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The Capacity of HIV Care Facilities to Implement Strategies Recommended by the Ending the HIV Epidemic—The Medical Monitoring Project Facility Survey

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Abstract

Background: Data are needed to assess the capacity of HIV care facilities to implement recommended Ending the HIV Epidemic (EHE) activities.

Setting: U.S HIV care facilities.

Methods: We analyzed 2021 survey data from a census of 514 facilities providing care to a national probability sample of U.S. adults with HIV. We present weighted estimates of facility characteristics, services, and policies, and estimates of the proportion of all U.S. HIV patients attending these facilities.

Results: Among HIV care facilities, 37% were private practices, 72% were in areas with population > 1 million, and 21% had over 1000 HIV patients. Most provided preexposure prophylaxis (PrEP, 83%) and postexposure prophylaxis (PEP, 84%). Over 67% of facilities provided HIV-specific stigma or discrimination training for all staff (covering 70% of patients) and 66% provided training on cultural competency (covering 74% of patients). A majority of patients attended facilities that provided on-site access to HIV/STI transmission risk reduction counseling (89%); fewer had on-site access to substance use disorders treatment (35%). We found low provision of on-site assistance with food banks or meal delivery (14%) and housing (33%). Approximately 71% of facilities reported using data to systematically monitor patient retention in care. On-site access to adherence tools was available at 58% of facilities; 29% reported notifying patients of missed prescription pickups.

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Conclusion: Results indicate some strengths that support EHE-recommended strategies among HIV care facilities, such as high availability of PrEP/PEP, as well as areas for improvement, such as provision of staff anti-stigma trainings and adherence supports.

Keywords

HIV/AIDS; Ending the HIV Epidemic; health facilities; health services; health care delivery

Introduction

The *Ending the HIV Epidemic in the U.S.* (EHE) initiative was established in 2019 with the aim of ending the HIV epidemic in the United States by 2030.[1] EHE's goal to drastically reduce HIV transmission is supported by strategies in 4 key areas: early HIV diagnosis, prevention of new infections, rapid and effective HIV treatment, and quick response to outbreaks. EHE stresses the importance of expansion of preexposure prophylaxis (PrEP) and access to syringe services programs (SSPs), HIV stigma reduction, provision of essential clinical and supportive services, rapid linkage to care and antiretroviral therapy (ART), retention in care and adherence support, and collaboration with health departments to identify persons in need of support to remain in care and achieve viral suppression. HIV care facilities play a key role in these activities, but the capacity of U.S. HIV care facilities to deliver them is unknown. We conducted a survey of HIV care facilities providing care to a national probability sample of adults with HIV to assess their adoption of recommended EHE activities.

Methods

For the MMP Facility Survey (MMPFS), surveys were sent to a census of 1,023 HIV medical care facilities identified by participants in the 2019 cycle (June 2019—May 2020) of the Medical Monitoring Project (MMP) as their most frequent source of HIV care during the previous 24 months and at which a medical record abstraction took place as part of MMP. MMP is a multi-stage complex sample survey that produces nationally representative estimates among U.S. adults with diagnosed HIV.[2]

For the MMPFS, all 1,023 HIV care facilities with unique geographic locations were recruited. Surveys were completed by a senior facility administrator, nurse manager, and/or clinical director. Facilities were recruited using a modified Dillman's Tailored Design Method[3] and given the option of completing the 30-minute questionnaire online or via mail or phone. Staff at nonresponding facilities were asked to complete an abbreviated subset of the questionnaire that took an average of 5 minutes to complete. Staff at 45% of facilities responded to the full survey (N=455), and an additional 6% responded to the abbreviated survey (N=59). Because respondents were facilities and no information was collected on individuals, human subjects approvals were not obtained.

The survey collected information on facility type, Ryan White HIV/AIDS Program (RWHAP) funding, staffing, staff training on HIV stigma and cultural competency, and pre- and post-exposure prophylaxis (PEP) provision. The survey also assessed clinical and supportive services available on-site and through established referrals. Finally, the survey

asked about availability of, and barriers to, rapid intake, rapid provision of ART, retention in care practices, and monitoring of ART adherence through pharmacy data.

Publicly available data collected for all facilities included: Primary Care Health Professional Shortage Area (HPSA) designation[4], Medically Underserved Area/Population (MUA/P) designation[5], Rural-Urban Continuum Code[6], and RWHAP funding; the number of respondents with medical records abstracted from the facility was also obtained from MMP data. In addition to providing information of interest about facilities, these data were used for nonresponse analysis, weighting, and imputation.

MMPFS data were weighted based on weighting classes informed by the nonresponse analysis to reduce any bias in facility-level estimates due to nonresponse. Weighted facility estimates were based on the 44% of surveyed facilities that responded to the full survey. Additionally, because facility data are linkable to MMP participant data, we also present estimates of facility characteristics at the patient level to describe the proportion of patients whose primary HIV care facility had selected characteristics. To generate patient-level estimates, we imputed missing facility data using two steps: recursive partitioning (trees) to create imputation classes, and weighted sequential hot deck to produce imputed values. This ensured that patient-level facility estimates had no missing values and minimized potential non-response bias. The imputed facility data that were linked to the MMP patient data used all available information from the 50% of surveyed facilities that responded to either the full or abbreviated survey. No significant differences were found between the characteristics of full and abbreviated survey respondents; therefore, we did not use the abbreviated survey responses in the weighted MMPFS dataset because doing so would not reduce bias and would lead to more item nonresponse for questions not included in the abbreviated survey. We did not find significant differences in the point estimates generated by the weighted and imputed facility-level datasets, thus we conclude that these methods were comparable.

