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Acceptability and Feasibility of HIV Self-Testing Among Transgender Women in San Francisco: A Mixed Methods Pilot Study

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Abstract

An estimated one in four transgender women (trans women) in the U.S. are infected with HIV. Rates of HIV testing are not commensurate with their risk, necessitating alternative strategies for early detection and care. We explored the feasibility and acceptability of HIV self-testing (HIVST) with 50 HIV-negative adult trans women in San Francisco. Participants received three self-test kits to perform once a month. Acceptability and behavioral surveys were collected as were 11 in-depth interviews (IDIs). Among 50 participants, 44 reported utilizing HIVST at least once; 94 % reported the test easy to use; 93 % said results were easy to read; and 91 % would recommend it to others. Most participants (68 %) preferred HIVST to clinic-based testing, although price was a key barrier to uptake. IDIs revealed a tension between desires for privacy versus support found at testing sites. HIVST for trans women was acceptable and feasible and requires careful consideration of linkage to support services.

Keywords

HIV; HIV self-test; HIV home-testing; Transgender women; Trans women

Introduction

Transgender women (individuals assigned a male sex at birth but who identify as female and/or transgender) represent the population most disproportionately impacted by HIV in the United States. Transgender women (trans women) have extremely elevated infection rates. Estimates from available data would indicate that over a quarter of trans women are infected [1–3], and infection rates may be twice as high among trans women of color [3, 4]. A systematic review of HIV prevalence among trans women in the U.S. estimated prevalence

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at 28 % [5], with the prevalence among Black trans women reaching 56 %. These estimates surpass infection among men who have sex with men (MSM) and are well over 40 times higher than the estimated prevalence in the non-transgender (cis-gender) U.S. population [5]. Despite elevated risk for HIV, the rates of HIV antibody testing among trans women are significantly lower than other at-risk groups [6, 7]. It is estimated that fewer than half of HIV positive trans women know their status [5]. Because testing is the gateway into HIV care and treatment, the U.S. transgender population, estimated to be 700,000 people [8], urgently needs alternative approaches that facilitate access to HIV testing.

Among technologies that may facilitate access to testing for trans women and other marginalized and high risk groups, HIV self-testing (HIVST) has enormous potential to increase the proportion of people tested, increase testing frequency, and encourage earlier detection of HIV and thus earlier treatment [9]. Availability of HIVST can offer the transgender community an opportunity to test without being exposed to discrimination in the clinical setting. Extreme stigma and discrimination and fear of a positive result often discourage the trans population from seeking health or social services, including testing and treatment [10–12]. While the acceptability and feasibility of HIVST remains unexplored in trans communities, acceptability data among high risk MSM in the U.S. indicate a desire to self-test [13, 14], particularly among black MSM [15], suggesting that this strategy may appeal to, and even empower [16], high-risk groups with poor access to care and distrust of the health system.

In order to understand the potential of self-conducted HIV tests for trans women and strategies to ensure successful use and appropriate follow-up, we conducted a mixed-methods feasibility and acceptability pilot study following 50 trans women in San Francisco for a 3-month period.

Methods

Study Procedures

Fifty trans women were recruited between June and August of 2013. Recruitment included utilization of the participant database at the Center of Excellence for Transgender Health (CoE) at the University of California San Francisco (UCSF), as well as recruitment flyers, Facebook postings at partnering agencies, and peer referral from participants. Eligible participants self-identified as transgender women (male sex assigned at birth, currently female identified), 18 years of age or older, sexually active (practicing anal sex in the past year), not known to be HIV infected, and willing and able to perform all study procedures. Eligibility screening was conducted by phone and then negative HIV status was confirmed by a certified HIV test counselor at the study site prior to provision of informed consent. Study visits were conducted at the UCSF Center for AIDS Prevention Studies offices in downtown San Francisco. The protocol was approved by the UCSF Committee for Human Research.

