Behavioral and Clinical Characteristics of People Living with Diagnosed HIV in California

2015-2017

California Department of Public Health
Center for Infectious Diseases
Office of AIDS
Medical Monitoring Project

OFFICE OF AIDS
California Department of Public Health

MEDICAL MONITORING PROJECT

June 2020

Acknowledgments

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Note: The appendix for this report is a separate document and can be found at: https://www.cdph.ca.gov/Programs/CID/DOA/Pages/OAsre.aspx

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1. Background

The California Medical Monitoring Project (MMP) is an HIV surveillance activity that collects information about behavioral and clinical characteristics from Californians living with diagnosed HIV. The California MMP is part of a cross-sectional, nationally representative, complex sample survey that the Centers for Disease Control and Prevention (CDC) funds in multiple project areas throughout the United States and Puerto Rico [1]. Los Angeles and San Francisco Counties conduct MMP surveillance separately in their jurisdictions and the California Department of Public Health Office of AIDS (OA) conducts MMP surveillance throughout the rest of California.

In 2009, the CDC recognized that there was a lack of representative data about people living with HIV and implemented MMP. Through 2014, MMP used a probability sample of people living with HIV who were receiving HIV medical care [1]. The CDC revised the sampling method in 2015 to include all people living with diagnosed HIV, regardless of whether they were in care. Using the revised sampling method, OA behavioral and clinical surveillance staff collected the data presented in this report between June 2015 and May 2018. The OA MMP staff locate, recruit, and conduct interviews by phone or in-person with sampled participants and abstract information from their medical records from the two years prior to the interview date.

At the national level, MMP data complement National HIV Surveillance System (NHSS) data by providing detailed information about demographics, general health, HIV care, ancillary services use, sexual behaviors, mental health, substance use, discrimination, and HIV stigma among people living with diagnosed HIV (PLWDH). The MMP estimate of percentage of PLWDH who experienced homelessness in the past year serves as a progress indicator for the National HIV/AIDS Strategy (NHAS) for the United States [2]. Experience of HIV stigma among PLWDH, which MMP measures, is under development as an NHAS progress indicator [3].

In California, OA uses MMP data to monitor progress towards goals described in "Laying a Foundation for Getting to Zero: California's Integrated Surveillance, Prevention, and Care Plan" of 1) increasing the percentage of sexually active PLWDH in care who are tested at least once a year for syphilis, gonorrhea, and chlamydia to at least seventy-five percent and 2) reducing the percentage of Californians living with diagnosed HIV infection who are homeless to less than five percent [4]. California MMP data also help to inform planning and decision-making for HIV and AIDS prevention and care programs and will guide development of OA's "Ending the Epidemics Strategic Plan."

As of December 31, 2017, 135,082 PLWDH were residing in California, a prevalence of 340.3 per 100,000 population [5]. The rate of new HIV diagnoses was 12.1 per 100,000 population, reflecting a 2.4% decrease from 12.4 per 100,000 population in 2013. About 74% of PLWDH in California were receiving HIV care in 2017 and 63% had achieved viral suppression. California's Integrated Plan objectives include increasing the percentage of PLWHD in care to a minimum of 90% and the rate of viral suppression to at least 80% [4].

2. Methods

MMP is a cross-sectional survey that, since 2015, has used stratified, 2-stage sampling to achieve a nationally representative sample of PLWDH in the United States and Puerto Rico [1]. In the first sampling stage, 23 project areas from 16 states and Puerto Rico were selected, including Los Angeles, San Francisco, and the California Project Area. The second sampling stage is carried out annually to select adults ages 18+ with diagnosed HIV infection from the NHSS. This report includes California Project Area MMP data from three annual cycles: 2015, 2016, and 2017. The sample for each annual cycle is drawn on December 31 of the prior year, data collection begins on June 1, and all cycle activities are completed by May 31 of the following year. For example, the sample for the 2015 cycle was drawn on December 31, 2014, data collection began on June 1, 2015, and the cycle ended on May 31, 2016.

Eligibility

People living in California (excluding Los Angeles and San Francisco) who, as of December 31 of the prior year, had received an HIV diagnosis and were at least 18 years old were eligible to be sampled for the California Project Area MMP.

Recruitment and Informed Consent

Staff contacted sampled people by phone and mailed letters. At both the national and local levels, MMP operated as a surveillance activity under a non-research determination. All MMP participants provided informed consent prior to the interview and signed a release of information granting access to their medical records.

Interviews

Trained Behavioral and Clinical Surveillance (BCS) staff conducted computer-assisted, structured interviews with participants either in-person or by phone. Interviews lasted approximately 1 hour and gathered information on participant demographics, clinical characteristics, health care and auxiliary services use, sexual behaviors,

mental health, and substance use. In-person interviews took place at participants' homes, private areas of clinics and doctor's offices, and private spaces within community-based settings such as public library conference rooms. Participants who completed interviews received tokens of appreciation in the form of $50 chain store gift cards.

Medical Record Abstraction

Staff obtained interview participants' medical records for the two years prior to the interview. Trained BCS staff abstracted information on participant demographics, HIV diagnosis and clinical care, AIDS-related diagnoses, antiretroviral and other medication prescriptions, co-morbidities, health care use, and HIV-related laboratory test results.

Data Management and Analysis

BCS staff encrypted computer-assisted interview files and transferred them to CDC using a secure data portal. BCS staff entered medical record abstraction (MRA) data into a secure, encrypted online database accessible to CDC. Staff at CDC cleaned the data and developed statistical weighting variables before returning interview and MRA datasets to OA through secure file transfer.

Estimates presented in this report are weighted to account for probability of selection, non-response, and multiplicity (rare instances in which a sampled participant has one or more duplicate NHSS records) [1]. Estimates with a coefficient of variation ≥0.30, a denominator sample size <30, an absolute CI width ≥0.30, or an absolute CI width between 0.05 and 0.30 and a relative CI width >130% are marked with an asterisk and should be interpreted with caution. Percentages may not sum to 100 and frequency numbers may not sum to the total N due to rounding and missing data in some categories.

Participant Response Rates

For each annual cycle, the California Project Area received a sample of 500 PLWDH. In 2015, 176 (35.2%) sampled persons completed interviews (Table 2.1). In 2016, 221 (44.2%) sampled persons completed interviews. In 2017, 229 (45.8%) sampled persons completed interviews. The combined 2015-2017 estimates reflect data from 626 participants out of 1500 sampled persons, resulting in an overall response rate of 41.7%. Tables and text in this report refer to combined 2015-2017 MMP data unless otherwise noted. Appendix tables contain estimates for 2015, 2016, and 2017 data individually.

2.1. Participant Response Rates - Medical Monitoring Project, CA, 2015-2017			
Year	**# Sampled**	**# Participating**	**% Participating**
2015	500	176	35.2%
2016	500	221	44.2%
2017	500	229	45.8%
TOTAL	**1,500**	**626**	**41.7%**

3. Population Characteristics

Most California Project Area PLWHD were men (86%), 13% were women, and less than 1% were transgender (Table 3.1). More than half reported being lesbian or gay (58%), 28% heterosexual or straight, and 10% bisexual. About 40% were of non-Lantinx white race/ethnicity, 34% were Latinx, 16% were black/African-American and 7% reported multiple racial identities. About 3% were Asian, American Indian/Alaska Native or Native Hawaiian/other Pacific Islander. About two

3.1. Demographics - Medical Monitoring Project, CA, 2015-2017

	Number[a]	Percentage[b]	95% CI[c]
Gender			
Male	524	86.1%	83.2-89.0
Female	98	13.4%	10.5-16.2
Transgender[d]	<5 obs.	0.5%*	0.0-1.1
Sexual Orientation			
Lesbian or gay	357	57.6%	53.0-62.1
Heterosexual or straight	180	28.2%	24.2-32.3
Bisexual	59	10.1%	7.3-12.9
Other	23	4.1%	2.1-6.1
Race/Ethnicity			
American Indian/Alaska Native	7	1.1%*	0.1-2.0
Asian	13	2.3%*	0.9-3.6
Black/African American	104	16.1%	12.8-19.3
Latinx[e]	208	33.9%	29.5-38.3
Native Hawaiian/Other Pacific Islander	<5 obs.	0.2%*	0.0-0.4
White	250	39.9%	35.4-44.5
Multiple races	42	6.6%	4.4-8.9
Age at Time of Interview (yr)			
18–24	10	1.6%*	0.4-2.7
25–34	77	12.9%	9.7-16.2
35-44	107	18.1%	14.4-21.8
45-54	207	32.9%	28.6-37.1
≥55	225	34.5%	30.2-38.8
Education			
Less than high school	82	12.6%	9.7-15.5
High school diploma or GED	129	20.5%	16.9-24.2
More than high school	413	66.9%	62.6-71.1