We used SAS 9.4 (Cary, NC: SAS Institute Inc.) to generate weighted estimates and confidence intervals (CI) of HIV care facility characteristics and imputed estimates of the proportion of US adults in HIV medical care whose primary HIV care facility had selected characteristics.

Results

HIV care facility characteristics

Among facilities providing HIV care to a probability sample of U.S. adults with HIV, 37% were private practices, 21% were hospital-based infectious disease (ID) practices, 18% were Federally Qualified Health Centers (FQHC), and 10% were hospital-based primary care clinics (categories not mutually exclusive; Table 1). Over 44% of facilities were in Primary Care Health Professional Shortage Areas and 45% in areas with a Medically Underserved Area/Population designation. Over 72% were in metro areas with population ≥ 1 million, 22% in metro areas with population < 1 million, and 6% in non-metro counties. Over 43% received any RWHAP funding, 92% accepted private insurance, 91% accepted Medicare, 82% accepted Medicaid, and 59% accepted AIDS Drug Assistance Program or other RWHAP-funded coverage. Approximately 9% of facilities had a past 12-month HIV

patient load of <50, 28% had 50–249, 26% had 250–499, 16% had 500–999, and 21% had >1000 HIV patients. Nearly 93% of facilities also saw patients without HIV, 83% provided PrEP, and 84% provided PEP.

Approximately 78% had on-site physicians who could provide HIV care at least 5 days per week, and 14% had only part-time HIV care providers (Table 1). Nearly all (98%) had ≥1 physician on staff, 57% had ≥1 nurse practitioner, 26% had ≥1 physician assistant, and 20% had ≥1 registered pharmacist. The most common physician specialties were infectious disease (72% of facilities), internal medicine (61%), and family medicine (46%). Over 67% of facilities provided HIV-specific stigma or discrimination and 66% provided training in other areas of cultural competency at least once for all staff who interact with patients.

The most common clinical services provided on-site were sexually transmitted infection screening and treatment (85%) and HIV testing for HIV patients' partners and others (74%) (Table 2). The most common substance use and mental health services provided on-site were tobacco cessation services (49%) and mental health services (47%). Gynecologic care (43%) and long-acting contraception (31%) were the most common women's health services available on-site. The most common supportive clinical services available on-site were HIV/STI transmission risk-reduction counseling (88%) and ART adherence support tools (58%). Language interpretation services (63%) and non-clinical case management (52%) were the most common supportive non-clinical service available on-site.

Free home HIV testing (45%) and high-resolution anoscopy (37%) were the clinical services most frequently reported as not available on-site or through referral (Table 2). Syringe services (50%) and medication assisted treatment for substance use disorders (33%) were the substance use and mental health services most frequently reported as not available on-site or through referral. Long-acting contraception (32%) and colposcopy (30%) were the women's health services most frequently reported as not available on-site or through referral. Nurse-provided clinical case management (29%) and patient navigation (29%) were the supportive clinical services most frequently reported as not available on-site or through referral. Childcare (56%) and food bank or meal delivery (33%) were the supportive non-clinical services most frequently reported as not available on-site or through referral.

The median number of business days within which a new patient can obtain an appointment with an HIV care provider was 5 days (95% CI 4–6), estimate not presented in tables). The most common barriers to offering new patients an appointment with an HIV care provider within 1 business day of the initial request were insufficient provider capacity (56%) and patient preference (50%; Table 3). Nearly 73% of facilities reported that new patients could obtain a 30-day supply of ART on their first provider visit; the most common barrier was unavailable laboratory test results (20%). Providing HIV clinical care for patients via remote conferencing was common (82%). Nearly three-quarters (71%) used data to systematically monitor patient retention in care, most often internal data such as electronic health records or billing data (66%). Approximately 73% reported collaborating with the state or local health department to identify or contact patients who are out of care. Nearly all (92%) sent patient reminders before all appointments—most often through live phone calls (71%) and text, email, or patient portal message (70%). Over 59% of facilities had direct access to

information about prescriptions fulfillment and pick-up by patients and 29% notify patients of missed prescription pickups.

Proportion of persons receiving HIV care by facility characteristics

Among persons receiving HIV care, 31% received care at a hospital-based infectious disease clinic, 25% at a private practice, and 22% at an FQHC (Table 1). An estimated 73% of patients received care at facilities in metro areas of ≥1 million population and 62% attended facilities receiving RWHAP funding. Almost 4% received care at facilities providing HIV care to less than 50 persons with HIV and 43% at facilities serving ≥1000 persons with HIV. Almost 11% attended facilities with only part-time HIV care providers. Roughly 70% received care at facilities that provide HIV-specific stigma or discrimination training and 74% at facilities that provide training in other areas of cultural competency at least once for all staff who interact with patients.

Over 87% of patients attended HIV care facilities that provide onsite STI screening and treatment and 74% attended facilities that provide HIV testing for partners of HIV patients (Table 2b). Approximately 33% attended facilities where high-resolution anoscopy was not provided onsite or through referral. Over 56% attended facilities providing onsite mental health services and 14% attended facilities where mental health services were not provided onsite or through referral. Approximately 35% attended facilities providing onsite substance use disorders treatment and 21% attended facilities where treatment was not provided onsite or through referral. Over 89% attended facilities providing onsite counseling about reducing the risk of HIV and STI transmission and 9% attended facilities where counseling was not available onsite or through referral. Nearly 67% attended facilities that provided onsite access to ART adherence support tools and 18% attended facilities where tools were not provided onsite or through referral. Approximately 37% of patients attended facilities with onsite peer support and 30% attended facilities without availability of peer counseling either onsite or through referral.