Consenting participants were enrolled for a 3-month time period, asked to conduct HIVST on a monthly basis, and to attend study visits at enrollment, 1 month, and 3 months. At enrollment, participants underwent trans-competent HIV counseling and testing with a

trained counselor. The counselor conducted HIV testing with the Clearview® HIV 1/2 STAT-PAK (Chembio Diagnostics Systems, Inc, Medford, NY), according to manufacturer's instructions. Participants then completed an interviewer-administered behavioral survey including questions regarding demographics, sexual and other risk behaviors, health care utilization, HIV testing history, social support, and perceived experiences of discrimination and stigma. Following the survey, study staff provided training on use of the OraQuick In-Home HIV tests™ [OraSure Technologies, Inc., Bethlehem, PA], an oral fluid test approved by the US Food and Drug Administration (US FDA) for over-the-counter sales [17]. Training for HIVST included a demonstration and walk-through of the kit instructions. Participants were provided with a self-test kit and a testing log to record the date, location, and test results. Kits included written instructions, pre- and post-test counseling materials, a list of local HIV/AIDS and related resources for trans women, referrals for confirmatory testing, and condoms and lubrication sachets.

Participants returned for a follow-up visit at 1 month to complete a brief acceptability survey, review testing procedures if further instruction was needed or requested, drop off their testing log, collect two additional testing kits and logs, and schedule a final follow-up appointment for 2 months later. Participants were asked to conduct their self-tests during the second and third month of follow-up, prior to coming in for their final study visit. The final study visit also included completion of a behavioral survey. After the first follow-up visit, a subsample of participants (n = 15) were selected to complete a semi-structured in-depth interview (IDI). IDI participants were sampled purposefully for racial/ethnic representation and to include participants who reported using the test with others and/or difficulty doing the test, to ensure we captured a variety of experiences. Among those selected, 11 completed the second follow-up visit as well as the IDI. Interview topics included self-testing experiences; facilitators and barriers to HIVST; testing decisions and contexts (e.g. choosing to test with a partner or friend); experiences using study resources; concerns about test use; interest in future self-testing; and suggestions for optimal delivery and entry into care. IDIs were audio-recorded, transcribed, and coded for analysis in Atlas.ti.

Measures

Acceptability surveys included questions regarding the number of self-tests participants performed themselves (and if any tests were used to test partners or friends), ease of using the tests and interpreting test results, confidence in results, willingness to test again and/or recommend the test, and preferences for future testing and testing venue. Future testing preference was assessed by asking participants to select whether they would like their next HIV test to be conducted by a health professional or if they would prefer to test themselves, or if they had no preference. Similarly, participants were asked how they would prefer to receive future HIV test results: from someone who would provide results and counseling, by reading the results themselves, or no preference. Demographic and behavioral indicators were tailored to trans women based on previous research conducted at the UCSF CoE. History of sex work was determined by participant's response to the question "have you ever engaged in sex work or prostitution, where someone paid you money or gave you something like drugs, food, clothes, or housing in return for sex?" Intimate Partner Violence

(IPV) was measured using a scale adapted and validated by Brennan et al. [18] to capture experiences of IPV specific to trans women.

Data Analysis

Questionnaire data were entered directly into REDCap [19] and analyzed with STATA version 13 (*Stata Statistical Software: Release* 13. College Station, TX: StataCorp LP). Frequency tables were generated to describe the population demographics, testing uptake, and acceptability of the test kits. Bivariate analysis included use of Chi square tests for binary predictors and nonparametric, rank-sum tests for continuous variables to explore associations between participant characteristics and test utilization patterns (number of tests used and using tests with others) and testing preferences. We also explored whether any demographic or behavioral characteristics predicted testing preferences longitudinally using generalized estimating equations (GEE) with a log-link function to account for within-participant correlation when estimating regression parameters. We were unable to explore whether changes in condom use behaviors occurred following test kit utilization due to the small sample size, with only 27 participants who reported on condom use at both the baseline and final visit.