3.1. Demographics - Medical Monitoring Project, CA, 2015-2017 *(cont.)*

	Number[a]	Percentage[b]	95% CI[c]
Country or Territory of Birth			
United States or U.S. territory	480	77.0%	73.2-80.8
Foreign born	143	23.0%	19.2-26.8
Time Since HIV Diagnosis (yr)			
<5	106	18.4%	14.7-22.1
5–9	124	20.4%	16.6-24.2
≥10	395	61.2%	56.6-65.7
TOTAL	**626**	**100.0%**	---

Abbreviations: CI, confidence interval; GED, general educational development. Note: Estimates with a coefficient of variation ≥0.30, a denominator sample size <30, an absolute CI width ≥0.30, or an absolute CI width between 0.05 and 0.30 and a relative CI width >130% are marked with an asterisk and should be interpreted with caution. [a] Numbers are unweighted. [b] Percentages are weighted percentages. [c] CIs incorporate weighted percentages. [d] People were classified as transgender if sex at birth and gender reported by the person were different, or if the person chose "transgender" in response to the question about self-identified gender. [e] Latinx people might be of any race. Persons are classified in only one race/ethnicity category.

thirds (67%) were ages 45 and older and about 15% were under the age of 35. Nearly one quarter (23%) reported having been born in a country other than the United States. The majority (61%) had been living with diagnosed HIV for 10 or more years at the time of the interview, 20% for five to nine years, and 18% for fewer than five years.

In the 12 months prior to the interview, 12% of PLWDH had experienced homelessness, 22% had gone without food due to lack of money, and 28% were living at or below the federal poverty threshold (Table 3.2). Thirty-nine percent reported any disability and about one quarter (27%) received social security disability insurance (SSDI).

More than half (58%) were employed or retired and 40% were unemployed. Two thirds reported a combined yearly household income below $40,000.

Nearly all PLWDH reported having health insurance or coverage for medications in the 12 months prior to the interview (Table 3.3). Half (49%) received medication coverage through the Ryan White or AIDS Drug Assistance Programs, 54% through Medicaid, 37% through private health insurance, 32% through Medicare, 11% through other public insurance, and 6% through Tricare/CHAMPUS or the Veterans Administration.

3.2. Characteristics, Past 12 Months - Medical Monitoring Project, CA, 2015-2017

	Number[a]	Percentage[b]	95% CI[c]
Homeless at Any Time, Past 12 Months[d]			
Yes	59	11.5%	8.2-14.8
No	565	88.5%	85.2-91.8

3.2. Characteristics, Past 12 Months - Medical Monitoring Project, CA, 2015-2017 (cont.)

	Number[a]	Percentage[b]	95% CI[c]
Incarcerated > 24 Hours, Past 12 Months			
Yes	21	4.0%	2.1-6.0
No	603	96.0%	94.0-97.9
Any Disability[e]			
Yes	261	38.5%	34.1-42.9
No	362	61.5%	57.1-65.9
Received Supplemental Security Income (SSI)			
Yes	113	17.8%	14.4-21.3
No	507	82.2%	78.7-85.6
Received Social Security Disability Insurance (SSDI)			
Yes	172	26.9%	22.9-30.9
No	451	73.1%	69.1-77.1
Went Without Food Due to Lack of Money			
Yes	128	21.7%	17.7-25.6
No	496	78.3%	74.4-82.3
Employment Status[f]			
Employed	288	46.4%	41.8-51.0
Unemployed	252	39.5%	35.0-43.9
Student	15	2.5%	1.2-3.7
Retired	68	11.7%	8.7-14.7
Combined Yearly Household Income (U.S.$)[g]			
0–19,999	260	42.0%	37.4-46.6
20,000–39,999	147	25.4%	21.2-29.5
40,000–74,999	107	17.6%	14.0-21.1
≥75,000	98	15.1%	11.9-18.2
Poverty Guidelines[h]			
Above poverty threshold	437	72.3%	68.2-76.4
At or below poverty threshold	175	27.7%	23.6-31.8
TOTAL	**626**	**100.0%**	**---**

Abbreviations: CI, confidence interval; U.S.$, U.S. dollar. [a] Numbers are unweighted. [b] Percentages are weighted percentages. [c] CIs incorporate weighted percentages. [d] Living on the street, in a shelter, in a single-room–occupancy hotel, or in a car. [e] Includes physical, mental, and emotional disabilities. [f] Employed includes employed for wages, self-employed, or homemaker. [g] Income from all sources, before taxes, in the last calendar year. [h] Poverty guidelines as defined by Federal Health and Human Services.

3.3. Health Insurance Coverage, Past 12 Months - Medical Monitoring Project, CA, 2015-2017

	Number[a]	Percentage[b]	95% CI[c]
Health Insurance or Coverage for Medications[d]			
Yes	621	99.1%	97.9-100.0
No	<5 obs.	0.9%*	0.0-2.1
Type of Health Insurance or Coverage for Medications:			
Ryan White or ADAP			
Yes	316	48.7%	44.1-53.4
No	299	51.3%	46.6-55.9
Medicaid			
Yes	343	53.5%	48.8-58.1
No	279	46.5%	41.9-51.2
Private Health Insurance			
Yes	240	37.1%	32.7-41.5
No	377	62.9%	58.5-67.3
Medicare			
Yes	205	32.0%	27.8-36.3
No	410	68.0%	63.7-72.2
Other Public Insurance			
Yes	59	11.2%	8.0-14.5
No	553	88.8%	85.5-92.0
Tricare/CHAMPUS or Veterans Administration			
Yes	26	5.7%	3.2-8.2
No	589	94.3%	91.8-96.8
Insurance Type Unknown[e]			
Yes	<5 obs.	0.5%*	0.0-1.1
No	612	99.5%	98.9-100.0
TOTAL	**626**	**100.0%**	---

Abbreviations: CI, confidence interval; CHAMPUS, Civilian Health and Medical Program of the Uniformed Services; ADAP, AIDS Drug Assistance Program. Note: Estimates with a coefficient of variation ≥0.30, a denominator sample size <30, an absolute CI width ≥0.30, or an absolute CI width between 0.05 and 0.30 and a relative CI width >130% are marked with an asterisk and should be interpreted with caution. [a] Numbers are unweighted. [b] Percentages are weighted percentages. [c] CIs incorporate weighted percentages. [d] Persons could select more than 1 response for health insurance or coverage for medications (including antiretroviral medications). [e] Unknown insurance type means that the person had insurance or coverage for medications (including antiretroviral medications), but the type of insurance or coverage could not be determined.

4. Clinical Characteristics and Health Care Services Use

More than half (57%) had clinical characteristics consistent with HIV infection, stage 3 (AIDS) in the 12 months prior to the interview, defined as documentation of an AIDS-defining condition or either a CD4 count of <200 cells/μL or a CD4 percentage of total lymphocytes of <14 (Table 4.1). Two-thirds (66%) had achieved sustained viral suppression (all past 12-month viral load

4.1. HIV Disease Stage, CD4+ Lymphocyte Counts, and Viral Suppression, Past 12 Months - Medical Monitoring Project, CA, 2015-2017

	Number[a]	Percentage[b]	95% CI[c]
HIV Infection Stage 3 (AIDS)[d]			
Yes	363	57.1%	52.6-61.7
No	263	42.9%	38.3-47.4
Geometric Mean CD4 Count (cells/μL)			
0–199	37	7.8%	5.1-10.5
200–349	54	9.6%	7.0-12.3
350–499	97	19.6%	15.6-23.5
≥500	313	63.0%	58.2-67.8
Lowest CD4 Count (cells/μL), Past 12 Months			
0–49	14	2.9%	1.3-4.5
50–199	42	8.6%	5.8-11.5
200–349	66	11.3%	8.5-14.1
350–499	99	19.6%	15.7-23.5
≥500	287	57.5%	52.7-62.4
Viral Suppression			
Most recent viral load documented	456	71.3%	67.0-75.6
Most recent viral load documented detectable, ≥200 copies/mL, or missing/unknown	170	28.7%	24.4-33.0
Sustained Viral Suppression			
All viral load measurements documented	425	65.8%	61.3-70.3
Any viral load ≥200 copies/mL or missing unknown	201	34.2%	29.7-38.7
TOTAL	**626**	**100.0%**	**---**

Abbreviations: CD4, CD4 T-lymphocyte count (cells/μL); CI, confidence interval. Source of disease stage information: CDC. Revised surveillance case definition for HIV infection–United States, 2014. MMWR 2014;63(RR-03):1–10. https://www.cdc.gov/mmwr/indrr-2014.html. Accessed August 21, 2019. Note: CD4 counts and viral load measurements are from medical record abstraction. [a] Numbers are unweighted. [b] Percentages are weighted percentages. [c] CIs incorporate weighted percentages. [d] HIV infection, stage 3 (AIDS): documentation of an AIDS-defining condition or either a CD4 count of <200 cells/μL or a CD4 percentage of total lymphocytes of <14. Documentation of an AIDS-defining condition supersedes a CD4 count or percentage that would not, by itself, be the basis for a stage 3 (AIDS) classification.

measurements documented undetectable or <200 copies/mL). Past 12-month HIV care retention was seen in 84% of PLWDH and 63% had been retained in HIV care for 24 months prior to the interview (Table 4.2).

