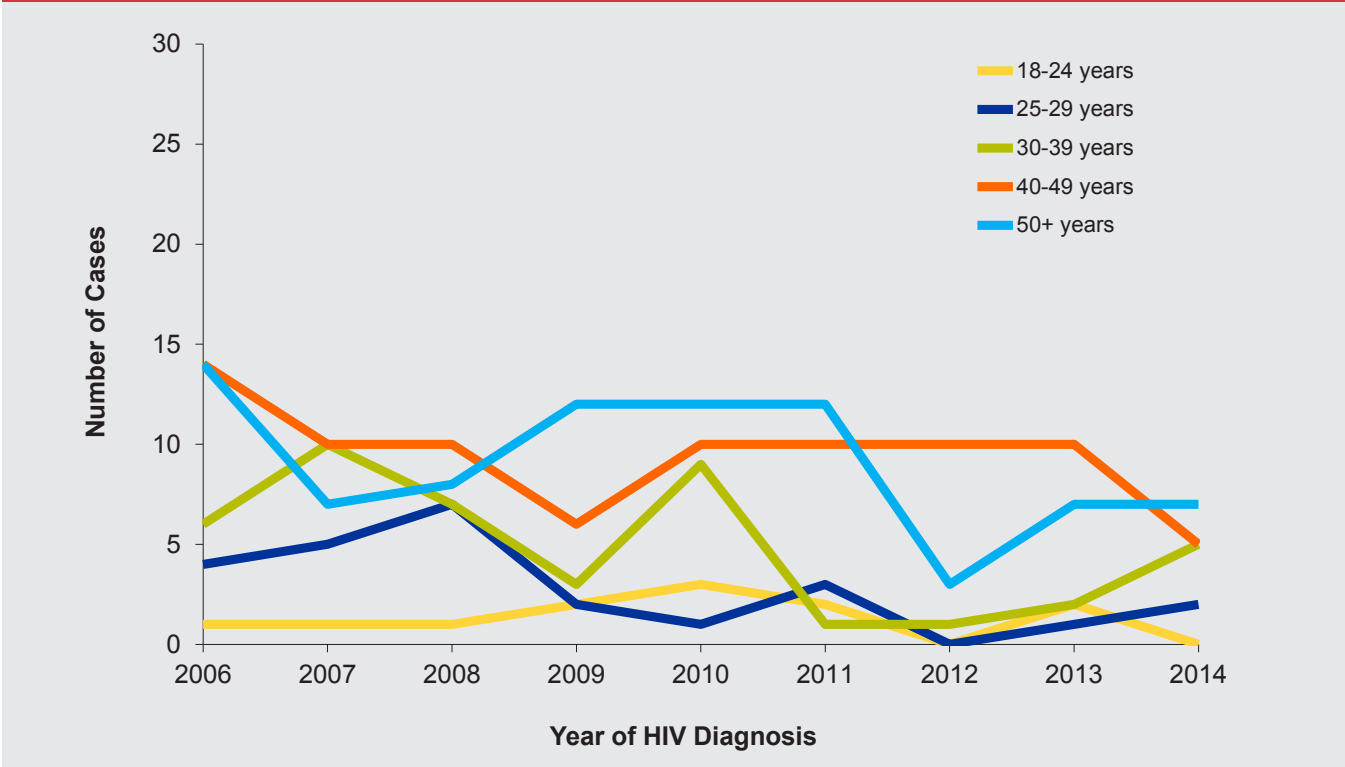


¹ Includes persons with HIV infection by year of their initial HIV diagnosis. See Technical Notes “Date of Initial HIV Diagnosis.”



Two-thirds of non-MSM PWID diagnosed with HIV between 2006 and 2014 were persons aged 40 years and older at time of diagnosis (Figure 8.2). Since 2010, annual cases among persons aged 30-39 years decreased and remained very low. Cases in persons aged 25-29 years declined since 2008. There were very few PWID aged 18-24 years and no PWID under age 18 diagnosed in this time period.

Figure 8.2 Number of non-MSM PWID diagnosed with HIV infection¹ by age group at HIV diagnosis, 2006-2014, San Francisco



¹ Includes persons with HIV infection by year of their initial HIV diagnosis. See Technical Notes “Date of Initial HIV Diagnosis.”

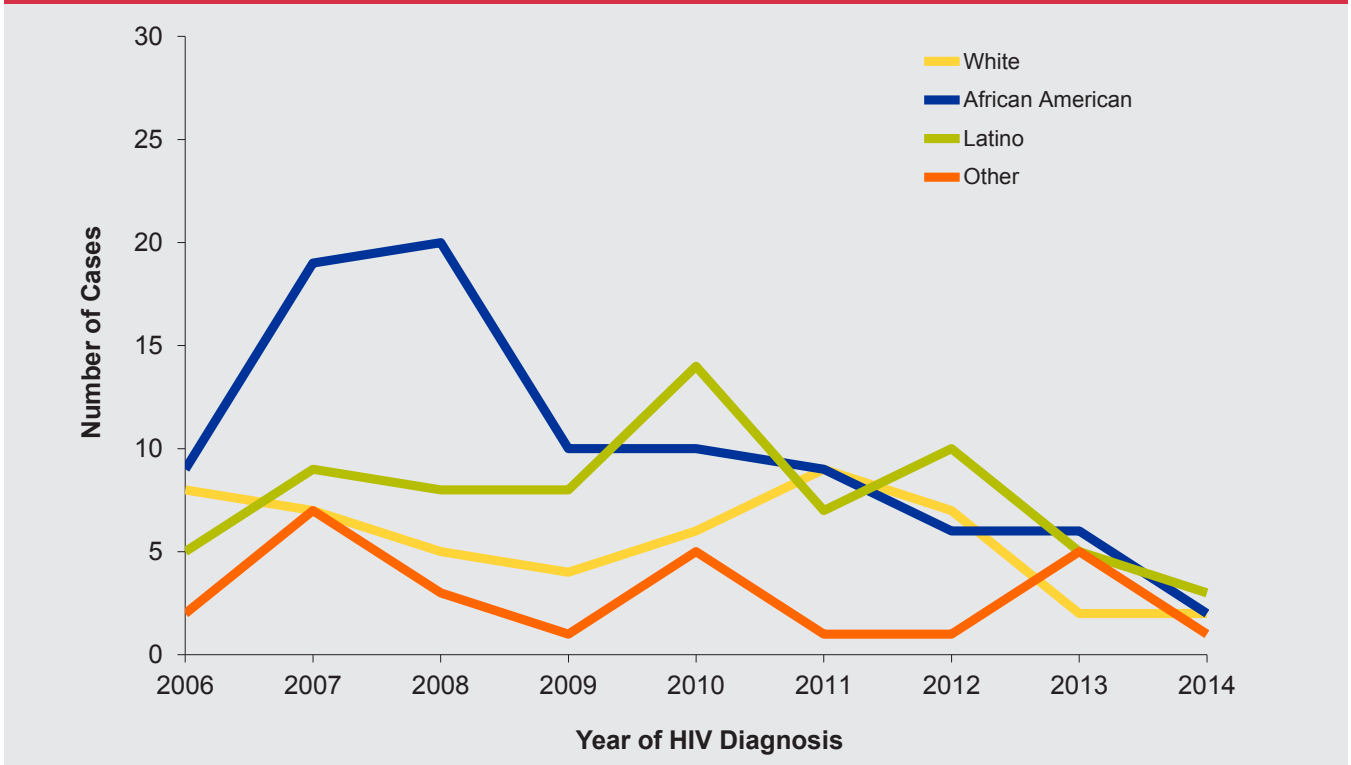
9

HIV among Heterosexuals

HIV surveillance data

Trends in heterosexual HIV cases by race/ethnicity are difficult to characterize due to the small number of cases infected through heterosexual contact (Figure 9.1). African Americans accounted for 39% of heterosexual HIV cases from 2006 to 2014, followed by Latinos who accounted for 29%. Starting in 2011, African American, Latino, and white annual case counts in heterosexuals have trended downward.

Figure 9.1 Number of heterosexuals diagnosed with HIV infection¹ by race/ethnicity, 2006-2014, San Francisco



¹ Includes persons with HIV infection by year of their initial HIV diagnosis. See Technical Notes "Date of Initial HIV Diagnosis."



Sexually transmitted diseases among heterosexuals

Figure 9.2 shows the annual number of primary, secondary, and early latent cases of syphilis among heterosexual men in San Francisco from 2005 through 2014. Data originate from case reporting from laboratories and health providers throughout the city, although the majority are patients seen at the municipal STD clinic. Compared to MSM, syphilis among heterosexual men remains relatively low in recent years with some fluctuation.

Figure 9.2 Syphilis among heterosexual men, 2005-2014, San Francisco

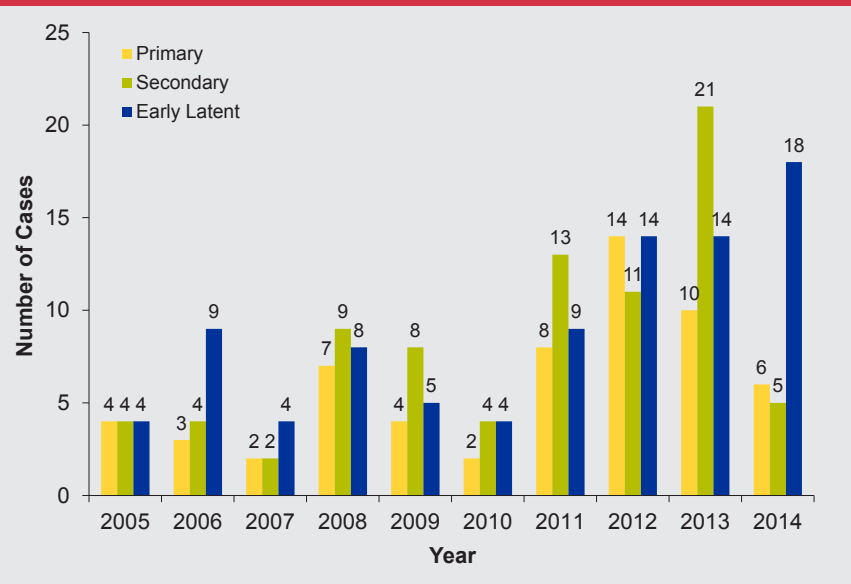
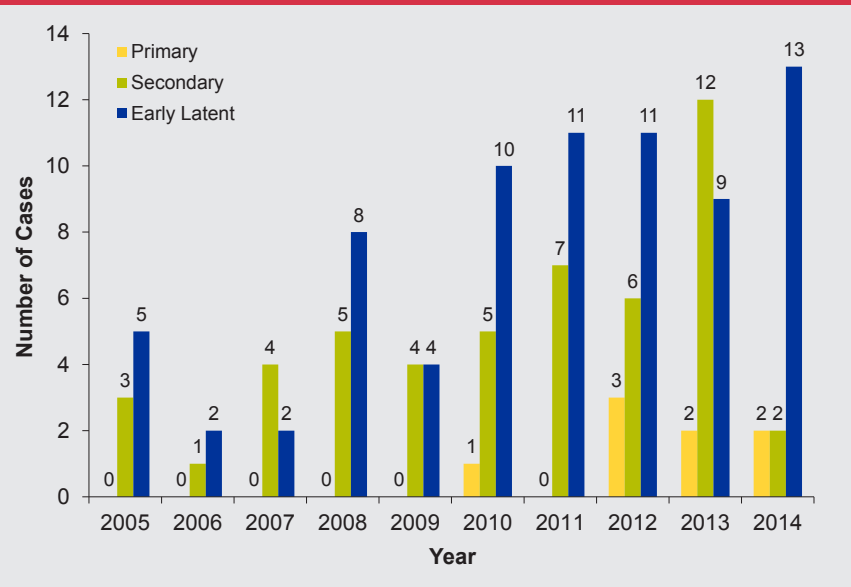


Figure 9.3 shows the annual number of primary, secondary, and early latent cases of syphilis among women in San Francisco from 2005 through 2014. Data originate from case reporting from laboratories and health providers throughout the city, although the majority are patients seen at the municipal STD clinic. Among women, syphilis cases have been low and stable, with a potential increase in recent years.