Over 66% of patients attended facilities where they could obtain a 30-day supply of ART on the day of their first visit. Approximately 87% attended facilities where providers provided HIV clinical care via remote conferencing. Nearly 84% attended facilities that used data to systematically monitor retention in care for all patients with HIV, 85% attended facilities that follow up on all missed appointments, and 70% attended facilities with access to information about prescription fulfillment and pick-up by patients.

Discussion

Using data collected from HIV care facilities attended by a representative sample of persons with HIV in the United States, we documented facility characteristics, services, and policies that support the health and well-being of persons with HIV and the goals of the EHE initiative. The findings revealed some areas of strength among U.S. HIV care facilities, such as high availability of PrEP/PEP and ability to provide a 30-day supply of ART on a patient's first visit. These services support EHE goals for preventing new infections and rapid treatment of ART to reach sustained viral suppression. However, areas for improvement were also identified, such as low availability of on-site ART adherence support

tools and use of pharmacy data for adherence monitoring—expansion of these services in U.S. HIV care facilities can help ensure that EHE goals for sustained viral suppression are met.

Expansion of preexposure prophylaxis (PrEP) and access to syringe services programs (SSPs)

Use of PrEP is highly effective at preventing HIV acquisition[7], but uptake is suboptimal[8] and disparities by gender, race, and ethnicity are evident.[9,10] Almost all (93%) facilities reported providing care for persons without HIV, and most reported providing PrEP (83%) and PEP (84%), indicating a substantial role for HIV care facilities in the provision of PrEP/PEP. A study of a national pharmacy database found increases in the number of U.S. PrEP providers from 2014 to 2019, with the prevalence of prescribing PrEP being highest among infectious disease physicians.[11] Over 72% of facilities reported having at least 1 infectious disease physician on staff. HIV care providers can play a key role in delivery of PrEP, particularly to the sexual partners of their patients with HIV. For example, over 74% of facilities reported having onsite HIV testing for partners of HIV patients and others; HIV care facilities could implement social networking-based HIV testing strategies for partners and social contacts of patients with HIV, with direct linkage to PrEP/PEP or ART as needed. A status neutral approach in which persons are linked to PrEP or ART depending on their status could increase provision of PrEP/PEP—in addition to having other benefits, such as decreasing stigma and offering more wholistic, person-centered care.[12] Approximately half of facilities reported providing no access to syringe services for their patients. Increasing the capacity of facilities to provide access to these services—either on-site or through referral—would directly support the EHE strategy to prevent new HIV transmissions through the delivery of effective interventions like syringe services programs.

HIV stigma reduction

Reducing HIV stigma is an EHE priority that is monitored by the National HIV/AIDS Strategy (NHAS)[13] to achieve the vision of every U.S. person with HIV living a life free from stigma and discrimination. Reducing stigma experienced in care settings is particularly important because stigma is associated with lower use of HIV testing and prevention services[14–16], use of PrEP[17,18], ART adherence[19,20], and use of medical care.[21,22] Over 67% of facilities reported providing HIV-specific stigma or discrimination training at least once for all staff who interact with patients (covering 70% of patients) and 66% reported providing training in areas of cultural competency (covering 74% of patients), indicating substantial room for improvement. Facility-based stigma reduction and cultural competency training may need to be offered more routinely, as a systematic review found more recent training was associated with lower stigma.[23] In addition to training, facilities should demonstrate their commitment to enforcing anti-stigma policies. One study found that perceptions that policies were not enforced was associated with more stigmatizing attitudes by providers.[24] However, while facility anti-stigma training and policies are important, the extent to which they reduce stigma experienced by patients should also be assessed.

Provision of essential clinical and supportive services

Ensuring access to needed clinical and supportive services is crucial to achieve the goals of EHE, reduce new HIV infections, and promote the health of people with HIV (PWH). While a substantial majority of PWH attended HIV care facilities that provided access to STI screening and treatment and HIV/STI transmission risk reduction counseling, nearly 8% and 9% (respectively) attended facilities with no access, indicating room for improvement in provision of these essential services. Fewer patients had access to substance use services such as substance use disorders treatment, medication-assisted treatment, and syringe services. Expanding access to substance use treatment for those who need it is crucial for meeting HIV care and prevention goals because PWH are more likely to have substance use disorders, which are associated with poor HIV outcomes.[25] Further, the NHAS Federal Implementation Plan introduced ambitious goals for improving quality of life among PWH, including decreasing food insecurity and unstable housing by 50% by 2025. We found low provision of on-site assistance with food banks or meal delivery and housing, which some evidence suggests is associated with higher uptake and effectiveness in reducing social needs.[26]

Rapid linkage to care and antiretroviral therapy (ART)

Rapid linkage to care and ART initiation are key EHE strategies that lead to better outcomes for PWH.[27–29] Facilities reported being able to offer an appointment with an HIV care provider for patients new to the facility in a median of 5 business days. The most common barriers to seeing new patients within 1 business day were insufficient provider capacity (56%) and patient preference (50%); support for rapid enrollment among administration and staff was not reported to be a barrier. Other surveys have found relatively high dissatisfaction with remuneration and time spent on administrative tasks among HIV care providers and estimate that provider attrition will not keep pace with projected increases in patients requiring HIV care.[30] Enhanced training of non-HIV primary care providers and family medicine residents to provide care for patients with HIV and improved care coordination in FQHCs has shown promise in addressing provider capacity issues.[31] Many facilities (73%) reported that all patients were routinely able to receive a 30-day supply of ART on their first visit, and most reported being able to provide ART regardless of prescription coverage (95%) or baseline laboratory test results (82%). This indicates that most facilities have the capacity to implement rapid ART, as recommended by guidelines.[32]