4.2. Receipt and Quality of HIV Care, Past 12 Months - Medical Monitoring Project, CA, 2015-2017

	Number[a]	Percentage[b]	95% CI[c]
Ever Received Outpatient HIV Care[d]			
Yes	626	100.0%	100.0-100.0
Received Outpatient HIV Care, Past 12 Months[d]			
Yes	623	99.0%	97.8-100.0
No	<5 obs.	1.0%*	0.0-2.2
Received Outpatient HIV Care, Past 24 Months[d]			
Yes	623	99.0%	97.8-100.0
No	<5 obs.	1.0%*	0.0-2.2
Retained in Care, Past 12 Months[e]			
Yes	515	84.0%	80.3-87.7
No	89	16.0%	12.3-19.7
Retained in Care, Past 24 Months[e]			
Yes	387	62.6%	58.0-67.2
No	216	37.4%	32.8-42.0
Prescribed ART, Past 12 Months[f]			
Yes	543	84.7%	81.1-88.3
No	83	15.3%	11.7-18.9
Prescribed PCP Prophylaxis, Past 12 Months[g]			
Yes	19	31.9%	18.3-45.4
No	30	68.1%	54.6-81.7
Prescribed MAC Prophylaxis, Past 12 Months[h]			
Yes	<5 obs.	12.2%*	0.0-34.4
No	10	87.8%*	65.6-100.0
Received Influenza Vaccination, Past 12 Months			
Yes	490	78.5%	74.6-82.3
No	132	21.5%	17.7-25.4
TOTAL	**626**	**100.0%**	---

Abbreviations: CI, confidence interval; ART, antiretroviral therapy; PCP, Pneumocystis pneumonia; MAC, Mycobacterium avium complex; CD4, CD4 T-lymphocyte count (cells/μL). Note: CD4 counts, viral load measurements, prophylaxes, and vaccinations are from medical record abstraction. Measurement period is the 12 months before the interview unless otherwise noted. Note: Estimates with a coefficient of variation ≥0.30, a denominator sample size <30, an absolute CI width ≥0.30, or an absolute CI width between 0.05 and 0.30 and a relative CI width >130% are marked with an asterisk and should be interpreted with caution. [a] Numbers are unweighted. [b] Percentages are weighted percentages. [c] CIs incorporate weighted percentages. [d] Outpatient HIV care was defined as any documentation of the following: encounter with an HIV care provider, viral load test result, CD4 test result, HIV resistance test or tropism assay, ART prescription, PCP prophylaxis, or MAC prophylaxis. [e] Two elements of outpatient HIV care at least 90 days apart in each 12-month period. [f] ART prescription documented in medical record; persons with no medical record abstraction were considered to have no documentation of ART prescription. [g] Among persons with CD4 cell count <200 cells/μL. [h] Among persons with CD4 cell count <50 cells/μL.

Nearly all (98%) had ever taken antiretroviral medications (ART) and 94% were currently on ART (Table 4.3). Among those who been on ART in the past but were not currently taking it, the most commonly cited reasons were money or insurance problems and not believing they needed ART.

4.3. Antiretroviral Therapy (ART) Use - Medical Monitoring Project, CA, 2015-2017

	Number[a]	Percentage[b]	95% CI[c]
Ever Taken ART			
Yes	616	98.3%	96.9-99.6
No	8	1.7%*	0.4-3.1
Currently Taking ART			
Yes	595	93.5%	90.9-96.1
No	29	6.5%	3.9-9.1
Reasons for Never Taking ART[d]:			
Health care provider never discussed taking ART with person			
Yes	0	0.0%*	---
No	8	100.0%*	---
Health care provider said person should not start taking ART			
Yes	6	68.1%*	29.9-100.0
No	<5 obs.	31.9%*	0.0-70.1
Money or insurance problems			
Yes	<5 obs.	10.8%*	0.0-31.5
No	7	89.2%*	68.5-100.0
Person doesn't believe he/she needs ART			
Yes	<5 obs.	26.6%*	0.0-59.1
No	<5 obs.	73.4%*	40.9-100.0
Person thinks ART would make him/her feel sick or harm him/her			
Yes	<5 obs.	26.1%*	0.0-59.3
No	<5 obs.	73.9%*	40.7-100.0
Person decided not to take ART for some other reason			
Yes	<5 obs.	33.8%*	0.0-72.0
No	<5 obs.	66.2%*	28.0-100.0
Reasons for Not Currently Taking ART, Among Those with a History of ART Use[d]:			
Health care provider never discussed restarting ART with person			
Yes	<5 obs.	34.9%*	9.3-60.6
No	17	65.1%*	39.4-90.7
Health care provider said person should not take ART			
Yes	<5 obs.	5.0%*	0.0-13.0
No	19	95.0%*	87.0-100.0

4.3. Antiretroviral Therapy (ART) Use - Medical Monitoring Project, CA, 2015-2017 (cont.)

	Number[a]	Percentage[b]	95% CI[c]
Money or insurance problems			
Yes	10	47.7%*	22.8-72.5
No	11	52.3%*	27.5-77.2
Person doesn't believe he/she needs ART			
Yes	9	48.5%*	23.5-73.4
No	12	51.5%*	26.6-76.5
Person thinks ART would make him/her feel sick or harm him/her			
Yes	<5 obs.	26.6%*	4.4-48.8
No	16	73.4%*	51.2-95.6
Person decided not to take ART for some other reason			
Yes	8	44.3%*	19.6-69.1
No	13	55.7%*	30.9-80.4
TOTAL	626	100.0%	---

Abbreviation: CI, confidence interval. Note: Estimates with a coefficient of variation ≥0.30, a denominator sample size <30, an absolute CI width ≥0.30, or an absolute CI width between 0.05 and 0.30 and a relative CI width >130% are marked with an asterisk and should be interpreted with caution. [a] Numbers are unweighted. [b] Percentages are weighted percentages. [c] CIs incorporate weighted percentages. [d] Persons could select more than one response for reasons not taking ART.

Self-reported number of missed ART doses in the past 30 days ranged from 0 to eleven or more, with most (86%) reporting 0, 1, or 2 missed doses (Table 4.4). The most commonly cited reasons for the most recent missed ART dose were forgetting to take HIV medicine (56%); change in daily routine or being out of town (35%); falling asleep early or oversleeping (34%); and having trouble getting a prescription, a refill, insurance coverage, or paying for HIV medicines (21%).