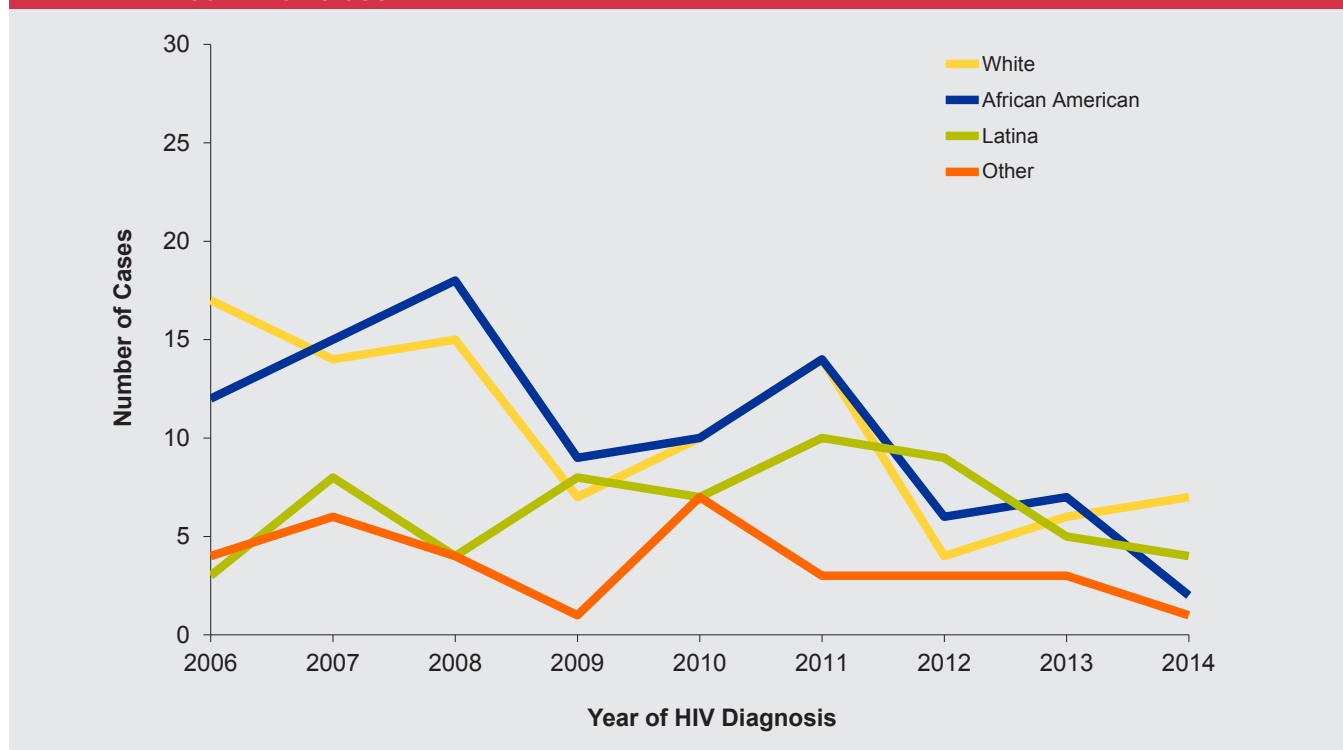
Figure 9.3 Syphilis among women, 2005-2014, San Francisco



10 HIV among Women

Among women diagnosed with HIV infection from 2006 to 2014, whites and African Americans accounted for two-thirds of cases. However, beginning in 2009, the number of new diagnoses among white, African American and Latina women were similar (Figure 10.1). From 2006 to 2014, whites accounted for 34%, African Americans accounted for 34%, and Latinas accounted for 21% of female cases diagnosed with HIV infection.

Figure 10.1 Number of women diagnosed with HIV infection¹ by race/ethnicity, 2006-2014, San Francisco

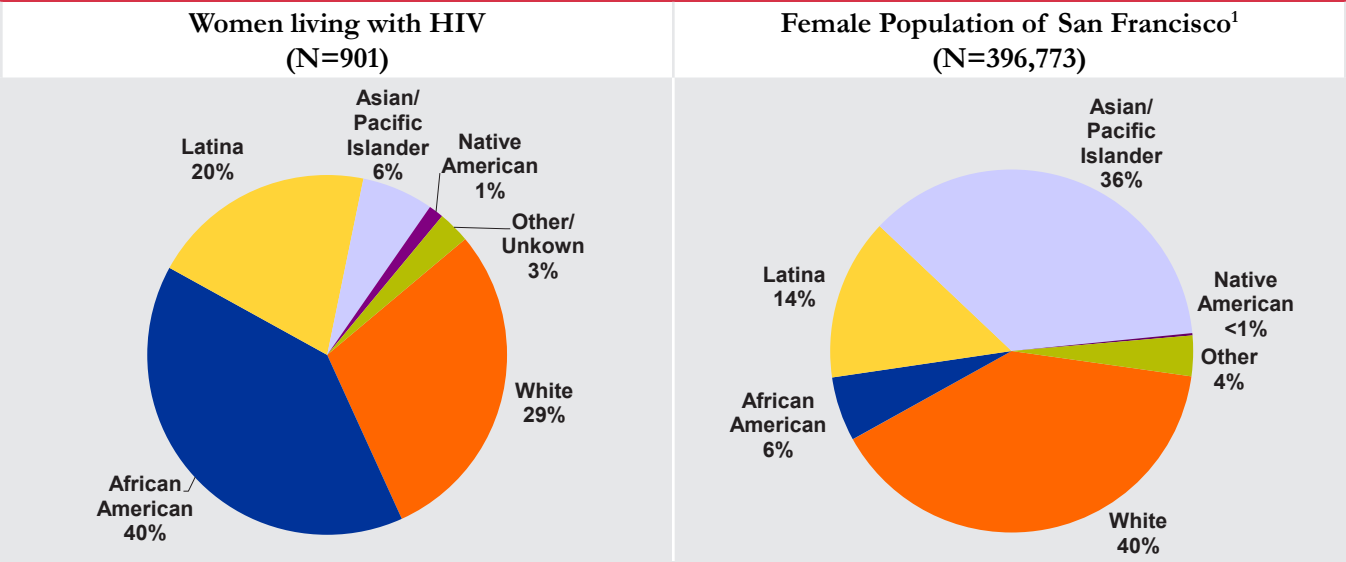


¹ Includes persons with HIV infection by year of their initial HIV diagnosis. See Technical Notes "Date of Initial HIV Diagnosis."



Among women, African Americans are disproportionately affected by HIV. This is evident when comparing living female HIV cases in San Francisco to the city’s female population (Figure 10.2). Although African American women represent 6% of the total female population, as of December 31, 2014 they accounted for 40% of the living female HIV cases in San Francisco.

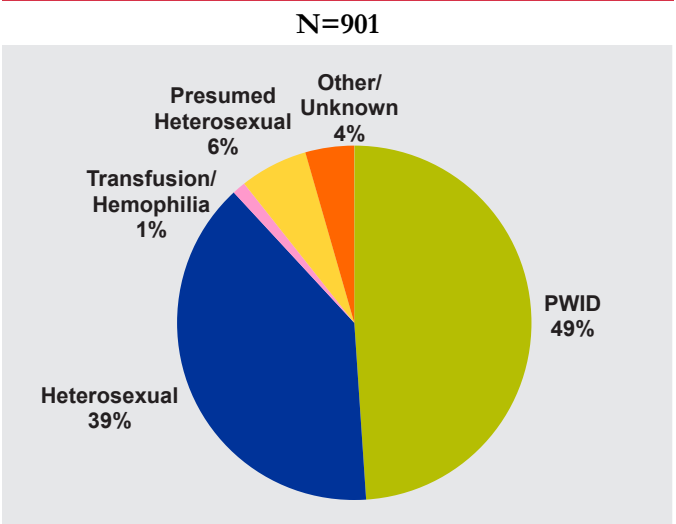
Figure 10.2 Women living with HIV diagnosed through December 2014 and female population by race/ethnicity, San Francisco



¹ United States 2010 Census data.

The current transmission category definition for heterosexual contact does not adequately describe transmission for a large number of women who were likely infected heterosexually. The CDC HIV Incidence Case Surveillance Branch’s definition for female presumed heterosexual contact reclassifies the transmission category for female cases who would otherwise be reported with no identified risk (see Technical Notes “Female Presumed Heterosexual Contact”). Among all living female HIV cases diagnosed in San Francisco, 49% acquired HIV infection through injecting drugs and 45% through heterosexual contact (Figure 10.3).

Figure 10.3 Women living with HIV diagnosed through December 2014 by transmission category, San Francisco



11 HIV among Children, Adolescents and Young Adults

Persons living with HIV in San Francisco who are adolescents (current age 13-17 years) or young adults (current age 18-24 years) make up less than 1% of all living HIV cases in the city. As of December 31, 2014 there were three adolescents and 124 young adults living with HIV. Among living young adult HIV cases, 78% were MSM (Table 11.1). Over one-third of living young adult cases were Latino, 22% were African American and 24% were white. Adolescent data are not displayed due to small numbers.

Table 11.1 Young adults living with HIV by transmission category, gender, and race/ethnicity, December 2014, San Francisco

	18 - 24 Years Old	
	Number	(%)
Total	124	(100)
Transmission Category		
MSM	88	(71)
PWID	2	(2)
MSM-PWID	9	(7)
Heterosexual	5	(4)
Perinatal	13	(10)
Other/Unidentified	7	(6)
Gender		
Male	101	(81)
Female	17	(14)
Transfemale ¹	6	(5)
Race/Ethnicity		
White	30	(24)
African American	27	(22)
Latino	43	(35)
Asian/Pacific Islander	17	(14)
Other/Unknown	7	(6)

¹ Transfemale data include all transgender cases. Transmale data are not released separately due to potential small population size. See Technical Notes "Transgender Status."

Table 11.2 compares San Francisco cases who were adolescents or young adults at time of HIV diagnosis with those in the same age groups at diagnosis nationally. Compared to all U.S. cases, San Francisco cases had lower proportions of adolescents and young adults among HIV diagnoses.

Table 11.2 Number of adolescents and young adults diagnosed with HIV infection, 2011-2014, San Francisco and the United States

