HIV Epidemiology Annual Report
County of Santa Clara
2018

County of Santa Clara
Public Health Department
Infectious Disease & Response Branch
December, 2019

TABLE OF CONTENTS

EXECUTIVE SUMMARY

As of December 31, 2018, a total number of 6,524 individuals diagnosed with HIV had been reported to the County of Santa Clara, since the first case was reported in 1983. Of these, 4,886 (75%) were diagnosed with AIDS. Among all individuals diagnosed with HIV, 2,605 (40%) persons have died, of whom the vast majority (2,537, 97%) had a diagnosis of AIDS. A total of 3,419 county residents were living with HIV in 2018, including 2,699 (79%) first reported by the county and 720 (21%) out of jurisdiction cases.

In 2018, 167 individuals were newly diagnosed with HIV infection in the county. The majority of them were male (89%), between ages 30 and 49 (54%), Latinx (51%), and men who have sex with men (MSM)[i] (68%). While the rate of HIV diagnosis among white males has steadily decreased from 2010 (16.3 per 100,000 people) through 2018 (10.8), the rates among males in all other racial/ethnic groups saw increases during the same period, leading to increasingly disparate rates between whites and all populations of color. HIV cases were most frequently diagnosed at outpatient settings (38%) as well as screening, diagnostic, and referral agencies (21%), accounting for more than half of all new diagnoses in 2018.

In 2018, people ages 45 to 64 years had the highest rate of HIV (348.7 per 100,000 people) of any age group, and twice the overall HIV rate (174.7) in the county. The rate among males was more than six times the rate among females (297.1 vs. 46.0). Among ethnic/racial groups, African Americans had the highest rate (817.6), followed by Latinx (264.6), whites (173.5), and Asian/Pacific Islanders (63.0).

In 2018, 88% of individuals newly diagnosed with HIV were linked to care within one month of diagnosis, surpassing the national goal of 85%. By three months, 94% were linked to care. Among all people living with HIV (PLWH) in the County, over three-quarters (78%) were in care[ii], over half (59%) retained in care[iii], and over two-thirds (70%) achieved viral suppression[iv]. In addition, the proportion of new HIV cases who have late diagnoses – onset of AIDS within 3 months from original HIV diagnosis – has decreased by more than half, from 43% in 2010 to 19% in 2017.

Despite the County's outperformance of the national average across the care continuum, disparities remain. For instance, the percentage of late diagnoses was less among whites (23%) than Latinx (31%), Asian/Pacific Islanders (33%), and African Americans (34%).

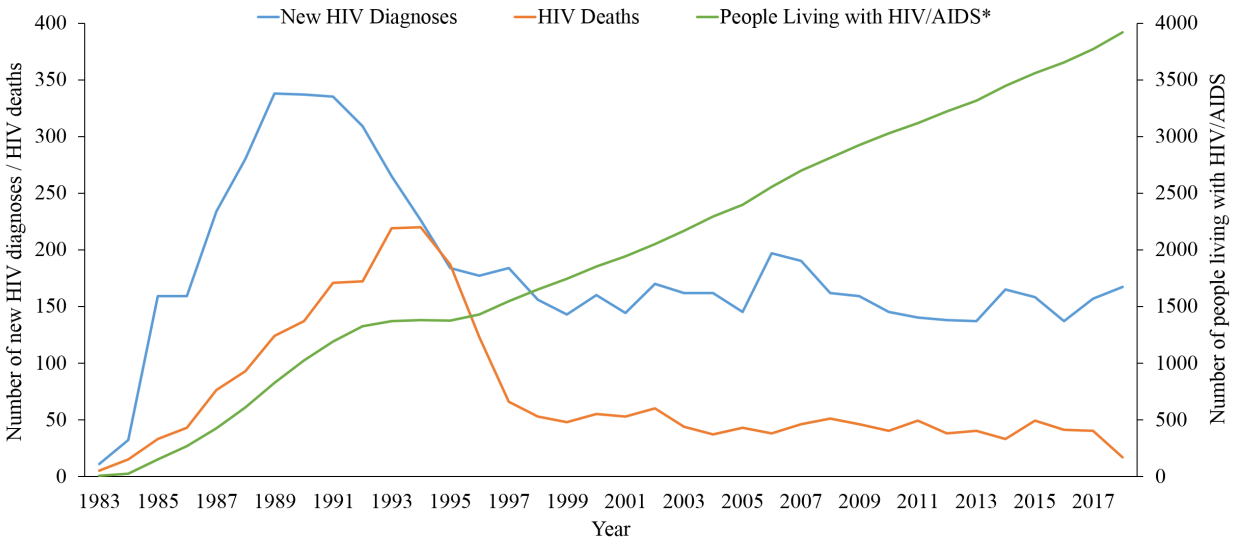
[i] Includes MSM who also use injection drugs
[ii] Diagnosed with HIV through 2017 and alive in 2018, and had at least 1 documented CD4 or viral load test in 2018.
[iii] Diagnosed with HIV through 2017 and alive in 2018, and had at least 2 documented CD4 or viral load test in 2018, at least 3 months apart.
[iv] Diagnosed with HIV through 2017 and alive in 2018, with most recent HIV viral load in 2018 less than 200 copies/ml.

In summary, while the County has seen improvements in survival and care for PLWH and stabilization of the overall epidemic, inequities that negatively affect LGBTQ populations and communities of color not only persist but have worsened. Directing efforts to populations disproportionately impacted remains the highest priority for the county's HIV response.

1. OVERVIEW OF HIV IN THE COUNTY OF SANTA CLARA

The County of Santa Clara has collected data on Human Immunodeficiency Virus (HIV) infection and Acquired Immune Deficiency Syndrome (AIDS) since 1983. The number of new HIV diagnoses in the county peaked from 1989 until 1991, then declined through 2000 (Figure 1). The HIV epidemic has since stabilized. As of December 31, 2018, a total number of 6,524 individuals diagnosed with HIV had been reported to the county. Of these, 4,886 (75%) were diagnosed with AIDS. A cumulative number of 2,605 (40%) persons with HIV infection were known to have died, including 2,537 with a diagnosis of AIDS. In 2018, 3,419 current residents of the county were living with HIV, including 2,699 (79%) first reported with HIV in the county and 720 (21%) out of jurisdiction cases.

Figure 1: Number of new HIV diagnoses, deaths, and people living with HIV*, County of Santa Clara, 1983 – 2018



*Based on residence at the time of HIV diagnosis
Source: County of Santa Clara Public Health Department, eHARS data as of May 1, 2019, and are provisional.

1.1 New Diagnoses of HIV Infection

Diagnoses of HIV Infection in 2018

In 2018, 167 individuals were reported as newly diagnosed with HIV infection in the County of Santa Clara. The majority of these individuals were male (89%), more than half (65%) were between ages 25 and 44 years, 51% of Latinx ethnicity, and over two-thirds (68%) were MSM, including MSM who also use injection drugs (MSM & IDU) (Table 1).

- *Age*: The proportion of newly reported HIV cases who were adolescents and young adults, ages 13 to 24 years, was lower in the county (15%) compared to both California (20%) and

the United States (21%). The highest proportion of new diagnoses in the county was among residents ages 25 to 44 years, who accounted for (65%) of all new diagnoses, surpassing the same age group statewide (57%) and nationally (54%). Only two (1%) new diagnoses were made among individuals ages 65 and older in the county in 2018.

- *Gender*: Of all new cases reported, 149 (89%) were among males, comparable to the statewide proportion of male cases but slightly higher than the national proportion (81%). In 2018, two (1%) new cases were reported among individuals who identify as transgender.
- *Race/ethnicity*: Consistent with statewide data, Latinx residents accounted for the greatest proportion (51%) of new HIV diagnoses among all racial/ethnic groups in the county. Seventeen percent of new diagnoses were among Asian/Pacific Islanders, representing a higher proportion than was seen statewide (7%) and nationally (3%). While African Americans accounted for 7% of new cases in the county–lower than the national proportion (44%)–they represent only 2% of the overall population of the county, such that African Americans are the most disproportionately impacted of all racial/ethnic groups.
- *Transmission category*: Sixty-eight percent of newly diagnosed cases were among MSM (63% MSM and 5% MSM & IDU), a proportion comparable to state (70%) and national data (70%). Heterosexual transmission (7%) and IDU (2%) accounted for a minority of cases. Notably, 22% of new cases in the county were missing information on associated transmission category[v].

[v] Transmission categories were statistically adjusted and imputed to account for missing information in the national data. Therefore, any comparison of transmission categories between county-level and state/national data should be interpreted with caution.

Table 1. Demographic and transmission characteristics of people newly diagnosed with HIV in the County of Santa Clara, California, and the United States

Demographic Characteristic	Group	Santa Clara[vi], 2018 n (%)	California[vii], 2017 n (%)	United States[viii], 2017 n (%)
Gender	Male	149 (89)	4,188 (87)	30,870 (81)
	Female	16 (10)	526 (11)	7,312 (19)
	Transgender	2 (1)	77 (2)	NA
Age at diagnosis (years)	0-12	0 (0)	5 (0.1)	99 (0.3)
	13-24	25 (15)	950 (20)	8,090 (21)
	25-44	108 (65)	2,715 (57)	20,615 (54)
	45-64	32 (19)	1,040 (22)	8,613 (22)
	65+	2 (1)	81 (2)	864 (2)
Race/ethnicity	African American	11 (7)	802 (17)	16,690 (44)
	White	36 (22)	1,245 (26)	10,048 (26)
	Latinx	86 (51)	2,232 (47)	9,461 (25)
	Asian/Pacific Islander	29 (17)	356 (7)	999 (3)
	American Indian/Alaska Native	0 (0)	18 (0.4)	212 (0.6)
	Multiple Races/Other	5 (3)	138 (3)	871 (2)
Transmission category	MSM	106 (63)	3,039 (63)	25,513 (67)
	IDU	4 (2)	223 (5)	2,344 (6)
	MSM & IDU	9 (5)	177 (4)	1,241 (3)
	Heterosexual contact	11 (7)	821 (17)	9,003 (23)
	Perinatal	0 (0)	6 (0.001)	73 (0.2)
	Unknown/Other	37 (22)	525 (11)	106 (0.3)
Overall	**Total**	**167 (100)**	**4,791 (100)**	**38,281 (100)**

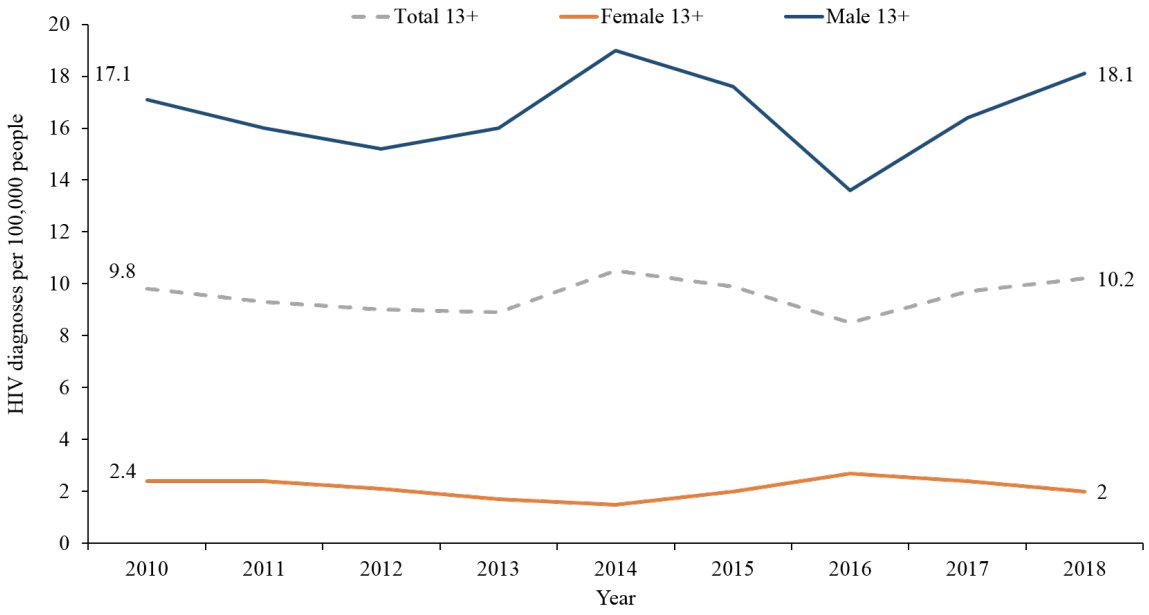
[vi] County of Santa Clara Public Health Department, eHARS data as of May 1, 2019, and are provisional.
[vii] California Department of Public Health, Office of AIDS, California HIV Surveillance Report – 2017 [Accessed Sep 20, 2019].
[viii] Centers for Disease Control and Prevention. HIV Surveillance Report, 2017; vol. 29. http://www.cdc.gov/hiv/library/reports/hiv-surveillance.html. Published November 2017. Accessed [Sep 20, 2019].
Data on gender are based on person's sex at birth and are only available for cases ≥13 years old at diagnosis. Data for transgender persons are not presented because national data on gender identity is not collected or reported consistently across jurisdictions. Transmission risk data have been statistically adjusted to account for missing transmission category; therefore, values may not sum to overall total.

Trends in New HIV Diagnoses

The rate of new HIV diagnoses among people ages 13 years and older slightly increased from 9.8 per 100,000 people in 2010 to 10.2 in 2018 (Figure 2). Despite a 22% increase between 2013 and 2014 driven by an increase of new diagnoses among Latinx MSM, the rate of new HIV diagnoses then decreased in both 2015 and 2016. The increase in the rate of new HIV diagnoses since 2016 was attributed to increasing diagnoses among Latinx and Asian/Pacific Islander male patients (Figure 3).

In 2018, the rate among males ages 13 and older (18.1 per 100,000 people) was more than nine times that of females ages 13 and older (2.0). Among males ages 13 and older, the rate of HIV diagnosis increased from 13.6 in 2016 to 18.1 in 2018 after a decrease from 2014 (19.0) to 2016 (13.6). Among females ages 13 and older, the total rate of diagnosis remained low and stable from 2.4 in 2010 to 2.0 in 2018.

Figure 2: Rate of HIV diagnoses among individuals age 13+, overall and by sex, County of Santa Clara, 2010 – 2018

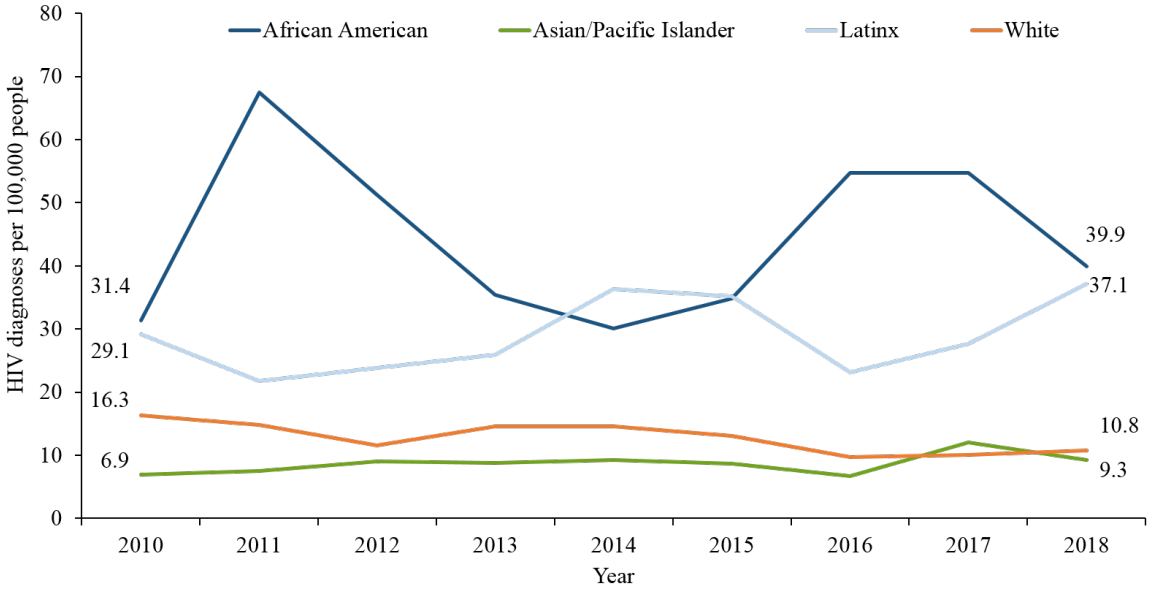


Source: 1. Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional; 2. State of California, Department of Finance, E-2. California County Population Estimates and Components of Change by Year — July 1, 2010–2018, December 2018; 3. State of California, Department of Finance, State and County Population Projections by Race/Ethnicity and Age, 2010-2060, Sacramento, California, January 2018.

When stratified by race/ethnicity, the rate of HIV diagnoses in 2018 among males ages 13 years and older was highest among African Americans (39.9 per 100,000 people) and Latinx (37.1), nearly four times that of their white counterparts (10.8). While the rates among adolescent and adult white males decreased by 34% from 2010 through 2018 (from 16.3 to 10.8), rates increased by similar percentages across all other races - Asian/Pacific Islanders by 35% (from 6.9 to 9.3),

Latinx by 27% (29.1 to 37.1), and African American by 27% (31.4 to 39.9) – signifying increasingly disparate rates and trends between white adolescent and adult males and populations of color (Figure 3).

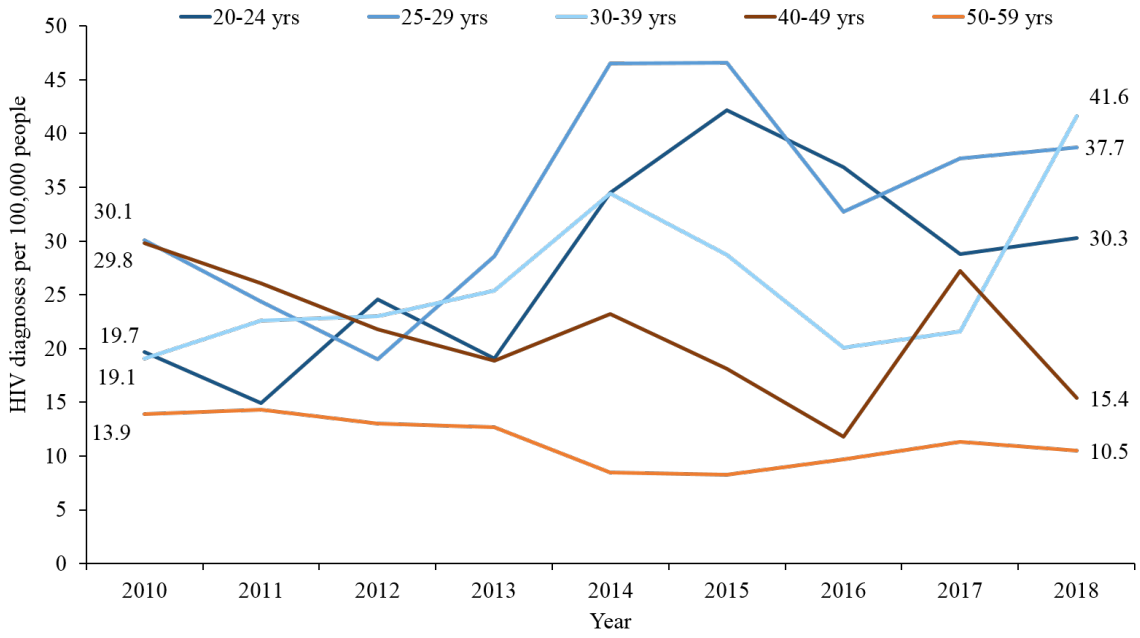
Figure 3: Rate of HIV diagnoses among males 13+ by race/ethnicity, County of Santa Clara, 2010 – 2018



Source: 1. Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional; 2. State of California, Department of Finance, E-2. California County Population Estimates and Components of Change by Year — July 1, 2010–2018, December 2018; 3. State of California, Department of Finance, State and County Population Projections by Race/Ethnicity and Age, 2010-2060, Sacramento, California, January 2018.