Retention in care, adherence support, and collaboration with health departments

Although most facilities reported using data to systematically monitor retention in care, 29% did not, indicating substantial room for improvement in efforts to improve this EHE recommended activity. Positively, approximately 73% of facilities reported collaborating with health departments in efforts to reach patients who are not engaged in care. On-site access to tools that support ART adherence, such as pill trays or dose reminder apps, was only available at 58% of facilities. Adherence support tools can be effective at improving ART adherence, as forgetting is the most common reason for missing ART doses.[33] In addition, while 59% of facilities had direct access to patient prescription fulfillment and

pick-up information, only 29% reported notifying patients of missed pickups, which can be helpful to support patient adherence.[34]

Limitations

Some limitations of this analysis include low facility response rate, although we were able to minimize potential bias by weighting the data based on information known for all facilities. Additionally, facilities responded to the survey July-November 2021 while the patients participated in MMP during June 2019-May 2020. To the extent that services and practices changed between these time-frames, the estimates of the proportion of patients attending facilities with certain characteristics may be affected. Finally, the survey did not measure the implementation of reported practices, nor was their quality assessed. Facility patients' perspectives on the availability of services and their quality may differ from those of facility staff. Due to social desirability bias in reporting on facility practices, our estimates should be viewed as upper bounds.

A strength of this analysis is its use of data from facilities attended by a probability sample of persons with HIV who are diverse in demographics, HIV care status and clinical outcomes, and geography.

Conclusion

We documented the provision of services and practices that support EHE-recommended strategies among HIV care facilities attended by a geographically diverse probability sample of US adults. Results indicate some strengths, such as high availability of PrEP/PEP, as well as areas for improvement, such as provision of staff anti-stigma trainings and adherence supports.

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Table 1.

Characteristics of HIV care facilities and the proportion of persons receiving HIV care by facility characteristics—Medical Monitoring Project Facility Survey 2021, United States.

		HIV care facility characteristics			Proportion of persons receiving HIV care by facility characteristics		
		n	%	95% CI	n	%	95% CI
Total		**455**	**100**		**4100**	**100**	
Type of facility	Federally Qualified Health Center	97	18.0	(14.5–21.5)	830	22.0	(17.7–26.2)
	FQHC look-alike	12	2.1*	(0.8–3.3)	55	1.6	(0.7–2.4)
	Hospital-based (infectious disease clinic)	96	21.3	(17.3–25.3)	1242	30.7	(26.7–34.6)
	Hospital-based (primary care clinic)	44	9.5	(6.6–12.3)	520	12.2	(6.9–17.5)
	Private practice	134	36.7	(31.9–41.6)	907	25.1	(21.8–28.4)
	State or local health department	38	6.0	(4.0–8.0)	319	8.3	(4.5–12.1)
	Veterans administration	10	2.7*	(1.0–4.3)	49	1.8	(1.0–2.5)
	STD Clinic	34	6.4	(4.1–8.7)	258	5.9	(4.3–7.6)
	Research	14	3.3	(1.5–5.0)	195	5.1	(2.3–7.9)
	Other community-based organization	53	9.2	(6.7–11.8)	375	9.7	(6.8–12.6)
	Correctional Facility	10	2.9*	(1.1–4.7)	83	2.5	(1.2–3.7)
Primary Care Health Professional Shortage Area (HPSA) Designation	Yes	213	44.1	(39.3–48.9)	1894	52.2	(44.9–59.5)
Medically Underserved Area/ Population (MUA/P) Designation	Yes	225	44.7	(39.9–49.6)	2159	53.9	(46.7–61.1)
Rural-Urban Continuum Code (RUCC)	Counties in metro areas of 1 million population or more	318	72.1	(67.9–76.4)	2898	73.0	(62.3–83.7)
	Counties in metro areas of 250,000 to 1 million population	75	15.2	(11.8–18.5)	558	17.6	(8.9–26.3)
	Counties in metro areas of fewer than 250,000 population	31	6.6	(4.2–9.0)	228	5.6	(4.8–6.4)
	Nonmetro counties	31	6.1	(3.9–8.3)	114	3.8*	(1.2–6.4)
Any Ryan White HIV/AIDS Program funding	Yes	257	43.1	(38.4–47.7)	2432	62.1	(55.4–68.7)
Type of Ryan White funding	Ryan White Part A	122	22.1	(18.3–26.0)	1497	37.3	(33.0–41.6)