We used a template analysis framework to code qualitative interview data [20], generating an initial list of themes or deductive codes based on the interview topics and applying these codes to the data using Atlas.ti (version 7.1.8, Scientific Software Development GmbH, Berlin). Based on review of the deductively coded data, inductive codes were used to flag data on themes that emerged within or across the topics. Coding was primarily done by one reviewer (SC) following an independent coding exercise (SC, LM), and generating consensus around a single coding framework. Using code reports, the team discussed the main ideas that emerged, and explored and charted relationships within the data among themes [21, 22]. Once quantitative and qualitative analyses were completed separately, findings from the two data sources were triangulated to check for inconsistencies and patterns between and among findings. Pseudonyms are used to present quotes from qualitative findings.

Results

Of 90 potential participants screened for eligibility, 17 were not eligible (1 identified as male, 2 were underage, 2 were assigned female sex at birth, 2 were not willing to test for HIV, 6 were HIV positive, and 4 were not sexually active). Among the 73 (81 %) who were eligible, 10 participants declined to participate, 12 scheduled an appointment but did not present at the study site, and 51 participants (70 % of those eligible) were enrolled. One participant was later determined ineligible (was not trans-gender), leaving 50 participants for analysis. Those who did not present for their appointment or declined to participate were of similar ethnic/racial background as the study participants.

Quantitative data results

Participant age ranged from 22 to 63 years old; median age was 42 years (inner quartile range 28–49); 70 % were over 30 years old. Thirty percent identified as Black/African

American, 22 % as White/Caucasian, 20 % as Hispanic/ Latino, 8 % as Asian/Pacific Islander, 8 % as Native American, and 12 % as multi-racial (Table 1). Just over half (56 %) had some form of post high-school education, and just under half (48 %) reported not working or receiving some form of public assistance. Eighty percent of participants reported that at some point in the previous year they did not earn enough money to cover daily living expenses (e.g., food, rent), with just under half of the population reporting having been homeless at some time in the past year. Sixty-eight percent had a history of arrest or incarceration.

Almost all participants reported having multiple sexual partnerships in the past 3 months (96 %) and low rates of consistent condom use (28 % with main partners/44 % with other partners). Eighty-two percent had ever engaged in sex work. Seventy-six percent reported having experienced some form of interpersonal violence or abuse in the past, including 46 % who reported sexual violence by a partner. Despite reporting indicators of social marginalization, participants were well-connected to testing and health-related services. All participants reported seeing a healthcare provider in the past year, 74 % reported being comfortable in healthcare settings, but 46 % also reported ever needing to see a provider and not going. Ninety-six percent of participants had been tested for HIV prior to participating in this study; 88 % had tested within the past year. None of the participants had ever used a self-test prior to participation.

Of the fifty participants who completed the baseline visit, 44 (88 %) returned for one-month follow-up and 36 (72 %) returned for the final three-month follow-up (Fig. 1). All of the 44 participants who returned for the first follow-up appointment reported using a self-test; though one later indicated during an IDI that she gave the first test kit to a friend but utilized test kits prior to her second visit. At the second follow-up visit all 36 participants (86 %) indicated using two or more of the HIV self-testing kits, with four participants indicating that they gave a test kit to friends or partners to use. No seroconversions were documented during the study; given the short follow-up period in this study and the known window period of the Ora-Quick test, detecting a seroconversion was unlikely. Further, it is unknown whether participants who were lost to follow-up used their test kits or seroconverted.

Across the visits, just over a quarter of the participants (n = 13) reported using the kit with another person present. In bivariate analysis, there were no socio-demographic or behavioral characteristics associated with increased uptake of self-testing (2–3 tests vs. 1 or none, Table 1). Indicators of lower SES, including being out of work and having insufficient income, were significantly associated with performing the self-test with someone else present. Having fewer lifetime partners was also associated with testing with others present. Lower education level (high school or less compared to at least some college or more) was the only covariate significantly associated with ever stating a preference for self-testing.