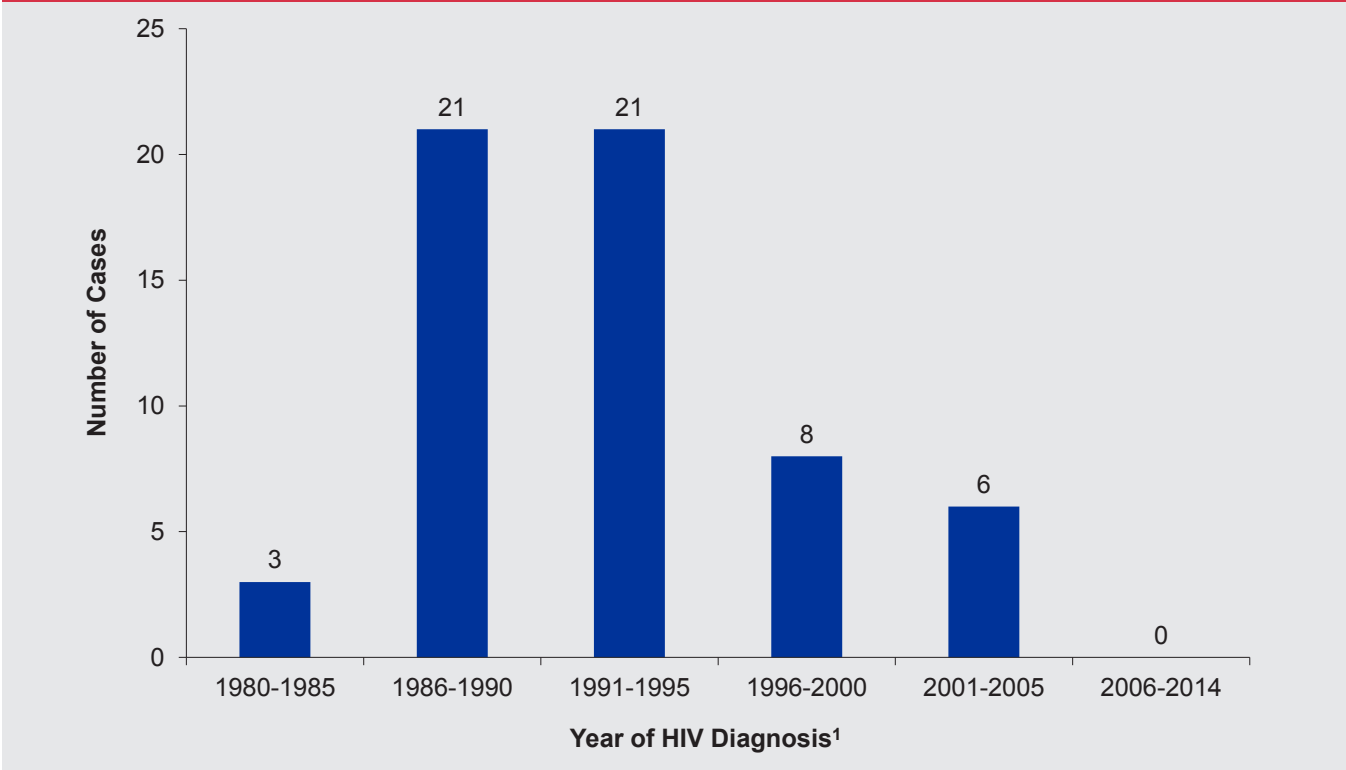
	Year of HIV Diagnosis							
	2011		2012		2013		2014	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)
San Francisco HIV Cases (All ages)	413		429		371		302	
Age 13-19 years at HIV diagnosis	4	(<1)	6	(1)	5	(1)	2	(<1)
Age 20-24 years at HIV diagnosis	41	(10)	47	(11)	44	(12)	34	(11)
U.S. HIV Cases¹ (All ages)	42,786		42,616		42,018			
Age 13-19 years at HIV diagnosis	2,053	(5)	1,915	(4)	1,710	(4)	N/A	
Age 20-24 years at HIV diagnosis	7,141	(17)	7,302	(17)	7,132	(17)	N/A	

¹ U.S. data are based on reported case counts from the 50 states and 6 dependent areas with confidential name-based HIV reporting in CDC HIV Surveillance Report, 2013.



As of December 31, 2014, a cumulative total of 59 pediatric HIV cases (children less than 13 years old and resided in San Francisco at time of diagnosis) were diagnosed in San Francisco. The number of pediatric HIV cases peaked between 1986 and 1995, and has declined over the following years (Figure 11.1). No pediatric HIV cases have been diagnosed among residents of San Francisco since 2005. Of the 59 pediatric HIV cases reported, 24 (41%) have died, 32 (54%) have survived beyond childhood, and three (5%) were living at the end of 2014.

Figure 11.1 Number of children diagnosed with HIV infection by time period of HIV diagnosis, 1980-2014, San Francisco



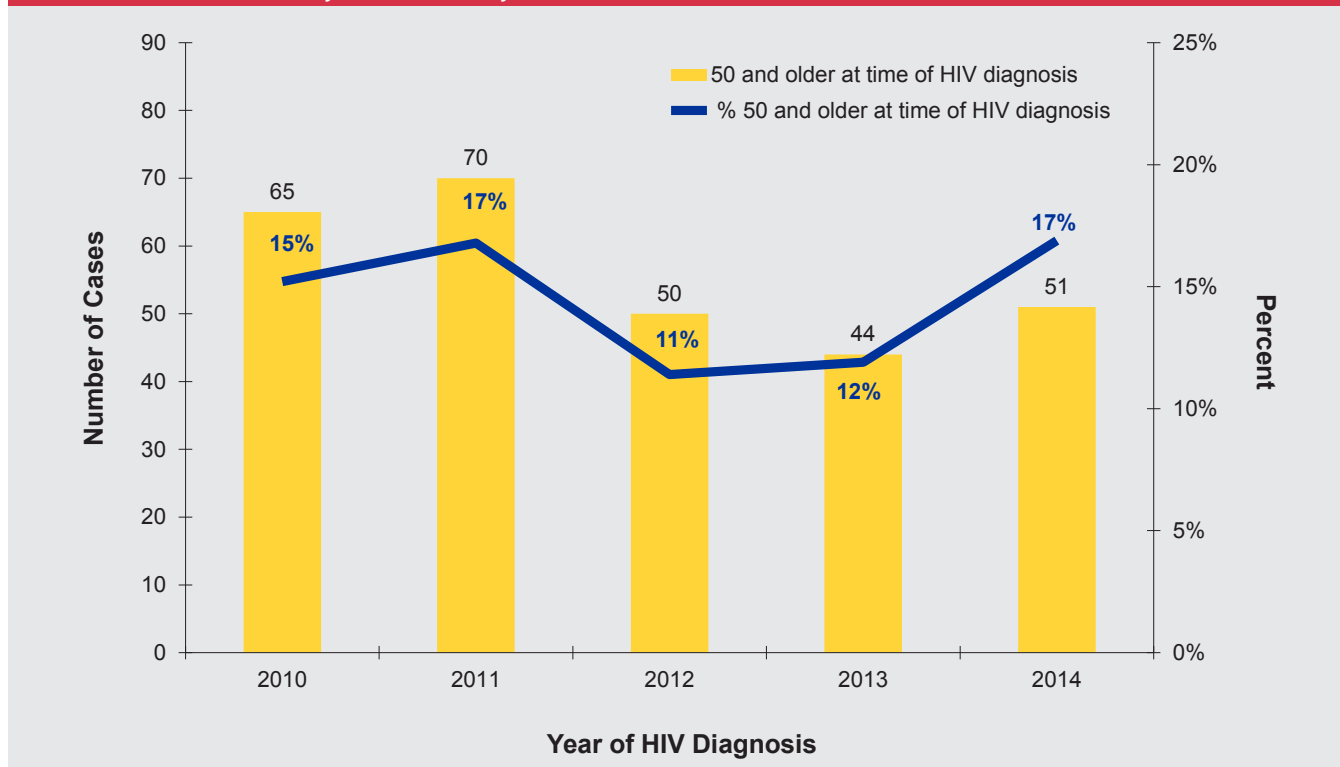
1 See Technical Notes “Date of Initial HIV Diagnosis.”

12 HIV in the Aging Population

With the advent of highly active ART, persons with HIV are living longer, and those aged 50 and older comprise a larger proportion of HIV cases over time. Those 50 years and older now represent more than 50% of the living HIV cases in San Francisco. Between 2010 and 2014, the number and proportion of living HIV cases aged 50 and older increased from 6,455 (44%) to 9,202 (58%).

The proportion of newly diagnosed persons who are 50 years and older at diagnosis varies from year to year during 2010 to 2014, and is between 11 and 17% (Figure 12.1). In 2011, the number of newly diagnosed cases who were age 50 and older peaked at 70 cases, and comprised 17% of newly diagnosed cases. The annual number of newly diagnosed cases 50 years and older has remained fairly stable since 2012. In 2014, the proportion of diagnosed cases aged 50 and older increased to 17%.

Figure 12.1 Number and percent of persons diagnosed with HIV infection¹ at age 50 years and older, 2010-2014, San Francisco



¹ Includes persons with HIV infection by year of their initial HIV diagnosis. See Technical Notes "Date of Initial HIV Diagnosis."

Persons diagnosed with HIV in 2010-2014 at the age of 50 years and older differed slightly in demographic distribution when compared to younger persons diagnosed during the same time. A greater proportion of persons diagnosed at 50 years and older were women, white, PWID and heterosexuals in comparison to younger diagnosed persons (Table 12.1).

Table 12.1 Characteristics of persons diagnosed with HIV infection in 2010-2014 by age at diagnosis, San Francisco

	Age ≥ 50 years at diagnosis (N=280)		Age < 50 years at diagnosis (N=1,685)	
	Number	(%)	Number	(%)
Gender				
Male	236	(84)	1,556	(92)
Female	44	(16)	88	(5)
Transgender	0	(0)	41	(2)
Race/Ethnicity				
White	159	(57)	786	(47)
African American	57	(20)	432	(26)
Latino	39	(14)	198	(12)
Other/Unknown	25	(9)	270	(16)
Transmission Category				
MSM	164	(58)	1,237	(73)
PWID	41	(15)	87	(5)
MSM-PWID	25	(9)	195	(12)
Heterosexual	30	(11)	81	(5)
Other/Unidentified	20	(7)	85	(5)

The majority of persons aged 50 years and older living with HIV are male (93%), white (68%), and MSM (74%) (Table 12.2). The gender and transmission category characteristics of persons aged 50 years and older are similar to those under 50 years old. The 50 years and older population are more likely to be white whereas those aged under 50 have a higher proportion of Latinos and Asian/Pacific Islanders.

Table 12.2 Characteristics of persons living with HIV by age group, December 2014, San Francisco

	Age ≥ 50 years as of 12/31/2014 (N=9,202)		Age < 50 years as of 12/31/2014 (N=6,777)	
	Number	(%)	Number	(%)
Gender				
Male	8,581	(93)	6,146	(91)
Female	489	(5)	412	(6)
Transgender	132	(1)	219	(3)
Race/Ethnicity				
White	6,248	(68)	3,460	(51)
African American	1,228	(13)	786	(12)
Latino	1,218	(13)	1,676	(25)
Asian/Pacific Islander	329	(4)	575	(8)
Native American	35	(<1)	47	(<1)
Other/Unknown	143	(2)	233	(3)
Transmission Category				
MSM	6,815	(74)	4,781	(71)
PWID	717	(8)	388	(6)
MSM-PWID	1,217	(13)	1,037	(15)
Heterosexual	250	(3)	271	(4)
Other/Unidentified	203	(2)	300	(4)

13 HIV among Transgender Persons

Transgender status relies on review of information in medical records. Information on transgender status has been collected since 1996. During 2006 to 2014, there were 115 transgender persons diagnosed with HIV in San Francisco (Table 13.1). Ninety-eight percent of these diagnoses were transfemale. Transgender cases comprised almost 3% of all HIV cases diagnosed in this time period. Compared to all HIV cases diagnosed, transgender cases were more likely to be non-white, PWID, and younger; 46% of newly diagnosed transgenders occurred in persons 18-29 years old.

As of December 31, 2014, there were 356 transgender persons living with HIV in San Francisco (Table 13.2). African Americans and Latinos were the largest racial/ethnic groups among living transgender HIV cases, and 44% of living transgender cases were PWID. The age distribution shows that living transgender cases were younger compared to all living HIV cases in San Francisco (See Table 1.3).