		HIV care facility characteristics			Proportion of persons receiving HIV care by facility characteristics		
		n	%	95% CI	n	%	95% CI
	Ryan White Part B	150	24.1	(20.3–27.9)	1574	41.6	(36.8–46.3)
	Ryan White Part C	153	24.3	(20.5–28.1)	1410	34.9	(30.6–39.2)
	Ryan White Part D	68	10.0	(7.5–12.6)	1059	25.5	(21.0–30.1)
	Ryan White Part F	94	9.2	(7.3–11.1)	684	15.8	(11.6–20.0)
	Ryan White SPNS	19	1.9	(1.0–2.8)	149	3.6*	(1.2–6.1)
	Ryan White AETC	23	2.3	(1.3–3.2)	339	6.8	(4.5–9.1)
	Ryan White Dental	39	3.9	(2.7–5.1)	180	4.5	(3.2–5.8)
	Ryan White MAI	52	5.2	(3.8–6.6)	294	8.1	(4.3–11.9)
Type of health coverage accepted	Medicaid	388	82.3	(78.3–86.2)	3375	87.6	(84.5–90.8)
	Medicare	417	91.4	(88.5–94.2)	3535	92.2	(89.8–94.5)
	Private Insurance	417	91.6	(88.8–94.4)	3549	92.3	(90.1–94.6)
	ADAP or Ryan White Coverage	305	59.0	(54.1–64.0)	2873	74.4	(70.2–78.5)
	Veterans Administration	163	36.2	(31.5–40.9)	1288	34.7	(29.9–39.6)
	Tricare	244	55.3	(50.4–60.1)	1818	48.5	(43.6–53.4)
Has a sliding fee scale for patients without health coverage	Yes	304	63.1	(58.2–68.0)	2837	72.6	(67.7–77.5)
HIV patient load	<50	31	9.3	(6.2–12.5)	126	3.6	(2.7–4.6)
	50–249	108	27.7	(23.1–32.3)	614	16.3	(14.2–18.3)
	250–499	108	25.9	(21.5–30.4)	694	17.7	(16.0–19.3)
	500–999	71	16.1	(12.4–19.8)	673	19.3	(14.7–23.8)
	1000+	95	21.0	(16.9–25.0)	1691	43.2	(39.1–47.2)
Does the facility provide medical care for people who do not have HIV?	Yes	407	92.8	(90.5–95.1)	3348	87.5	(81.9–93.1)
Does the facility provide HIV pre-exposure prophylaxis (PrEP)?	Yes	366	83.3	(79.7–86.9)	3085	79.9	(74.0–85.8)
Does the facility provide HIV post-exposure prophylaxis (PEP)?	Yes	362	83.6	(80.2–87.1)	3007	78.1	(72.5–83.8)
On-site physician who can provide HIV care at least 5 days per week	Yes	342	77.6	(73.5–81.6)	3216	85.2	(82.7–87.8)
HIV care provider staffing	Only full-time HIV care providers	174	42.2	(37.3–47.1)	1371	35.5	(32.3–38.8)

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		HIV care facility characteristics			Proportion of persons receiving HIV care by facility characteristics		
		n	%	95% CI	n	%	95% CI
	A mix of full-time and part-time HIV care providers	202	43.6	(38.7–48.4)	2011	54.0	(50.7–57.3)
	Only part-time HIV care provider	65	14.2	(10.8–17.7)	416	10.5	(8.9–12.0)
Facilities with 1 or more of each HIV care provider type	Physicians	423	97.7	(96.2–99.1)	3713	98.1	(96.8–99.4)
	Nurse practitioners	267	57.2	(52.2–62.2)	2658	69.4	(66.2–72.7)
	Other advance practice nurses	29	5.3	(3.3–7.4)	335	8.7	(5.0–12.5)
	Physician assistants	116	25.9	(21.5–30.2)	1116	29.2	(24.5–33.9)
	Registered pharmacists	96	19.6	(15.8–23.5)	1187	29.0	(25.1–33.0)
	Other provider type	60	12.9	(9.6–16.1)	703	19.1	(14.1–24.1)
Physician specialties	Infectious disease	329	72.2	(67.7–76.6)	3015	77.3	(72.0–82.6)
	Internal medicine	271	61.0	(56.2–65.8)	2459	63.2	(59.3–67.1)
	Family medicine	218	46.4	(41.5–51.2)	1789	43.2	(39.8–46.7)
	Other general practice	90	19.4	(15.6–23.3)	727	18.7	(13.6–23.7)
	Hematology/Oncology	62	13.8	(10.4–17.2)	853	21.4	(18.1–24.6)
	Neurology	68	15.3	(11.8–18.9)	802	20.9	(16.4–25.5)
	Dermatology	61	13.6	(10.2–17.0)	821	20.8	(17.7–24.0)
	Pulmonary	73	16.6	(12.9–20.3)	809	21.0	(17.6–24.5)
	Obstetrics and gynecology	115	24.3	(20.1–28.4)	1076	28.3	(24.5–32.1)
	Cardiology	76	16.8	(13.1–20.5)	719	18.8	(16.2–21.4)
	Psychiatry	128	26.8	(22.5–31.1)	1427	36.4	(32.4–40.3)
	Ophthalmology	57	13.1	(9.8–16.5)	647	16.2	(12.8–19.7)
Does the facility provide HIV-specific stigma or discrimination training at least once for all staff who interact with patients?	Yes	319	67.5	(62.8–72.2)	2718	70.1	(65.7–74.5)
Does the facility provide training in other areas of cultural competency at least once for all staff who interact with patients?	Yes	314	66.4	(61.6–71.2)	2862	73.9	(67.5–80.2)

Notes: FQHC, Federally Qualified Health Center; STD, sexually transmitted disease; ADAP, AIDS Drug Assistance Program; MAI, Minority AIDS Initiative; Numbers are unweighted, percentages are weighted.

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* Estimates are unstable and should be viewed with caution.

Table 2.

Services provided by HIV care facilities and the proportion of persons receiving HIV care by availability of services—Medical Monitoring Project Facility Survey 2021, United States.