When stratified by age, the rate of HIV diagnosis in 2018 was the highest among males ages 30 to 39 (41.6 per 100,000 people), a sharp increase from 2017. From 2010 through 2018, overall rates of HIV diagnoses among all age groups under 40 years increased (Figure 4).

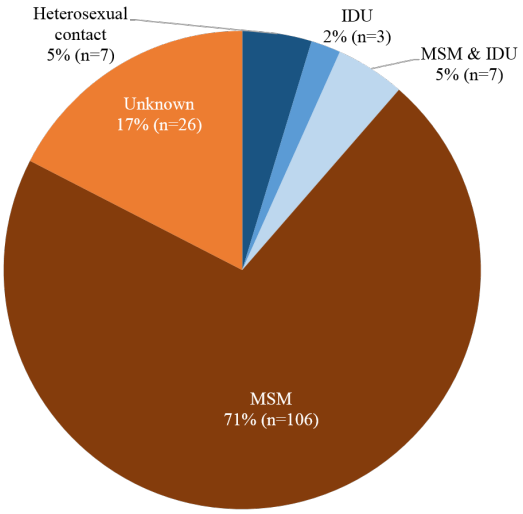
Figure 4: Rate of HIV diagnoses among males by selected age group, County of Santa Clara, 2010 – 2018



Source: 1. Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional; 2. State of California, Department of Finance, E-2. California County Population Estimates and Components of Change by Year — July 1, 2010–2018, December 2018; 3. State of California, Department of Finance, State and County Population Projections by Race/Ethnicity and Age, 2010-2060, Sacramento, California, January 2018.

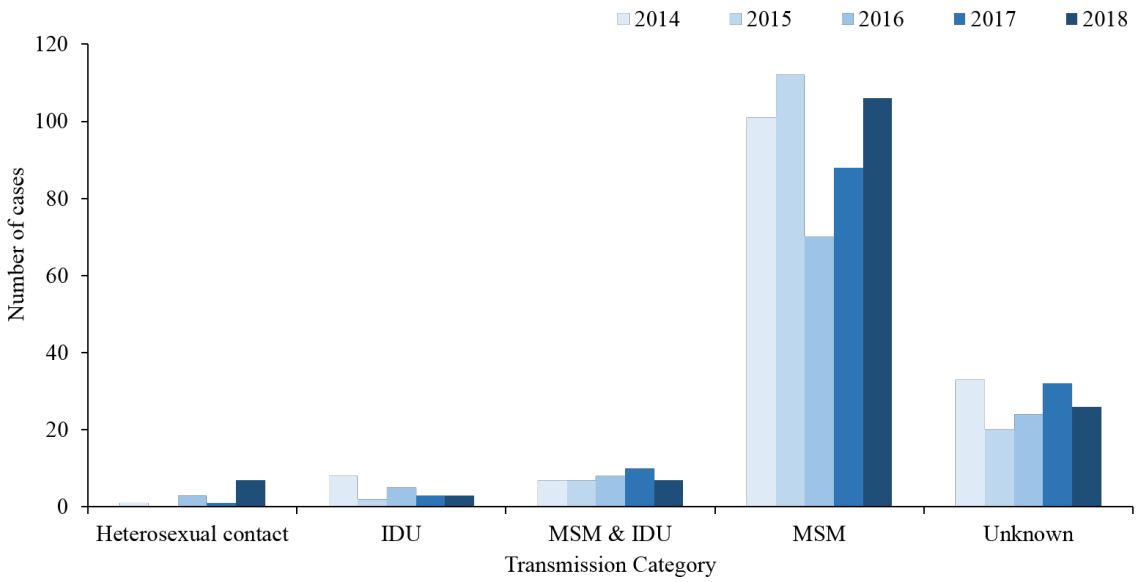
In 2018, over three-quarters (76%) of males newly diagnosed with HIV were MSM including MSM & IDU. Notably, information on associated mode of transmission for 17% of new diagnoses among males in 2018 was unknown (Figure 5). After a significant decrease between 2015 and 2016, HIV diagnoses among MSM increased for the second year in a row, from 70 cases in 2016 to 106 cases in 2018. This trend represents more than a 50% increase, and approaches case numbers not seen since 2015. (Figure 6).

Figure 5: Proportion of males age 13+ newly diagnosed with HIV by transmission category, County of Santa Clara, 2018



Source: County of Santa Clara Public Health Department, eHARS data as of May 1, 2019, and are provisional.

Figure 6: Number of males age 13+ newly diagnosed with HIV by transmission category, County of Santa Clara, 2014 – 2018

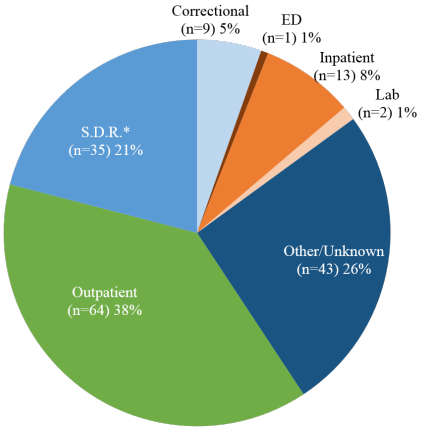


Source: County of Santa Clara Public Health Department, eHARS data as of May 1, 2019, and are provisional.

HIV Diagnoses by Diagnostic Setting

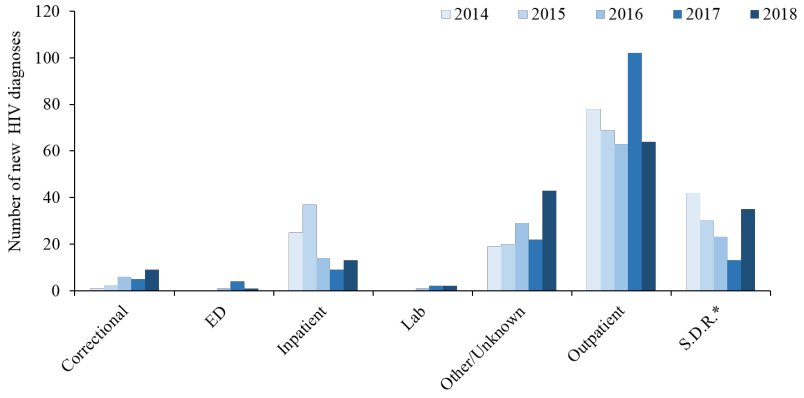
In 2018, 64(38%) new diagnoses were made in the outpatient setting which include primary care or specialty clinics, community health centers, and public health clinics among others ; 35(21%) at screening, diagnostic and referral agencies; and 13(8%) during inpatient admissions. Nine patients were diagnosed at correctional facilities, and one diagnosis was made in an emergency department (Figure 7). Compared to 2017, the number of HIV cases diagnosed by screening, diagnostic, and referral agencies more than doubled from 13 to 35 cases in 2018. The number of cases diagnosed at both correctional facilities and inpatient settings also increased in 2018. HIV diagnoses in outpatient settings and emergency departments decreased in the past year (Figure 8). In 2018, Latinx cases were more frequently diagnosed at screening, diagnostic and referral agencies (27%, 23 of 86 cases) and African American cases at outpatient settings (64%, 7 of 11 cases) compared to other racial/ethnic groups (Figure 9).

Figure 7: HIV diagnoses by facility type, County of Santa Clara, 2018



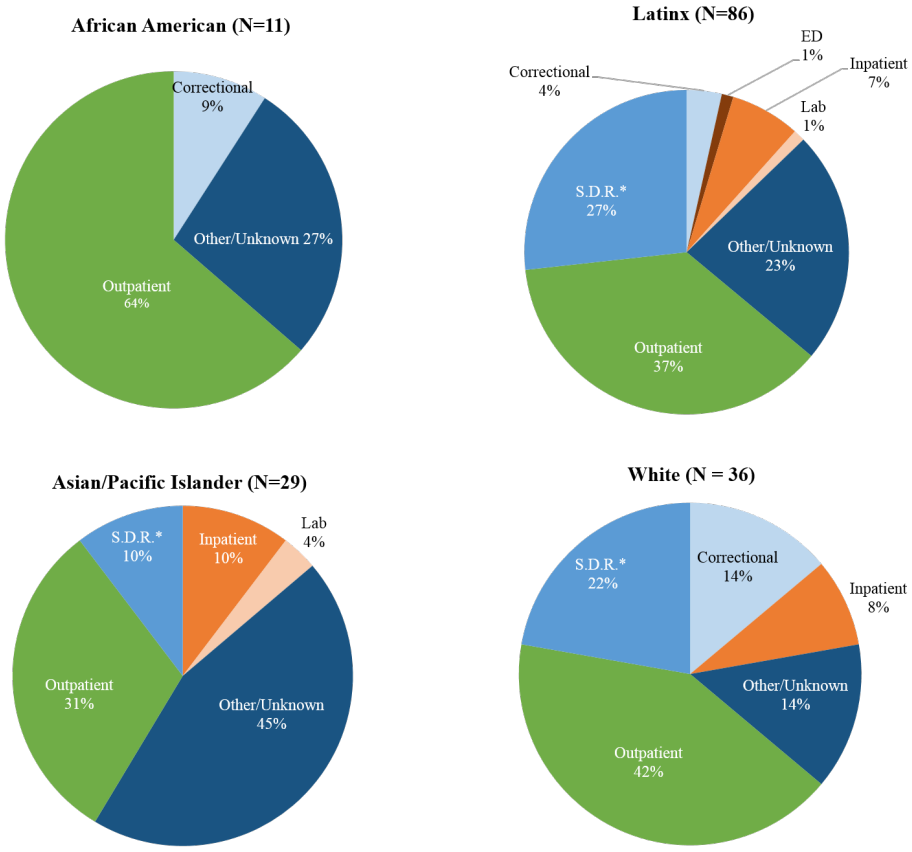
*Screening, diagnostic, and referral agency.
Source: County of Santa Clara Public Health Department, eHARS data as of May 1, 2019, and are provisional.

Figure 8: HIV diagnoses by facility type, County of Santa Clara, 2014 - 2018



*Screening, diagnostic, and referral agency
Source: County of Santa Clara Public Health Department, eHARS data as of May 1, 2019, and are provisional.

Figure 9: HIV diagnosis by facility type and race/ethnicity, County of Santa Clara, 2018

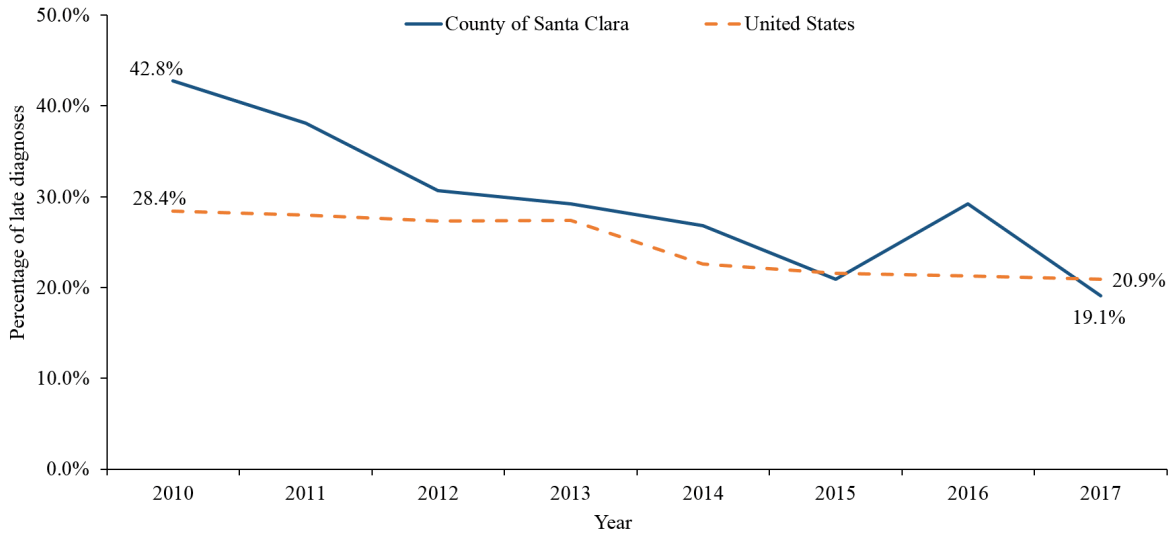


*Screening, diagnostic, and referral agency
Source: County of Santa Clara Public Health Department, eHARS data as of May 1, 2019, and are provisional.

Late HIV Diagnosis

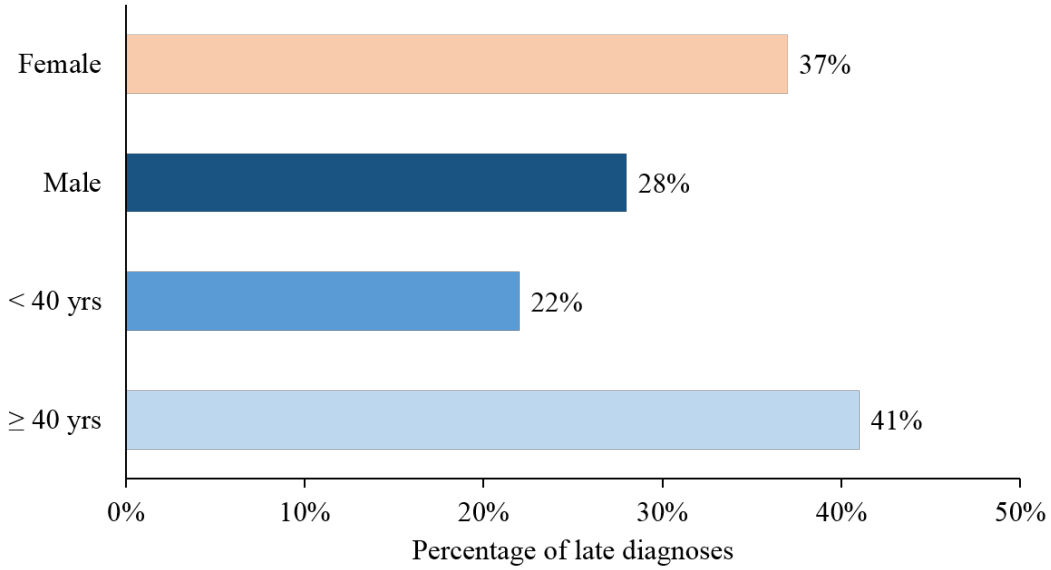
On average, the percentage of late diagnoses (onset of AIDS within three months from HIV diagnosis) among new cases decreased by more than half, from 42.8% in 2010 to 19.1% in 2017. Closing a gap of more than fourteen percent compared to the national average in 2010, the percentage of late HIV diagnoses in the county was lower than the national average in 2017 (Figure 10). Combining data from 2010 through 2017, females and people ages 40 and older were more likely to receive a late diagnosis (37% and 41%, respectively) than their male and/or younger counterparts (28% and 22%, respectively) (Figure 11). African Americans (34%), Asian/Pacific Islanders (33%), and Latinx (31%) were more frequently diagnosed late compared to whites (23%) (Figure 12). People who acquired HIV through injection drug use (40%), heterosexual contact (36%) or other modes of transmission (40%) were more likely to be diagnosed late than MSM (24%) (Figure 13).

Figure 10: Percentage of late HIV diagnoses*, County of Santa Clara and United States, 2010 – 2017



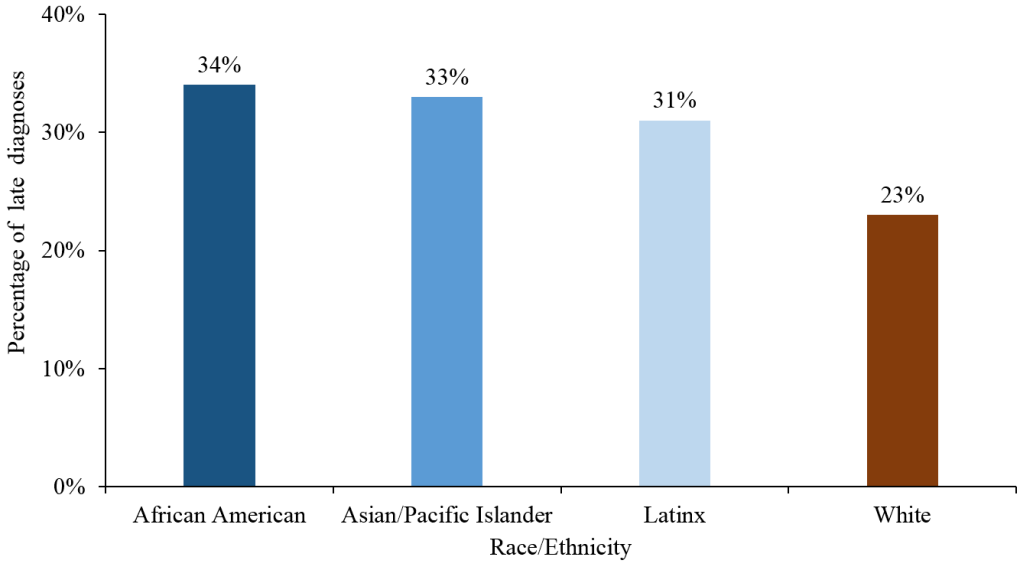
* Late diagnosis is defined as having AIDS diagnosis within 3 months of diagnosis of HIV infection.
Source: 1. Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional; 2. Centers for Disease Control and Prevention. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2017. *HIV Surveillance*

Figure 11: Percentage of late HIV diagnoses* by sex and age group, County of Santa Clara, 2010 – 2017



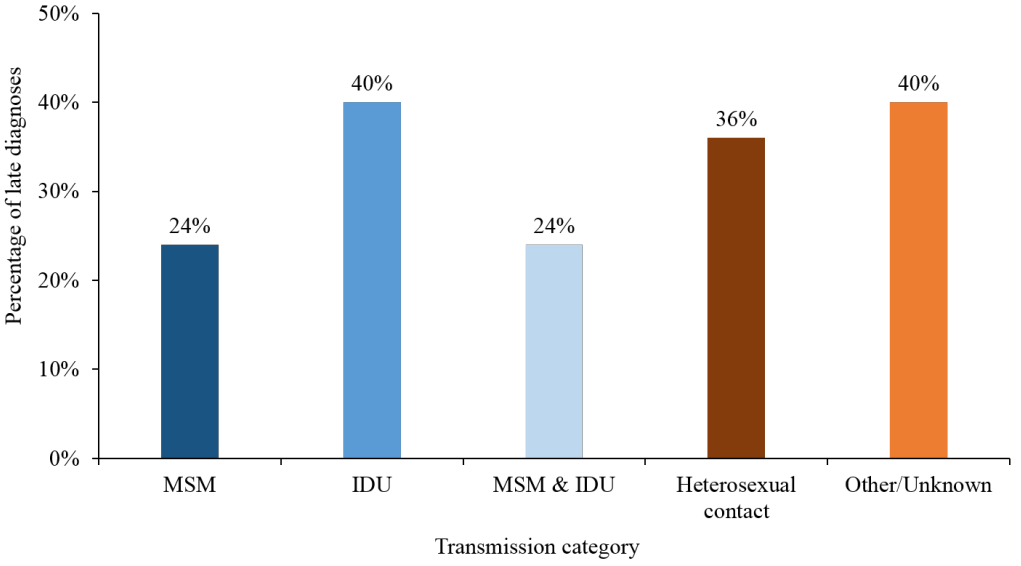
*Late diagnosis is defined as having AIDS diagnosis within 3 months of diagnosis of HIV infection.
Source: Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional.