Table 13.1 Characteristics of transgender¹ persons compared to all persons diagnosed with HIV infection in 2006-2014, San Francisco

	Transgender HIV Cases 2006-2014		HIV Cases 2006-2014	
	Number	(%)	Number	(%)
Total	115		3,989	
Race/Ethnicity				
White	22	(19)	1,984	(50)
African American	31	(27)	559	(14)
Latino	37	(32)	908	(23)
Other/Unknown	25	(22)	538	(13)
People who Inject Drugs				
Yes	33	(29)	787	(20)
No	82	(71)	3,202	(80)
Age at HIV Diagnosis (Years)				
13 - 17	0	(0)	13	(<1)
18 - 24	30	(26)	460	(12)
25 - 29	23	(20)	628	(16)
30 - 39	36	(31)	1,268	(32)
40 - 49	20	(17)	1,087	(27)
50+	6	(5)	533	(13)

1 See Technical Notes "Transgender Status."

Table 13.2 Characteristics of transgender¹ persons living with HIV, December 2014, San Francisco

	Number	(%)
Race/Ethnicity		
White	75	(21)
African American	117	(33)
Latino	112	(31)
Asian/Pacific Islander	38	(11)
Other/Unknown	14	(4)
People who Inject Drugs		
Yes	155	(44)
No	201	(56)
Age in Years (at end of 2014)		
13 - 17	0	(0)
18 - 24	6	(2)
25 - 29	22	(6)
30 - 39	77	(22)
40 - 49	118	(33)
50+	133	(37)
Total Number	356	(100)

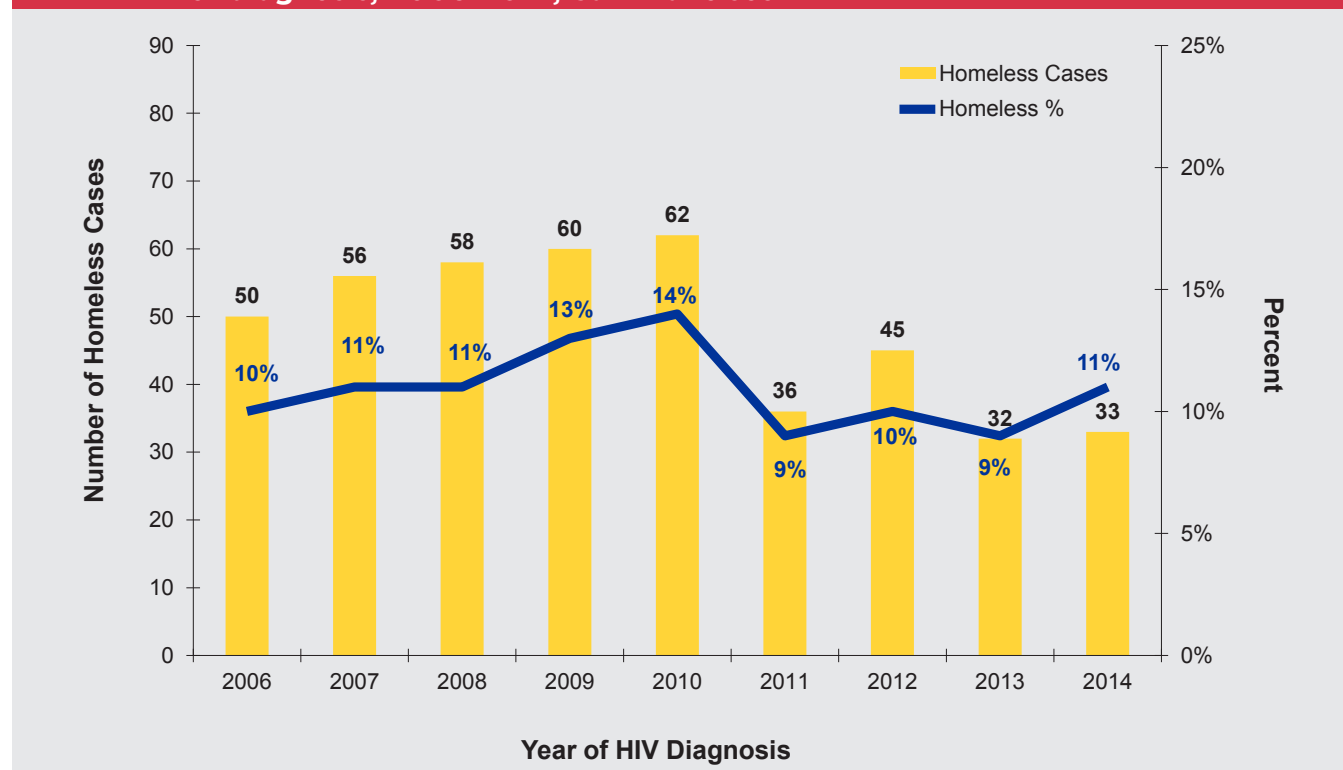
1 See Technical Notes "Transgender Status."

14 HIV among Homeless Persons

A case is defined as homeless if the medical record states that the patient is homeless at time of HIV diagnosis, or the patient's address at diagnosis is a known homeless shelter or a free postal address not connected to a residence ("general delivery"). Cases with missing information on residence at diagnosis are not classified as homeless.

Among all cases diagnosed with HIV infection, the number of homeless cases increased from 2006 to 2010 and dropped thereafter (Figure 14.1). The proportion of annual cases who were homeless at diagnosis was higher in 2009 and 2010, but otherwise fairly stable between 9% and 11%.

Figure 14.1 Number and percent of homeless persons diagnosed with HIV infection¹ by year of diagnosis, 2006-2014, San Francisco



¹ Includes persons with HIV infection by year of their initial HIV diagnosis. See Technical Notes "Date of Initial HIV Diagnosis."

Compared to all HIV cases diagnosed in 2006 to 2014, persons who were homeless at time of HIV diagnosis were more likely to be female, transfemale, African American, and people who inject drugs (Table 14.1).

Table 14.1 Characteristics of homeless persons compared to all persons diagnosed with HIV infection in 2006-2014, San Francisco

	Homeless HIV Cases 2006-2014		HIV Cases 2006-2014	
	Number	(%)	Number	(%)
Total	432		3,989	
Gender				
Male	330	(76)	3,597	(90)
Female	60	(14)	277	(7)
Transfemale ¹	42	(10)	115	(3)
Race/Ethnicity				
White	190	(44)	1,984	(50)
African American	120	(28)	559	(14)
Latino	78	(18)	908	(23)
Other/Unknown	42	(10)	538	(13)
Transmission Category				
MSM	148	(34)	2,840	(71)
PWID	102	(24)	248	(6)
MSM-PWID	137	(32)	539	(14)
Heterosexual	32	(7)	236	(6)
Other/Unidentified	13	(3)	126	(3)
Age at Diagnosis (Years)				
0 - 17	0	(0)	13	(<1)
18 - 24	66	(15)	460	(12)
25 - 29	79	(18)	628	(16)
30 - 39	109	(25)	1,268	(32)
40 - 49	108	(25)	1,087	(27)
50+	70	(16)	533	(13)

¹ Transfemale data include all transgender cases. Transmale data are not released separately due to potential small population size. See Technical Notes “Transgender Status.”

15 Persons Co-infected with HIV and Sexually Transmitted Diseases

The occurrence of Sexually Transmitted Diseases (STD) diagnosis among persons living with HIV (PLWH) is a marker of condomless sex, which depending upon HIV treatment status and partner HIV serostatus, may cause an increased potential for HIV transmission. Diagnosis of STD among persons with HIV was determined through a computerized match of the HIV and STD case registries. Data from STD registry included persons reported with gonorrhea, chlamydia, non-gonococcal urethritis, or infectious syphilis. The number of STD cases among PLWH continues to rise from 823 cases in 2009 to 1,175 cases in 2013 (Figure 15.1). The increase coincided with the upward trend shown in early syphilis (Figure 7.4) and in male gonorrhea (Figure 7.3) reported from 2009 through 2013 among MSM diagnosed with HIV. All STD occurred after the HIV diagnosis, indicating condomless sex among persons with known HIV infection.

Figure 15.1 Number of STD diagnoses among persons living with HIV by year of STD diagnosis, 2009-2013, San Francisco

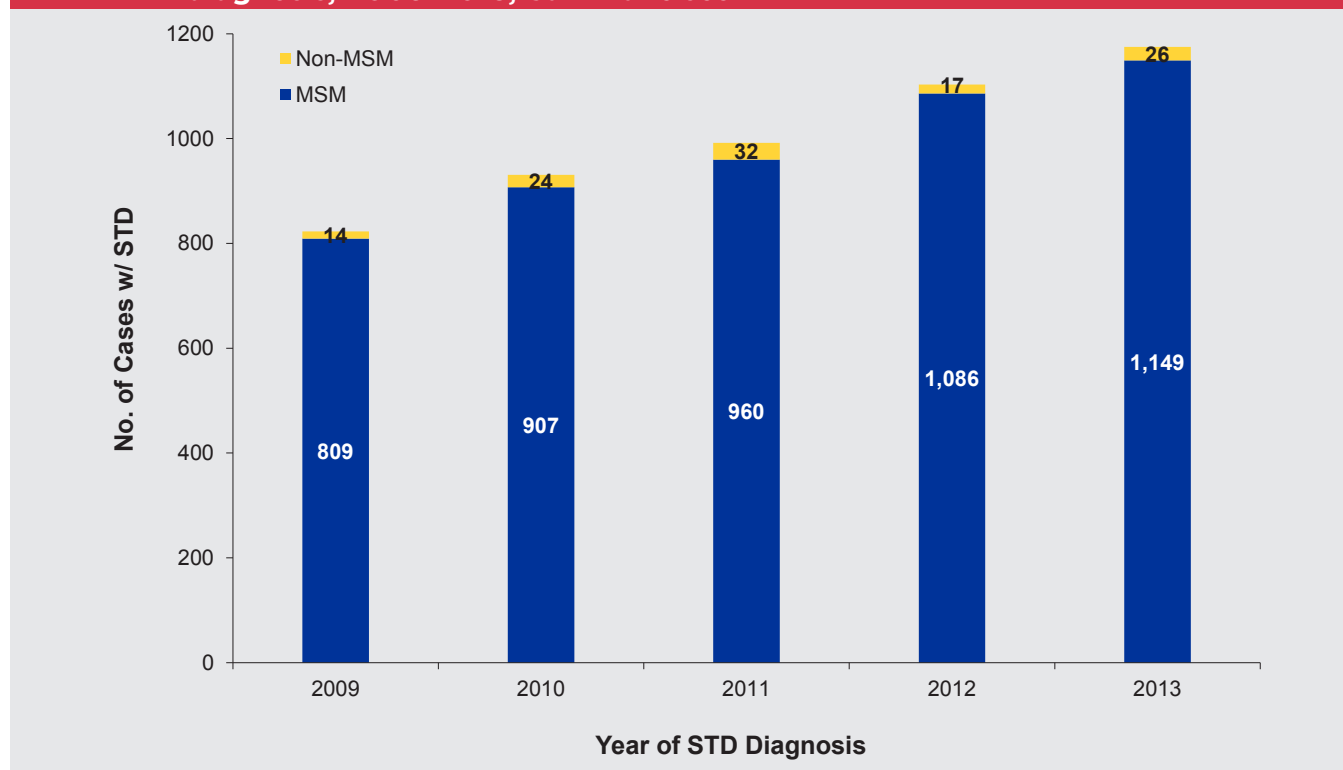


Table 15.1 shows the demographic characteristics of HIV cases diagnosed with an STD from 2009 through 2013. The majority of cases were male, white, and aged 40-49 years at time of STD diagnosis. Gender and race/ethnicity distributions were similar across five years. The proportion of HIV cases diagnosed with STD in the 50-59 age group increased steadily between 2010 and 2013, while the proportion of HIV cases diagnosed with STD aged 30-49 decreased during the same period of time.