At the one-month follow-up visit, 95 % of participants reported that it was easy to use HIVST; the two participants who indicated difficulties cited emotional difficulties (i.e. feeling nervous or anxious about the result) rather than technical difficulties when explaining their responses (Table 2). Additionally, 91 % of participants reported that it was easy to follow the instructions that were included in the test kit, with only one person

explaining that they did not understand much of the language that was used. Ninety-three percent of participants indicated that it was easy to interpret the test results; of those who reported difficulty interpreting the results, two cited an indeterminate result. Furthermore, 98 % of participants reported feeling confident they used the tests correctly. Additionally, at the one-month follow-up, 68 % stated they would prefer HIV self-tests vs clinic-based HIV tests in the future. Similarly, when asked how they would prefer to receive HIV test results, 64 % of participants stated they would prefer to read results alone. Ninety-one percent indicated they would recommend the self-test to others. Finally, preferences for distribution of test kits were reported as follows: pharmacy (39 %), pick-up from clinic (27 %), pick-up from local CBO (18 %), online with home delivery (14 %), and no preference (2 %).

Testing preferences did not change significantly over time: three people who had stated preference for self-testing at the first follow-up stated preference for clinic-based testing at second follow-up and one changed from clinic-based to self-testing preference. No demographic or behavioral characteristics were significantly associated with preference for self-testing vs clinic-based or no testing preference in longitudinal analyses (data not shown).

Qualitative Data Results

Eleven participants discussed their HIV self-testing experiences during in-depth interviews (IDIs). IDI participant demographics mirrored the overall sample, with age ranging from 22 to 63 years and the same approximate proportions of race/ethnicity and education level represented. All but one of the IDI participants used an HIV self-test kit, with 9 of the 11 using two or more tests. Four participants gave test kits to friends and/or used them to test partners.

Results from IDIs demonstrated that self-tests were generally acceptable to our participants; the tests were easy to use, convenient, and painless. Other than requests that the packaging be smaller and more discrete, participants did not report dissatisfaction with any elements of the test.

> "To be honest my experience was the test was very convenient. I liked it. I liked how easy it was for the most part. The liquid part kind of scared me a little. That was the only part though. And making sure I used around the gums correctly, but other than that I think all in all my experience was rewarding in the fact that it was convenient and also accurate." (Lila, age 22)

The greatest barrier participants identified to future test use was cost, which was described as a zero-sum factor: if the tests are either low- or no-cost, then testing preferences would inform the choice to use self-tests in the future. However, if tests are expensive past the point of accessibility, preferences were no longer a factor—participants would simply not purchase self-tests. When asked under what circumstances one would choose a self-test or choose to test at a clinic in the future, one participant said:

> "Respondent: The circumstance is having to go and pay for them - the home test kit - and it's free at a clinic to do…. [Interviewer: Okay, if costs were not an issue which would you prefer?] …The home kit." (Ruby, age 47)

Another participant concurred that trans women could not buy the test:

> "Buy it? I don't think so. It's too expensive and we are a poor community. We need the money. [Interviewer: If it were a lower cost, would the trans women you know use it?] … Oh, yes… it's an acceptable test, I trust the test, and it's not going to be expensive…. Right now, I cannot afford it." (Liana, age 60)

Overwhelmingly, those asked how much they would be willing to spend on a self-test said $20 or under, even though $20 was still described as a lot of money. Participants reported having easy access to free testing, sometimes receiving incentives to get tested at community-based organizations (CBOs). One participant explained her testing options and why $20 seemed like a reasonable price point, highlighting the economic context of testing in San Francisco:

> "Because it's $20. It's not - it's not like oh, you have to pay 100 dollars for this. Because then I would have gone to a clinic. And sometimes with clinics they provide incentives for coming in. You know, so sometimes that kind of determines where I go to test. And I'll admit, like yeah, I have gone to get tested just for the incentive." (Marie, age 24)

The interviews also provided a more nuanced view of what participants liked about self-testing. In addition to convenience and privacy, some participants found it empowering that they could test themselves, particularly amidst relationships and social dynamics in which they did not always hold power.