	HIV care facility characteristics									Proportion of persons receiving HIV care by facility characteristics								
	Onsite			Established outside referral relationship			No/unknown			Onsite			Established outside referral relationship			No/unknown		
	n	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI
Clinical-clinical services																		
STI screening and treatment	387	85.4	(81.8–88.9)	24	6.1	(3.6–8.5)	36	8.6	(5.8–11.4)	3341	87.3	(85.0–89.6)	181	5.2	(4.4–6.0)	276	7.5	(5.3–9.6)
HIV testing for partners of HIV patients and others	341	73.8	(69.4–78.3)	53	13.3	(9.9–16.8)	53	12.8	(9.4–16.2)	2820	73.6	(69.7–77.5)	528	14.3	(10.9–17.7)	450	12.1	(9.5–14.8)
Transgender hormone therapy	185	40.2	(35.4–45.0)	144	31.7	(27.1–36.3)	118	28.1	(23.6–32.6)	1735	45.0	(39.5–50.6)	1161	30.1	(26.1–34.1)	902	24.9	(20.5–29.2)
Medical nutrition therapy	199	38.8	(34.1–43.5)	130	31.5	(26.8–36.1)	118	29.7	(25.1–34.3)	1753	46.0	(39.9–52.1)	1148	28.4	(22.8–33.9)	897	25.7	(21.0–30.3)
Dental care	128	23.9	(19.9–27.9)	229	51.4	(46.5–56.4)	90	24.7	(20.2–29.1)	1020	24.6	(22.4–26.8)	1973	53.7	(49.8–57.5)	805	21.8	(17.5–26.0)
Free home HIV testing for partners of HIV patients and others	94	17.1	(13.6–20.5)	159	37.7	(32.9–42.5)	194	45.2	(40.3–50.1)	718	18.9	(14.5–23.4)	1369	34.6	(28.1–41.0)	1711	46.5	(41.3–51.7)
High resolution anoscopy	60	12.1	(9.0–15.3)	231	51.3	(46.3–56.2)	156	36.6	(31.8–41.4)	878	22.2	(19.5–24.9)	1749	45.0	(41.5–48.5)	1171	32.8	(28.0–37.7)
Clinical-substance use and mental health services																		
Tobacco cessation services	229	48.9	(44.0–53.8)	124	27.7	(23.3–32.1)	94	23.4	(19.2–27.7)	1897	49.7	(46.7–52.6)	1015	26.7	(23.5–29.9)	886	23.6	(20.1–27.1)
Mental health services	234	46.7	(41.9–51.6)	146	36.9	(32.1–41.7)	67	16.4	(12.6–20.1)	2242	56.4	(50.0–62.8)	1064	29.2	(24.0–34.5)	492	14.4	(12.0–16.7)
Substance use disorders treatment	141	29.5	(25.1–34.0)	207	46.2	(41.3–51.1)	99	24.3	(20.0–28.6)	1386	35.0	(28.8–41.1)	1661	44.4	(39.8–49.0)	751	20.6	(16.2–25.0)
Medication-assisted treatment (MAT) for substance use disorders.	139	28.3	(24.0–32.6)	176	38.4	(33.7–43.2)	132	33.3	(28.6–38.0)	1311	31.8	(26.4–37.2)	1450	38.2	(32.8–43.6)	1037	30.0	(24.7–35.3)

	HIV care facility characteristics									Proportion of persons receiving HIV care by facility characteristics								
	Onsite			Established outside referral relationship			No/unknown			Onsite			Established outside referral relationship			No/unknown		
	n	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI
Syringe services	36	7.8	(5.3–10.4)	191	42.3	(37.5–47.2)	220	49.8	(44.9–54.8)	243	6.8	(5.7–7.8)	1695	41.8	(34.7–48.9)	1860	51.4	(43.8–59.1)
Clinical-women's health care																		
Gynecologic care	211	42.9	(38.1–47.8)	143	33.7	(29.0–38.4)	93	23.3	(19.1–27.6)	1881	47.1	(42.6–51.7)	1204	32.7	(27.6–37.9)	713	20.1	(16.5–23.8)
Long-acting contraception (injection or implant)	152	30.8	(26.4–35.3)	169	37.7	(33.0–42.5)	126	31.5	(26.8–36.1)	1294	32.7	(27.0–38.4)	1480	38.1	(32.3–44.0)	1024	29.2	(24.9–33.4)
Prenatal care	110	21.6	(17.7–25.5)	227	49.9	(45.0–54.8)	110	28.5	(24.0–33.1)	875	21.7	(17.5–25.9)	2041	54.7	(50.4–59.0)	882	23.6	(19.3–27.8)
Colposcopy	98	20.1	(16.3–23.9)	231	50.4	(45.5–55.3)	118	29.5	(24.9–34.1)	1058	26.1	(23.7–28.6)	1840	47.7	(42.6–52.8)	900	26.2	(20.6–31.7)
Supportive clinical services																		
Counseling about reducing risk of HIV and STI transmission	399	87.9	(84.6–91.3)	12	3.4	(1.5–5.2)	36	8.7	(5.8–11.6)	3397	89.1	(86.6–91.7)	81	2.3*	(0.9–3.7)	320	8.6	(6.8–10.4)
Access to tools that support ART adherence, such as pill trays or dose reminder apps	289	57.5	(52.6–62.5)	70	19.3	(15.2–23.4)	88	23.2	(18.9–27.5)	2579	66.5	(59.8–73.2)	559	15.6	(11.9–19.3)	660	17.9	(13.3–22.4)
Patient navigation	267	53.6	(48.6–58.5)	65	17.1	(13.3–21.0)	115	29.3	(24.7–33.9)	2622	67.7	(62.6–72.9)	402	10.5	(7.4–13.6)	774	21.8	(18.9–24.7)
Clinical case management provided by a nurse.	239	47.9	(43.0–52.8)	84	22.7	(18.4–27.0)	124	29.4	(24.9–33.9)	2197	56.4	(52.6–60.3)	594	16.6	(14.5–18.7)	1007	27.0	(24.4–29.5)
Supportive non-clinical services																		
Language interpretation services	296	62.9	(58.1–67.7)	88	20.6	(16.6–24.7)	63	16.4	(12.6–20.2)	2682	69.3	(63.6–75.0)	675	18.0	(13.2–22.9)	441	12.7	(9.2–16.1)
Non-clinical case management	265	51.9	(47.0–56.8)	99	26.6	(22.1–31.1)	83	21.5	(17.3–25.7)	2501	63.7	(59.3–68.0)	615	17.6	(13.0–22.2)	682	18.7	(16.0–21.5)

