

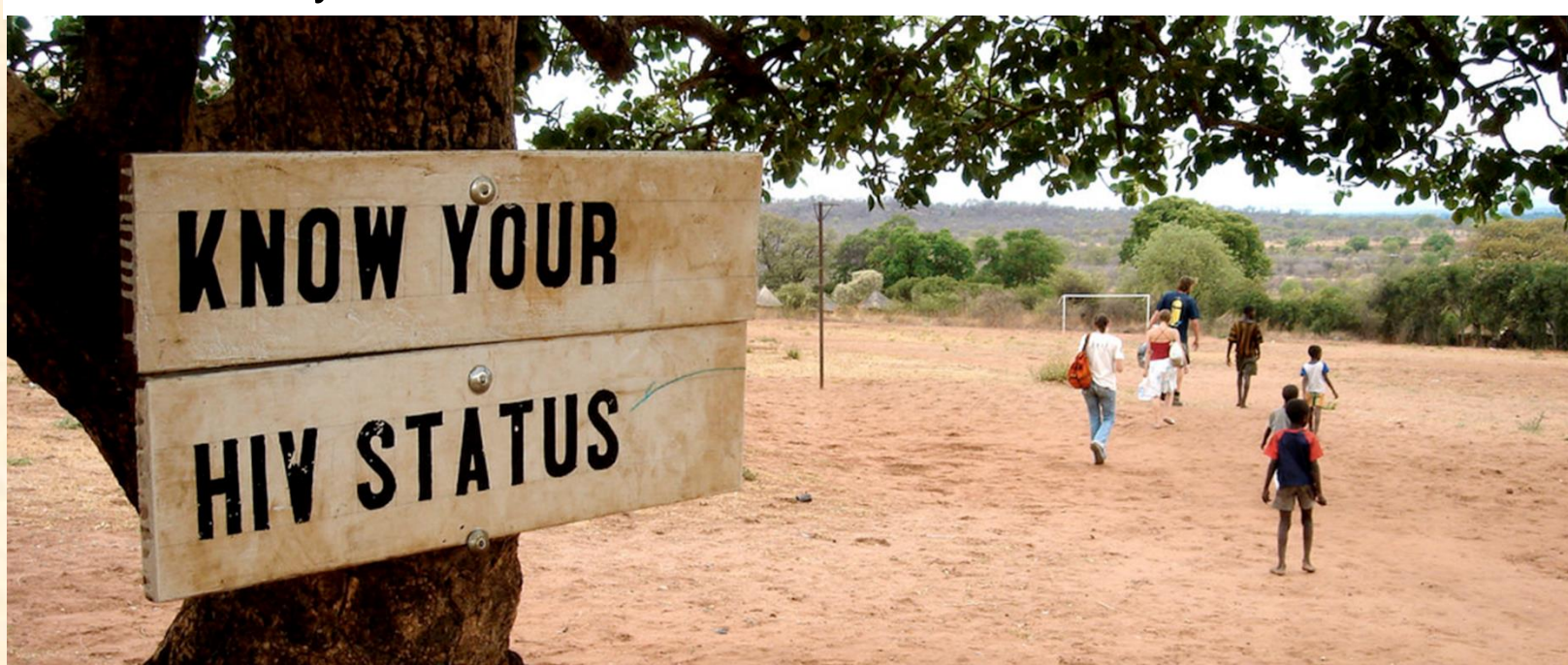
# Acceptability, feasibility, and preference for HIV self-testing in Zimbabwe

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## Background

In Sub-Saharan Africa, approximately 55% of HIV-infected individuals are unaware of their HIV status. HIV self-testing (HIVST) may substantially increase acceptability and access to testing in a low-cost, confidential and non-stigmatizing manner, addressing many barriers to provider-delivered testing (PDHTS) strategies. In preparation for the introduction and scale-up of HIVST in Zimbabwe, we compared the offer of HIVST versus PDHTS in rural and peri-urban communities in Zimbabwe. Our aim was to examine preferred testing method, and characteristics of testers by method.



## Methods

- Outreach teams visited 6 rural and 3 peri-urban communities in advance to promote testing, telling people they would be able to choose to test using either PDHTS or HIVST, and inform them of testing dates in their community.
- Mobile testing units visited each community on the designated testing day(s). Individuals ≥18 years presenting for testing who had a personal mobile phone and provided consent were enrolled.
- A baseline questionnaire was administered and participant phone numbers were registered for follow-up.
- Those who chose HIVST received a self-test kit with validated instructions. They were shown a 3-minute instructional video of how to self-test and interpret results.
- Participants could test privately on-site, or take the test kit away to test at a time and location convenient for them.
- Participants were contacted by telephone 2 weeks later to complete a telephone questionnaire about their experience with testing and linkage to post-test services.

## Results

1000 participants were recruited into the study, 500 from rural and 500 from peri-urban areas. Demographic data are presented in Table 1.

- 17% of participants had never previously accessed HTS
- Participants from rural communities were more likely to be older, female, never married, and less educated.

Table 1: Baseline characteristics

Characteristic	Total (N=1000) N (%)	Rural (N=500) N (%)	Peri-urban (N=500) N (%)	p-value
Mean age (range)	33 (18-74)	35 (18-74)	32 (18-72)	0.13
Male	515 (52%)	242 (48%)	273 (55%)	0.05
Marital status				<0.01
Never married	713 (71%)	378 (76%)	335 (67%)	
Married	148 (15%)	57 (11%)	91 (18%)	
Separated/Widow/Divor	139 (14%)	65 (13%)	74 (15%)	
Education				<0.01
< O levels	475 (48%)	261 (52%)	214 (43%)	
≥ O levels	525 (53%)	239 (48%)	286 (57%)	
Receive a regular salary through employment	254 (26%)	83 (17%)	181 (36%)	<0.01
Ever tested for HIV	830 (83%)	416 (83%)	414 (83%)	0.87

Results on testing method selection were available for 998 participants. 695 (70%) participants opted for HIVST (p<0.001), including 351 (70%) in rural communities and 343 (69%) in peri-urban communities (Table 2). Of these, 50 (14%) in rural and 35 (10%) in peri-urban communities tested themselves on-site.