Figure 12: Percentage of late HIV diagnoses* by race/ethnicity, County of Santa Clara, 2010 – 2017



*Late diagnosis is defined as having AIDS diagnosis within 3 months of diagnosis of HIV infection.
Source: Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional.

Figure 13: Percentage of late HIV diagnoses* by transmission category, County of Santa Clara, 2010 – 2017



*Late diagnosis is defined as having AIDS diagnosis within 3 months of diagnosis of HIV infection.
Source: Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional.

1.2 People Living with HIV

In 2018, there were 3,419 PLWH with most recent address in the County of Santa Clara, including 2,699 (79%) first reported in the county and 720 (21%) out of jurisdiction cases. The rate of PLWH among males was more than six times the rate among females (297.1 vs. 46.0 per 100,000 people). People ages 45 to 64 had the highest PLWH rate of any age group (348.7), and nearly twice that of the county (174.7). When stratified by race/ethnicity, African Americans had the highest rate (817.6), followed by Latinx (264.6), white (173.5), and Asian/Pacific Islander (63.0) (Table 2).

Table 2: Demographic and transmission characteristics of PLWH, County of Santa Clara, 2018[ix,x]

Demographic Characteristic	Group	N	%	Rate per 100,000 people
Gender	Male	2,936	86%	297.1
	Female	445	13%	46.0
	Transgender	38	1%	-
Age (years)	0-12	2	<1%	0.6
	13-24	81	2%	26.8
	25-44	1,203	35%	224.3
	45-64	1,799	53%	348.7
	65+	334	10%	119.1
Race/ethnicity	White	1,106	32%	173.5
	Latinx	1,424	42%	264.6
	African American	371	11%	817.6
	Asian/Pacific Islander	422	12%	63.0
	Other/Unknown	96	3%	-
Transmission category	MSM	2,165	63%	-
	IDU	160	5%	-
	MSM & IDU	210	6%	-
	Heterosexual contact	366	11%	-
	Other/Unknown	518	15%	-
Overall	**Total**	**3,419**	**100%**	**174.7**

[ix] PLWH includes people diagnosed with HIV who were alive through 12/31/2018 and had their most recent address in the County of Santa Clara; Rates among transgender population and by transmission mode are not available due to undefined population denominators.

[x] Source: 1. The County of Santa Clara Public Health Department, eHARS data as of May 1, 2019, and are provisional; 2. State of California, Department of Finance, State and County Population Projections by Race/Ethnicity and Age, 2010-2060, Sacramento, California, January 2018; 3. State of California, Department of Finance, E-2. California County Population Estimates and Components of Change by Year — July 1, 2010–2018, December 2018.

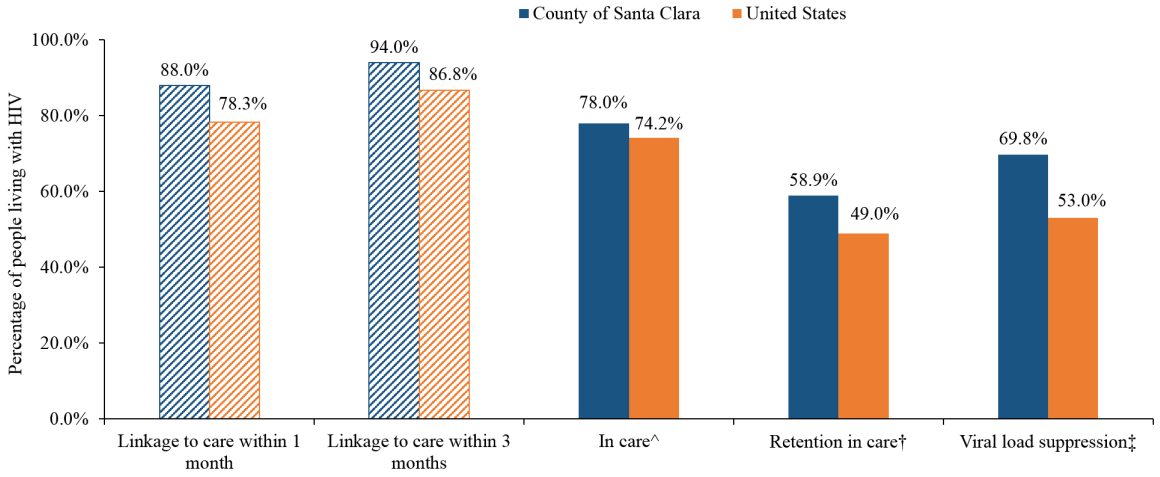
1.3 HIV Care Continuum

HIV Care Continuum

In 2018, 94% of people newly diagnosed with HIV in Santa Clara County were linked to care within three months of diagnosis. Compared to the national average, more PLWH were in care (78% vs. 74%), retained in care (59% vs. 49%) and achieved viral suppression (70% vs. 53%) in the county in 2018. Although the majority of PLWH in 2018 were retained in care, the remaining 41% were either not linked to care (22%), or were linked but were not retained in care (19%). Additionally, nearly one-third of PLWH were not virally suppressed at the time of their most recent test results (Figure 14).

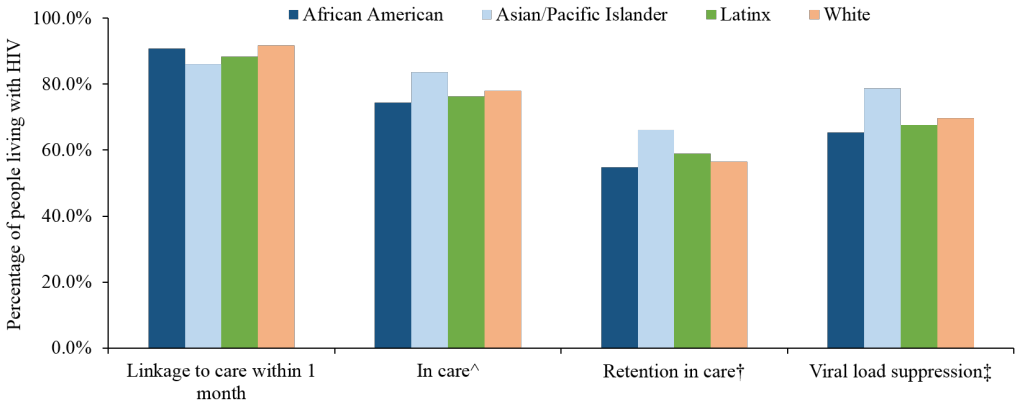
Asian/Pacific Islanders living with HIV were slightly more likely to have been retained in care and virally suppressed. However, there were no substantial differences in the percentages of linkage to care across racial/ethnic groups (Figure 15).

Figure 14: HIV continuum of care, County of Santa Clara and United States, 2018



* U.S. data for in care, retention in care and viral load suppression is from 42 states and District of Columbia among people diagnosed with HIV through 2015 and alive in 2016.
^ People who were diagnosed with HIV through 2017 and alive in 2018 and who had at least 1 documented CD4 or viral load test in 2018.
† People who were diagnosed with HIV through 2017 and alive in 2018, and who had at least 2 documented CD4 or viral load test in 2018, at least 3 months apart.
‡ People who were diagnosed with HIV through 2017 and alive in 2018, with most recent HIV viral load in 2018 less than 200 copies/ml
Source: 1. Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional; 2. Centers for Disease Control and Prevention. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2017. *HIV Surveillance Supplemental Report* 2019;24(No. 3). http://www.cdc.gov/hiv/library/reports/ hiv-

Figure 15: HIV continuum of care, by race/ethnicity, County of Santa Clara, 2018

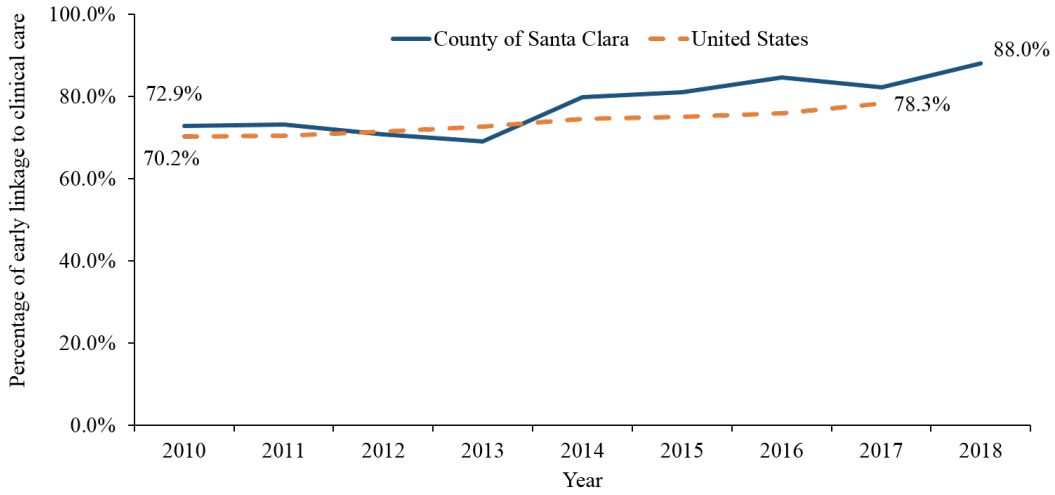


^ People who were diagnosed with HIV through 2017 and alive in 2018 and who had at least 1 documented CD4 or viral load test in 2018.
† People who were diagnosed with HIV through 2017 and alive in 2018, and who had at least 2 documented CD4 or viral load test in 2018, at least 3 months apart.
‡ People who were diagnosed with HIV through 2017 and alive in 2018, with most recent HIV viral load in 2018 less than 200 copies/ml.
Source: Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional.

Early Linkage to HIV Care

Between 2010 and 2018, the proportion of Santa Clara County residents diagnosed with HIV who received successful early linkage to care* increased from 73% to 88%. Since 2014, the county has had a consistently higher percentage of successful early linkage to care compared to the US average, and as of 2018 had exceeded the national goal of 85% (Figure 16).

Figure 16: Percentage of early linkage to HIV care* among people ages 13+ newly diagnosed with HIV, County of Santa Clara and United States, 2010 – 2018

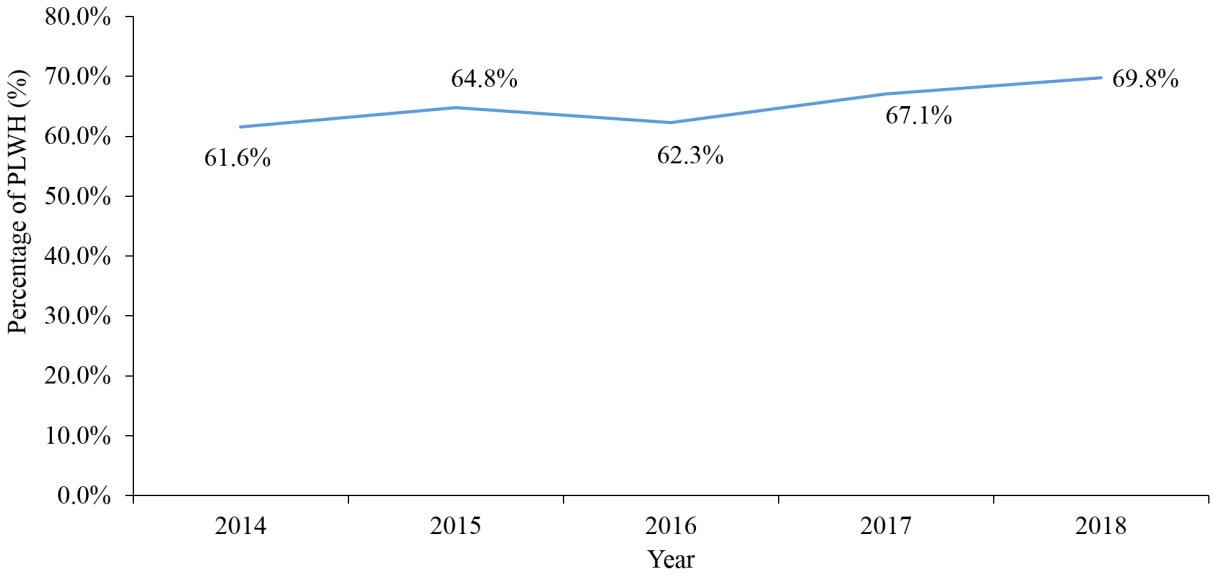


*Early Linkage to Clinical Care includes at least one CD4 or viral load test within one month of HIV diagnosis.
Source: 1. Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional; 2. Centers for Disease Control and Prevention. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2017. HIV Surveillance Supplemental Report 2019;24(No. 3). http://www.cdc.gov/hiv/library/reports/ hiv-surveillance.html.

Viral Suppression

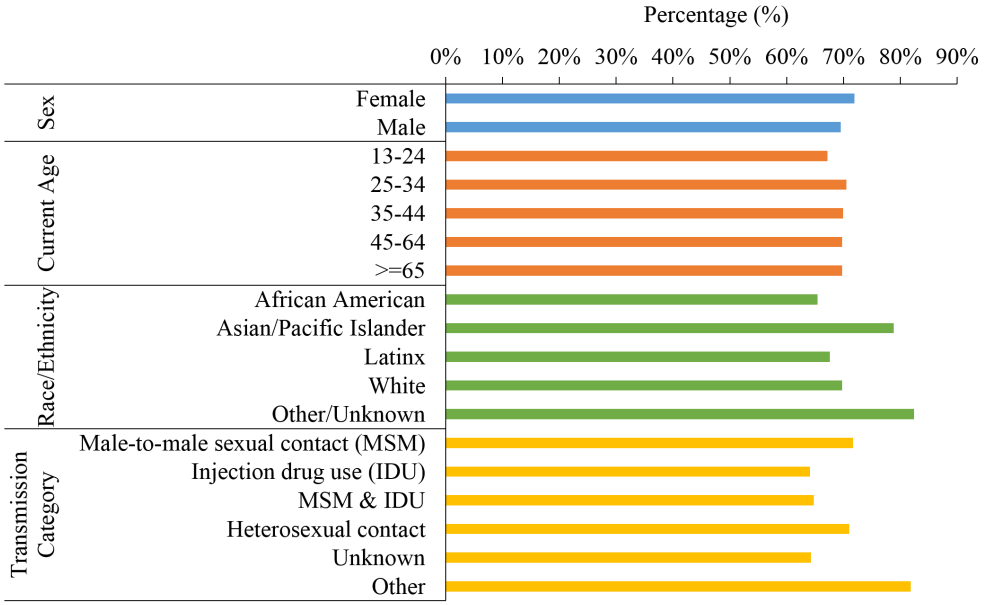
In 2018, 70% of PLWH in the county were virally suppressed, with most recent HIV viral load less than 200 copies/ml. The percentage of those virally suppressed steadily increased, from 62% in 2014 to 70% in 2018 (Figure 17). The percentage of viral suppression among people newly diagnosed with HIV also showed significant improvements. Among people newly diagnosed with HIV between 2012 and 2017, the percentage of those who achieved viral suppression within six months of diagnosis more than doubled, from 31% in 2012 to 72% in 2017. The percentage of viral suppression within 12 months of diagnosis similarly increased, from 45% to 79% (Data not shown). Despite these improvements, disparities existed among some populations. Compared to other groups, adolescents and young adults ages 13 to 24 (67%) and injection drug users (64%) were less frequently virally suppressed (Figure 18).

Figure 17: Viral suppression among PLWH ages 13+*, County of Santa Clara, 2014 – 2018



*People who were diagnosed with HIV through 2017 and alive in 2018, with most recent HIV viral load in 2018 less than 200 copies/ml.
Source: Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional.

Figure 18: Viral suppression among PLWH ages 13+, by demographic and transmission characteristics, County of Santa Clara, 2018

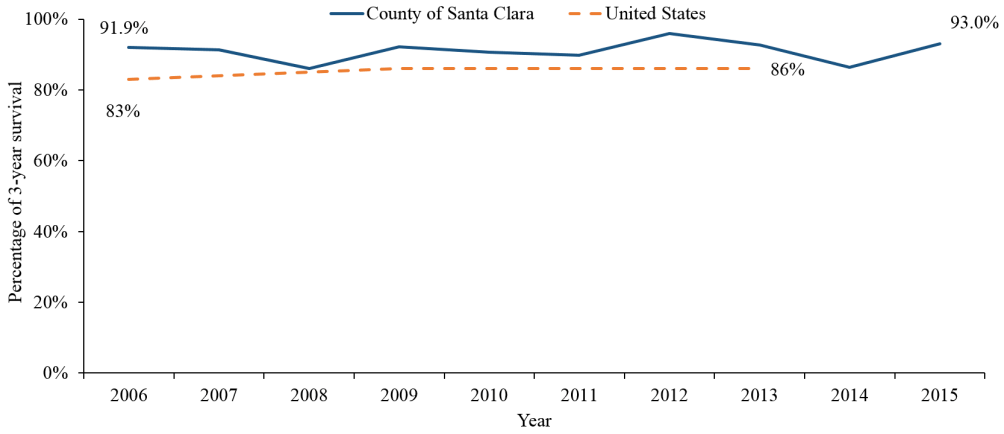


*People who were diagnosed with HIV through 2017 and alive in 2018, with most recent HIV viral load in 2018 less than 200 copies/ml. Source: Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional.