> "I think sometimes we are such a high risk group of women because sometimes we're too trusting of [our partners]. You know, we let them sing us a song and we fall in love with it and that idea and then boom. … I think [self-testing] takes ownership in you knowing your status. And I think it, for me, makes me even more inclined to get tested more regularly." (Desiree, age 23)

Three participants reported using self-tests provided by the study to test partners, and nearly all of the women interviewed expressed interest in partner testing. Some women liked both the idea that concurrent partner testing could offer support and that a potential partner refusing to test in front of you might be a red flag. In that sense, some of the participants referred to using self-tests to inform sexual decision making.

> "If the person wouldn't take the test with me, if I had more than one test and I had a prospect, there would be nothing happening with the penis intimately." (Sheila, age 63)

> " …you're telling me you're negative and you refuse to sit down and test, you're lying to me." (Brittany, age 49)

Participants also contrasted the privacy of the self-test with the public experience of clinic-based testing. While 26 % of participants (13/50) reported feeling uncomfortable in health care settings in the surveys, only a few IDI participants reported a reluctance to go to a clinic due to fear of mistreatment by health professionals. Instead, many more described discomfort with being seen at a testing clinic by people they knew out of fear of gossip and

loss of privacy. This discomfort was fueled by perceptions of stigma both internal and external to the LGBT community.

> "At the clinic, of course everybody is there, you're nervous, people run and they see you. 'Oh.' They start thinking, especially in my community. 'Oh, you know, she came to the STD clinic. Oh.' And stuff like that, and start coming out with different ideas." (Dora, Age 41)

Interviews also revealed that concern about stigma, and the related desire for the privacy, exists in tension with the desire for social and resource support. Participants spoke of the importance of privacy in their own lives and the lives of other trans women they knew, and over half (7/11) of those participating in IDIs stated explicitly that they associate clinic-based testing with compromised privacy. However, all but one of those participants also reported that if they felt unsure of their status and could be positive, they would either want the resource support of a counselor in a clinic environment or the presence of a support person while self-testing.

> "I could see someone comforting me if I did test positive. You know, I would be processing it. I'm sure they'd be like, 'It's OK,' you know, et cetera. But who's to say that, in a different circle of girls, that it doesn't come up, 'Oh, girl, I was just with Desiree and she, you know, tested positive and you know, I don't know what she's going to do,' you know what I mean? I've seen it happen. And so, I just don't know if I would [take that chance]." (Desiree, age 23)

Participants expressed an internal conflict in the decision-making process: the trade-off between support and privacy is particularly acute when social resources are low and the fear of stigma both from within and outside one's own community are high. The need for support was highlighted in interviews not only as a function of context (HIV testing), but also as a need specific to trans women.

> "A transgender's life can be a lonely life. If you have the possibility of having some kind of emotional support, it helps a lot…. We do everything by ourselves because within the homosexual matrix, there are still prejudices." (Sheila, Age 63)

Discussion

To our knowledge, this is the first study to explore acceptability and feasibility of self-conducted HIV testing among trans women. Study participants used the tests, most more than once, and the majority indicated that the tests were easy to use and they would use them again. More than half stated a preference for self-testing over clinic-based testing. These results are similar to findings from other groups at high risk of HIV [23–25].

Approximately a quarter of the participants decided to provide tests to others or test with others, though participants were neither instructed to test with others nor explicitly instructed not to. In fact, testing together was often cited in qualitative interviews as an incentive for partners to discuss HIV and provide mutual support. In light of the desire to test in partnerships documented in the qualitative data, it is not surprising that survey data demonstrated that those with fewer lifetime partners (and thus potentially more

monogamous relationships) were also more likely to test with others. Self-conducted testing in partnerships or among friends could prove an important strategy to extend testing uptake overall. Currently, the OraQuick self-test is being packaged and marketed not as a partnership experience, but as an individual experience focused on privacy. While privacy is an important feature of the self-testing option, there may be an opportunity to package kits in pairs, which would allow for a single purchase to cover either two partners or to cover a follow-up test for repeat individual testing following the immunological window period. Our data reveal that the current individual self-test packaging approach might fail to capture a substantial population seeking to experience self-testing with a partner. For a population that experiences marginalization based on sexual identity and partnership choices, having the choice to test with a partner or a friend outside of potentially stigmatizing clinic sites is important. Even for those participants who were unsure what testing option they would choose in the future, a high level of interest in testing with a partner was expressed in the qualitative interviews and merits future exploration.