Table 15.1 Demographic characteristics of persons co-infected with HIV and STD, 2009-2013, San Francisco

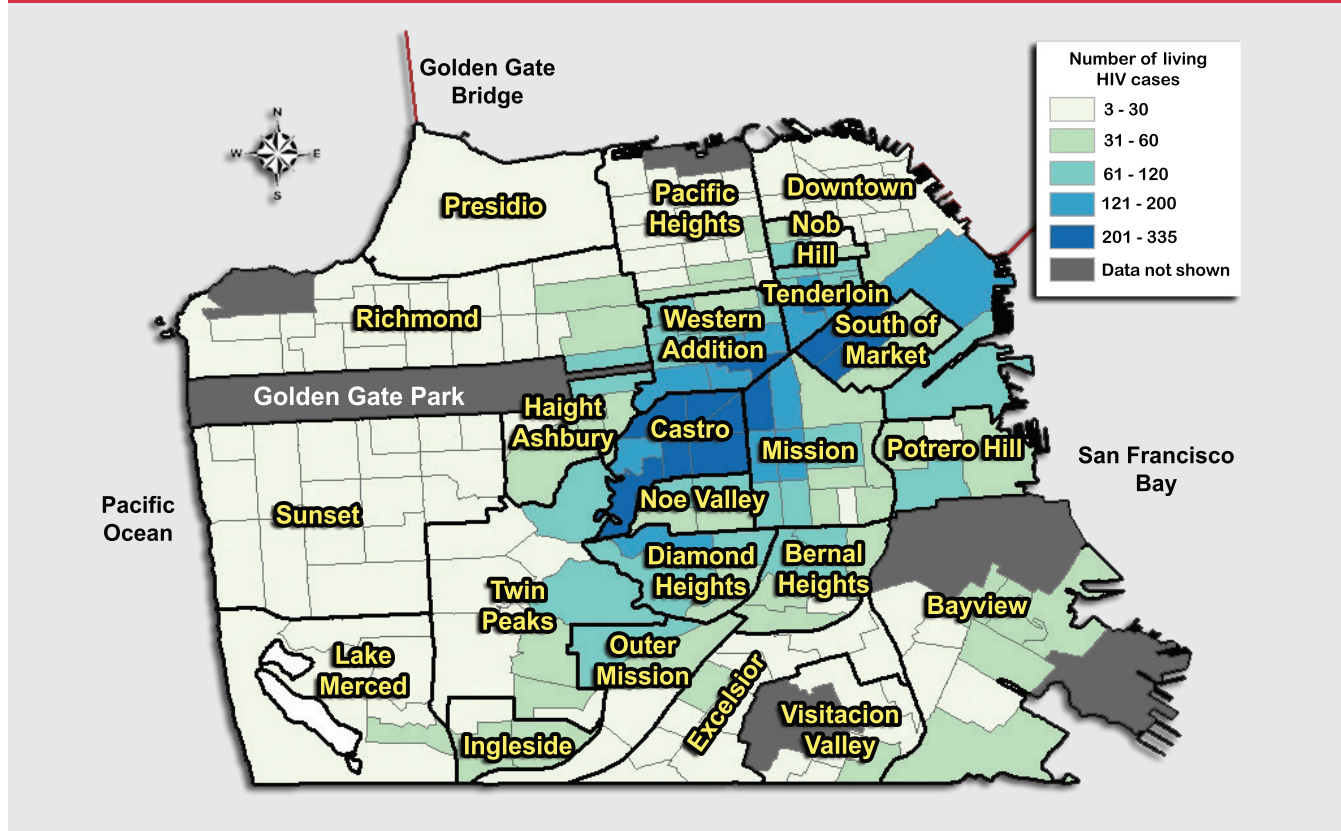
	Year of STD diagnosis									
	2009		2010		2011		2012		2013	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)	Number	(%)
Gender										
Male	799	(97)	907	(97)	960	(97)	1,083	(98)	1,147	(98)
Female	8	(1)	8	(1)	11	(1)	8	(1)	6	(1)
Transfemale ¹	16	(2)	16	(2)	21	(2)	12	(1)	22	(2)
Race/Ethnicity										
White	487	(59)	590	(63)	598	(60)	671	(61)	690	(59)
African American	80	(10)	76	(8)	89	(9)	86	(8)	104	(9)
Latino	179	(22)	199	(21)	215	(22)	257	(23)	269	(23)
Asian/Pacific Islander	53	(6)	48	(5)	60	(6)	68	(6)	80	(7)
Other/Unknown	24	(3)	18	(2)	30	(3)	21	(2)	32	(3)
Age at STD Diagnosis (years)										
15 - 29	97	(12)	101	(11)	110	(11)	132	(12)	141	(12)
30 - 39	267	(32)	252	(27)	245	(25)	265	(24)	291	(25)
40 - 49	321	(39)	415	(45)	415	(42)	461	(42)	471	(40)
50 - 59	113	(14)	128	(14)	172	(17)	197	(18)	230	(20)
60 +	25	(3)	35	(4)	50	(5)	48	(4)	42	(4)
Total	823		931		992		1,103		1,175	

¹ Transfemale data include all transgender cases. Transmale data are not released separately due to potential small population size. See Technical notes "Transgender Status."

16 Geographic Distribution of HIV

At the end of 2014, there were 11,547 living San Francisco cases with a last known address in San Francisco. Twenty-eight percent of persons living with HIV who resided in San Francisco at time of diagnosis now reside outside of the city. Map 16.1 illustrates the distribution of living HIV cases by census tract and neighborhood using the most recent address information. We recently updated addresses for those lost-to-follow up using public records information in the Lexis-Nexis database. This enhanced address collection method identified many living cases residing outside of San Francisco and may explain decreases in the number of cases observed across several census tracts in the city. This drop may also be a result of rising housing costs that have severely affected the city in recent years.

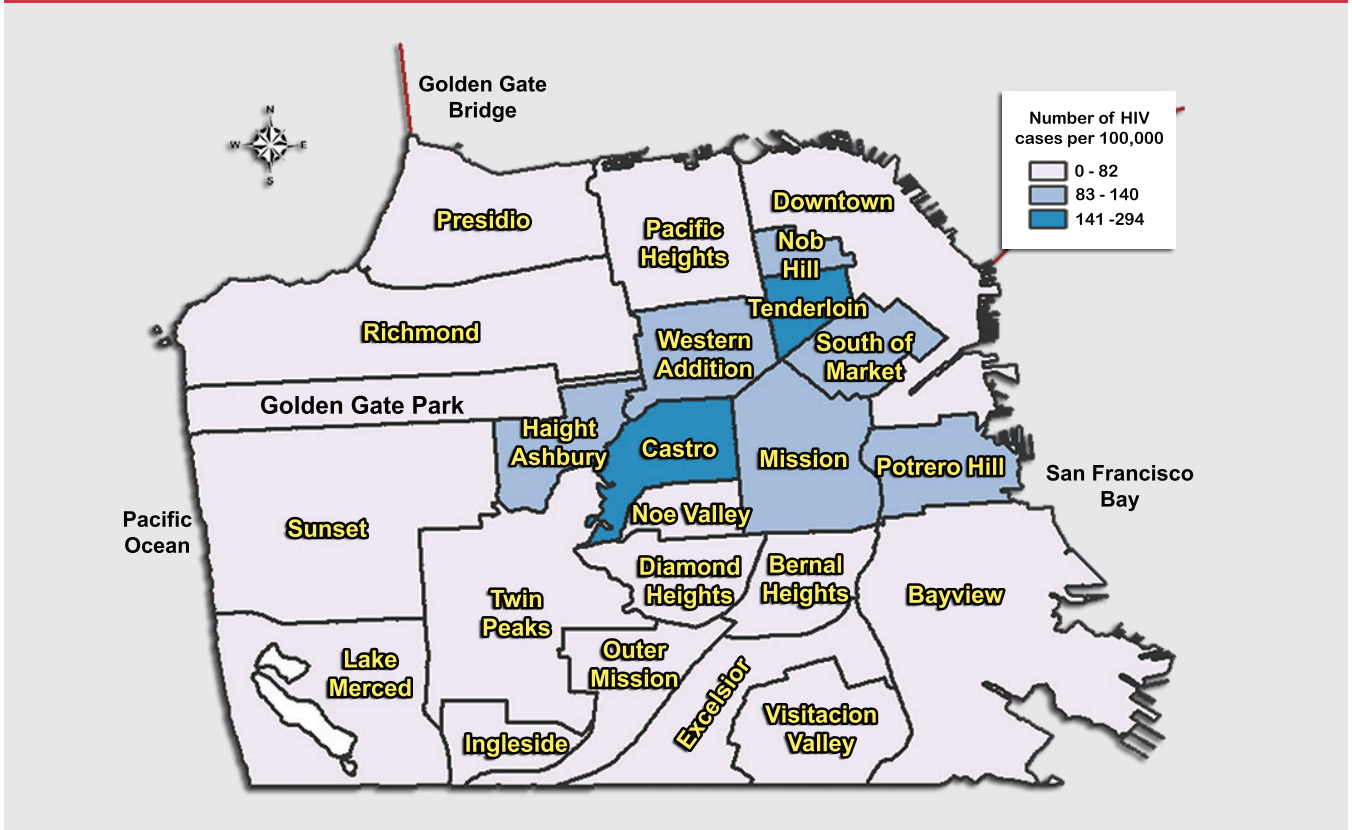
Map 16.1 Geographic distribution of persons living with HIV, December 2014, San Francisco



* Living homeless HIV cases (N=496) and living HIV cases with an unknown or invalid address (N=350) are not displayed on this map. Data are not shown for areas with population size less than 500.

During 2013-2014, the overall rate of newly diagnosed HIV cases in San Francisco was 83 per 100,000. Map 16.2 shows certain neighborhoods account for higher diagnosis rates while the majority of neighborhoods fall below the 2013-2014 overall rate of HIV diagnosis in San Francisco. The Castro had the highest rate of newly diagnosed cases in 2013-2014 with 294 per 100,000 persons, which was more than three times the overall average in the city, followed by the Tenderloin (189 per 100,000) and Potrero Hill (132 per 100,000).

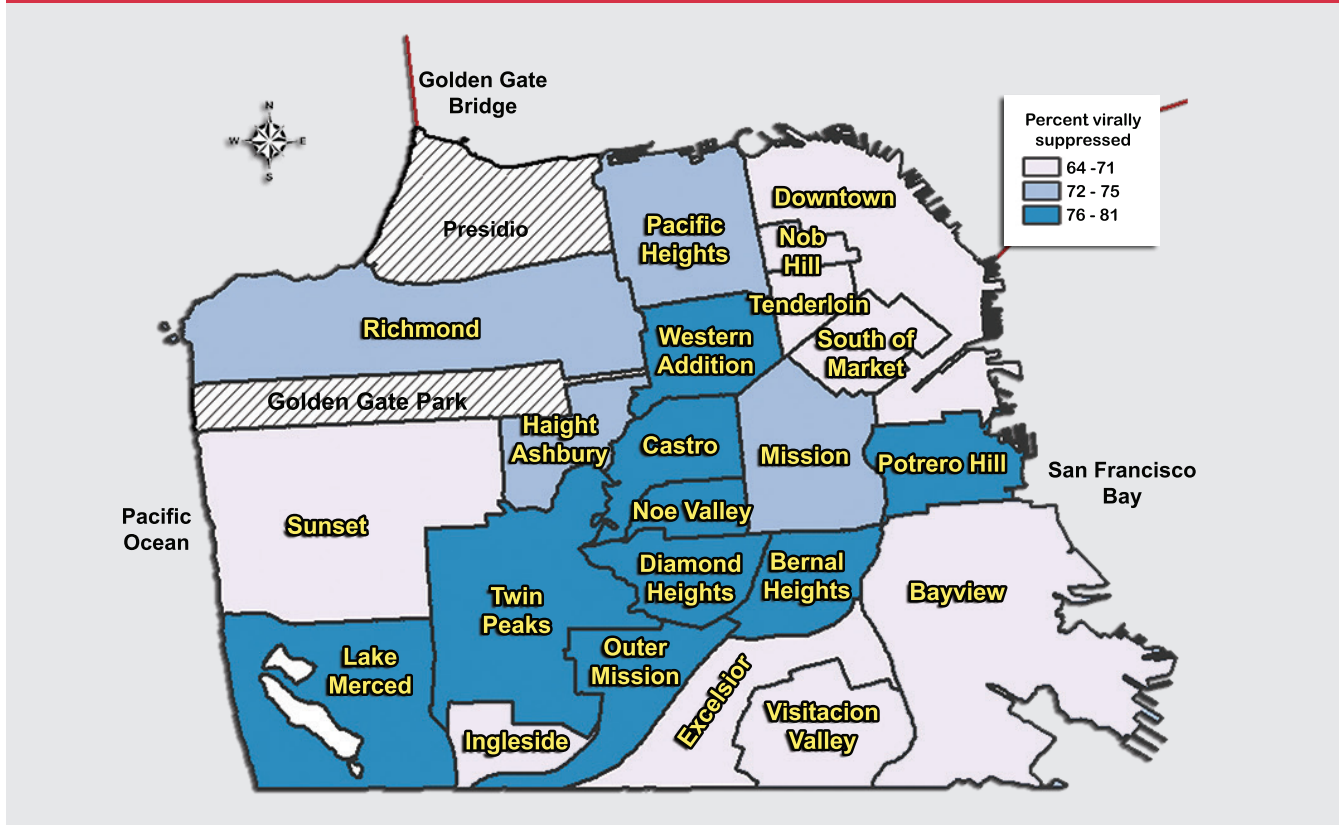
Map 16.2 Geographic distribution of rates of HIV diagnosis per 100,000 population for persons diagnosed in 2013-2014, San Francisco





We examined living HIV cases aged 13 years and older as of December 31, 2013 who were diagnosed through December 31, 2012 and who achieved viral suppression in 2013. Overall, among those still residing in San Francisco, 72% achieved viral suppression in 2013. The neighborhoods with viral suppression percentages below the average include the Tenderloin (64%), Sunset (67%), Excelsior (67%), South of Market (69%), Downtown (69%), Nob Hill, Ingleside, and Bayview (each with 70%), and Visitacion Valley (71%). Thirty-one percent of homeless persons were virally suppressed by 2013 (not displayed).