4.4. Antiretroviral Therapy (ART) Adherence - Medical Monitoring Project, CA, 2015-2017

	Number[a]	Percentage[b]	95% CI[c]
ART Adherence in the Past 30 Days:			
How many days did you miss at least 1 dose of any of your HIV medicines?			
0	356	60.2%	55.6-64.9
1–2	154	26.2%	22.1-30.3
3–5	61	9.5%	6.8-12.2
6–10	18	3.1%*	1.2-5.0
11+	6	1.0%*	0.2-1.8

4.4. Antiretroviral Therapy (ART) Adherence - Medical Monitoring Project, CA, 2015-2017 *(cont.)*

	Number[a]	Percentage[b]	95% CI[c]
How well did you do at taking your HIV medicines in the way you were supposed to?			
Very poor	6	0.8%*	0.1-1.4
Poor	11	2.0%*	0.5-3.5
Fair	35	7.1%	4.3-9.9
Good	82	12.3%	9.4-15.1
Very good	152	24.6%	20.7-28.5
Excellent	309	53.2%	48.5-57.9
How often did you take your HIV medicines in the way you were supposed to?			
Never	<5 obs.	0.8%*	0.0-1.7
Rarely	<5 obs.	0.7%*	0.0-1.3
Sometimes	14	2.1%*	0.7-3.5
Usually	29	4.4%	2.7-6.2
Almost always	168	27.4%	23.2-31.6
Always	377	64.6%	60.1-69.1
How often were you troubled by ART side effects?			
Never	375	64.4%	59.9-68.8
Rarely	118	19.1%	15.5-22.6
About half the time	43	7.0%	4.6-9.4
Most of the time	28	5.3%	3.1-7.5
Always	24	4.2%	2.4-6.1
Reasons for Last Missed ART Dose[d]:			
Had a problem getting a prescription, a refill, insurance coverage, or paying for HIV medicines			
Yes	119	20.6%	16.7-24.4
No	473	79.4%	75.6-83.3
In the hospital or too sick to take HIV medicines			
Yes	52	7.9%	5.3-10.5
No	540	92.1%	89.5-94.7
Fell asleep early or overslept			
Yes	203	34.4%	29.9-38.9
No	389	65.6%	61.1-70.1
Change in your daily routine or were out of town			
Yes	212	34.7%	30.3-39.1
No	378	65.3%	60.9-69.7

4.4. Antiretroviral Therapy (ART) Adherence - Medical Monitoring Project, CA, 2015-2017 *(cont.)*

	Number[a]	Percentage[b]	95% CI[c]
Had side effects from your HIV medicines			
Yes	55	8.6%	6.1-11.0
No	537	91.4%	89.0-93.9
Felt depressed or overwhelmed			
Yes	98	15.4%	12.1-18.8
No	494	84.6%	81.2-87.9
Was drinking or using drugs			
Yes	46	7.4%	5.0-9.9
No	546	92.6%	90.1-95.0
Forgot to take HIV medicines			
Yes	328	56.3%	51.6-60.9
No	264	43.7%	39.1-48.4
Did not feel like taking HIV medicines			
Yes	82	13.3%	10.1-16.5
No	510	86.7%	83.5-89.9
TOTAL	**595**	**100.0%**	**---**

Abbreviation: CI, confidence interval. Note: Estimates with a coefficient of variation ≥0.30, a denominator sample size <30, an absolute CI width ≥0.30, or an absolute CI width between 0.05 and 0.30 and a relative CI width >130% are marked with an asterisk and should be interpreted with caution. [a] Numbers are unweighted. [b] Percentages are weighted percentages. [c] CIs incorporate weighted percentages. [d] People could report more than one reason for last missed ART dose.

No statistically significant differences in ART prescription, dose adherence, and sustained viral suppression rates were seen by gender, sexual orientation, race/ethnicity, or age group (Table 4.5).

4.5. Antiretroviral Therapy (ART) Prescription and Dose Adherence, and Sustained Viral Suppression, by Selected Characteristics - Medical Monitoring Project, CA, 2015-2017

	Prescription of ART			ART Dose Adherence[a]			Sustained Viral Suppression[b]		
	#[c]	%[d]	95% CI[e]	#[c]	%[d]	95% CI[e]	#[c]	%[d]	95% CI[e]
Gender									
Male	453	84.4%	80.5-88.3	297	60.0%	54.9-65.1	350	64.9%	60.0-69.8
Female	86	86.3%	77.6-94.9	57	62.6%	51.8-73.4	72	71.6%	60.9-82.3
Transgender[f]	<5 obs.	100.0%	---	<5 obs.	45.3%	0.0-94.6*	<5 obs.	67.0%*	16.7-100.0
Sexual Orientation									
Lesbian or gay	312	85.4%	80.7-90.1	210	60.8%	54.7-67.0	248	68.7%	62.9-74.5
Heterosexual or straight	155	83.9%	77.1-90.7	106	64.8%	57.0-72.6	119	63.3%	55.0-71.5
Bisexual	49	78.9%	66.2-91.5	27	48.8%*	33.3-64.4	39	59.5%	44.5-74.4
Other	20	91.4%	80.7-100.0	10	44.3%*	20.0-68.6	15	60.3%*	35.5-85.0
Race/Ethnicity									
American Indian/Alaska Native	<5 obs.	50.0%*	5.0-95.0	<5 obs.	46.0%	2.8-89.2	<5 obs.	35.8%*	0.0-74.7
Asian	9	62.9%*	31.3-94.4	10	85.7%*	66.6-100.0	7	44.9%*	15.3-74.4
Black/African American	92	82.6%	72.4-92.9	57	55.8%	44.6-67.0	68	63.3%	52.5-74.1
Latinx[g]	179	83.2%	77.0-89.4	112	58.2%	50.1-66.2	137	65.2%	57.6-72.8
Native Hawaiian/Other Pacific Islander	<5 obs.	100.0%	---	<5 obs.	100.0%	---	<5 obs.	100.0%	---
White	219	87.6%	82.5-92.6	148	62.3%	54.9-69.6	178	68.3%	61.1-75.5
Multiple Races	38	92.9%	85.6-100.0	24	61.5%*	44.5-78.6	30	71.1%*	54.5-87.6
Age at Time of Interview (yr)									
18–29	34	84.2%	70.1-98.2	21	70.2%*	53.5-86.9	21	55.7%*	36.9-74.5
30–39	77	79.7%	69.1-90.2	46	55.0%	42.9-67.1	58	60.5%	48.5-72.5
40–49	125	83.5%	75.7-91.3	84	60.0%	50.0-70.1	102	67.1%	57.5-76.7
≥50	307	86.7%	82.3-91.1	205	60.7%	54.6-66.7	244	67.9%	62.0-73.7
TOTAL	543	84.7%	81.1-88.3	356	60.2%	55.6-64.9	425	65.8%	61.3-70.3

Abbreviations: CI, confidence interval. Note: Estimates with a coefficient of variation ≥0.30, a denominator sample size <30, an absolute CI width ≥0.30, or an absolute CI width between 0.05 and 0.30 and a relative CI width >130% are marked with an asterisk and should be interpreted with caution. [a] In past 30 days, 100% adherence to ART doses. [b] All viral load measurements in the 12 months before the interview documented undetectable or <200 copies/mL. [c] Numbers are unweighted. [d] Percentages are weighted percentages. [e] CIs incorporate weighted percentages. [f] People were classified as transgender if sex at birth and gender reported by the person were different, or if the person chose "transgender" in response to the question about self-identified gender. [g] Latinx people might be of any race. Persons are classified in only one race/ethnicity category.

About half received a syphilis test in 12 months prior to the interview, 39% received a test for chlamydia, 38% received a test for gonorrhea, and 34% received all three tests (Table 4.6).

4.6. Sexually Transmitted Infections Testing - Medical Monitoring Project, CA, 2015-2017

	Total Population			Sexually Active[a] People Only		
	#[b]	%[c]	95% CI[d]	#[b]	%[c]	95% CI[d]
Gonorrhea[e]						
Yes, received test	223	37.6%	33.0-42.2	151	42.2%	36.0-48.4
No test documented	363	62.4%	57.8-67.0	195	57.8%	51.6-64.0
Chlamydia[f]						
Yes, received test	227	38.6%	34.0-43.2	155	43.8%	37.5-50.0
No test documented	359	61.4%	56.8-66.0	191	56.2%	50.0-62.5
Syphilis[g]						
Yes, received test	337	56.0%	51.2-60.7	212	59.0%	52.7-65.3
No test documented	249	44.0%	39.3-48.8	134	41.0%	34.7-47.3
Gonorrhea, Chlamydia, and Syphilis						
Yes, received all 3 tests	203	33.9%	29.5-38.3	212	59.0%	52.7-65.3
Fewer than 3 tests documented	383	66.1%	61.7-70.5	134	41.0%	34.7-47.3
TOTAL	**626**	**100.0%**	---	**368**	**100.0%**	---

Abbreviations: CI, confidence interval; DFA, direct fluorescent antibody; EIA, enzyme immunoassay; ELISA, enzyme-linked immunoassay; FTA-ABS, fluorescent treponemal antibody absorbed; MHA-TP, microhemagglutination assay for antibody to Treponema pallidum; NAAT, nucleic acid amplification test; RPR, rapid plasma reagin; TP-PA, T. pallidum particle agglutination; TPHA, T. pallidum hemagglutination assay; VDRL, Venereal Disease Research Laboratory. Note: Information on laboratory testing for sexually transmitted diseases was based on medical record abstraction. [a] Sexual activity was reported in the interview component of the Medical Monitoring Project and was defined as anal or vaginal intercourse. [b] Numbers are unweighted. [c] Percentages are weighted percentages. [d] CIs incorporate weighted percentages. [e] Testing for Neisseria gonorrhoeae was defined as documentation of a result from culture, gram stain, EIA, NAAT, or nucleic acid probe. [f] Chlamydia trachomatis testing was defined as a result from culture, DFA, EIA or ELISA, NAAT, or nucleic acid probe. [g] Syphilis testing was defined as a result from nontreponemal syphilis tests (RPR or VDRL), treponemal syphilis tests (TPHA, TP-PA, MHA-TP, or FTA-ABS tests), or dark-field microscopy.