	HIV care facility characteristics									Proportion of persons receiving HIV care by facility characteristics								
	Onsite			Established outside referral relationship			No/unknown			Onsite			Established outside referral relationship			No/unknown		
	n	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI
Social work	245	48.4	(43.5–53.3)	117	30.0	(25.4–34.6)	85	21.6	(17.4–25.8)	2336	59.7	(54.8–64.7)	702	19.3	(15.3–23.2)	760	21.0	(16.6–25.4)
Assistance with transportation	232	44.7	(39.9–49.5)	138	34.8	(30.0–39.5)	77	20.5	(16.4–24.7)	2087	55.7	(52.5–59.0)	1152	28.5	(25.5–31.5)	559	15.8	(12.3–19.2)
Peer support counseling	163	30.9	(26.5–35.3)	159	39.0	(34.2–43.9)	125	30.1	(25.5–34.6)	1439	37.0	(30.3–43.8)	1271	32.9	(28.7–37.1)	1088	30.1	(24.6–35.6)
Peer support groups	148	27.9	(23.7–32.1)	183	44.1	(39.2–49.0)	116	28.0	(23.5–32.5)	1340	33.4	(26.0–40.8)	1414	37.2	(31.5–43.0)	1044	29.4	(25.1–33.6)
Assistance with housing	144	26.7	(22.5–30.8)	208	47.5	(42.6–52.4)	95	25.8	(21.3–30.3)	1303	32.7	(27.7–37.6)	1894	49.8	(44.6–55.1)	601	17.5	(14.3–20.8)
Food bank or meal delivery	73	13.1	(10.0–16.2)	250	54.2	(49.3–59.1)	124	32.7	(28.0–37.4)	561	13.9	(11.7–16.1)	2364	61.8	(58.8–64.8)	873	24.3	(20.4–28.2)
Childcare	20	4.0	(2.2–5.9)	185	40.5	(35.7–45.3)	242	55.5	(50.6–60.4)	177	4.5	(3.9–5.2)	1569	40.6	(35.9–45.2)	2052	54.9	(50.1–59.6)

Notes: STI, sexually transmitted infection; ART, antiretroviral therapy; Numbers are unweighted, percentages are weighted.

*Estimates are unstable and should be viewed with caution.

Table 3.

Provision of care among HIV care facilities and the proportion of persons receiving HIV care by care characteristics—Medical Monitoring Project Facility Survey 2021, United States.

		HIV care facility characteristics			Proportion of persons receiving HIV care by facility characteristics		
		n	%	95% CI	n	%	95% CI
Total		**455**	**100**		**4100**	**100**	
What are the barriers to offering new patients an appointment with an HIV care provider within 1 business day of an initial request?	Patient preference	217	50.4	(45.3–55.5)	1991	51.5	(45.1–57.8)
	Insufficient provider capacity to see rapid entry patients	223	55.5	(50.5–60.5)	1626	45.4	(40.4–50.4)
	Patients lack documents required for facility enrollment	83	18.6	(14.7–22.5)	975	23.3	(18.0–28.6)
	Patients lack documents required for Ryan White HIV/AIDS Program enrollment	69	12.1	(9.1–15.0)	803	19.4	(15.5–23.4)
	Facility administration is not committed to rapid enrollment	10	2.6*	(1.0–4.3)	42	0.9	(0.6–1.2)
	Other staff are not committed to rapid enrollment	8	1.6*	(0.4–2.7)	51	1.3*	(0.5–2.2)
Which of these documents are required for scheduling the first appointment with an HIV care provider?	Proof of income	122	21.8	(17.9–25.6)	1326	32.9	(29.6–36.2)
	Proof of residence	129	24.1	(20.1–28.1)	1348	33.2	(29.7–36.7)
	Government-issued identification	164	35.9	(31.1–40.6)	1417	37.3	(34.6–40.0)
	Result of a test for tuberculosis (PPD or IGRA)	28	5.6	(3.4–7.8)	318	7.3	(4.6–10.0)
	Positive HIV antibody or detectable viral load	247	51.5	(46.6–56.4)	2405	62.2	(56.1–68.3)
	CD4 lymphocyte count result	90	19.2	(15.3–23.0)	904	23.0	(20.5–25.5)
	None of the above	134	32.3	(27.7–37.0)	1016	27.9	(23.7–32.1)
Which of the following patients are routinely able to obtain a 30-day supply of antiretroviral medication on the day of their first visit with an HIV care provider?	All patients	274	72.9	(68.1–77.7)	2555	66.1	(60.9–71.3)
	Patients with no prescription coverage, e.g. by using a pharmaceutical patient assistance program or funds designated for this purpose	359	94.7	(92.2–97.2)	3541	93.5	(90.8–96.2)