The conflict in choosing between professional support and privacy when testing alone reveals a key tension in decision making around self-testing for trans women. Self-testing may appeal to those who prioritize privacy; however participants also widely expressed a need for support when testing, particularly if they suspected seroconversion. Need for privacy was also extensively discussed in the context of a participants' concern with stigma, particularly testing-related stigma from within the transgender community. In fact, fear of stigma and gossip within the transgender community seemed to deter trans women from presenting at clinics more so than fears of provider-based stigma, which were low in this population who reported being comfortable in health care environments. When asked about future testing preferences in qualitative interviews, participants struggled to reconcile the need for privacy and support when imagining their next testing experience.

As this study was the first exploration of HIVST acceptability and feasibility for trans women, it was designed to be small and exploratory and was not powered to detect differences in usage and preference by population characteristics, though patterns and trends that can shed light on these differences were explored nonetheless. There was substantial attrition in this study; however, we do not believe this reflects a disinterest or dissatisfaction with the HIV self-testing experience. Instead, this population is quite transient (at least four of fifty participants reported moving out of the study area in a period of three months), and some attrition was likely due to the study location—the financial district of San Francisco can be intimidating. The demographic profile of the participants reflected social and economic marginalization found in existing literature on U.S. trans women [26, 27], though our study participants were well-connected to testing and engaged in health-related services. This is likely due to the study environment of San Francisco, which offers a variety of health care options serving the transgender community, and has been providing comprehensive safety net health insurance for many years. Additionally, the majority of our participants (60 %) were identified from study databases and community-based organizations or health clinics, indicating a sample population that is likely more linked with available clinical resources than transgender populations in areas without these networks [27]. Participants in this pilot were also HIV negative and aware of their status, having been tested at their

enrollment visit. As a result, we cannot draw conclusions about test acceptability among trans women unaware of their status or who had not undergone recent testing.

Conclusion

Twenty-five years of HIV prevention research, practice, and policy have not adequately produced evidence-based, effective prevention options for trans women, a population at disproportionately high risk for HIV. Instead, trans women have often been subsumed in efforts tailored for MSM, which may not be culturally appropriate for trans women who face unique barriers to care and distinctive contextual vulnerabilities [28–31]. As a result, little research has been conducted to support needed alternative testing strategies for trans women. We found that HIVST is a feasible strategy to expand the mix of testing options in this population, particularly for those who prefer to avoid the clinic environment and/or who require more frequent testing. To increase the potential for HIVST utilization among trans women, outreach is needed to inform this population about self-testing and enhanced opportunities for partner testing and strategies to facilitate linkage to social and resource support should be sought. Critically, the current price point may exclude populations that experience disproportionate economic marginalization; cost reduction or subsidization should be explored in the public health sector. Additional research should focus on expanding outreach, delivery options and implementation strategies to meet the testing needs of trans women and whether introduction of HIVST has the potential to improve early HIV diagnosis.