One or more past-year emergency department visits were reported by 35% of PLWDH (Table 4.7). Sixteen percent of PLWDH reported being admitted to the hospital at least once. One-third (33%) of women had been pregnant since being diagnosed with HIV and 74% received a pap test in the past year (Table 4.8).

4.7. Emergency Department Visits and Hospital Admissions - Medical Monitoring Project, CA, 2015-2017

	Number[a]	Percentage[b]	95% CI[c]
Number of Visits to Emergency Department			
0	401	64.7%	60.3-69.1
1	128	20.6%	17.0-24.2
2–4	75	11.6%	8.7-14.6
≥5	20	3.1%	1.6-4.5
Number of Hospital Admissions			
0	521	83.9%	80.5-87.2
1	66	9.6%	7.1-12.1
2–4	31	5.0%	2.9-7.2
≥5	6	1.5%*	0.2-2.7
TOTAL	**626**	**100.0%**	---

Abbreviation: CI, confidence interval. Note: Estimates with a coefficient of variation ≥0.30, a denominator sample size <30, an absolute CI width ≥0.30, or an absolute CI width between 0.05 and 0.30 and a relative CI width >130% are marked with an asterisk and should be interpreted with caution. [a] Numbers are unweighted. [b] Percentages are weighted percentages. [c] CIs incorporate weighted percentages.

4.8. Gynecological Care and Reproductive Health Among Women - Medical Monitoring Project, CA, 2015-2017

	Number[a]	Percentage[b]	95% CI[c]
Papanicolaou (Pap) Test, Past 12 Months			
Yes	72	73.6%	63.5-83.7
No	24	26.4%	16.3-36.5
Pregnant Since HIV Diagnosis			
Yes	34	33.0%	22.6-43.4
No	63	67.0%	56.6-77.4
TOTAL	**98**	**100.0%**	---

Abbreviation: CI, confidence interval. Note. Measures are self-reported. [a] Numbers are unweighted. [b] Percentages are weighted percentages. [c] CIs incorporate weighted percentages.

5. Mental Health and Substance Use

Eighteen percent of PLWDH had Patient Health Questionnaire 8-item scale (PHQ-8) scores (range 0-24) consistent with moderate or severe depression (score ≥ 10) and 15% had Generalized Anxiety Disorder 7-item scale (GAD-7) scores (range 0-21) consistent with moderate or severe anxiety (Table 5.1).

5.1. Depression and Anxiety - Medical Monitoring Project, CA, 2015-2017

	Number[a]	Percentage[b]	95% CI[c]
Moderate or Severe Depression (PHQ-8 score ≥10)			
Yes	115	17.9%	14.5-21.3
No	503	82.1%	78.7-85.5
Anxiety[d]			
Severe anxiety	44	6.2%	4.1-8.2
Moderate anxiety	57	8.5%	6.1-11.0
Mild anxiety	45	8.3%	5.6-11.1
No anxiety	473	77.0%	73.1-80.8
TOTAL	**626**	**100.0%**	---

Abbreviations: CI, confidence interval; DSM-IV, Diagnostic and Statistical Manual of Mental Disorders, 4th edition; GAD-7, Generalized Anxiety Disorder 7-item Scale; PHQ-8, Patient Health Questionnaire. [a] Numbers are unweighted. [b] Percentages are weighted percentages. [c] CIs incorporate weighted percentages. [d] Responses to the GAD–7 were used to define "mild anxiety", "moderate anxiety" and "severe anxiety," according to criteria from the DSM-IV. "Severe anxiety" was defined as having a score of ≥15; "moderate anxiety" was defined as having a score of 10–14; and "mild anxiety" was defined as having a score of 5–9.

About one quarter (28%) of PLWDH were current cigarette smokers, with 19% reporting daily cigarette smoking (Table 5.2). While 29% had ever used electronic cigarettes, just 5% of PLWDH

5.2. Tobacco and Electronic Cigarette Use - Medical Monitoring Project, CA, 2015-2017

	Number[a]	Percentage[b]	95% CI[c]
Smoked ≥100 Cigarettes (lifetime)			
Yes	361	58.5%	53.9-63.0
No	262	41.5%	37.0-46.1
Cigarette Smoking Status			
Current smoker	169	27.6%	23.4-31.7
Former smoker	192	30.9%	26.7-35.2
Never smoked	262	41.5%	37.0-46.1
Frequency of Current Cigarette Smoking			
Less than monthly	15	2.7%*	1.0-4.4
Monthly	6	1.1%*	0.2-2.1
Weekly	30	5.0%	3.1-6.9
Daily	118	18.7%	15.1-22.3
Never	454	72.4%	68.3-76.6
Smoked ≥50 Cigars, Cigarillos, or Little Filtered Cigars (lifetime)			
Yes	76	11.2%	8.6-13.9
No	547	88.8%	86.1-91.4
Cigars, Cigarillos, or Little Filtered Cigars Smoking Status			
Current smoker	35	4.9%	3.2-6.6
Former smoker	41	6.4%	4.2-8.5
Never smoked	547	88.8%	86.1-91.4
Frequency of Current Cigars, Cigarillos, or Little Filtered Cigars Smoking			
Rarely	18	2.2%	1.1-3.4
Some days	<5 obs.	0.6%*	0.0-1.3
Daily	13	2.0%	0.9-3.1
Never	588	95.1%	93.4-96.8
Electronic Cigarette Smoking Status			
Used electronic cigarettes in the past 30 days	28	5.4%	3.2-7.6
Used electronic cigarettes, but not in the past 30 days	143	22.4%	18.6-26.2
Never used electronic cigarettes	453	72.2%	68.1-76.3
TOTAL	**626**	**100.0%**	---

Abbreviation: CI, confidence interval. Note: Estimates with a coefficient of variation ≥0.30, a denominator sample size <30, an absolute CI width ≥0.30, or an absolute CI width between 0.05 and 0.30 and a relative CI width >130% are marked with an asterisk and should be interpreted with caution. [a] Numbers are unweighted. [b] Percentages are weighted percentages. [c] CIs incorporate weighted percentages.

reported electronic cigarette use in the past 30 days. Nine percent of PLWDH reported daily alcohol use and 15% reported binge drinking in the past 30 days (Table 5.3). In regards to

5.3. Alcohol Use - Medical Monitoring Project, CA, 2015-2017

	Number[a]	Percentage[b]	95% CI[c]
Any Alcohol Use[d]			
Yes	423	67.6%	63.3-71.9
No	201	32.4%	28.1-36.7
Frequency of Alcohol Use			
Daily	55	8.7%	6.0-11.4
Weekly	136	22.6%	18.7-26.4
Monthly	96	15.2%	11.9-18.4
Less than monthly	136	21.1%	17.4-24.9
Never	201	32.4%	28.1-36.7
Binge Drinking, Past 30 Days[e]			
Yes	89	14.7%	11.4-18.0
No	534	85.3%	82.0-88.6
TOTAL	**626**	**100.0%**	---

Abbreviation: CI, confidence interval. [a] Numbers are unweighted. [b] Percentages are weighted percentages. [c] CIs incorporate weighted percentages. [d] Persons who drank at least 1 alcoholic beverage during the 12 months before the interview. Alcoholic beverage was defined as a 12-ounce beer, 5-ounce glass of wine, or 1.5-ounce shot of liquor. [e] Persons who drank ≥5 alcoholic beverages in a single sitting (≥4 for women) during the 30 days before the interview.

non-injected substance use in the 12 months prior to the interview, 13% reported using methamphetamine, 10% amyl nitrite or poppers, 6% cocaine, 5% club drugs such as ecstasy, 4% amphetamines, and 3% prescription opioids without a prescription (Table 5.4).