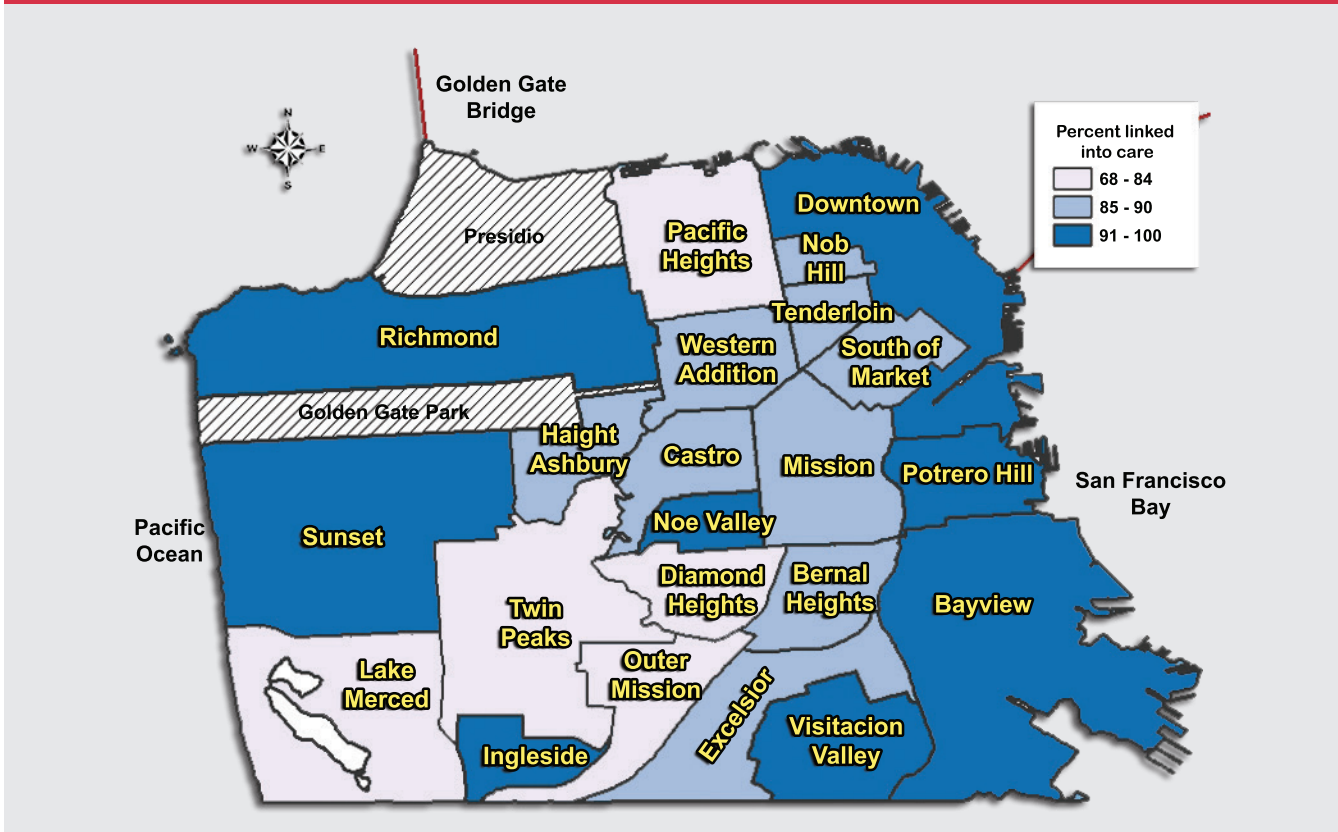
Map 16.3 Geographic distribution of proportion of persons living with HIV diagnosed through 2012 who achieved viral suppression in 2013, San Francisco



* Living homeless HIV cases and living HIV cases with an unknown or invalid address are not displayed on this map (N=127, 31% and N=174, 53% achieved viral suppression, respectively).

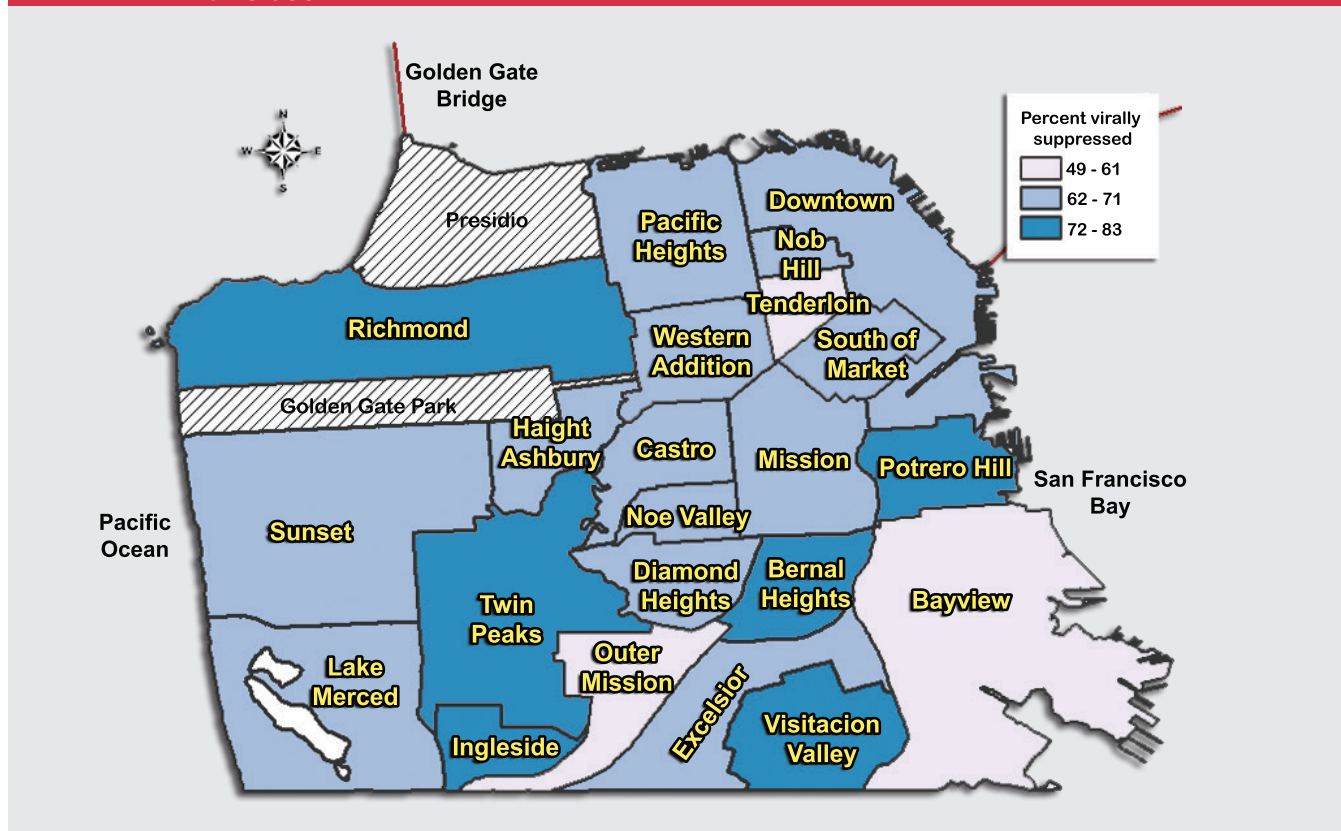
Eighty-five percent of those diagnosed from 2010 to 2013 were linked into care within three months of their HIV diagnosis. Neighborhoods such as Diamond Heights (83%), Pacific Heights (83%), Outer Mission (82%), Twin Peaks (79%), and Lake Merced (68%) had below average rates of linkage to care (Map 16.4). Eight neighborhoods had 91% or more of their newly diagnosed cases linked into care within three months, including the Ingleside neighborhood, which exhibited a 100% linkage rate.

Map 16.4 Geographic distribution of proportion of persons diagnosed with HIV infection in 2010-2013 who were linked to care within 3 months of diagnosis, San Francisco



* Homeless HIV cases and HIV cases with an unknown or invalid address are not displayed on this map (N=130, 77% and N=87, 71% were linked into care within 3 months of diagnosis, respectively).

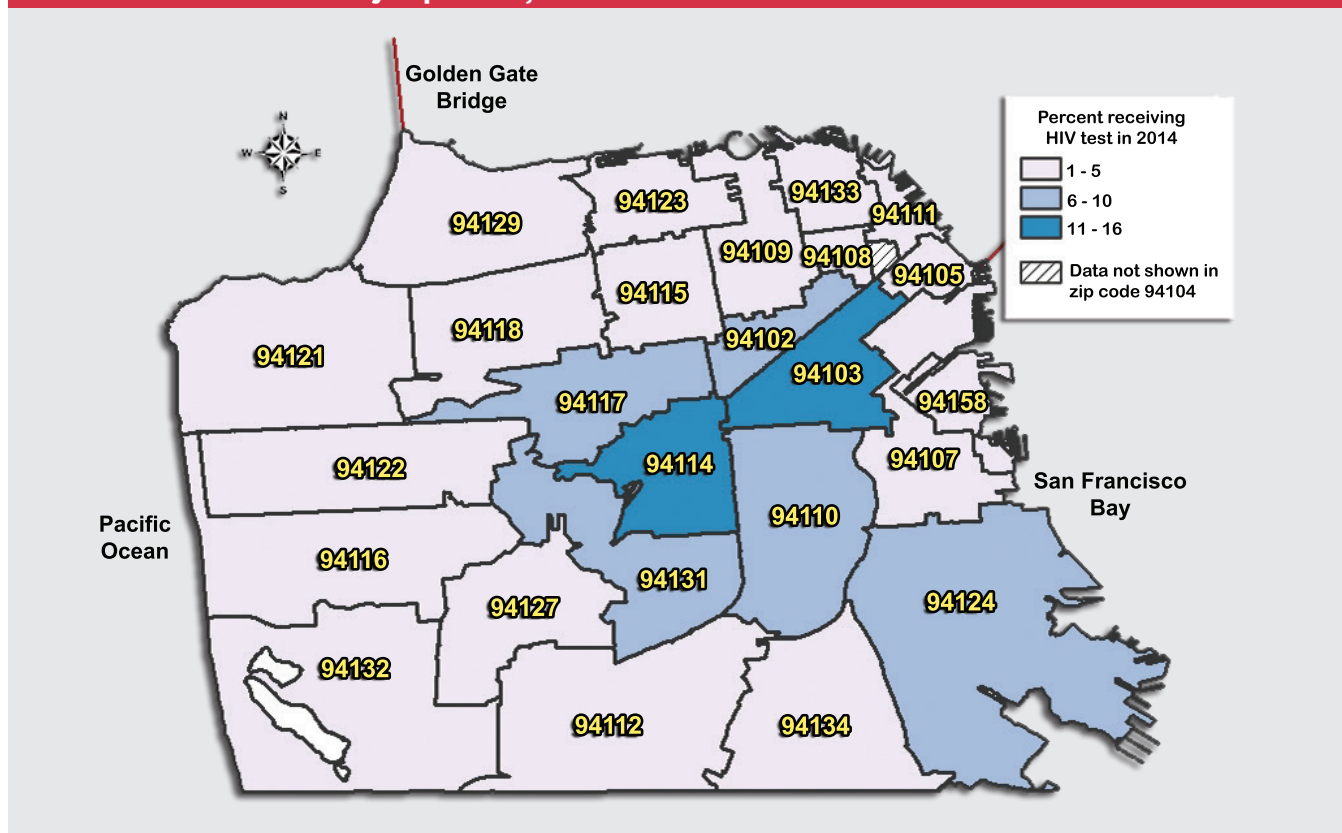
Map 16.5 Geographic distribution of proportion of persons diagnosed with HIV infection in 2010-2013 who achieved viral suppression within 12 months of diagnosis, San Francisco



* Homeless HIV cases and HIV cases with an unknown or invalid address are not displayed on this map (N=74, 44% and N=48, 39% achieved viral suppression within 12 months of diagnosis, respectively).