Acknowledgments

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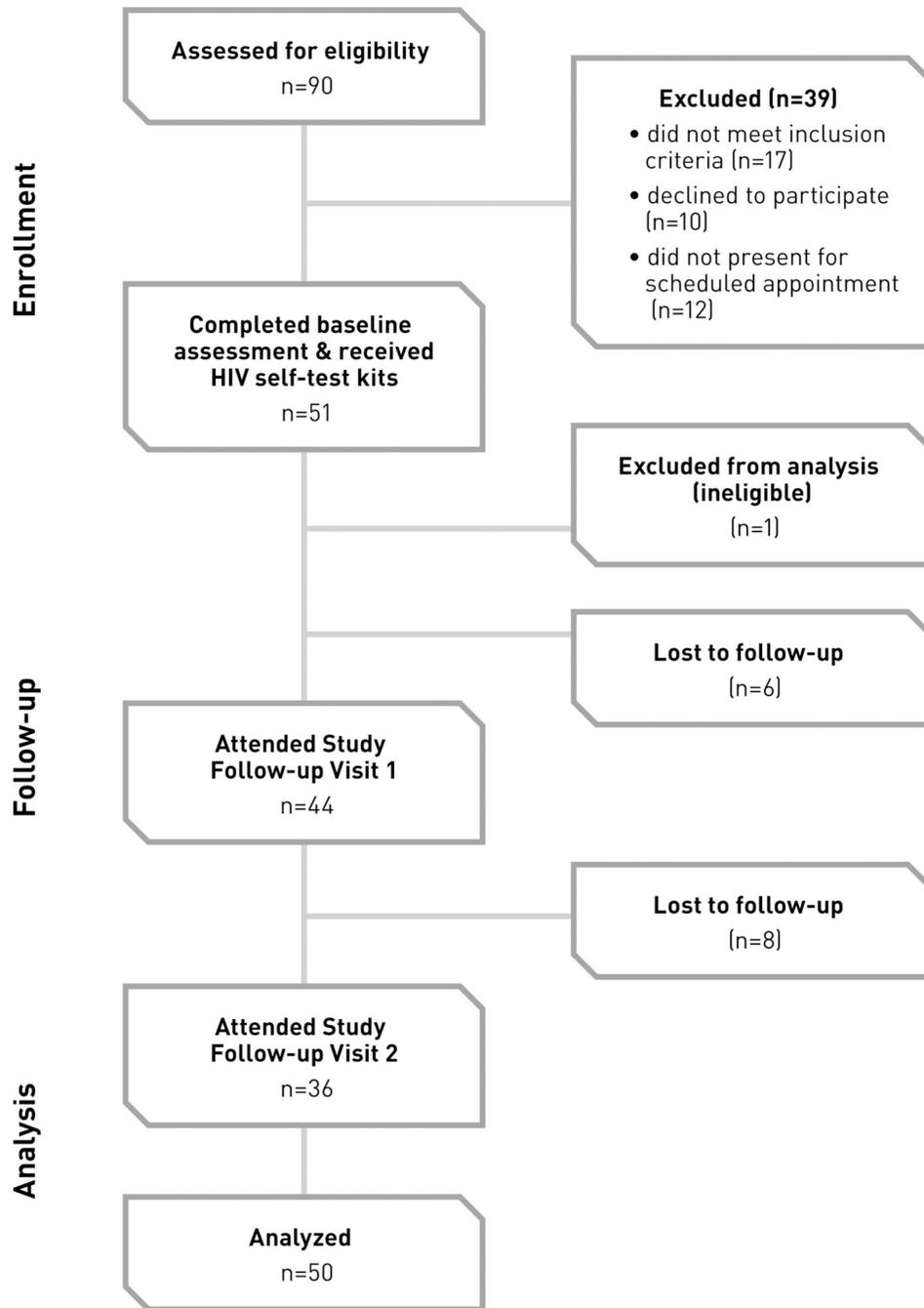
Fig. 1.
Participant recruitment, enrollment, and retention

Table 1

Uptake of HIV self-testing, testing with others, and testing preference by baseline socio-demographic and behavioral characteristics among transgender women participating in a study of self-conducted HIV testing, San Francisco, 2013–2014

Respondent characteristics	Overall (n = 50)		Conducted 2 or more self-tests (n = 34)		Ever conducted test with others (n = 13)		Ever stated preference for self-test (n = 31)	
	n	%	n	%	n	%	n	%
Socio-demographic characteristics								
Age								
18–30	15	30	9	26	6	46	7	23
31+	35	70	25	74	7	54	24	77
Gender identity								
Female	25	50	16	47	6	46	16	52
Transgender/trans woman	25	50	18	53	7	54	15	48
Race/ethnicity								
Black/African American	15	30	8	24	5	38	8	26
Hispanic/Latino	10	20	5	15	2	15	7	23
White/Caucasian	11	22	10	29	3	23	7	23
Asian/Pacific Islander	4	8	2	6	0	–	2	6
Native American	4	8	3	9	2	15	3	10
Multi-racial	6	12	6	18	1	8	4	13
Highest level of education								
High school or less	23	46	18	53	6	46	17	55
Some college or technical school	27	54	16	47	7	54	14	45[*]
Currently working								
Yes (on the books)	14	28	8	24	0	–	10	32
Yes (off the books)[§]	12	24	8	24	5	38	6	19
Not working or on public assistance	24	48	18	53	8	62[*]	15	48
Income sufficient/insufficient for basic needs								
Sufficient	10	20	5	15	0	–	6	19
Insufficient	40	80	29	85	13	100[*]	25	81
Homeless in the past year								