5.4. Non-Injection Drug Use - Medical Monitoring Project, CA, 2015-2017

	Number[a]	Percentage[b]	95% CI[c]
Use of Any Non-Injection Drugs[d]			
Yes	205	33.8%	29.4-38.2
No	416	66.2%	61.8-70.6
Non-Injection Drugs Used[d]:			
Marijuana			
Yes	181	30.1%	25.8-34.4
No	440	69.9%	65.6-74.2
Crack			
Yes	11	1.2%*	0.4-2.1
No	610	98.8%	97.9-99.6
Cocaine that is smoked or snorted			
Yes	34	6.1%	3.5-8.6
No	587	93.9%	91.4-96.5
Methamphetamine (e.g., crystal meth, tina, crank, ice)			
Yes	72	12.6%	9.3-15.9
No	549	87.4%	84.1-90.7
Amphetamine (e.g., speed, bennies, uppers)			
Yes	19	3.5%	1.6-5.3
No	602	96.5%	94.7-98.4
Club drugs (e.g., Ecstasy or X, ketamine or Special K, GHB or Liquid Ecstasy)			
Yes	36	5.4%	3.3-7.5
No	585	94.6%	92.5-96.7
Amyl nitrite (poppers)			
Yes	63	10.0%	7.2-12.8
No	558	90.0%	87.2-92.8
Prescription opioids (e.g., oxycodone, hydrocodone, Vicodin, Percocet)[e]			
Yes	21	3.1%	1.7-4.6
No	600	96.9%	95.4-98.3
Prescription tranquilizers (e.g., Valium, Ativan, Xanax, downers, nerve pills)[e]			
Yes	11	1.5%*	0.6-2.4
No	609	98.5%	97.6-99.4
TOTAL	**626**	**100.0%**	---

Abbreviations: CI, confidence interval; GHB, gamma hydroxybutyrate. Note: Persons could report taking more than 1 noninjection drug. Estimates with a coefficient of variation ≥0.30, a denominator sample size <30, an absolute CI width ≥0.30, or an absolute CI width between 0.05 and 0.30 and a relative CI width >130% are marked with an asterisk and should be interpreted with caution. [a] Numbers are unweighted. [b] Percentages are weighted percentages. [c] CIs incorporate weighted percentages. [d] Includes all drugs that were not injected (i.e., administered by any route other than injection), including legal drugs that were not used for medical purposes. [e] Not prescribed, or prescribed but taken more than directed.

Four percent of PLWDH reported injecting drugs without a prescription in the past year, most commonly methamphetamine (3%) (Table 5.5).

5.5. Injection Drug Use - Medical Monitoring Project, CA, 2015-2017

	Number[a]	Percentage[b]	95% CI[c]
Use of Any Injection Drugs			
Yes	26	3.6%	2.1-5.2
No	596	96.4%	94.8-97.9
Injection Drugs Used:			
Cocaine			
Yes	<5 obs.	0.2%*	0.0-0.5
No	620	99.8%	99.5-100.0
Heroin			
Yes	6	1.0%*	0.0-2.0
No	615	99.0%	98.0-100.0
Heroin and cocaine (speedball)			
Yes	<5 obs.	0.2%*	0.0-0.5
No	619	99.8%	99.5-100.0
Methamphetamine (e.g., crystal meth, tina, crank, ice)			
Yes	23	3.2%	1.7-4.8
No	598	96.8%	95.2-98.3
Amphetamine (e.g., speed, bennies, uppers)			
Yes	8	1.0%*	0.3-1.7
No	613	99.0%	98.3-99.7
Prescription opioids (e.g., OxyContin, oxycodone, hydrocodone)			
Yes	<5 obs.	0.6%*	0.0-1.6
No	619	99.4%	98.4-100.0
TOTAL	**626**	**100.0%**	---

Abbreviation: CI, confidence interval. Note: Persons could report taking more than 1 injection drug. Estimates with a coefficient of variation ≥0.30, a denominator sample size <30, an absolute CI width ≥0.30, or an absolute CI width between 0.05 and 0.30 and a relative CI width >130% are marked with an asterisk and should be interpreted with caution. [a] Numbers are unweighted. [b] Percentages are weighted percentages. [c] CIs incorporate weighted percentages.

6. Sexual Behavior

About 63% of men and 53% of women living with diagnosed HIV had engaged in vaginal or anal sex in the 12 months prior to the interview (Table 6.1). Sexually active men who had sex with men

6.1. Sexual Behavior Among Cisgender Men and Women - Medical Monitoring Project, CA, 2015-2017

	Men			Women		
	#[a]	%[b]	95% CI[c]	#[a]	%[b]	95% CI[c]
Engaged in Anal Sex with Men:						
Receptive						
Yes	227	45.1%	40.0-50.2	7	7.2%*	1.6-12.7
No	289	54.9%	49.8-60.0	89	92.8%	87.3-98.4
Insertive						
Yes	216	42.8%	37.7-47.9	---	---	---
No	300	57.2%	52.1-62.3	---	---	---
Engaged in Anal Sex with Women						
Yes	11	1.7%*	0.6-2.8	---	---	---
No	513	98.3%	97.2-99.4	---	---	---
Engaged in Vaginal Sex						
Yes	56	10.5%	7.6-13.5	47	52.9%	41.6-64.2
No	463	89.5%	86.5-92.4	48	47.1%	35.8-58.4
Engaged in Vaginal or Anal Sex						
Yes	319	62.8%	58.0-67.6	47	52.9%	41.6-64.2
No	198	37.2%	32.4-42.0	48	47.1%	35.8-58.4
TOTAL	**524**	**100.0%**	---	**98**	**100.0%**	---

Abbreviations: CI, confidence interval. Note: Estimates with a coefficient of variation ≥0.30, a denominator sample size <30, an absolute CI width ≥0.30, or an absolute CI width between 0.05 and 0.30 and a relative CI width >130% are marked with an asterisk and should be interpreted with caution. [a] Numbers are unweighted. [b] Percentages are weighted percentages. [c] CIs incorporate weighted percentages.

(MSM) had a median of 2 past-year sex partners (range 1-100) (Table 6.2) and 12% engaged in any high-risk sex. Among MSM, 68% reported having sex while sustainably virally suppressed and 13% reported having condomless sex with at least one HIV-negative partner who was on pre-exposure prophylaxis (PrEP) (Table 6.3). Men who had sex only with women (MSW) and women who had sex with men (WSM) had a median of 1 past-year sex partner (range 1-6 among MSW, 1-3 among WSM) (Table 6.2). Eighty-one percent of WSM reported past-year sex while sustainably virally suppressed (Table 6.3).

6.2. Number (Average, Median, Range) of Vaginal or Anal Sex Partners Among Men Who Had Sex with Men (MSM), Men Who Had Sex Only with Women (MSW), and Women Who Had Sex with Men (WSM) - Medical Monitoring Project, CA, 2015-2017

	Men		Women
	MSM[a]	MSW[b]	WSM[c]
Mean	6	1	1
Median	2	1	1
Range	1-100	1-6	1-3

Abbreviations: MSM, men who had sex with men; MSW, men who had sex only with women; WSM, women who had sex with men. [a] Among men who had anal sex with men in the 12 months before the interview. [b] Among men who had vaginal or anal sex only with women in the 12 months before the interview. [c] Among women who had vaginal or anal sex with men in the 12 months before the interview.