1.4 HIV Survival

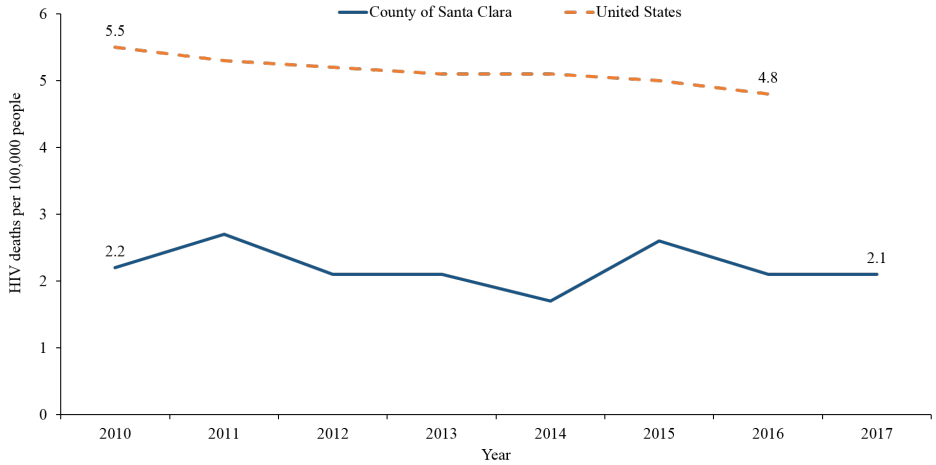
The 3-year AIDS survival rate in the county remained stable for more than a decade and was generally above the national average. Figure 19 shows the 3-year survival rates among patients diagnosed with AIDS between 2006 and 2015 for the county in comparison with the national rate of survival. HIV mortality rate in the general population in the county remained low between 2010 and 2017. In 2016, the HIV mortality rate in the County of Santa Clara (2.1 per 100,000 people) was less than half of the national rate (4.8) (Figure 20).

Figure 19: AIDS 3-year survival rate, County of Santa Clara and United States, 2006 – 2015



Source: 1. Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional; 2. Centers for Disease Control and Prevention. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2017. *HIV Surveillance Supplemental Report* 2019;24(No. 3). http://www.cdc.gov/hiv/library/reports/ hiv-surveillance.html. Published June 2019.

Figure 20: HIV mortality rate, County of Santa Clara and United States, 2010 – 2017



Source: 1. Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional; 2. Centers for Disease Control and Prevention. HIV Surveillance Report, 2015; vol. 27. http://www.cdc.gov/hiv/library/reports/hiv-surveillance.html. Published November 2016. Accessed May 21, 2019; 3. Centers for Disease Control and Prevention. HIV Surveillance Report, 2016; vol. 28. http://www.cdc.gov/hiv/library/reports/hiv-surveillance.html. Published November 2017. Accessed May 21, 2019; 4.Centers for Disease Control and Prevention. HIV Surveillance Report, 2017; vol. 29. http://www.cdc.gov/hiv/library/reports/hiv-surveillance.html. Published November 2018. Accessed Sep 3, 2019.

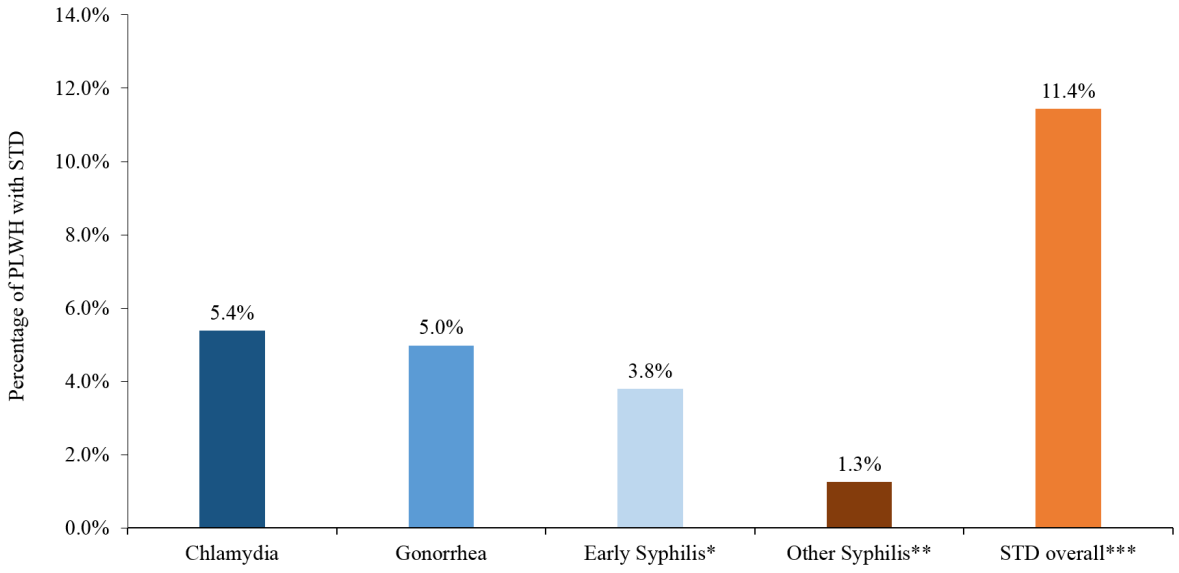
1.5 HIV and Sexually Transmitted Diseases (STD) Co-infection

Overall, 363 (11%) of PLWH were diagnosed with at least one STD in 2018. Chlamydia (5.4%) and gonorrhea (5.0%) were the most frequently reported STDs among PLWH in 2018, while (3.8%) were diagnosed with early syphilis (Figure 21).

With regard to gender and age, over a quarter (26%) of PLWH who identified as transgender were co-infected with an STD in 2018. PLWH ages 20 to 29 were most frequently co-infected with an STD, with 26% among those ages 20 to 24, and 22.4% among those ages 25 to 29 experiencing an STD in 2018 (Figure 22). In addition, 15% of Latinx PLWH were diagnosed with STD, followed by Asian/Pacific Islanders (11%), and whites (9%). African Americans had the lowest percentage (4%) of HIV/STD co-infection (Figure 23).

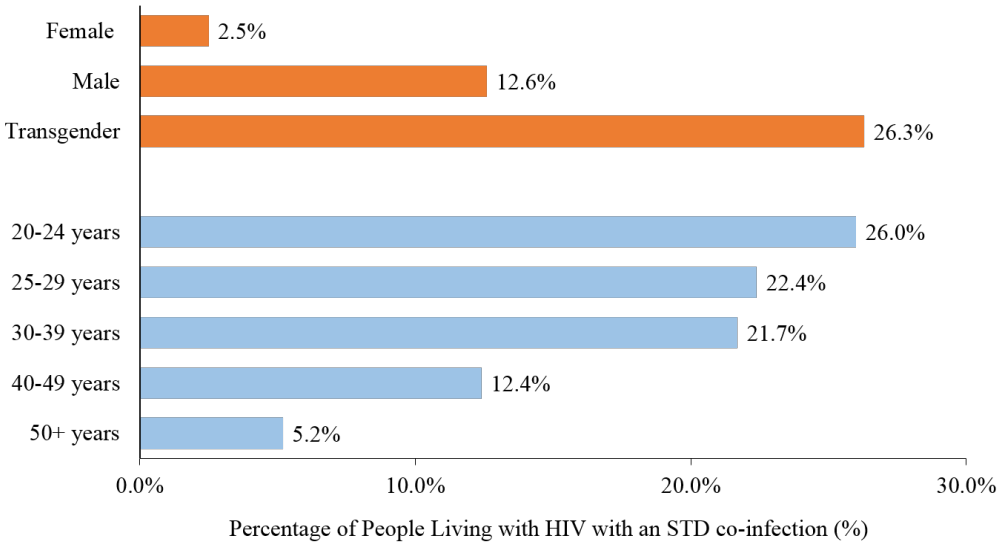
Among transmission categories, HIV/STD co-infection most disproportionately impacted MSM (15%), over three times greater than IDU (4%), and more than seven times higher than those whose HIV was attributed to heterosexual contact (2%) (Figure 24). The percentage of HIV/STD co-infection among MSM was four times that of non-MSM males, and six times that of females (Figure 25).

Figure 21: Percentage of people living with HIV with STD†, County of Santa Clara, 2018



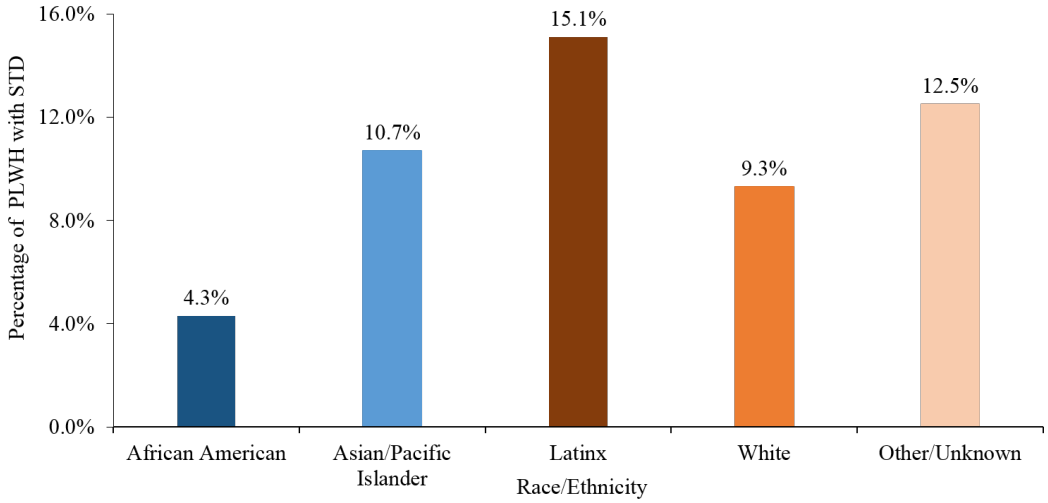
† People living with HIV ages 13 and older with chlamydia, gonorrhea, early syphilis (primary, secondary and early non-primary non-secondary), and other syphilis (late syphilis or cases of unknown duration) diagnoses in 2018. A person with multiple episodes of one disease in the year will be only counted once for the disease.
* Includes primary, secondary and early non-primary non-secondary syphilis cases.
** Includes late syphilis or cases of unknown duration.
*** The percentage of overall STD diagnosis is lower than the sum of the percentages of chlamydia, gonorrhea and syphilis (all stages) because one person may be diagnosed with multiple diseases.
Source: 1. Santa Clara County Public Health Department, eHARSdata as of May 1, 2019; 2. Santa Clara County Public Health Department, CalREDIE(2018), data

Figure 22: Percentage of people living with HIV with an STD†, by gender and age group, County of Santa Clara, 2018



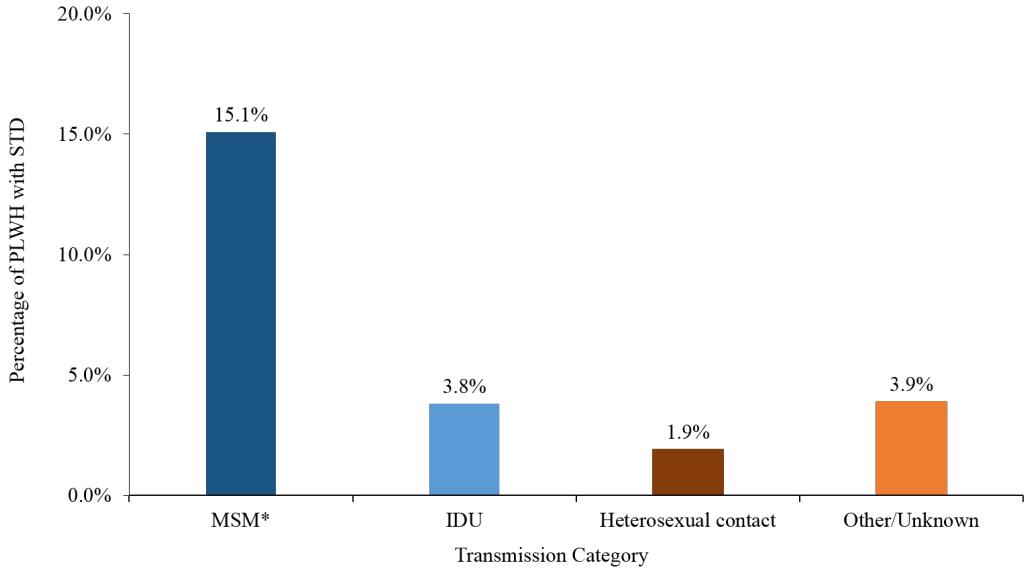
† People living with HIV ages 13 and older with chlamydia, gonorrhea, early syphilis (primary, secondary and early non-primary non-secondary), and other syphilis (late syphilis or cases of unknown duration) diagnoses in 2018. A person with multiple episodes of one disease in the year will be only counted once for the disease. Source: 1. Santa Clara County Public Health Department, eHARSdata as of May 1, 2019; 2. Santa Clara County Public Health Department, CalREDIE (2018), data as of May 1, 2019, and are provisional.

Figure 23: Percentage of people living with HIV with STD†, by race/ethnicity, County of Santa Clara, 2018



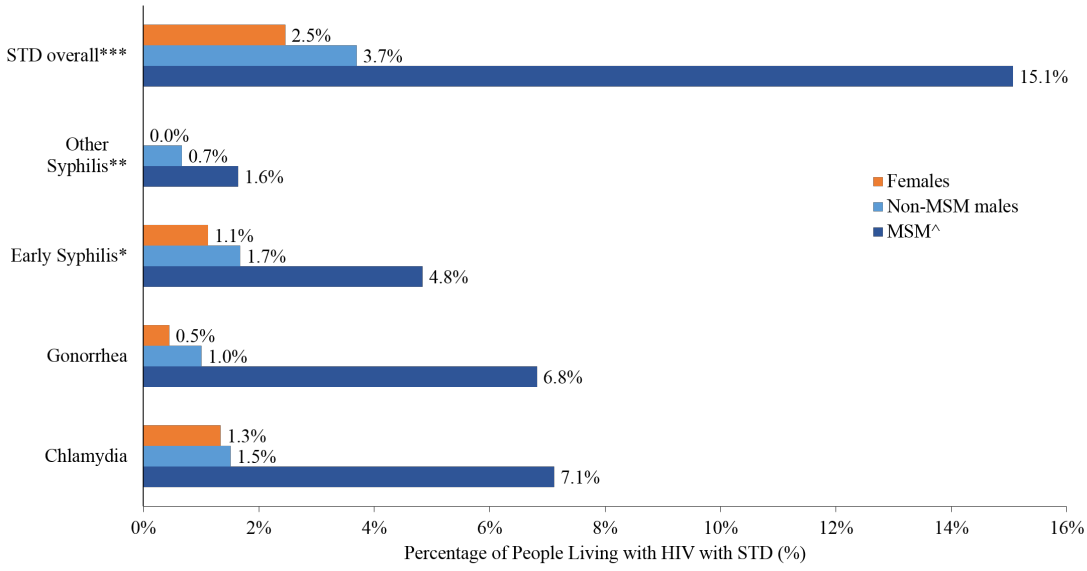
† People living with HIV ages 13 and older with chlamydia, gonorrhea, early syphilis (primary, secondary and early non-primary non-secondary), and other syphilis (late syphilis or cases of unknown duration) diagnoses in 2018. A person with multiple episodes of one disease in the year will be only counted once for the disease. Source: 1. Santa Clara County Public Health Department, eHARSdata as of May 1, 2019; 2. Santa Clara County Public Health Department, CalREDIE(2018), data as of May 1, 2019, and are provisional.

Figure 24: Percentage of people living with HIV with STD†, by transmission category, County of Santa Clara, 2018



† People living with HIV ages 13 and older with chlamydia, gonorrhea, early syphilis (primary, secondary and early non-primary non-secondary), and other syphilis (late syphilis or cases of unknown duration) diagnoses in 2018. A person with multiple episodes of one disease in the year will be only counted once for the disease.*Includes MSM and MSM & IDU. Source: 1. Santa Clara County Public Health Department, eHARSdata as of May 1, 2019; 2. Santa Clara County Public Health Department, CalREDIE(2018), data as of May 1, 2019, and are provisional.

Figure 25: Percentage of people living with HIV with STD† by disease, County of Santa Clara, 2018



† People living with HIV ages 13 and older with chlamydia, gonorrhea, early syphilis (primary, secondary and early non-primary non-secondary), and other syphilis (late or unknown duration) diagnosis in 2018. A person with multiple episodes of one disease in the year will be only counted once for the disease. ^ includes MSM and MSM & IDU. *Includes primary, secondary, and early non-primary non-secondary cases. **Includes late or cases of unknown duration. ***Percentage of overall STD diagnosis is lower than the sum of the percentages of chlamydia, gonorrhea, and syphilis (all stages) because one person may have multiple infections. Source: 1. Santa Clara County Public Health Department, eHARSdata as of May 1, 2019; 2. Santa Clara County Public Health Department, CalREDIE (2018), data as of May 1, 2019, and are provisional.

2. HIV AMONG PRIORITY POPULATIONS IN THE COUNTY OF SANTA CLARA

The HIV epidemic has stabilized in the county since the mid-2000s, with 3,419 people known to be diagnosed and living with HIV as of December 31, 2018. African American and Latinx residents are disproportionately impacted by the disease, with rates of HIV among African Americans more than four times higher than rates among whites. MSM have been disproportionately impacted as well since the beginning of the epidemic. These disparities likely relate to social determinants, which are driven by structural factors impacting population health beyond the extent of individual characteristics[xi]. CDC defines s*ocial determinants of health* (SDH) as "overlapping social structures and economic systems (e.g., social environment, physical environment, health services, and structural and societal factors) that are responsible for most health inequities."[xii] To address these health disparities and promote equity, CDC has adopted a holistic framework that emphasizes community-based prevention approaches for HIV.[xiii]

Health inequities persist in the County of Santa Clara as they do across the State of California and the United States. However, several factors uniquely shape health inequities in the county, such as a growing immigrant population, the rise of the technology industry, and the increase in income inequality. In this report, we highlight populations disproportionately impacted by HIV and other health disparities to illustrate the needs guiding our priorities with regard to HIV surveillance and prevention in the County of Santa Clara.