- Those who opted to self-test were more likely to be male, <35 years, more educated, and have ≥1 sexual partners in the past 3 months.
- Those who opted to self-test were less likely to have tested positive for HIV in the past, and have used a condom at last sex.

Table 2: Characteristics by testing method (N=998)

Characteristic	Total (N=998) N (%)	Provider-delivered testing (N=303) N (%)	Self-testing (N=695) N (%)	p-value
Age				0.02
18-24 years	216 (22%)	60 (20%)	155 (22%)	
25-34 years	418 (42%)	112 (37%)	305 (44%)	
≥35 years	366 (37%)	131 (43%)	235 (34%)	
Male	515 (52%)	143 (47%)	370 (53%)	0.08
Marital status				0.40
Never married	713 (71%)	211 (70%)	500 (72%)	
Married	148 (15%)	43 (14%)	105 (15%)	
Separated/Widow/Divor	139 (14%)	49 (16%)	90 (13%)	
Education				<0.01
< O levels	475 (48%)	178 (59%)	296 (43%)	
≥ O levels	525 (53%)	125 (41%)	399 (57%)	
Ever tested for HIV	830 (83%)	253 (84%)	576 (83%)	0.81
Ever had a positive HIV test	46 (6%)	35 (14%)	11 (2%)	<0.01
Number of sex partners in the past 3 months				0.01
0	166 (17%)	67 (22%)	99 (14%)	
1	739 (74%)	208 (69%)	529 (76%)	
≥2	95 (10%)	28 (9%)	67 (10%)	
Used a condom at last sex	245 (25%)	86 (28%)	159 (23%)	0.06

## Results

622 (89%) self-testers completed a 2-week follow-up questionnaire - 32 (5%) had not used the test at the time of the questionnaire (Table 3). Primary reasons for not testing were being busy/traveling (44%) and fear of results (19%).

- 96% of participants found the test not at all hard to use (rural participants were more likely to report difficulty).
- Nearly 30% tested with someone else present, and of these 20% tested with their sexual partner.
- Among those who did not test positive, 76% preferred their next test to be a self-test done in private. Participants in rural areas were more likely to report this.
- Among those whose test was reactive, at the time of the follow-up questionnaire 53% had gone for confirmatory HIV testing.

Table 3: Perceptions of those who self-tested

Characteristic	Total (N=590) N (%)	Rural (N=307) N (%)	Peri-urban (N=283) N (%)	p-value
How hard was it to self-test correctly?				0.05
Not at all hard	564 (96%)	299 (97%)	265 (94%)	
Somewhat hard	19 (3%)	7 (2%)	12 (4%)	
Very hard	7 (1%)	1 (0%)	6 (2%)	
Tested with someone else present	169 (29%)	82 (27%)	87 (31%)	0.28
Tested with a sexual partner	120 (20%)	64 (21%)	56 (20%)	0.75
Test result				0.01
Positive	47 (8%)	15 (5%)	32 (11%)	
Negative	532 (90%)	287 (93%)	245 (87%)	
Don't know	11 (2%)	5 (2%)	6 (2%)	
Trust that self-test result was correct	553 (94%)	293 (95%)	260 (92%)	0.10
Comfortable learning test result without a provider present	540 (92%)	289 (94%)	251 (89%)	0.02
Among those who did not test HIV+ (n=543), what would you want your next test to be?				0.02
VCT clinic or hospital	51 (9%)	21 (7%)	30 (12%)	
Provider delivered testing at home	17 (3%)	7 (2%)	10 (4%)	
Self-testing in the presence of a provider	32 (6%)	12 (4%)	20 (8%)	
Self-testing in the presence of someone else, not a provider	32 (6%)	14 (5%)	18 (17%)	
Self-testing in private	411 (76%)	238 (82%)	173 (70%)	
Would recommend self-testing to friends/family	586 (99%)	306 (100%)	280 (99%)	0.47
Of those testing HIV+ (n=47), attended post-test HIV services at the time of follow-up	25 (53%)	8 (53%)	17 (53%)	0.99
How hard was it to understand what services to attend after self-testing?				<0.01
Not at all hard	562 (95%)	301 (98%)	261 (92%)	
Somewhat hard	17 (3%)	5 (2%)	12 (4%)	
Very hard	11 (2%)	1 (0%)	10 (4%)	

## Conclusions

- HIVST was highly acceptable and may encourage testing among those underserved by traditional testing models, including couples, younger people, males and those at higher risk.
- Most wanted their next test to be a self-test. However, 12% opted to test in private but on-site at the clinic, and some reported interest in self-testing in the presence of others (a provider or someone else). There may be scope for exploring HIVST modalities which accommodate these scenarios.
- Importantly, half of those with a reactive result via HIVST had linked to confirmatory testing by the time of follow-up. This is similar to available linkage data after PDHTC in Zimbabwe.
- HIVST represents a promising alternative for engaging those who have been harder to reach with existing testing services in Zimbabwe. Exploring different distribution mechanisms and modalities for self-testing will be important moving forward.
- Exploring methods for increasing linkage to appropriate post-test services needs to be optimized, regardless of testing modality.



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