		HIV care facility characteristics			Proportion of persons receiving HIV care by facility characteristics		
		n	%	95% CI	n	%	95% CI
	Patients without results of baseline laboratory tests	308	82.1	(78.0–86.2)	3016	77.7	(73.9–81.4)
Which of these are barriers to patients obtaining a 30-day supply of antiretroviral therapy on the day of the first HIV care provider visit?	Patient preference	41	10.0	(6.9–13.1)	440	11.3	(9.0–13.6)
	Prescription not given because test results are not available	81	19.5	(15.5–23.5)	725	20.0	(16.3–23.7)
	Delay getting medication paid for	65	17.1	(13.2–21.0)	556	14.0	(11.9–16.2)
	Antiretroviral starter packs are not available to be given to patients	52	12.6	(9.2–16.0)	497	12.5	(9.6–15.3)
	Lack of trained staff to submit patient assistance program applications for free antiretrovirals	10	3.0*	(1.2–4.9)	50	1.1	(0.6–1.7)
	Patient cannot afford copayment	41	10.8	(7.5–14.0)	399	9.9	(7.3–12.5)
	Providers are not committed to immediate antiretroviral initiation	16	4.1	(2.1–6.2)	117	3.3	(2.2–4.4)
	Facility administration is not committed to immediate antiretroviral initiation	7	1.5*	(0.3–2.8)	76	6.3	(3.0–9.5)
	Lack of a standardized protocol for all clinicians to follow	14	3.6	(1.7–5.5)	193	5.1	(2.3–8.0)
Have any providers provided HIV clinical care for patients via remote conferencing?	Yes	366	82.0	(78.1–85.9)	3301	87.3	(84.4–90.2)
Have any patients received HIV clinical care from outside HIV providers via remote conferencing during a visit (in-person or virtual) at your facility?	Yes	118	27.0	(22.6–31.5)	987	27.6	(22.5–32.8)
Have any providers received HIV clinical consultation or mentoring from outside providers via remote conferencing, e.g., HIV ECHO?	Yes	156	34.1	(29.4–38.8)	1520	38.9	(34.0–43.9)
Have any providers provided HIV clinical consultation or mentoring for outside providers via remote conferencing, e.g., HIV ECHO?	Yes	174	36.9	(32.1–41.6)	1823	45.6	(41.6–49.6)
Does the facility use data to systematically monitor retention in care of all HIV patients?	Yes	342	71.0	(66.4–75.7)	3214	83.6	(78.8–88.5)
Which types of data does the facility use to monitor retention in care?	Internal data (e.g., electronic health record or billing data)	312	65.6	(60.8–70.5)	2941	77.6	(72.8–82.3)
	Health department surveillance data	112	20.6	(16.8–24.4)	1139	28.2	(24.4–32.0)
	CAREWare	143	24.2	(20.3–28.1)	1573	37.5	(29.9–45.1)

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		HIV care facility characteristics			Proportion of persons receiving HIV care by facility characteristics		
		n	%	95% CI	n	%	95% CI
	Pharmacy refill data	176	37.8	(33.0–42.5)	1703	43.7	(37.7–49.7)
Does the facility collaborate with the state or local health department to identify or contact patients who are out of care, e.g., by providing clinic data or contact information to the health department?	Yes	340	72.6	(68.0–77.2)	3016	78.1	(72.3–83.8)
Does the facility send patient reminders before all provider appointments?	Yes	415	92.4	(89.7–95.2)	3648	96.3	(95.5–97.1)
Which of these patient reminders are routinely used at the facility?	Text, email, or patient portal message	317	70.4	(65.8–75.0)	2948	76.0	(72.1–80.0)
	Automated phone calls	239	52.0	(47.1–57.0)	2194	58.1	(51.7–64.5)
	Live phone calls	330	71.2	(66.6–75.8)	2918	77.7	(72.0–83.4)
	Letter	134	27.9	(23.5–32.2)	1253	33.9	(28.8–38.9)
Does the facility follow-up on all missed appointments?	Yes	379	83.9	(80.2–87.7)	3244	85.0	(80.3–89.8)
With which methods does the facility follow-up on missed appointments?	Text, email, or patient portal message	209	44.8	(39.9–49.7)	1799	48.4	(44.6–52.2)
	Automated phone calls	82	16.5	(13.0–20.1)	541	14.5	(11.6–17.4)
	Live phone calls	342	75.4	(71.1–79.8)	2923	77.1	(70.4–83.7)
	Letter	210	44.0	(39.2–48.9)	1807	47.1	(42.7–51.6)
	Outreach in the field by a facility employee	119	23.0	(19.1–27.0)	1249	30.7	(26.5–35.0)
Is there a pharmacy at the same geographic location as the facility (onsite)?	Yes	244	53.8	(48.9–58.7)	2422	62.9	(57.4–68.4)
Does the facility have direct access to information about prescription fulfillment and pick-up by patients?	Yes	283	59.1	(54.2–64.0)	2662	69.8	(66.2–73.5)
Does the facility notify patients of all missed prescription pickups?	Yes	146	29.3	(24.9–33.7)	1511	38.4	(32.2–44.7)
With which methods does the facility notify patients of missed prescription pick-ups?	Text, email, or patient portal message	89	17.7	(14.0–21.3)	780	20.3	(15.2–25.5)
	Automated phone calls	50	9.7	(6.9–12.5)	476	12.3	(9.8–14.8)
	Live phone calls	126	24.9	(20.8–29.0)	1348	34.1	(28.0–40.2)
	Letter	32	6.2	(4.0–8.5)	254	7.8	(3.8–11.9)

Notes: PPD, purified protein derivative; IGRA, interferon-gamma release assay; Numbers are unweighted, percentages are weighted.

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* Estimates are unstable and should be viewed with caution.