2.1 HIV among Transgender and Non-binary Populations

Nationally and across California, HIV disproportionately impacts transgender and gender-non-binary people[xiv]. In 2017, of 4,791 people newly diagnosed with HIV in California, 77 (2%) identified as transgender (Table 1). Starting from 2017, the County of Santa Clara began to report on HIV among transgender populations for both newly diagnosed cases and PLWH. In 2018, about 1% (2 out of 167) of new diagnoses in the county identified as transgender, consistent with 1% of PLWH (38 out of 3,419) (Table 1 and Table 2). Transgender PLWH in the County of Santa Clara were predominantly transgender female patients (95%, 36 out of 38).

[xi] CDC. Social determinants of health among adults with diagnosed HIV infection in 13 states, the District of Columbia, and Puerto Rico, 2015. HIV Surveillance Supplemental Report 2017; 22 (No. 3). http://www.cdc.gov/hiv/library/reports/hivsurveillance.html. Published August 2017. Accessed [Sep 19th, 2019].
[xii] CDC. Establishing a Holistic Framework to Reduce Inequities in HIV, Viral Hepatitis, STDs, and Tuberculosis in the United States. Atlanta (GA): U.S. Department of Health and Human Services, CDC; October 2010. Accessed [Sep 19th, 2019].
[xiii] Centers for Disease Control and Prevention. Establishing a Holistic Framework to Reduce Inequities in HIV, Viral Hepatitis, STDs, and Tuberculosis in the United States. Atlanta (GA): U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; October 2010. Accessed [Sep 19th, 2019].
[xiv] Clark, H., Babu, A., Wiewel, E.W.et al.AIDS Behav (2017) 21: 2774. https://doi.org/10.1007/s10461-016-1656-7

In the County of Santa Clara, 58 HIV diagnoses have been reported among transgender persons since the beginning of the HIV epidemic in 1983. Over 70% (42 out of 58) were reported to the county after 2000. Sixty-two percent (36 out of 58) were Latinx, nearly three-quarters (74%) were between 25 and 44 years old, and 95% were associated with transmission of HIV through sexual contact (including sexual contact with IDU) (Table 3). Latinx and African American transgender individuals diagnosed with HIV tended to be younger with 22% under 25 years at the time of diagnosis. In comparison, all five white transgender cases were under 25 years at diagnosis (Data not shown).

Table 3: HIV diagnoses among transgender persons by demographic and transmission characteristics, County of Santa Clara, 1983-2018[xv]

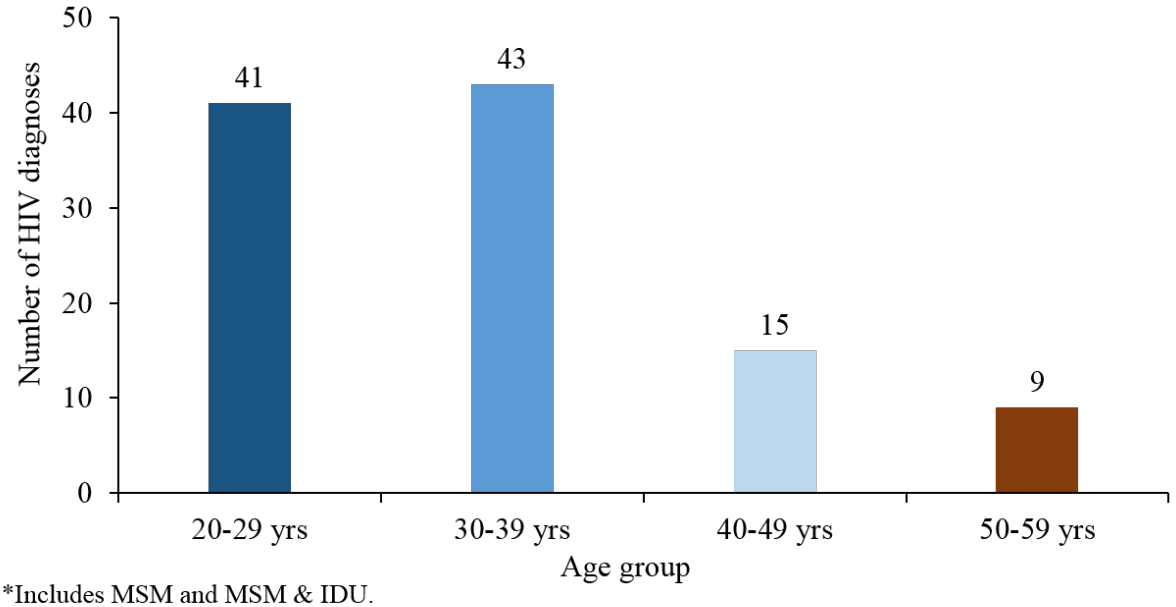
Demographic Characteristic	Group	N	%
Age (years)	0–12	0	0%
	13-24	12	21%
	25-44	43	74%
	45-64	3	5%
	65+	0	0%
Race/ethnicity	White	5	9%
	Latinx	36	62%
	African American	9	15%
	Asian/Pacific Islander	6	10%
	Other/Unknown	2	3%
Transmission Category	Sexual Contact	47	81%
	IDU	0	0%
	Sexual Contact & IDU	8	14%
	Other/Unknown	3	5%
Overall	**Total**	**58**	**100%**

[xv] Analysis of transmission risks for transgender HIV cases combines traditional transmission categories of MSM and heterosexual contact into a single "sexual contact" category, and "MSM & IDU" into "sexual contact & IDU." Source: The County of Santa Clara Public Health Department, eHARS data as of May 1, 2019, and are provisional.

2.2 HIV among Men Who have Sex with Men (MSM)

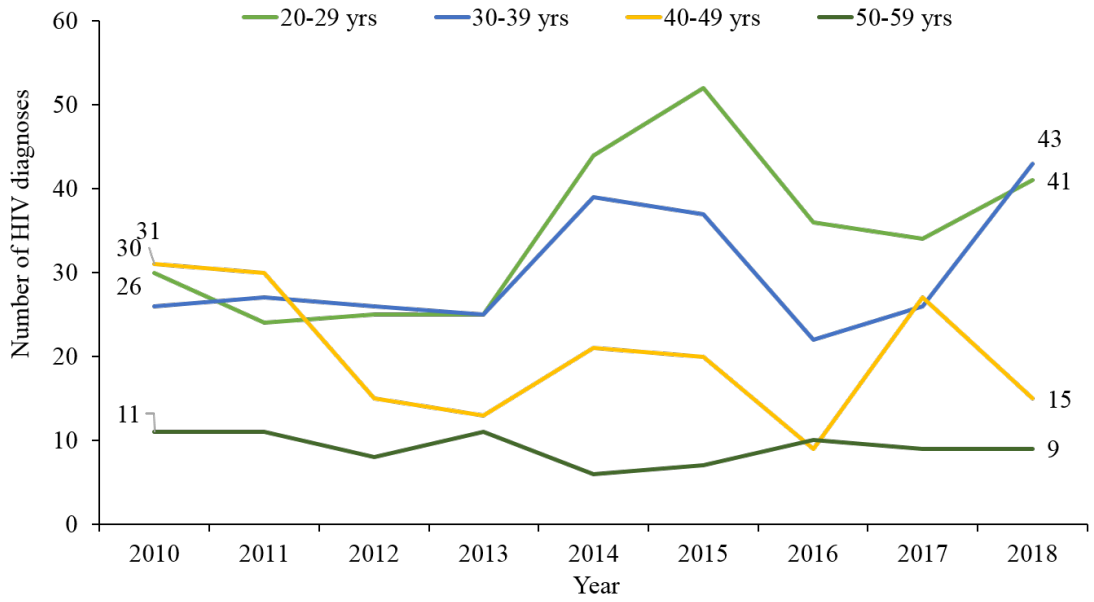
In 2018, nearly 80% of MSM who were newly diagnosed with HIV were less than 40 years old (Figure 26). HIV diagnoses among MSM between the ages 30 and 39 years increased 65%, from 26 cases in 2017 to 43 cases in 2018, whereas a 44% decrease was observed among MSM ages 40 to 49, from 27 cases in 2017 to 15 cases in 2018 (Figure 27). More than half of new diagnoses in MSM were Latinx (56%), followed by whites (20%) and Asian/Pacific Islanders (17%) (Figure 28). Compared to 2017, there were 12 more diagnoses among Latinx MSM and six more cases diagnosed among white MSMs in 2018. New HIV diagnoses among Asian/Pacific Islander MSM decreased slightly between 2017 and 2018 (Figure 29). In addition, MSM living with HIV experienced the highest rate of STD co-infection (12%) in 2018 (Figure 24). Finally, in 2018, the majority of MSM across all races/ethnicities achieved viral suppression; 83% of Asian/Pacific Islander MSM living with HIV were virally suppressed, while 61% of African American MSM cases had met the clinical criteria for viral suppression (Figure 30).

Figure 26: Number of MSM* newly diagnosed with HIV by selected age group, County of Santa Clara, 2018



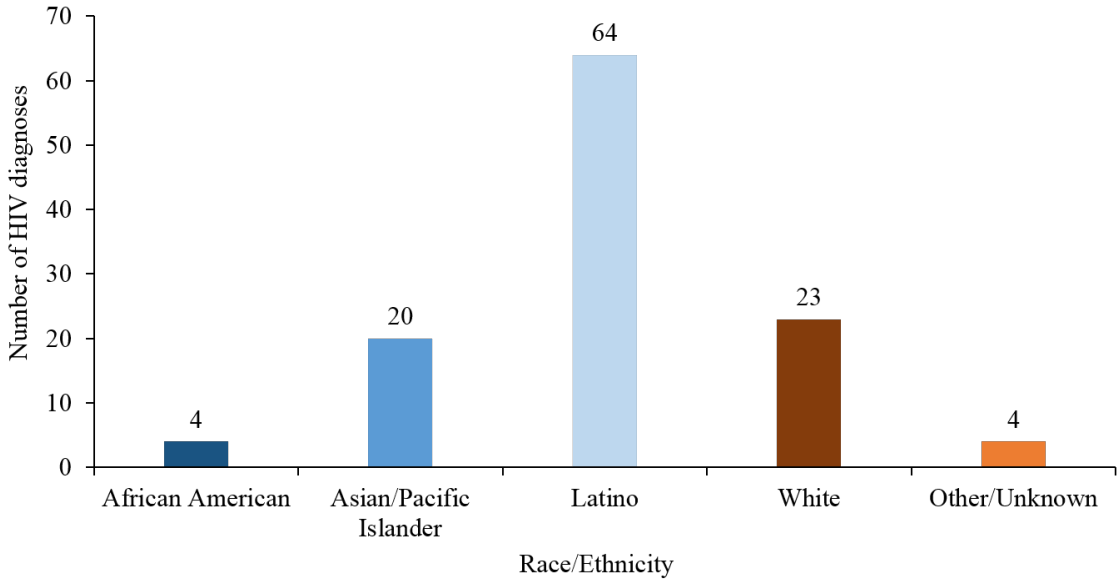
*Includes MSM and MSM & IDU.
Source: County of Santa Clara Public Health Department, eHARS data as of May 1, 2019, and are provisional.

Figure 27: Number of MSM* newly diagnosed with HIV by selected age group, County of Santa Clara, 2010 – 2018



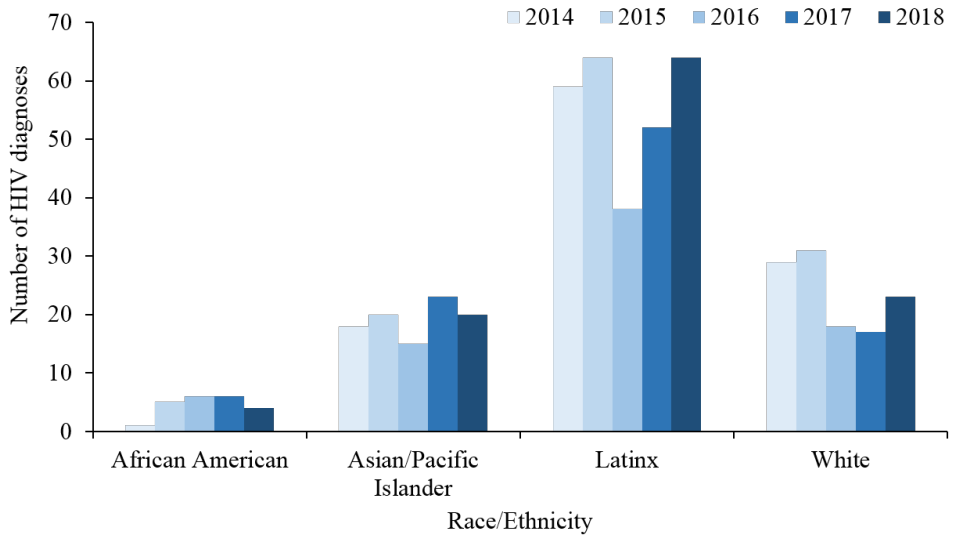
*Includes MSM and MSM & IDU.
Source: County of Santa Clara Public Health Department, eHARS data as of May 1, 2019, and are provisional.

Figure 28: Number of MSM* newly diagnosed with HIV by race/ethnicity, County of Santa Clara, 2018



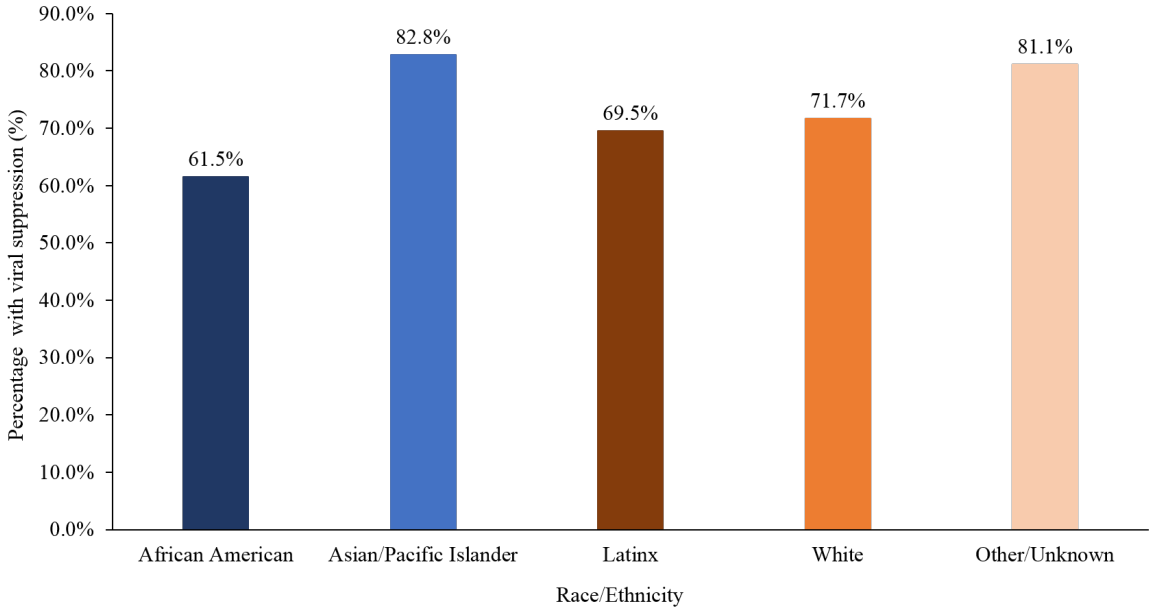
*Includes MSM and MSM & IDU.
Source: County of Santa Clara Public Health Department, eHARS data as of May 1, 2019, and are provisional.

Figure 29: Number of MSM* newly diagnosed with HIV by race/ethnicity, County of Santa Clara, 2014 – 2018



*Includes MSM and MSM & IDU.
Source: County of Santa Clara Public Health Department, eHARS data as of May 1, 2019, and are provisional.

Figure 30: Viral suppression among MSM living with HIV, by race/ethnicity, County of Santa Clara, 2018

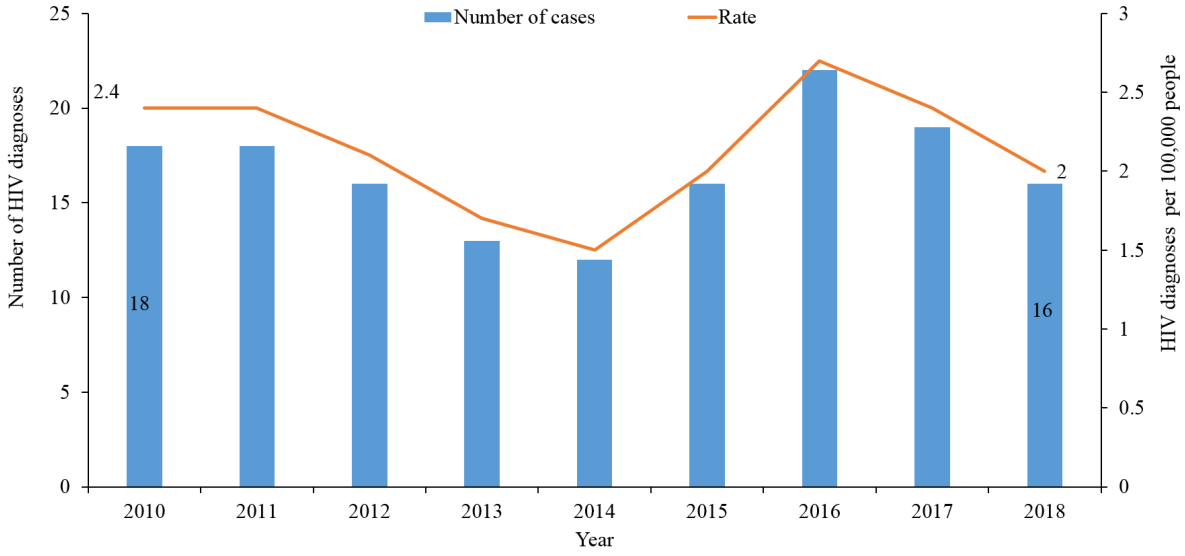


*Includes MSM and MSM & IDU.
Source: County of Santa Clara Public Health Department, eHARS data as of May 1, 2019, and are provisional.