Map 16.6 shows the proportion of males aged 13 years and older who received an HIV test in 2014. We used HIV testing data from the community and medical settings to determine the number of males tested at age 13 and older by the client's zip code. The 2010 Census data at the zip code level for males 13 and older provided the denominator to estimate the testing coverage among the male population. The 94114 and 94103 zip codes had the highest testing rates in 2014 with 16% and 12%, respectively. Repeat testers in the community setting could not be distinguished so these may be overestimates of the testing efforts.

Map 16.6 Proportion of San Francisco male residents aged 13 years and older who received an HIV test by zip code, 2014

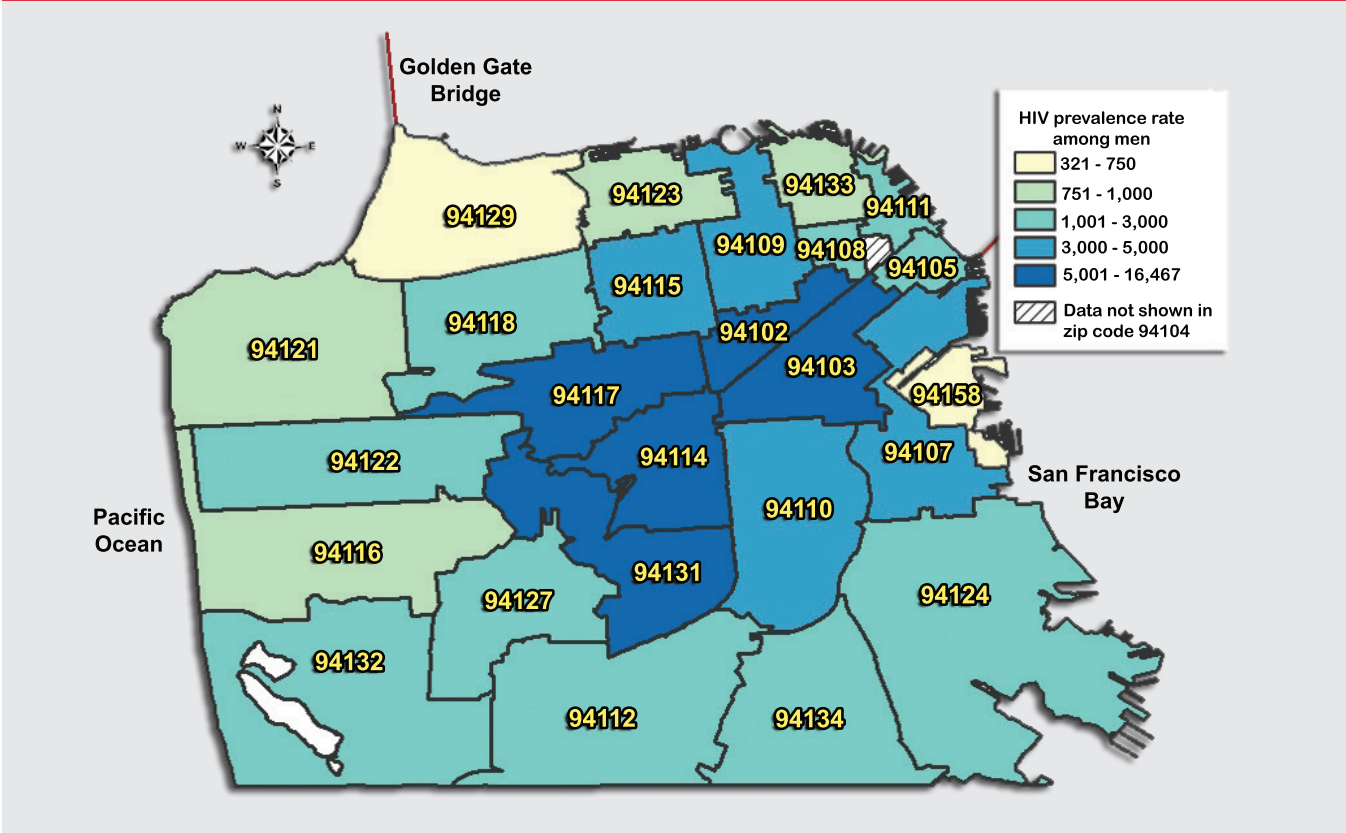


* Data for zip code 94104 are suppressed because the total population in this zip code is less than 500.



Map 16.7 shows the male HIV prevalence rates in 2014 by zip code with high concentrations in the central parts of the city. The zip code 94114 had the highest HIV prevalence of 16,467 males per 100,000, a rate twice as high as the second highest zip code, 94102, with 7,501 per 100,000. Although the 94102 area had the second highest HIV prevalence rate in the city, HIV testing was much stronger for residents in the 94103 area. Comparing the testing coverage (Map 16.6) and the prevalence by zip codes allows us to use these maps as a tool to identify areas that may need to increase testing efforts.

Map 16.7 HIV prevalence rates¹ per 100,000 population among men aged 13 years and older by zip code, 2014, San Francisco



* Data for zip code 94104 are suppressed because the total population in this zip code is less than 500.
 1 See Technical Notes “HIV Prevalence Rates by Zip Code.”



Technical Notes

HIV Surveillance Methods

San Francisco HIV cases are reported primarily through active surveillance activities in which public health personnel review laboratory and pathology reports and medical records to identify cases and complete the case report forms. HIV cases are also identified through passive reporting, review of death certificates, validation studies using secondary data sources such as hospital billing records or other disease registries, and reports from other health departments. The surveillance system is evaluated regularly for completeness, timeliness, and accuracy.

Completeness of HIV case reporting in San Francisco was evaluated for cases diagnosed in 2013 using a reporting delay model¹ as recommended by the Centers for Disease Control and Prevention HIV Incidence and Case Surveillance Branch. Case report data for 2013 diagnoses did not meet the statistical assumptions of the capture-recapture model², hence this alternate method was used. In brief, the reporting delay statistical approach estimates the total number of diagnoses that occurred in a particular year by modeling reporting delay patterns observed among cases in the previous five years. The completeness of case reporting of HIV diagnoses in 2013 was found to be 94% (evaluated on data reported through December 26, 2014). In terms of timeliness, 89% of expected cases were reported within six months of the HIV diagnosis date.

The HIV data in this report include persons who were residents of San Francisco at the time they were diagnosed with HIV (all stages of infection) including San Francisco residents who were diagnosed in other jurisdictions. San Francisco started name-based case reporting for HIV cases in April 2006, as mandated by California law. The confidential name-based HIV reporting system in San Francisco is considered mature (more than six years have elapsed to allow for stabilization of data collection), and only cases reported confidentially by name are included in this report.

Stage of Disease at Diagnosis of HIV Infection

In 2014, the United States surveillance case definition³ for HIV infection among adults and adolescents aged ≥ 13 years and children age < 13 years was revised to expand the HIV infection classification staging system to five stages of HIV infection as described below. With the new case definition, stages 1-3 are classified on the basis of CD4 T-lymphocyte count and age on date of CD4 T-lymphocyte test, unless persons have had a stage-3-defining opportunistic illness. The CD4 T-lymphocyte percentage of total lymphocytes is only used when the corresponding CD4 T-lymphocyte count is unknown.

- HIV infection stage 0: This stage is early HIV infection and is established by a sequence of discordant HIV test results indicative of early HIV infection in which a negative or indeterminate result was within 180 days of a positive result. This sequence of discordant results may be based on testing history (previous

1 M'ikanatha NM, & Iskander J (Eds.). (2014). Concepts and methods in infectious disease surveillance. Oxford, UK: Wiley-Blackwell.

2 Hall HI, Song R, Gerstel JE. Assessing the completeness of reporting human immunodeficiency virus diagnoses in 2002-2003: Capture recapture methods. American Journal of Epidemiology. 2006; 164:391-397.

3 Selik RE, Mokotoff ED, Branson B, Owen SM, Whitmore S, Hall HI. Revised Surveillance Case Definitions for HIV Infection -- United States, 2014. MMWR 2014;63(No. RR-3):1-10.

documented negative/indeterminate results), or by a HIV testing algorithm. If the criteria for stage 0 are met, the stage is 0 (supersedes other stages) regardless of criteria for other stages (CD4 T-lymphocyte test results and opportunistic illness diagnoses).

- **HIV infection stage 1-3:** HIV infection stage 1-3 is based on age-specific CD4 T-lymphocyte count or CD4 T-lymphocyte percentage of total lymphocytes.

	Age on date of CD4 T-lymphocyte test					
	<1 year		1-5 years		≥6 years	
Stage	Cells/ μ L	%	Cells/ μ L	%	Cells/ μ L	%
1	≥1,500	≥34	≥1,000	≥30	≥500	≥26
2	750-1,499	26-33	500-999	22-29	200-499	14-25
3	<750	<26	<500	<22	<200	<14

Data on persons with HIV infection, stage 3 (AIDS) include persons whose infection has ever been classified as stage 3 (AIDS).

- **HIV infection, stage unknown:** No information available on CD4 count or percentage and no reported information on AIDS-defining conditions (every effort is made to collect CD4 counts or percentages at time of diagnosis).

Date of Initial HIV Diagnosis

The date of initial HIV diagnosis for newly diagnosed cases takes into account a number of dates and is determined based on the earliest of any of the following: positive HIV antibody test, positive HIV antigen/antibody combination test, viral load or CD4 test, initiation of ART, physician-documented diagnosis in absence of sufficient laboratory evidence, or patient self-report of a positive HIV test.

HIV Case Rates and HIV Mortality Rates

Annual race-specific rates are calculated as the number of cases diagnosed for a particular racial/ethnic group during each year divided by the population for that race/ethnicity, multiplied by 100,000. Annual race-specific mortality rates are calculated as the number of deaths (including all causes of death) for a particular racial/ethnic group during each year divided by the population for that race/ethnicity, multiplied by 100,000. These rates are calculated separately for males and females. The annual populations are not available for transgender persons. Population denominators by year are obtained from the State of California, Department of Finance, Demographic Research Unit, in two sources: the California Intercensal Population Estimates⁴ and California Population Projections⁵ (<http://www.dof.ca.gov/research/demographic/>).

⁴ State of California, Department of Finance, Race/Hispanics Population with Age and Gender Detail, 2000–2010. Sacramento, California, September 2012.

⁵ State of California, Department of Finance, Report P-3: State and County Population Projections by Race/Ethnicity, Detailed Age, and Gender, 2010-2060. Sacramento, California, December 2014.



Transgender Status

In September 1996, SFPDPH began noting transgender status when this information is contained in the medical record. Transgender individuals are listed as either male-to-female or female-to-male. The majority of transgender HIV cases are male-to-female (transfemale). Due to the small number of transmale cases and potential small population size, their data are included with transfemale cases to protect confidentiality. Please note that there are several limitations of our transgender data. We believe that our report likely underestimated the number of transgender persons affected by HIV because data collected for HIV reporting are derived from the medical record. Consequently, information that may be discussed with the health care provider but not recorded in the medical record is generally not available for the purposes of HIV case reporting.

Grouping of Data Categories

Data in certain racial/ethnic or risk categories are grouped together when the number of persons with HIV in that particular group is small and/or does not present significant trends. For example, “Other” in the Race/Ethnicity breakdown represents Asian/Pacific Islander, Native American, and people of mixed race. Whenever possible, this report presents the expanded racial/ethnic categories rather than aggregating into the group “Other.” The label “Other” in the Transmission Category breakdown may include transfusion recipients, hemophiliacs, heterosexuals, persons acquiring HIV perinatally, or persons of unidentified risk.