Respondent characteristics	Overall (n = 50)		Conducted 2 or more self-tests (n = 34)		Ever conducted test with others (n = 13)		Ever stated preference for self-test (n = 31)	
	n	%	n	%	n	%	n	%
Yes	24	48	15	44	8	62	13	42
No	26	52	19	56	5	38	18	58
History of incarceration								
Yes	34	68	23	68	8	62	20	65
No	16	32	11	32	5	38	11	35
Sexual Behaviors								
Age of sexual debut								
12 years	21	42	13	38	8	62	12	39
>12 years	29	58	21	62	5	38	19	61
Lifetime sexual partners (median, IQR)	106	(30, 350)	77	(20, 350)	20	(10–55) *	113	(30–500)
Has main partner in past 3 months								
Yes	25	50	18	53	9	69	14	45
No	25	50	16	47	4	31	17	55
Consistent condom use with main partner (among those with main partner)								
Yes	7	28	6	33	2	22	4	29
No	18	72	12	67	7	78	10	71
Consistent condom use with other partners (among those with other partners)								
Yes	21	44	14	44	3	25	12	40
No	27	56	18	56	9	75	18	60
Ever experienced sexual violence								
Yes	23	46	17	50	7	54	15	48
No	27	54	27	50	6	46	16	52
Ever experienced any form of interpersonal violence								
Yes	38	76	28	82	11	85	25	81
No	12	24	6	18	2	15	6	19
Ever engaged in sex work (among those responding)								
Yes	41	82	30	88	12	92	27	88
No	5	10	4	12	0	–	2	6
Knows where to access a care provider								
Always	36	72	25	74	10	77	22	71

Respondent characteristics	Overall (n = 50)		Conducted 2 or more self-tests (n = 34)		Ever conducted test with others (n = 13)		Ever stated preference for self-test (n = 31)	
	n	%	n	%	n	%	n	%
Most of the time	10	20	8	24	2	15	8	26
Sometimes	4	8	1	3	1	8	1	3
Comfortable in health care environments								
Yes	37	74	27	79	11	85	23	74
No	13	26	7	21	2	15	8	26
Most recent HIV test								
Within the last year	44	88	29	85	13	100	27	87
More than a year ago	4	8	3	9	0	–	2	6
Never tested	2	4	2	6	0	–	2	6

*
P value .05 (Chi square or rank sum test)

§
Question phrasing includes working 'on the street'

Table 2

Self-Testing acceptability and feasibility at first follow-up visit among transgender women participating in a study of self-conducted HIV testing, San Francisco, 2013–2014

Acceptability & feasibility items[*]	Total (n = 44)	
	n	%
Ease of collecting sample		
Easy to collect	42	95
Difficult to collect	2	5
Ease of following instructions		
Easy to follow instructions	40	91
Difficult to follow instructions	4	9
Ease of interpreting results		
Easy to interpret results	41	93
Difficult to interpret results	3	7
Confidence in correct test use		
Confident	43	98
Not confident	1	2
Preference for next HIV testing experience		
Prefer home/self-test	30	68
Prefer to test with a health professional or no preference	14	32
Preference for receiving HIV test results		
Prefer to read tests alone	28	64
Prefer to have someone present or no preference	16	36
Recommend HIV self-test to a friend/partner		
Yes	40	91
No/Don't know	4	9

[*] As reported at first follow-up visit