2.3 HIV among Women

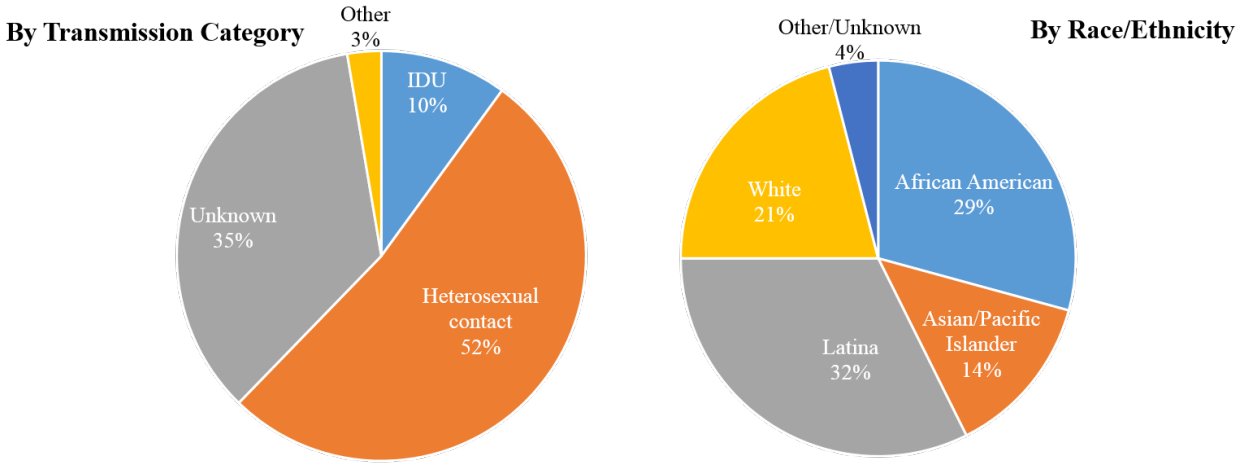
In 2018, 16 women ages 13 and older were newly diagnosed with HIV in the County of Santa Clara. The rate of HIV diagnoses among women aged 13 and older declined from 2010 to 2014, then rebounded in 2015 and 2016 before again declining to 2.0 in 2018 (Figure 31). Women ages 30 to 49 accounted for half of new diagnoses among females in 2018. Among all 445 women living with HIV, 32% were Latinx and 29% were African American. More than half (52%) of women living with HIV in the county were associated with transmission through heterosexual contact compared to 10% through injection drug use. Over a third (35%) of women living with HIV had no known source of HIV acquisition (Figure 32). Women living with HIV were less frequently co-infected with an STD in 2018 compared to men living with HIV (2% vs 13%) (Figure 22).

Figure 31: Number and rate of women ages 13+ newly diagnosed HIV, County of Santa Clara, 2010 – 2018



Source: 1. Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional; 2. State of California, Department of Finance, E-2. California County Population Estimates and Components of Change by Year — July 1, 2010–2018, December 2018 ; 3. State of California, Department of Finance, State and County Population Projections by Race/Ethnicity and Age, 2010-2060, Sacramento, California, January 2018.

Figure 32: Women living with HIV by transmission category and race/ethnicity, County of Santa Clara, 2018 (N = 445)



2.4 HIV among Adolescents and Young Adults

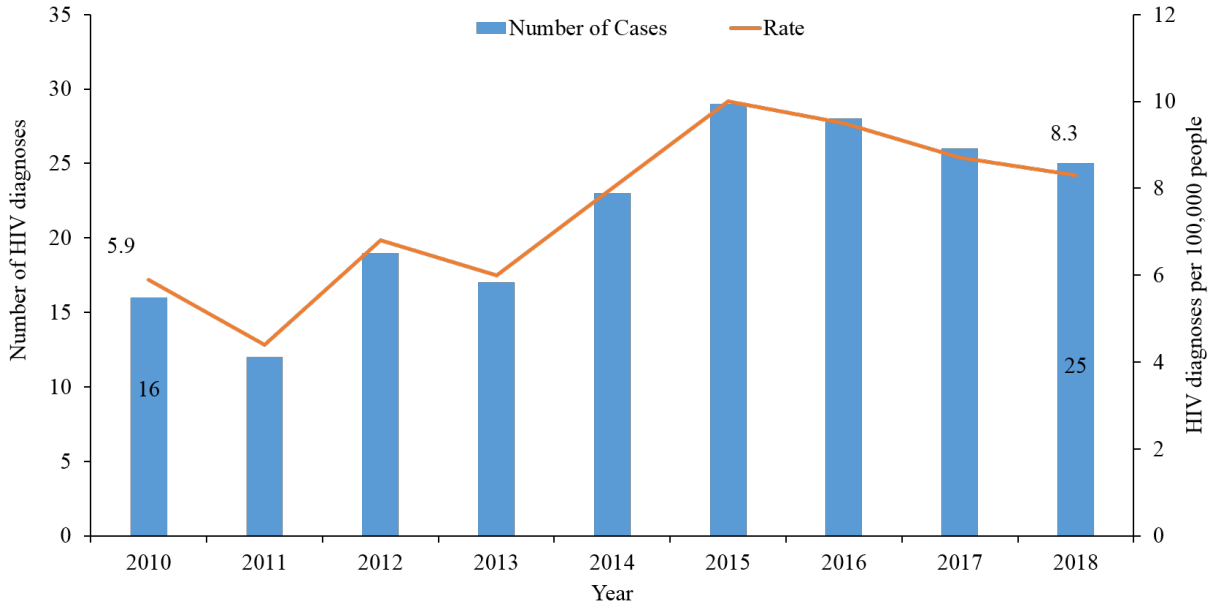
In 2018, there were 25 new HIV diagnoses among adolescents and young adults ages 13 to 24 years. Among all 195 adolescents and young adults diagnosed with HIV between 2010 and 2018, the majority were male (92%), Latinx (50%) and MSM (81%), including MSM who used injection drugs (4%). Compared to people newly diagnosed with HIV in 2018, diagnoses among adolescents and young adults (from 2010 to 2018) were more frequently male (92% vs. 89%) and MSM (81% vs. 68%). Adolescents and young adults diagnosed with HIV were less frequently associated with transmission through heterosexual contact (3% vs. 7%) (Table 4 and Table 1). The rates of HIV among those ages 13 to 24 steadily increased from 5.9 per 100,000 people in 2010 to 8.3 in 2018 (Figure 33). Young adults ages 20 to 24 living with HIV were disproportionately affected by STD co-infections compared to all other age groups, with over a quarter of this population (26%) co-infected with an STD in 2018 (Figure 22).

Table 4: Adolescents and young adults ages 13-24 with new HIV diagnosis by demographic and transmission characteristics, County of Santa Clara, 2010–2018[xvi]

Demographic Characteristic	Group	N	Percent (%)
Gender	Female	14	7
	Male	179	92
	Transgender	2	1
Race/Ethnicity	African American	15	8
	Asian/Pacific Islander	32	16
	Latinx	98	50
	White	44	23
	Other/Unknown	6	3
Transmission Category	MSM	150	77
	IDU	4	2
	MSM & IDU	8	4
	Heterosexual contact	5	3
	Other/Unknown	28	14
Overall	Total	195	100

[xvi] Source: The County of Santa Clara Public Health Department, eHARS data as of May 1, 2019, and are provisional.

Figure 33: Number and rate of newly diagnosed HIV among adolescents and young adults ages 13–24, County of Santa Clara, 2010 – 2018



Source: 1. Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional; 2. State of California, Department of Finance, E-2. California County Population Estimates and Components of Change by Year — July 1, 2010–2018, December 2018; 3. State of California, Department of Finance, State and County Population Projections by Race/Ethnicity and Age, 2010-2060, Sacramento, California, January 2018.

2.5 HIV among People Ages 50 and Older

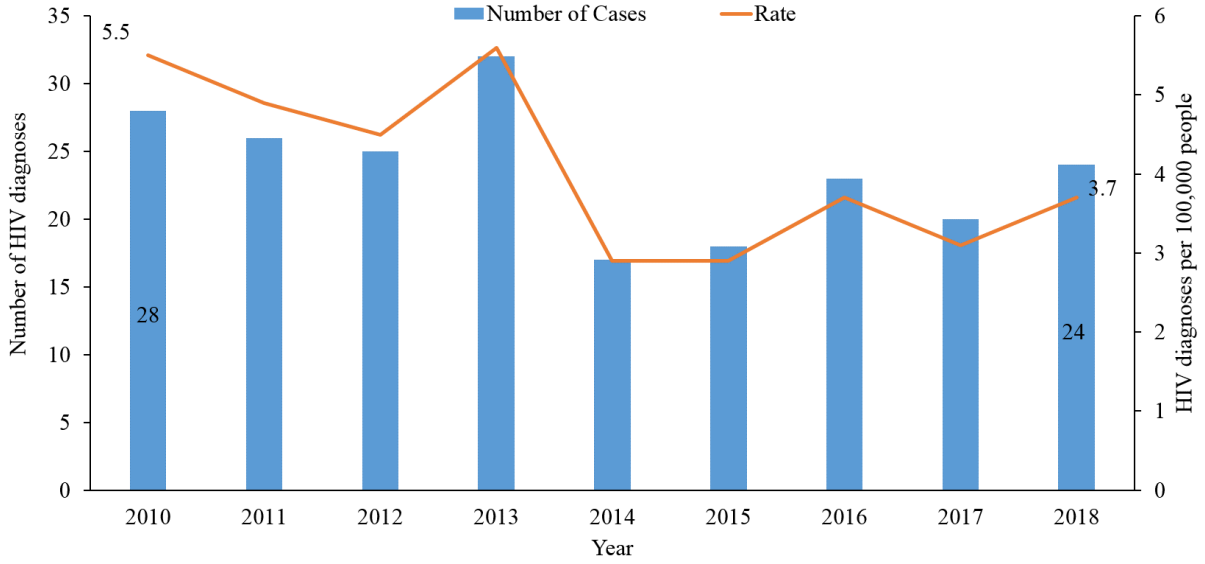
In 2018, there were 24 people ages 50 years and older who were newly diagnosed with HIV compared to 28 new HIV diagnoses in 2010. From 2010 to 2018, a total of 213 people diagnosed with HIV were 50 years or older at the time of diagnosis, 83% of whom were male. Compared to all new HIV diagnoses in 2018, those who were 50 years and older at time of diagnosis (diagnosed between 2010 and 2018) were characterized by higher proportions of whites (46% vs. 22%), and IDU (8% vs. 2%) but lower proportions of Latinx (26% vs. 51%), and MSM including IDUs (51% vs. 68%) (Table 5 and Table 1). The rate of HIV diagnoses among individuals ages 50 and older decreased by a third (33%), from 5.5 per 100,000 people in 2010 to 3.7 in 2018 (Figure 34). In 2018, approximately 5% of PLWH ages 50 and older experienced at least one STD (Figure 22).

Table 5: Adults ages 50 and older at time of HIV diagnosis by demographic and transmission characteristics, County of Santa Clara, 2010 – 2018[xvii]

Demographic Characteristic	Group	N	Percent (%)
Gender	Female	36	17
	Male	176	83
	Transgender	1	<1
Race/ethnicity	African American	16	8
	Asian/Pacific Islander	36	17
	Latinx	56	26
	White	97	46
	Other/Unknown	8	4
Transmission Category	MSM	101	47
	IDU	16	8
	MSM & IDU	9	4
	Heterosexual contact	19	9
	Unknown	68	32
Overall	Total	213	100

[xvii] Source: The County of Santa Clara Public Health Department, eHARS data as of May 1, 2019, and are provisional.

Figure 34: Number and rate of newly diagnosed HIV among people ages 50 and older, County of Santa Clara, 2010 – 2018

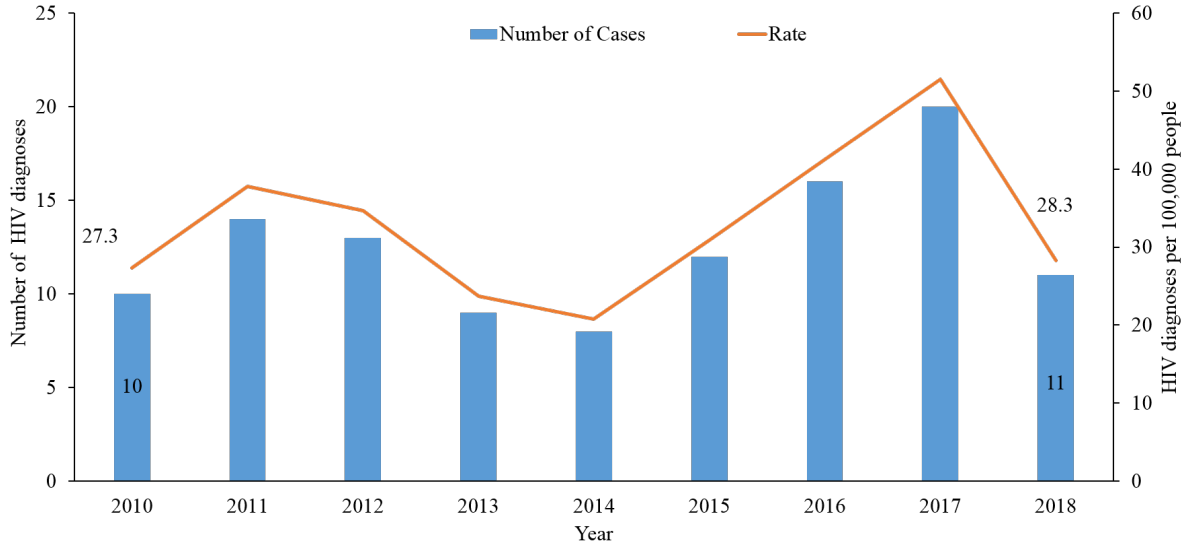


Source: 1. Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional; 2. State of California, Department of Finance, E-2. California County Population Estimates and Components of Change by Year — July 1, 2010–2018, December 2018; 3.State of California, Department of Finance, State and County Population Projections by Race/Ethnicity and Age, 2010-2060, Sacramento, California, January 2018.

2.6 HIV among African Americans

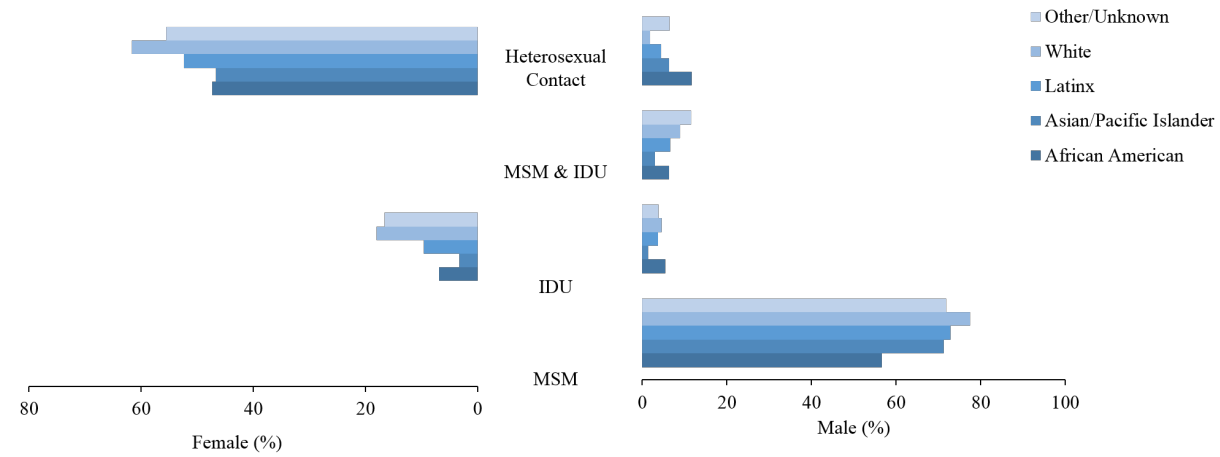
In 2018, 11 new cases of HIV were reported among African Americans in the County of Santa Clara. African Americans accounted for 7% of new HIV cases in the county even though they represent only 2% of the overall population of the county. The rate of HIV diagnoses among African Americans in 2018 was 28.3 per 100,000 people. This rate should be interpreted with caution in light of the small number of cases. African American males living with HIV reported the highest proportion of IDU (5%) and heterosexual contact (12%) as mode of HIV transmission compared to males in other racial/ethnic groups. Comparatively, African American females living with HIV were less likely to be impacted by IDU and heterosexual transmission compared to Latinx and white females (Figure 36). More than one in every three HIV diagnoses received by African Americans in the county was late in 2018 (Figure 12). In contrast, the prevalence of HIV and STD co-infection among African Americans was lower (4%) than all other racial/ethnic groups in 2018 (Figure 23).

Figure 35: Number and rate* of newly diagnosed HIV among African Americans, County of Santa Clara, 2010 – 2018



*Rates for 2010, 2013, 2014, and 2018 are not reliable due to small number of cases. Source: 1. Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional; 2. State of California, Department of Finance, E-2. California County Population Estimates and Components of Change by Year — July 1, 2010–2018, December 2018; 3. State of California, Department of Finance, State and County Population Projections by Race/Ethnicity and Age, 2010-2060. Sacramento, California, January 2018.

Figure 36: Percentage of transmission modes among people living with HIV, by sex and race/ethnicity, County of Santa Clara, 2018

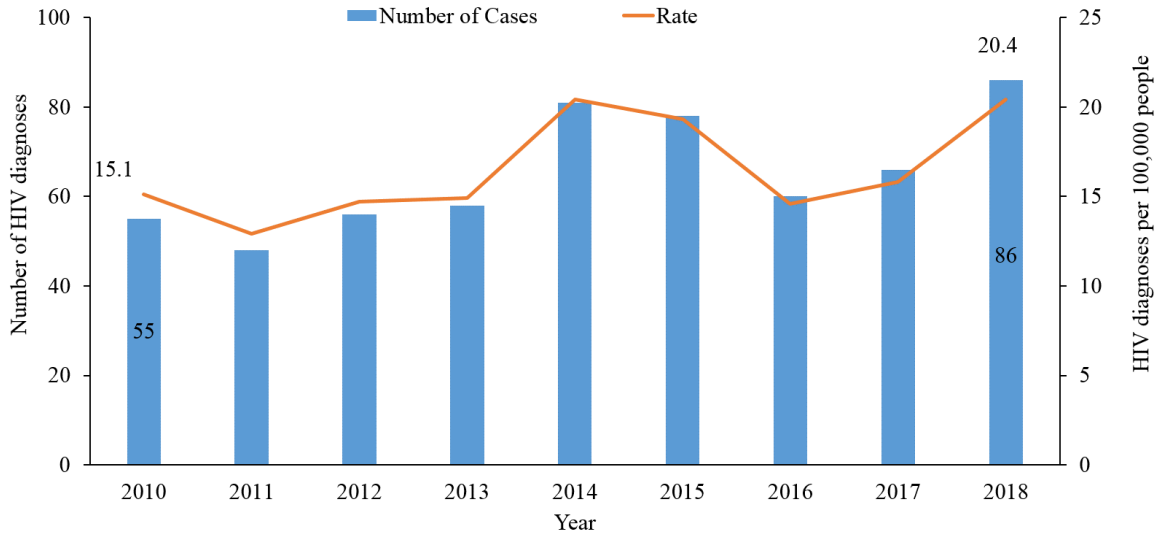


Source: Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional.