6.3. Sexual Behavior During the 12 Months Before the Interview Among Men Who Had Sex with Men (MSM), Men Who Had Sex Only with Women (MSW), and Women Who Had Sex with Men (WSM) - Medical Monitoring Project, CA, 2015-2017

	MSM			MSW			WSM		
	#ᵃ	%ᵇ	95% CIᶜ	#ᵃ	%ᵇ	95% CIᶜ	#ᵃ	%ᵇ	95% CIᶜ
Engaged in Any High-Risk Sexᵈ									
Yes	29	8.3%	4.8-11.9	5	4.3%*	0.2-8.4	<5 obs.	1.0%*	0.0-2.7
No	384	91.7%	88.1-95.2	88	95.7%	91.6-99.8	92	99.0%	97.3-100.0
Engaged in Any High-Risk Sex (Among Sexually Active Persons)ᵈ									
Yes	29	12.2%	7.1-17.3	5	9.7%*	0.7-18.7	<5 obs.	1.9%*	0.0-5.0
No	244	87.8%	82.7-92.9	39	90.3%	81.3-99.3	45	98.1%	95.0-100.0
PERCENTAGES OF SEXUALLY ACTIVE PERSONS WHO USED A PREVENTION STRATEGY WITH AT LEAST 1 PARTNER:									
Sex While Sustainably Virally Suppressedᵉ									
Yes	187	68.1%	61.3-74.9	22	48.8%*	31.9-65.7	39	81.2%	67.4-95.0
No	86	31.9%	25.1-38.7	23	51.2%*	34.3-68.1	8	18.8%*	5.0-32.6
Condom-Protected Sexᶠ									
Yes	162	56.7%	49.4-64.1	33	71.5%*	54.1-88.9	21	43.7%*	27.8-59.7
No	110	43.3%	35.9-50.6	11	28.5%*	11.1-45.9	26	56.3%*	40.3-72.2
Condomless Sex With a Partner on PrEPᵍ									
Yes	40	13.3%	8.5-18.1	<5 obs.	2.4%*	0.0-6.4	0	0.0%	---
No	233	86.7%	81.9-91.5	43	97.6%	93.6-100.0	47	100.0%	---
Sex With an HIV Positive Partnerʰ									
Yes	166	59.9%	52.9-66.9	9	28.2%*	10.9-45.6	17	36.2%*	20.9-51.5
No	107	40.1%	33.1-47.1	36	71.8%*	54.4-89.1	30	63.8%*	48.5-79.1
TOTAL	273	100.0%	---	45	100.0%	---	47	100.0%	---

Abbreviations: CI, confidence interval; PrEP, pre-exposure prophylaxis. Note: Persons who reported no anal, vaginal or oral sex in the 12 months before the interview were categorized according to self-reported sexual orientation. This table does not include information on women who had sex with women only, women who had sex with transgender people only, or men who had sex with transgender people only. Estimates with a coefficient of variation ≥0.30, a denominator sample size <30, an absolute CI width ≥0.30, or an absolute CI width between 0.05 and 0.30 and a relative CI width >130% are marked with an asterisk and should be interpreted with caution. [a] Numbers are unweighted. [b] Percentages are weighted percentages. [c] CIs incorporate weighted percentages. [d] Vaginal or anal sex with at least 1 HIV-negative or unknown status partner while not sustainably virally suppressed, a condom was not used, and the partner was not on PrEP. PrEP use was only measured among the five most recent partners. [e] HIV viral load <200 copies/mL documented in the medical record at every measure in the past 12 months before the interview. [f] Condoms were consistently used with at least 1 vaginal or anal sex partner. [g] At least 1 HIV-negative condomless-sex partner was on PrEP. PrEP use was only measured among the five most recent partners and was reported by the HIV-positive partner. [h] Sex with at least 1 HIV-positive partner.

7. Intimate Partner Violence and Sexual Violence

About one quarter of PLWDH reported having ever experienced intimate partner violence and 5% experienced it in the past 12 months.

Seventeen percent reported having ever experienced sexual violence and 2% experienced it in the past 12 months.

7.1. Intimate Partner Violence and Sexual Violence - Medical Monitoring Project, CA, 2015-2017

	Number[a]	Percentage[b]	95% CI[c]
Was ever slapped, punched, shoved, kicked, choked or otherwise physically hurt by a romantic or sexual partner			
Yes	172	27.5%	23.3-31.7
No	445	72.5%	68.3-76.7
Was slapped, punched, shoved, kicked, choked or otherwise physically hurt by a romantic or sexual partner, past 12 months			
Yes	24	4.8%	2.5-7.0
No	593	95.2%	93.0-97.5
Was ever threatened with harm or physically forced to have unwanted vaginal, anal, or oral sex			
Yes	119	17.3%	13.9-20.7
No	498	82.7%	79.3-86.1
Was threatened with harm or physically forced to have unwanted vaginal, anal, or oral sex, past 12 months			
Yes	12	1.9%*	0.7-3.1
No	605	98.1%	96.9-99.3
TOTAL	**626**	**100.0%**	---

Abbreviation: CI, confidence interval. Note: Estimates with a coefficient of variation ≥0.30, a denominator sample size <30, an absolute CI width ≥0.30, or an absolute CI width between 0.05 and 0.30 and a relative CI width >130% are marked with an asterisk and should be interpreted with caution. [a] Numbers are unweighted. [b] Percentages are weighted percentages. [c] CIs incorporate weighted percentages.

8. Met and Unmet Ancillary Service Needs

The highest rate of unmet need for ancillary services among PLWDH was seen in dental care, with 22% reporting needing but not getting this service in the 12 months prior to the interview. Twelve percent needed but did not receive food assistance (Supplemental Nutrition Assistance Program or the Special Supplemental Nutrition Program for Women, Infants, and Children) and 10% needed but did not receive transportation assistance. About 9% of PLWDH needed but did not receive mental health services and similar unmet need rates were seen for shelter or housing services and HIV peer group support. Eight percent needed but did not receive meal or food services and 8% needed but did not receive HIV case management services.

Rates of unmet need were generally higher among PLWDH whose scores on the HIV stigma scale were in the top 25% (score ≥ 57.5, range 0-100), indicating high levels of HIV stigma experience. Among PLWDH with high HIV stigma scores, the rate of unmet need was 33% for dental care, 22% for transportation assistance, 21% for shelter or housing services, and 17% for HIV case management services, meal or food services, and food assistance.

8.1. Met and Unmet Need for Ancillary Services, Overall and by High HIV Stigma Score - Medical Monitoring Project, CA, 2015-2017

Service:	Overall			High HIV Stigma[a]		
	#[b]	%[c]	95% CI[d]	#[b]	%[c]	95% CI[d]
Dental Care						
Needed, but did not receive service	143	22.1%	18.3-25.9	44	33.4%	24.0-42.8
Received service	390	62.8%	58.3-67.2	86	55.0%	45.4-64.5
Did not need, did not receive service	91	15.1%	11.7-18.4	17	11.7%	5.7-17.6
SNAP or WIC						
Needed, but did not receive service	76	11.7%	8.7-14.7	29	16.6%	10.0-23.3
Received service	120	19.4%	15.8-23.0	45	32.6%	23.6-41.5
Did not need, did not receive service	428	69.0%	64.7-73.2	73	50.8%	41.3-60.3
Transportation Assistance						
Needed, but did not receive service	60	9.7%	6.9-12.5	28	21.6%	13.3-30.0
Received service	111	16.7%	13.5-20.0	31	22.0%	14.0-30.0
Did not need, did not receive service	453	73.5%	69.5-77.5	88	56.4%	46.9-65.9
Mental Health Services						
Needed, but did not receive service	61	9.4%	6.7-12.1	20	12.0%	6.1-17.8
Received service	205	32.1%	27.8-36.3	66	45.0%	35.6-54.4
Did not need, did not receive service	357	58.5%	54.0-63.1	61	43.0%	33.6-52.4

8.1. Met and Unmet Need for Ancillary Services, Overall and by High HIV Stigma Score - Medical Monitoring Project, CA, 2015-2017 (cont.)

Service:	Overall			High HIV Stigma[a]		
	#[b]	%[c]	95% CI[d]	#[b]	%[c]	95% CI[d]
Shelter or Housing Services						
Needed, but did not receive service	64	9.3%	6.8-11.9	30	21.1%	13.2-28.9
Received service	85	12.2%	9.5-14.9	29	17.1%	10.6-23.6
Did not need, did not receive service	475	78.4%	74.9-82.0	88	61.8%	52.7-70.9
HIV Peer Group Support						
Needed, but did not receive service	62	9.3%	6.8-11.9	20	13.0%	7.0-19.0
Received service	72	10.1%	7.5-12.6	26	17.8%	10.9-24.7
Did not need, did not receive service	489	80.6%	77.2-84.0	101	69.2%	60.8-77.7
Meal or Food Services[e]						
Needed, but did not receive service	50	8.1%	5.6-10.6	25	16.9%	9.8-24.1
Received service	126	20.2%	16.6-23.9	34	22.7%	15.0-30.3
Did not need, did not receive service	447	71.7%	67.5-75.8	88	60.4%	51.2-69.6
HIV Case Management Services						
Needed, but did not receive service	51	7.7%	5.3-10.1	23	17.4%	9.9-24.8
Received service	300	47.3%	42.7-51.9	71	45.6%	36.2-55.0
Did not need, did not receive service	272	45.0%	40.4-49.6	53	37.1%	27.8-46.3
Patient Navigation Services						
Needed, but did not receive service	40	5.2%	3.5-6.9	14	9.2%	4.4-14.1
Received service	70	9.7%	7.2-12.2	26	15.5%	8.8-22.2
Did not need, did not receive service	513	85.1%	82.1-88.1	107	75.2%	67.4-83.0
Medicine Through ADAP						
Needed, but did not receive service	25	4.3%	2.3-6.4	9	7.6%	2.0-13.1
Received service	316	48.8%	44.1-53.4	80	53.8%	44.3-63.3
Did not need, did not receive service	273	46.9%	42.2-51.5	55	38.6%	29.4-47.8
Drug or Alcohol Counseling or Treatment						
Needed, but did not receive service	17	3.0%	1.4-4.6	7	4.1%	0.9-7.3
Received service	49	7.6%	5.1-20.1	14	9.6%	3.8-15.5
Did not need, did not receive service	557	89.4%	86.5-92.3	126	86.3%	79.8-92.8

8.1. Met and Unmet Need for Ancillary Services, Overall and by High HIV Stigma Score - Medical Monitoring Project, CA, 2015-2017 (cont.)