Medical Monitoring Project

The Medical Monitoring Project (MMP) is an ongoing CDC-funded national HIV/AIDS supplemental surveillance project. San Francisco is one of 23 project areas currently conducting MMP. Multi-stage probability-proportional-to-size sampling is used to recruit HIV-infected adults receiving care at health facilities in San Francisco. Information about care utilization, clinical outcomes, resource needs, and HIV risk behaviors is collected through patient interviews and medical chart review. Interview data from 419 participants from the 2009-2010 San Francisco MMP cycles was used in this report.

Out-of-Jurisdiction Cases

Routine HIV case surveillance assigns case ownership by residence at diagnosis. HIV cases residing in San Francisco at time of diagnosis are considered San Francisco cases. HIV cases currently receiving care in San Francisco but who were residing elsewhere at time of diagnosis are considered out-of-jurisdiction (OOJ) cases.

HIV Infection Stage 3 (AIDS) Survival

Survival was calculated as the time between the date of initial AIDS diagnosis and the date of death. This analysis included persons who met the case definition for HIV infection stage 3 (AIDS). The follow-up



information for cases was obtained through retrospective and prospective reviews of laboratory records and medical charts. Dates of death were obtained through review of local death certificates, reports from the State Office of AIDS, and matches with the National Death Index (NDI) and Social Security death files. The most recent NDI and Social Security death file matches included deaths that occurred through December 31, 2012. Persons not known to have died were censored on the date of their last known follow-up or on December 31, 2012, whichever was more recent.

Causes of Death

Cause of death information on death certificates is summarized and coded using the International Classification of Diseases, 10th revision (ICD-10) for deaths that occurred since 1999. A single cause of death is identified from all reported conditions that began the chain of events that resulted in death; this is known as the underlying cause of death. All conditions (including the underlying cause of death) listed on the death certificate are known as the multiple causes of death (<http://www.cdc.gov/nchs/icd/icd10.htm>). We obtained the ICD codes from annual matches to the National Death Index from 1999 to 2012. Deaths classified as B20-B24 and all AIDS-related opportunistic infections listed on the death certificate were included in the HIV-related classification.


Estimate of ART Use

Information on ART use is obtained from medical chart review. Using surveillance data to estimate use of ART will most likely result in an underestimate of ART use. The underestimate occurs because use of ART is collected at the time a person with HIV infection is reported (which is often close to the time that they are diagnosed), a time when many persons have not yet begun treatment. The SFDPH collects follow-up information from selected health care facilities. For persons who receive care at these sites, treatment data are likely to be more complete because it allows us to capture the use of ART after diagnosis and the date the case report was completed. Follow-up information is not available for persons who have moved away from San Francisco or who receive ongoing care outside of the city. Surveillance data provide information that indicates when a person was prescribed ART but does not provide information on adherence. Persons whose medical records indicate that they were prescribed ART are assumed to have received it.

The lower level estimate of ART use (Table 3.6) was calculated among all cases living with HIV. The upper level estimate (Table 3.6, Figure 3.4) was calculated among cases who had follow-up information within the last two years and whose chart review was completed between January 2013 and April 2015.

Female Presumed Heterosexual Contact

In 2010 the CDC HIV Incidence Case Surveillance Branch accepted a definition for female presumed heterosexual contact to reclassify the transmission category for adult female cases who would otherwise be reported with no identified risk. The definition for female presumed heterosexual contact was first proposed



by the Council of State and Territorial Epidemiologists⁶. Like other transmission categories, the definition uses patient history variables collected on the HIV adult case report form. The female presumed heterosexual contact definition includes the following components: (1) the patient's sex at birth is female, (2) the patient had sex with male(s), (3) the patient had no indication of injection drug use, and (4) there is no other known information that would suggest a likely alternative source of HIV infection.

HIV Prevalence Rates by Zip Code

The HIV prevalence rate among men is calculated using the number of living male HIV cases by their most current zip code divided by the male population aged 13 and older, multiplied by 100,000. Updated current address information and their corresponding zip codes are collected as part of routine surveillance including medical chart reviews and laboratory reports for all San Francisco cases. Population data used in the denominator is from the U.S. Census Bureau 2010 for Zip Code Tabulation Areas (ZCTAs). Rates were suppressed for a zip code if the case count was less than five or the population size was less than 500.

⁶ Council of State and Territorial Epidemiologists Positions statements 2007: Heterosexual HIV transmission classification. Available from <http://cymcdn.com/sites/www.cste.org/resource/resmgr/PS/07-ID-09.pdf>



Data Tables

Figure 1.1 HIV infection stage 3 (AIDS) cases, deaths, and prevalence, 1980-2014, San Francisco 2

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
HIV infection stage 3 cases	2	26	99	274	557	860	1237	1632	1764	2160
HIV infection stage 3 deaths	0	8	32	111	273	534	807	878	1040	1279
Persons living with HIV infection stage 3	2	20	87	250	534	860	1290	2044	2768	3649

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
HIV infection stage 3 cases	2046	2287	2332	2068	1784	1558	1077	804	693	579
HIV infection stage 3 deaths	1364	1512	1641	1603	1601	1485	993	424	402	353
Persons living with HIV infection stage 3	4331	5106	5797	6262	6445	6518	6602	6982	7273	7499

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
HIV infection stage 3 cases	557	515	494	561	485	481	449	446	434	324
HIV infection stage 3 deaths	350	324	323	303	310	312	289	271	229	211
Persons living with HIV infection stage 3	7706	7897	8068	8326	8501	8670	8830	9005	9210	9323

Year	2010	2011	2012	2013	2014
HIV infection stage 3 cases	299	250	241	185	128
HIV infection stage 3 deaths	195	188	183	154	139
Persons living with HIV infection stage 3	9427	9489	9547	9578	9567

Figure 2.1 Number of persons diagnosed with HIV infection by race/ethnicity, 2006-2014, San Francisco 11

	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	278	269	257	241	209	213	212	169	136
African American	75	78	83	69	61	67	44	49	33
Latino	113	105	121	100	108	81	106	92	82
Other	53	75	61	57	61	52	67	61	51

Figure 2.2 Annual rates of men diagnosed with HIV infection per 100,000 population by race/ethnicity, 2006-2014, San Francisco 12

	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	143	139	132	128	108	110	113	87	69
African American	235	222	237	223	195	204	151	168	127
Latino	173	145	177	132	149	103	142	122	107
Other	36	48	38	39	37	33	45	37	33

Figure 2.3 Annual rates of women diagnosed with HIV infection per 100,000 population by race/ethnicity, 2006-2014, San Francisco 12

	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	11	9	9	4	6	9	2	4	4
African American	47	60	73	38	44	61	26	31	9
Latina	6	15	7	14	12	17	15	8	6
Other	3	4	3	1	4	2	2	2	1

Figure 2.4 Number of men diagnosed with HIV infection by transmission category, 2006-2014, San Francisco 13

	2006	2007	2008	2009	2010	2011	2012	2013	2014
MSM	357	331	365	318	274	291	329	276	221
PWID	19	18	17	16	22	13	11	12	10
MSM-PWID	77	82	58	69	61	45	44	36	34
Other	16	30	24	21	35	14	19	15	17

Figure 2.5 Number of women diagnosed with HIV infection by transmission category, 2006-2014, San Francisco 13

	2006	2007	2008	2009	2010	2011	2012	2013	2014
PWID	20	15	16	9	13	15	3	10	9
Heterosexual	12	23	19	14	17	18	17	9	2
Other	4	5	6	2	4	8	2	2	3



Figure 5.2 Mortality rates among men diagnosed with HIV infection per 100,000 population by race/ethnicity, 2002-2012, San Francisco 37

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
White	121	123	121	117	111	109	89	89	88	75	84
African American	246	245	254	333	223	282	216	199	172	212	178
Latino	108	75	90	74	62	75	59	56	50	56	55
Other	12	15	20	18	24	16	10	12	14	15	9

Figure 5.3 Mortality rates among women diagnosed with HIV infection per 100,000 population by race/ethnicity, 2002-2012, San Francisco 37

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
White	5	6	4	6	11	8	8	5	2	2	5
African American	85	73	70	82	68	64	75	51	58	58	47
Latino	10	7	10	10	22	5	2	2	2	4	2
Other	2	2	2	2	2	2	1	2	6	1	1

Figure 6.1 Trends in health insurance status at time of HIV diagnosis by race/ethnicity, 2010-2014, San Francisco 40

Whites	2010	2011	2012	2013	2014	African American	2010	2011	2012	2013	2014
Public	27%	23%	14%	16%	18%	Public	49%	46%	43%	47%	55%
Private	46%	41%	45%	47%	47%	Private	23%	19%	25%	18%	15%
None	13%	22%	27%	27%	26%	None	16%	25%	18%	27%	18%
Missing	14%	15%	13%	10%	9%	Missing	11%	9%	14%	8%	12%

Latino	2010	2011	2012	2013	2014	Other	2010	2011	2012	2013	2014
Public	42%	29%	30%	21%	29%	Public	26%	19%	22%	28%	20%
Private	20%	31%	25%	38%	29%	Private	28%	44%	40%	30%	35%
None	28%	24%	36%	36%	30%	None	28%	23%	30%	28%	27%
Missing	10%	16%	8%	5%	11%	Missing	18%	13%	7%	15%	18%

Figure 7.1 Number of MSM diagnosed with HIV infection by race/ethnicity, 2006-2014, San Francisco. 43

	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	248	242	231	221	184	191	197	155	119
African American	48	42	45	46	32	40	32	34	25
Latino	103	90	107	85	83	68	88	82	69
Other	47	62	56	53	49	46	60	52	47

Figure 7.3 Male rectal gonorrhea and male gonococcal proctitis among MSM by HIV serostatus, 2005-2014, San Francisco. 45

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Male Rectal Gonorrhea (HIV+)	187	227	227	195	167	167	219	291	324	285
Male Rectal Gonorrhea (HIV-)	205	252	193	199	214	246	332	444	432	499
Male Gonococcal Proctitis (HIV+)	28	25	26	18	11	5	11	10	13	16
Male Gonococcal Proctitis (HIV-)	23	17	7	17	16	13	13	15	20	22

Figure 7.4 Early syphilis among MSM by HIV serostatus, 2005-2014, San Francisco 46

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Primary (HIV+)	37	40	29	51	52	75	66	93	91	80
Secondary (HIV+)	81	85	74	124	110	139	143	185	158	149
Early Latent (HIV+)	104	105	81	139	141	173	195	260	289	300
Primary (HIV-)	29	33	29	52	51	59	65	74	97	83
Secondary (HIV-)	58	51	44	63	72	67	58	94	86	97
Early Latent (HIV-)	52	39	46	48	51	65	60	67	113	137



Figure 8.1 Number of non-MSM PWID diagnosed with HIV infection by race/ethnicity, 2006-2014, San Francisco. 49

	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	17	16	17	10	15	12	3	10	12
African American	15	12	12	9	16	11	5	6	2
Latino	4	2	2	4	1	5	3	3	4
Other	3	3	2	2	3	0	3	3	1

Figure 8.2 Number of non-MSM PWID diagnosed with HIV infection by age group at HIV diagnosis, 2006-2014, San Francisco 50

Age in years	2006	2007	2008	2009	2010	2011	2012	2013	2014
18-24	1	1	1	2	3	2	0	2	0
25-29	4	5	7	2	1	3	0	1	2
30-39	6	10	7	3	9	1	1	2	5
40-49	14	10	10	6	10	10	10	10	5
50+	14	7	8	12	12	12	3	7	7

Figure 9.1 Number of heterosexuals diagnosed with HIV infection by race/ethnicity, 2006-2014, San Francisco 51

	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	8	7	5	4	6	9	7	2	2
African American	9	19	20	10	10	9	6	6	2
Latino	5	9	8	8	14	7	10	5	3
Other	2	7	3	1	5	1	1	5	1

Figure 10.1 Number of women diagnosed with HIV infection by race/ethnicity, 2006-2014, San Francisco. 53

	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	17	14	15	7	10	14	4	6	7
African American	12	15	18	9	10	14	6	7	2
Latina	3	8	4	8	7	10	9	5	4
Other	4	6	4	1	7	3	3	3	1



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