2.7 HIV among Latinx

In 2018, 86 new cases of HIV were reported among Latinx in the County of Santa Clara, which accounted for more than half (51%) of all new diagnoses. The rate of HIV diagnosis among Latinx increased from 15.1 per 100,000 people in 2010 to 20.4 in 2018 (Figure 37). The majority (80%) of Latinx males living with HIV identified as MSM, including those who also reported IDU; 4% reported IDU only; 5% identified heterosexual contact as mode of transmission. Latinx females were more frequently impacted by IDU and heterosexual transmission compared to African American and Asian/Pacific Islander females (Figure 36). In 2018, the prevalence of HIV and STD co-infection was highest (14%) among Latinx compared to all other racial/ethnic groups (Figure 23).

Figure 37: Number and rate of newly diagnosed HIV among Latinx, County of Santa Clara, 2010 – 2018



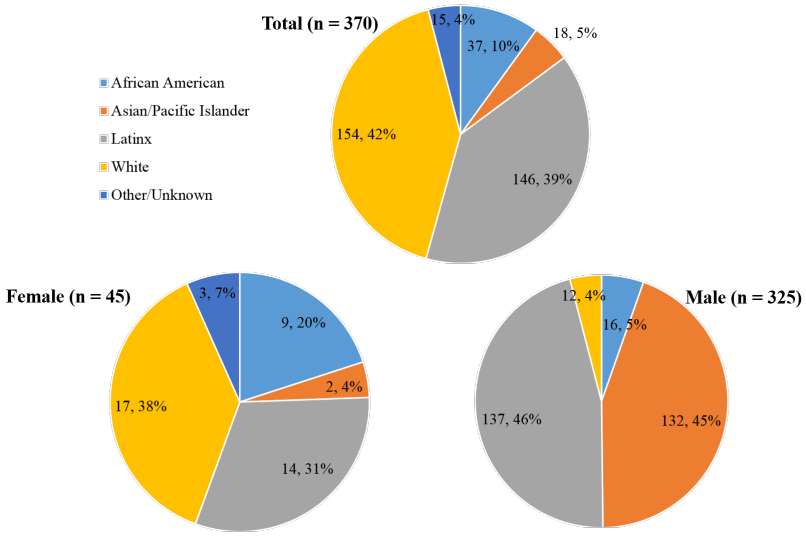
Source: 1. Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional; 2. State of California, Department of Finance, E-2. California County Population Estimates and Components of Change by Year — July 1, 2010–2018, December 2018; 3. State of California, Department of Finance, State and County Population Projections by Race/Ethnicity and Age, 2010-2060. Sacramento, California, January 2018.

2.8 HIV among People Who Inject Drugs

Among all PLWH in the County of Santa Clara County in 2018, 370 had a history of IDU. More than half (57%, 210) also identified as MSM (Table 2). Nearly 90% of PLWH reporting IDU were males. Overall, the majority of IDU cases were white (42%) and Latinx (39%); African Americans and Asian/Pacific Islanders accounted for 10% and 5%, respectively. Latinx male (46%) and white female (38%) cases most frequently reported having a history of IDU (Figure 38). Viral load suppression among PLWH who reported IDU varied by race/ethnicity and sex (Figure 39).

A time trend analysis was conducted to track changes in the number and proportion of HIV cases associated with injection drug use (both IDU only and MSM & IDU) in the County of Santa Clara (Figure 40). Before 1995, 18% of HIV cases were among people who injected drugs, which significantly decreased to 14% for the period from 1995-2005 and to 11% for period after 2005 until 2018 ($p<0.0001$). The county established the Needle Exchange Program (NEX) in 1994, which was the state's fourth such program at the time. In fiscal year 2018, approximately 8% (55 clients) of NEX Program participants reported having an HIV diagnosis[xviii]. The significant reduction in the percentage of HIV cases associated with injection drug use in the County of Santa Clara may demonstrate the effectiveness of the NEX program over the past 25 years in successful reduction of HIV transmission via sharing of needles and other injection equipment.

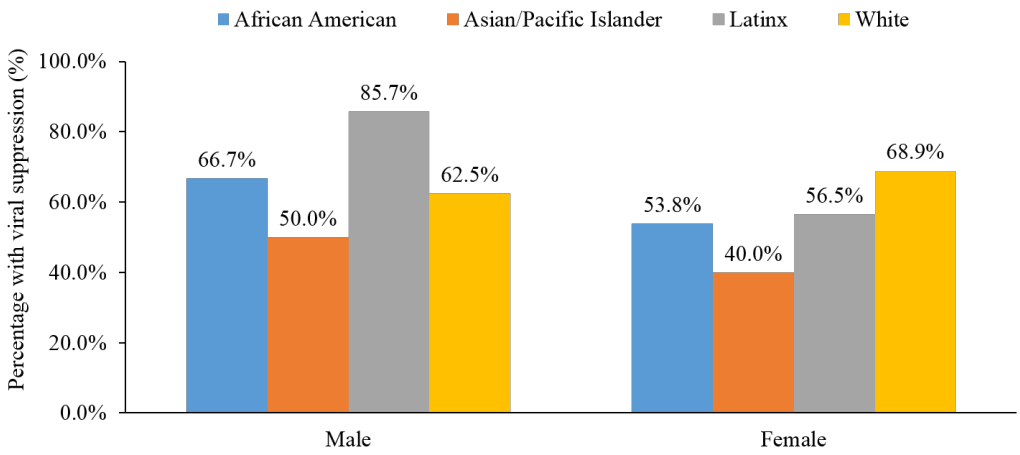
Figure 38: Injection drug use among people living with HIV, by sex and race/ethnicity, County of Santa Clara, 2018



Source: Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional.

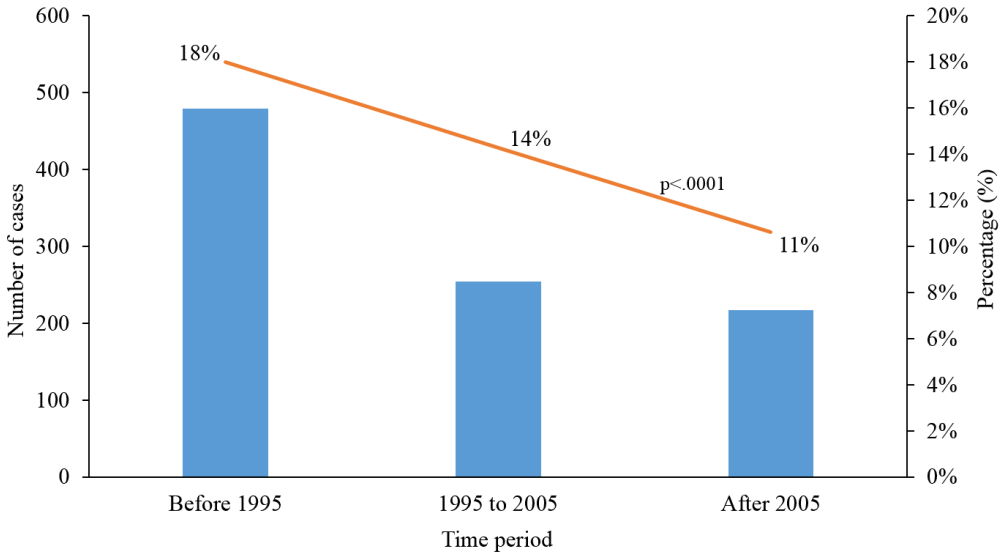
[xviii] County of Santa Clara Public Health Department, Needle Exchange Program Annual Report 2018.

Figure 39: Viral suppression among people living with HIV who reported IDU, by sex and race/ethnicity, County of Santa Clara, 2018



*People who were diagnosed with HIV through 2017 and alive in 2018, with most recent HIV viral load in 2018 less than 200 copies/ml. Source: Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional.

Figure 40: HIV diagnoses associated with Injection Drug Use (IDU only and MSM & IDU) before 1995, 1995 –2005, and after 2005, County of Santa Clara.

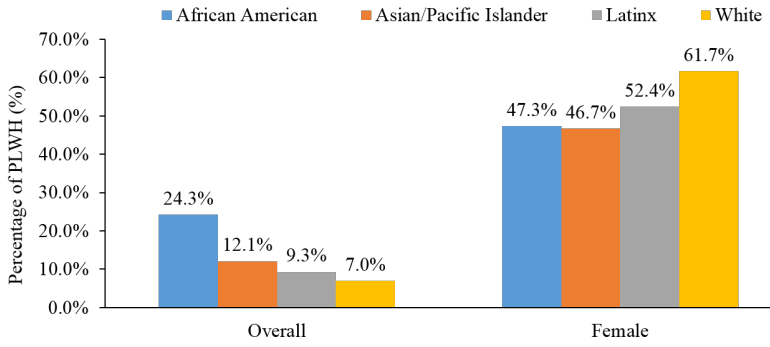


Source: Santa Clara County Public Health Department, eHARSdata as of May 1, 2019.

2.9 HIV among Heterosexuals

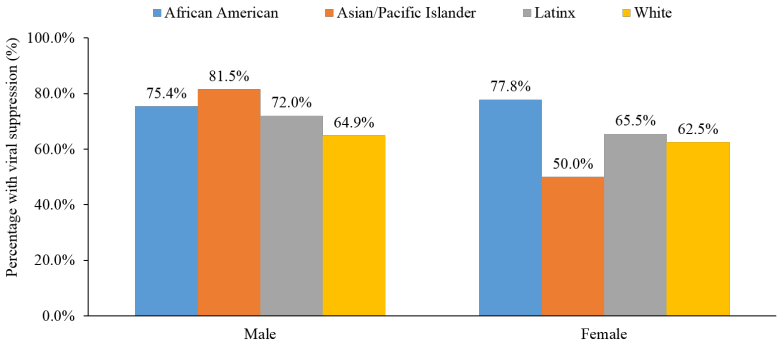
In 2018, 11% of PLWH in the County of Santa Clara reported having acquired HIV through heterosexual contact (Table 2). Overall, African Americans living with HIV were more likely to report transmission through heterosexual contact (24%), followed by Asian/Pacific Islanders (12%), Latinx (9%) and whites (7%). Fewer African American females (47%) and Asian/Pacific Islander females (47%) living with HIV were associated with heterosexual contact compared to Latinx (52%) and white females (62%) (Figure 41). However, these figures are likely underestimates for African American (43%) and Asian/Pacific Islander (45%) females who had the highest percentage of cases with unknown mode of transmission. Females who acquired HIV through heterosexual contact were less likely to achieve viral suppression than their male counterparts for all racial/ethnic groups except African Americans. The greatest gender disparity was observed among Asians/Pacific Islanders where the proportion of virally suppressed females (50%) was less than two-thirds of virally suppressed males (81%) (Figure 42).

Figure 41: Percentage of people living with HIV associated with heterosexual transmission, by race/ethnicity and sex, County of Santa Clara, 2018



Source: Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional.

Figure 42: Viral suppression among HIV cases associated with heterosexual transmission, by sex and race/ethnicity, County of Santa Clara, 2018



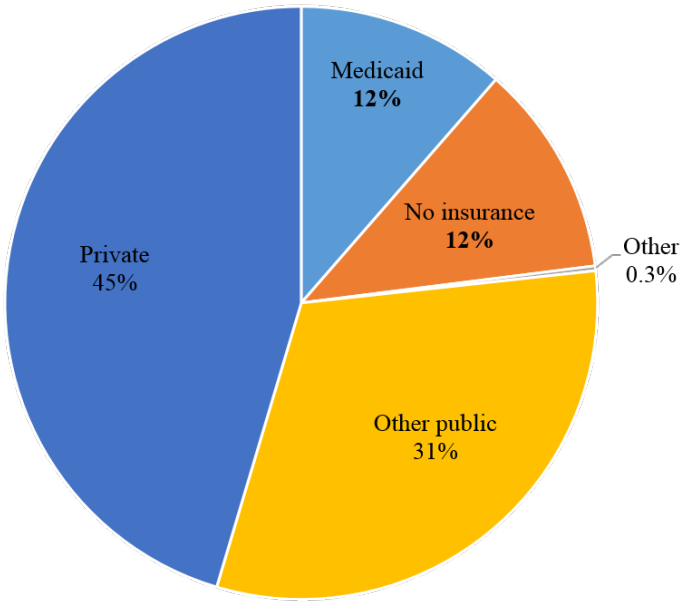
*People who were diagnosed with HIV through 2017 and alive in 2018, with most recent HIV viral load in 2018 less than 200 copies/ml.
Source: Santa Clara County Public Health Department, eHARS data as of May 1, 2019, and are provisional.

2.10 Health Insurance Status at HIV Diagnosis

Among 1,344 people who were diagnosed with HIV between 2010 and 2018, 1139 (85%) provided information regarding their health insurance status at the time of HIV diagnosis. Nearly half (45%) of those reported having private insurance (Figure 43). Medicaid accounted for about 12% of insurance coverage, and another 31% of cases reported having other types of public insurance. No Medicare coverage was reported. About 12% of people did not have any type of insurance coverage at the time of their HIV diagnosis.

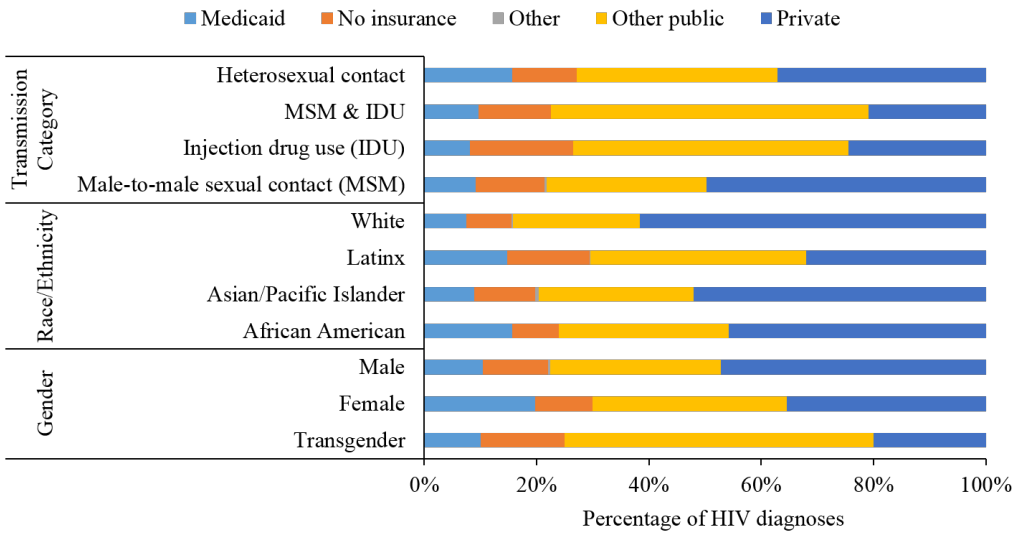
Figure 44 shows people who use injection drugs (18%), transgender (15%), and Latinx (15%) were three sub–groups most likely to lack insurance coverage at the time of HIV diagnosis. Transgender (55%) and MSM & IDU (56%) reported the highest percentage of public insurance other than Medicare and Medicaid. White (62%), Asian/Pacific Islander (52%), and MSM (50%) groups reported the highest percentages of private insurance coverage, whereas MSM & IDU (21%) and transgender (20%) groups reported the lowest percentages.

Figure 43: Health insurance at the time of HIV diagnosis, County of Santa Clara, 2010 – 2018 (N = 1139)



Source: Santa Clara County Public Health Department, eHARSdata as of May 1, 2019.

Figure 44: Health insurance at the time of HIV diagnosis, by demographic and transmission characteristics, County of Santa Clara, 2010 – 2018

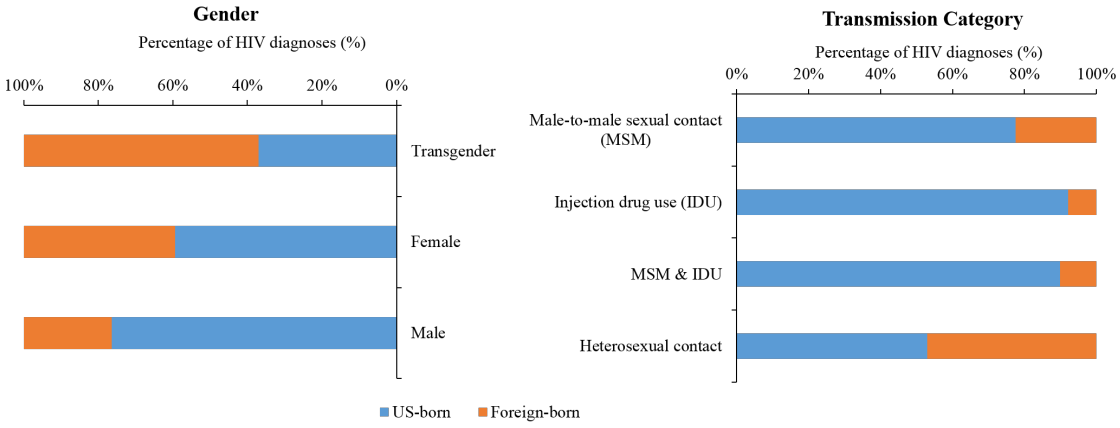


Source: County of Santa Clara Public Health Department, eHARS data as of May 1, 2019.

2.11 Country of Origin

Overall 95% of 6,524 people who were diagnosed with HIV provided valid information regarding their country of origin: including 4,584 US–born cases and 1,589 foreign–born cases (Data not shown). Compared to foreign–born cases, US–born HIV patients were more likely to be males, MSM, IDU, and MSM & IDU cases. Meanwhile, compared to US-born cases, foreign born cases had high proportions of females, as well as reported heterosexual transmission. (Figure 45).

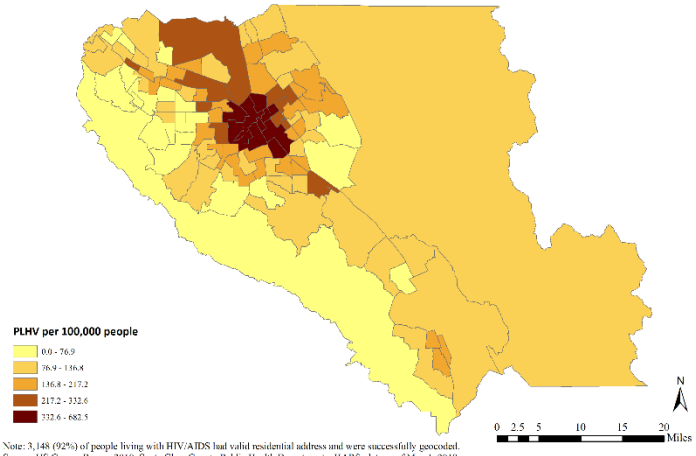
Figure 45: People diagnosed with HIV, by country of origin, gender, and transmission category, County of Santa Clara, 1983-2018



Source: County of Santa Clara Public Health Department, eHARS data as of May 1, 2019.