Service:	Overall			High HIV Stigma[a]		
	#[b]	%[c]	95% CI[d]	#[b]	%[c]	95% CI[d]
Professional HIV Medication Adherence Support Services						
Needed, but did not receive service	11	1.4%*	0.5-2.2	<5 obs.	1.2%*	0.0-2.8
Received service	186	27.7%	23.7-31.7	53	33.1%	24.4-41.8
Did not need, did not receive service	426	70.9%	66.9-74.9	90	65.7%	56.9-74.5
Domestic Violence Services						
Needed, but did not receive service	6	1.2%*	0.0-2.4	<5 obs.	2.9%*	0.0-7.4
Received service	<5 obs.	0.4%*	0.0-0.9	<5 obs.	0.7%*	0.0-2.0
Did not need, did not receive service	614	98.4%	97.1-99.7	143	96.4%	91.8-100.0
Interpreter Services						
Needed, but did not receive service	<5 obs.	0.9%*	0.0-1.9	<5 obs.	2.8%*	0.0-6.7
Received service	33	4.9%	3.2-6.7	9	4.8%*	1.6-8.0
Did not need, did not receive service	587	94.1%	92.2-96.1	136	92.4%	87.5-97.4
TOTAL	**626**	**100.0%**	---	**147**	**100.0%**	---

Abbreviations: CI, confidence interval; ADAP, AIDS Drug Assistance Program; SNAP, Supplemental Nutrition Assistance Program; WIC, Special Supplemental Nutrition Program for Women, Infants, and Children. Note: Persons could report receiving or needing more than one service. Estimates with a coefficient of variation ≥0.30, a denominator sample size <30, an absolute CI width ≥0.30, or an absolute CI width between 0.05 and 0.30 and a relative CI width >130% are marked with an asterisk and should be interpreted with caution. [a] Stigma scores were measured with a ten-item scale ranging from 0 (no stigma) to 100 (high stigma) that measures four dimensions of HIV stigma: personalized stigma, disclosure concerns, negative self-image, and perceived public attitudes about people living with HIV. People were classified as having experienced high levels of HIV stigma if their score on the HIV stigma scale was in the top quartile for the 2015-2017 combined sample (score of ≥ 57.5). [b] Numbers are unweighted. [c] Percentages are weighted percentages. [d] CIs incorporate weighted percentages. [e] Includes services such as soup kitchens, food pantries, food banks, church dinners, or food delivery services.

9. Prevention Services

About half of PLWDH reported attending a one-on-one HIV/STD risk-reduction conversation with a physician, nurse, or other health care worker (51%) or receiving free condoms (50%) in the 12 months prior to the interview. About one quarter (27%) attended a one-on-one HIV/STD risk-reduction conversation with an outreach worker, counselor, or prevention program worker and 10% attended an organized HIV/STD risk-reduction session involving a small group of people.

9.1. Prevention Services - Medical Monitoring Project, CA, 2015-2017

	Number[a]	Percentage[b]	95% CI[c]
One-on-One HIV/STD Risk-Reduction Conversation With Physician, Nurse, or Other Health Care Worker			
Yes	308	50.6%	46.0-55.2
No	315	49.4%	44.8-54.0
One-on-One HIV/STD Risk-Reduction Conversation With Outreach Worker, Counselor, or Prevention Program Worker			
Yes	163	26.9%	22.8-31.0
No	461	73.1%	69.0-77.2
Attended an Organized HIV/STD Risk-Reduction Session Involving a Small Group of People			
Yes	62	10.1%	7.4-12.9
No	562	89.9%	87.1-92.6
Received Free Condoms			
Yes	306	49.7%	45.1-54.4
No	318	50.3%	45.6-54.9
TOTAL	**626**	**100.0%**	---

Abbreviation: CI, confidence interval. Note. Persons could report receiving more than one prevention service. [a] Numbers are unweighted. [b] Percentages are weighted percentages. [c] CIs incorporate weighted percentages.

10. HIV Stigma

Scores on the HIV stigma scale ranged from the minimum of zero to the maximum of one hundred (Table 10.1). Men and women had similar median HIV stigma scores and a similar percentage had scores in the top quartile (score ≥ 57.5). Median HIV stigma score and percentage with scores in the top quartile were higher among bisexual and heterosexual or straight PLWDH compared to lesbian or gay PLWDH. About 33% of black/African-American PLWDH and 29% of those reporting multiple racial identities had stigma scores in the top quartile compared to 21% of white PLWDH. A higher percentage of those ages 30-39 had HIV stigma scores in the top quartile (34%) compared to those ages 50 and older (22%).

10.1. HIV Stigma by Selected Characteristics - Medical Monitoring Project, CA, 2015-2017

	Median HIV Stigma[a] Score		High HIV Stigma[b]		
	Median Score	**Interquartile Range**	**#[c]**	**%[d]**	**95% CI[e]**
Gender					
Male	38.1	23.0-54.7	118	24.5%	20.0-29.0
Female	40.1	26.6-59.7	28	26.8%	17.4-36.2
Transgender	35.5*	10.0-48.9	<5 obs.	26.8%*	0.0-60.5
Sexual Orientation					
Lesbian or gay	35.8	21.6-52.8	70	19.9%	14.9-24.9
Heterosexual or straight	41.1	26.3-62.9	51	29.5%	21.7-37.4
Bisexual	45.4	26.6-63.4	20	37.6%	23.0-52.1
Other	46.8*	22.3-56.1	6	35.8%*	9.9-61.7
Race/Ethnicity					
American Indian/Alaska Native	43.3	39.5-55.5	<5 obs.	25.6%*	0.0-59.5
Asian	41.0	26.4-55.9	<5 obs.	27.8%*	0.0-56.2
Black/African American	40.2	21.2-59.9	30	32.8%	21.9-43.6
Latinx	39.4	26.3-54.5	53	23.8%	17.1-30.6
Native Hawaiian/Other Pacific Islander	21.7	16.3-27.1	0	0.0%*	---
White	35.7	20.6-53.2	44	21.3%	14.8-27.9
Multiple races	42.8	22.8-60.1	15	29.4%	15.0-43.7

10.1. HIV Stigma by Selected Characteristics - Medical Monitoring Project, CA, 2015-2017 (cont.)

	Median HIV Stigma[a] Score		High HIV Stigma[b]		
	Median Score	Interquartile Range	#[c]	%[d]	95% CI[e]
Age at Time of Interview (yr)					
18–29	36.0	24.5-53.2	11	22.0%*	8.2-35.9
30–39	41.2	24.9-64.5	26	33.5%	21.6-45.4
40–49	41.4	27.7-56.1	38	26.3%	17.6-35.0
≥50	36.8	19.6-53.5	72	22.2%	16.9-27.4
OVERALL	**38.7**	**23.4-54.9**	**584**	---	---

Abbreviations: CI, confidence interval. [a] Stigma scores were measured with a ten-item scale ranging from 0 (no stigma) to 100 (high stigma) that measures four dimensions of HIV stigma: personalized stigma, disclosure concerns, negative self-image, and perceived public attitudes about people living with HIV. Estimates with a coefficient of variation ≥0.30, a denominator sample size <30, an absolute CI width ≥0.30, or an absolute CI width between 0.05 and 0.30 and a relative CI width >130% are marked with an asterisk and should be interpreted with caution. [b] People were classified as having experienced high levels of HIV stigma if their score on the HIV stigma scale was in the top quartile for the 2015-2017 combined sample (score of ≥ 57.5). [c] Numbers are unweighted. [d] Percentages are weighted percentages. [e] CIs incorporate weighted percentages.

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