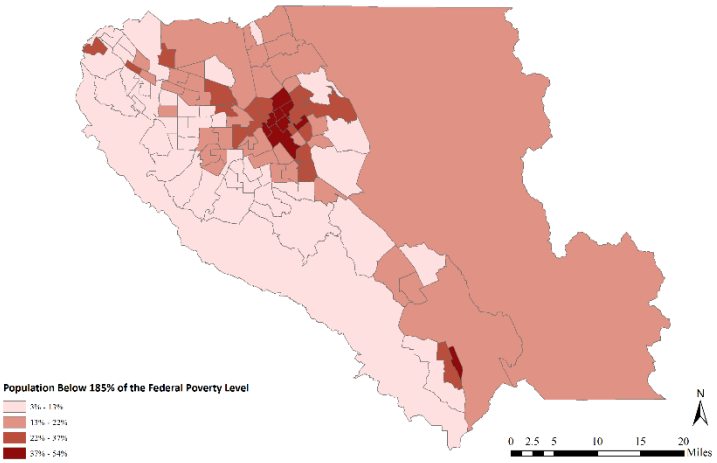
3. GEOGRAPHIC DISTRIBUTION OF HIV AND SOCIAL DETERMINANTS

Map 1: People Living with HIV/AIDS by Neighborhood, County of Santa Clara, 2018



Note: 3,148 (92%) of people living with HIV/AIDS had valid residential address and were successfully geocoded.
Source: US Census Bureau 2010; Santa Clara County Public Health Department, eHARS, data as of May 1, 2019.

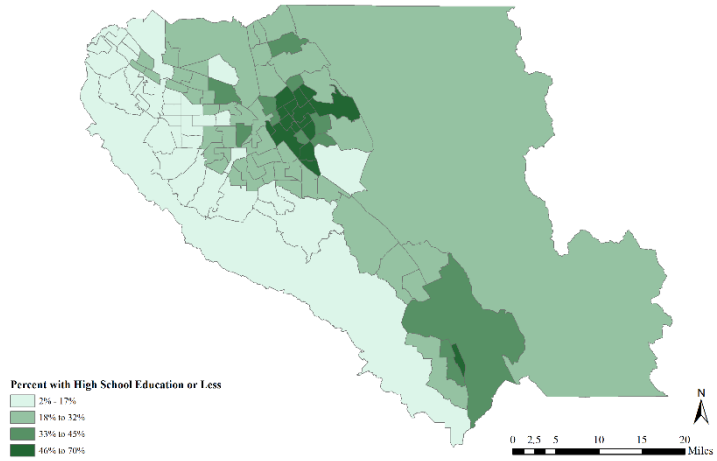
Map 2: Poverty, by Neighborhood, County of Santa Clara, 2013 - 2017



Source: U.S. Census Bureau; 2013-2017 American Community Survey 5-Year Estimates; generated by Sidhu M.; using American FactFinder; Accessed December 6, 2018.

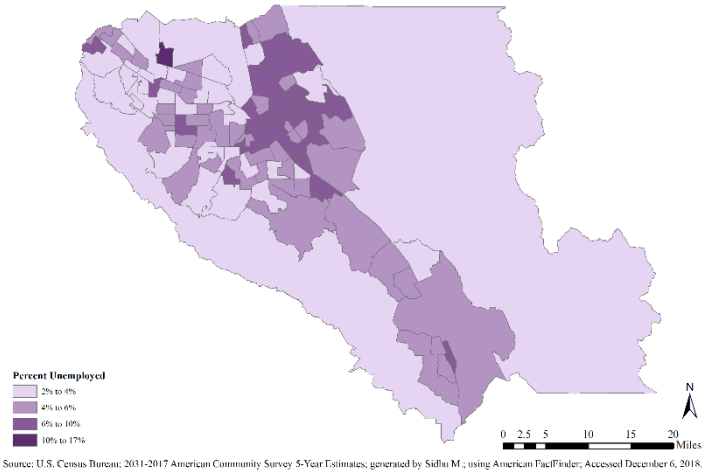
Geographic areas with high rates of people living with HIV/AIDS were concentrated in the north central part of the county, as well as in the more rural southern region (Map 1). Many of these areas of high HIV prevalence have been associated with higher poverty levels (Map 2), lower education attainment (Map 3), and higher rates of unemployment (Map 4).

Map 3: Education, by Neighborhood, County of Santa Clara, 2013 - 2017



Source: U.S. Census Bureau; 2013-17 American Community Survey 5-Year Estimates; generated by Sidhu M.; using American FactFinder; Accessed December 6, 2018.

Map 4: Unemployment, by Neighborhood, County of Santa Clara, 2013 - 2017



Source: U.S. Census Bureau; 2031-2017 American Community Survey 5-Year Estimates; generated by Sidhu M.; using American FactFinder; Accessed December 6, 2018.

4. COUNTY EFFORTS IN STOPPING THE HIV EPIDEMIC

4.1 Efforts and Achievements

The STD/HIV Prevention & Control Program of the County of Santa Clara Public Health Department is charged with promoting a comprehensive system of HIV and STD prevention and care for the county. To this end, all program efforts focus on five key strategies: improve quality and usability of collected data; improve PrEP and PEP utilization and access, increase and improve HIV and STD testing and integration, improve linkage and retention in HIV care, and increase general HIV education & awareness and reduce stigma around HIV, sexual orientation, and gender identity.

> "WE HAVE MADE INCREDIBLE PROGRESS IN THE COUNTY OF SANTA CLARA, BUT OUR WORK IS NOT DONE UNTIL HIV/AIDS IS A THING OF THE PAST."
>
> *---THE COUNTY OF SANTA CLARA DISTRICT 4 SUPERVISOR*
>
> KEN YEAGER

1) *Improve quality and usability of collected data.* Understanding the HIV epidemic in the county and responding with appropriate allocations of resources and targeted interventions relies on modern, nimble, and robust systems of data collection and evaluation that capture not only disease rates and demographic information, but also the complex needs of people living with and at risk for HIV. The FY17-18 budget allocated County General Fund for an additional Communicable Disease Investigator, hired in November 2017, who has contributed significantly to improving the speed and thoroughness of HIV and other STD investigation in the face of rising numbers of STD case reports. A new nurse manager who was hired to oversee the STD/HIV Client Services team has updated procedures for HIV surveillance, linkage to HIV care, HIV and STD testing, and implemented a novel data-to-care HIV outreach service. This service utilizes monthly data sets provided by the state identifying individuals out of HIV care to investigate their barriers to care and send social workers to the field to connect with clients and relink to HIV care. During a one-year period, from August 2018 to July 2019, the team followed up with 213 patients with HIV infection who were out of care, including 23 newly diagnosed patients (Additional details are available in *4) Improve linkage to and retention in HIV Care*.)

2) *Improve PrEP and PEP utilization and access.* New opportunities to enhance access to these powerful medications for HIV prevention came first in the form of County General Fund allocations for the Getting To Zero (GTZ) initiative[xix]. This funding was used to hire and train the

[xix] Getting to Zero HIV (GTZ) Santa Clara County-Silicon Valley is a four year initiative that will strive for Zero New HIV Infections, Zero Deaths related to HIV/AIDS, and Zero HIV/AIDS Stigma and Discrimination in the County of Santa Clara. http://gettingtozeroscc.org/

county's first PrEP navigation specialist and support the initiative's creation of a PrEP/PEP Action Team. Since its creation in January 2017, the PrEP navigator program has received 328 referrals resulting in 235 clients successfully accessing PrEP and 26 completing PEP. The STD/HIV Program also completed 20 provider detailing this year, sending expert health education specialists to clinical sites to assess barriers to PrEP and PEP prescribing, offer personalized resources and distribute 22 PrEP toolkits. In FY18-19, a total of 29 PrEP/PEP trainings were conducted reaching 575 clinicians, staff, and providers from 12 disciplines. In part due to these provider outreach efforts, this year 27 new provider sites posted their availability to offer PrEP on the website www.PleasePrEPMe.org. The STD/HIV Controller also provided technical assistance to Santa Clara Valley Medical Center to build a PEP order set for the County's electronical medical record system to facilitate PEP delivery in County emergency and urgent care sites.

Additional funding was allocated by the Board of Supervisors in the FY17-18 budget to support the addition of PrEP and PEP services to the Crane Center (County HIV/STI Clinic). This additional service, and collaboration with the Public Health Pharmacy to include pharmacist-delivered PrEP and PEP care in addition to clinician-delivered care, has improved the PrEP delivery capacity of the County and Health Department. For instance, the percentage of PrEP navigation clients successfully accessing PrEP prescriptions increased from 37% between October 2016 and June 2017 to 69% in the in the following six months (July 2017-December 2017).

Finally, the General Fund allocation for GTZ and supplemental funding for social marketing in FY17-18 enabled two extensive social marketing campaigns, aimed to inform young Latinx men who have sex with men about the option of PrEP to enhance HIV prevention. The first campaign, "Get Liberated," resulted in over 2.4 million media impressions, and the second, "PrEP is for…" more than 45 million. A third PrEP Awareness campaign specific to African-American residents, conducted through a mini-grant from GTZ County General Fund to the Roots Clinic, reached over 17,000 views. In FY18-19, another social marketing campaign titled "I Became Untransmittable" generated an estimated 58,731,202 impressions. Additional community activities that included PrEP and PEP promotion enabled by County General Fund and state grant funding resulted in 41 community events and 10,415 community members reached between February 2017 and July 2018.

3) *Increase and improve HIV and STD testing and integration.* This year brought new efforts to provide STD and HIV testing to all county residents, train providers in guideline-based practices, measure achievements, and integrate services. A new policy and procedure to enable field-delivered testing was finalized in August 2017 and piloted at the Silicon Valley Pride and Jubilee events, resulting in over 110 clients screened for HIV and other STDs. These testing services were also added to the Needle Exchange Program to reach clients with barriers to testing related to injection drug use and/or homelessness. Through coordination by the GTZ collaborative and related activities, 54 trainings were conducted for medical providers and staff, students, and

other community members, all addressing the importance of STD and HIV testing. The STD/HIV Controller developed and provided training tools to SCVMC and two additional County emergency departments to enable and enhance access to HIV testing in emergency care settings.

4) *Improve linkage to and retention in HIV Care.* Through Ryan White funding, County General Fund, and the work of County and non-County care collaborators, the County has long had a robust, high-quality, well-integrated system of care for PLWH. In FY17-18, with the hiring of a new nurse manager, and Positive Connections being awarded Outreach funds (through Ryan White Part B Minority AIDS Initiative "MAI"), Positive Connections launched a data-to-care project whereby staff work with communicable disease investigators, community-based organizations, and clinics to provide real time outreach to clients identified as out of care using monthly surveillance data provided by the state. Positive Connections collaborates closely with the County's HIV surveillance program, PACE (County operated and Ryan White funded HIV clinic), Valley Homeless Healthcare Program, and other California counties (San Francisco and Stanislaus).

Positive Connections' care linkage and outreach services coupled with highly intensive case management is primarily geared toward hard to reach and/or hard to serve clients such as homeless, dual/triple diagnosed HIV positive clients with substance abuse and/or mental health, ultra-low income, undocumented, and underserved minority clients (i.e. Latinx, African American, and Asian/ Pacific Islanders). During a one-year period, from August 2018 through July 2019, PC investigated 213 patients with HIV infection who were out of care, including 23 who were newly diagnosed. Among patients who were followed-up, 53 (25%) were already in care, 48 (23%) were out of jurisdiction, 4 (2%) were deceased, 64 (30%) were out of reach, and 41 (19%) were confirmed out of care. Among patients who were confirmed to be out of care, 16 (7%) were successfully re-engaged in care, 9 (4%) declined services, and the remaining 16 (8%) are currently in the process of being linked back to care.

5) *Increase general HIV education & awareness and reduce stigma around HIV, sexual orientation, and gender identity.* In collaboration with the County's Office of LGBTQ Affairs, the GTZ initiative supported nine mini-grantees to conduct unique projects to increase HIV education and awareness and reduce stigma around HIV, sexual orientation, and gender identity. In FY18-19, these efforts led to 3,607 visits to LGBTQ Youth Space Drop-in Center, and the hiring of 8 youth ambassadors trained 10 sessions who developed and distributed 2,500 GTZ-related materials to approximately 1,030 individuals. Mini-grantees also reached 934 college students through 17 campus events and 11 peer education workshops, 653 views of a telenovela treating on PrEP and HIV stigma in a Latinx community, and a theater production aimed at increasing STI/HIV testing and access to PrEP/PEP as well as reducing stigma. Lastly, mini-grantees were funded to establish and implement universal opt-out HIV/STD screening and testing at a few health centers and clinics throughout the County including Roots Community Health Center and School Health Clinics.

Additional grant-funded work supported contractors in providing curricula, training, and technical assistance to County schools and districts to bring them into compliance with the California Healthy Youth Act, a 2016 law requiring comprehensive sexuality education in middle and high school that specifically supports PrEP, includes all sexual and gender identities, and addresses HIV-related stigma.

4.2 Future Plans and Challenges

To improve and sustain the extensive work described above, several new initiatives are planned or underway for the coming year. New one-time funding opportunities will be leveraged to establish rapid point-of-care syphilis testing in outreach settings and other instances where traditional phlebotomy is limited - such as Alternate Test Sites for HIV. Sustainability of this service may require additional investment. These sites are also in the process of adding PrEP navigation to testing services, so HIV tests routinely are accompanied by comprehensive screening and linkage to prevention and care services. As described above, a new system to identify and re-engage PLWH who may be out of care has been successfully piloted and will continue to be implemented throughout the coming year.

Provider detailing, which successfully enhanced PrEP and PEP access, will continue to be adapted to improve detection, reporting, and treatment of other STDs. Grant funding will be used to expand the work in enhancing access to high quality comprehensive sexuality education in the county. Innovative social media strategies are planned through GTZ and other funding to enhance provider capacity for PrEP and PEP care and raise community awareness of the powerful stigma-fighting message that Undetectable = Untransmittable: someone with HIV on medications with a suppressed viral load has essentially zero risk of passing HIV to a sexual partner. Work continues to build sustainability of the GTZ initiative through a planned grant-funded extension of the GTZ work with an action research and evaluation partner to improve communication between GTZ community partners. Finally, new in-kind support has been offered from the GTZ backbone organization to match the County General Fund for GTZ mini-grants, with plans to be used to pilot building a center of excellence in HIV and STD screening, prevention, and linkage to care at one clinical care site in the County.

5. TECHNICAL NOTES

This report presents information extracted from the national enhanced HIV/AIDS reporting system (eHARS), which includes HIV cases reported to the County of Santa Clara Public Health Department (SCCPHD) through May 1, 2019. As such, the data may not represent HIV-infected residents who have not been tested or who were tested at a time when the infection could not be detected. Consistent with national reporting standards, individuals diagnosed with HIV infection include persons classified as stage 3 (AIDS).

Given the small number of HIV diagnoses among children under 13, most data presented in this report are for adults and adolescents ages 13 and older.

Rates per 100,000 people were calculated for (1) the numbers of HIV diagnoses, (2) the numbers of deaths of persons diagnosed with HIV, and (3) the numbers of PLWH. Due to instability, rates that are based on numbers less than 12 should be interpreted with caution. Population denominators for calculating rates were based on California County Population Estimates and Components of Change by Year — July 1, 2010–2018 and State and County Population Projections by Race/Ethnicity and Age, 2010-2060 (for data from 2010-2016) from the California Department of Finance.

The analysis on HIV infection among MSM includes all cases of men who report sexual contact with male partners, including men who have sex with both men and women, as well as men who report both sex with male partners and injection drug use as risk factors for HIV acquisition (MSM & IDU).

Data for recent years should be interpreted with caution due to reporting delay, particularly for 2018. Reporting delay occurs when HIV diagnoses or deaths are not reported to SCCPHD in a timely manner. Analysis of HIV deaths was restricted to those diagnosed through 2017 to allow at least 12 months for deaths to be reported to SCCPHD. For 3-year survival of AIDS cases, the analysis was limited to persons diagnosed with AIDS through 2015.

STD co-infections among PLWH were identified by matching the list of PLWH who were known to be residents of the County of Santa Clara based on their current address and the list of newly reported STD cases in the County of Santa Clara in 2018. Only chlamydia, gonorrhea, and syphilis were included as STDs in this report. For our analysis, early syphilis cases include primary, secondary, and early non-primary non-secondary cases. Similarly, other syphilis cases include late syphilis or cases of unknown duration.

SCCPHD collects information on gender identity for HIV cases when it is available. The majority of transgender HIV cases reported in the county are trans female (male-to-female). Due to the small number of reported trans male cases (female-to-male), data are combined with trans female cases to protect their confidentiality. Our report likely underestimates the number of

transgender persons affected by HIV because data on gender identity collected for HIV case reporting is limited.

HIV data for the County of Santa Clara prior to 2017 lacks information distinguishing sex assigned at birth (based on genetics, hormones, and/or physical features) from gender identity. In this report, HIV cases are classified as male, female, or transgender. However, this classification conflates the concepts of sex and gender while limiting the inclusion of the full spectrum of gender identity and sexual orientation. Therefore, data presented elsewhere in this report that describe PLWH by gender or sex (including the transmission category MSM) prior to 2017 overlooks the significant impact of HIV on transgender and non-binary populations.

Additionally, data stratified by demographic and transmission characteristics for transgender population should be interpreted with caution due to small sample sizes. For our analysis of transmission risks among transgender HIV diagnoses, we combined transmission categories of MSM and heterosexual contact into a single category "sexual contact", and MSM & IDU into "sexual contact & IDU." Further analyses as well as improved surveillance efforts are needed to generate reliable estimates that can more accurately describe the disproportionate burden of HIV on transgender and non-binary people.

6. ABBREVIATIONS

AIDS: Acquired Immune Deficiency Syndrome

CDC: Centers for Disease Control and Prevention

eHARS: Enhanced HIV/AIDS Reporting System

GTZ: Getting To Zero

HIV: Human Immunodeficiency Virus

IDU: Injection Drug Use

LGBTQ: Lesbian, Gay, Bisexual, Transgender, and Queer

MSM: Men Who Have Sex with Men

MSM & IDU: Men Who Have Sex with Men Who Also Use Injection Drugs

PLWH: People Living With HIV

PrEP: Pre-Exposure Prophylaxis

PEP: Post-Exposure Prophylaxis

RFP: Request for Proposal

SCCPHD: County of Santa Clara Public Health Department

STD: Sexually Transmitted Diseases

STI: Sexually Transmitted Infections