



Applying User Preferences to Optimise the Contribution of HIV Self-Testing to Reaching the “First 90” Target of UNAIDS Fast-Track Strategy: Results from Discrete Choice Experiments in Zimbabwe

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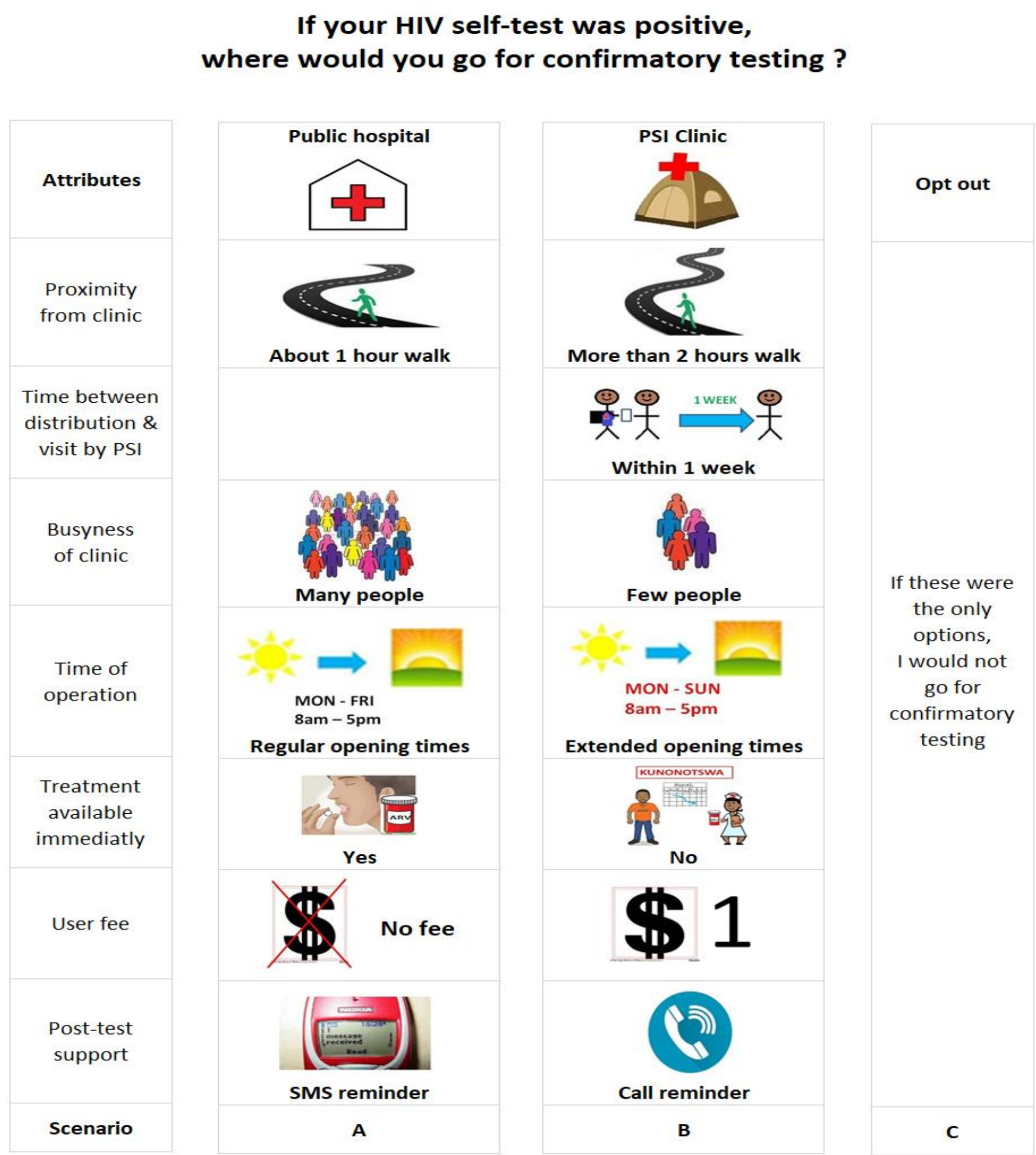
BACKGROUND

New HIV testing strategies are needed to reach the United Nations’ 90-90-90 target. HIV self-testing (HIVST) can increase uptake, but users’ perspectives on optimal models of distribution and post-test services are uncertain. We used discrete choice experiments (DCE) to explore the impact of service characteristics on uptake along the testing cascade.

METHODS

DCEs are a quantitative survey method that present respondents with repeated choices between packages of service characteristics (Figure 1), and estimate the *relative* strength of preferences for each service characteristic. We embedded DCEs within a population-based survey following door-to-door HIVST kit distribution by community volunteers in two rural districts in Zimbabwe. One DCE addressed distribution preferences and the other confirmatory testing preferences following self-testing. Using the estimated utilities, we identified key drivers of uptake for each service and simulated changes to linkage attributable to hypothetical changes in service characteristics of outreach and static clinic confirmatory testing.

Figure 1. Linkage DCE questionnaire



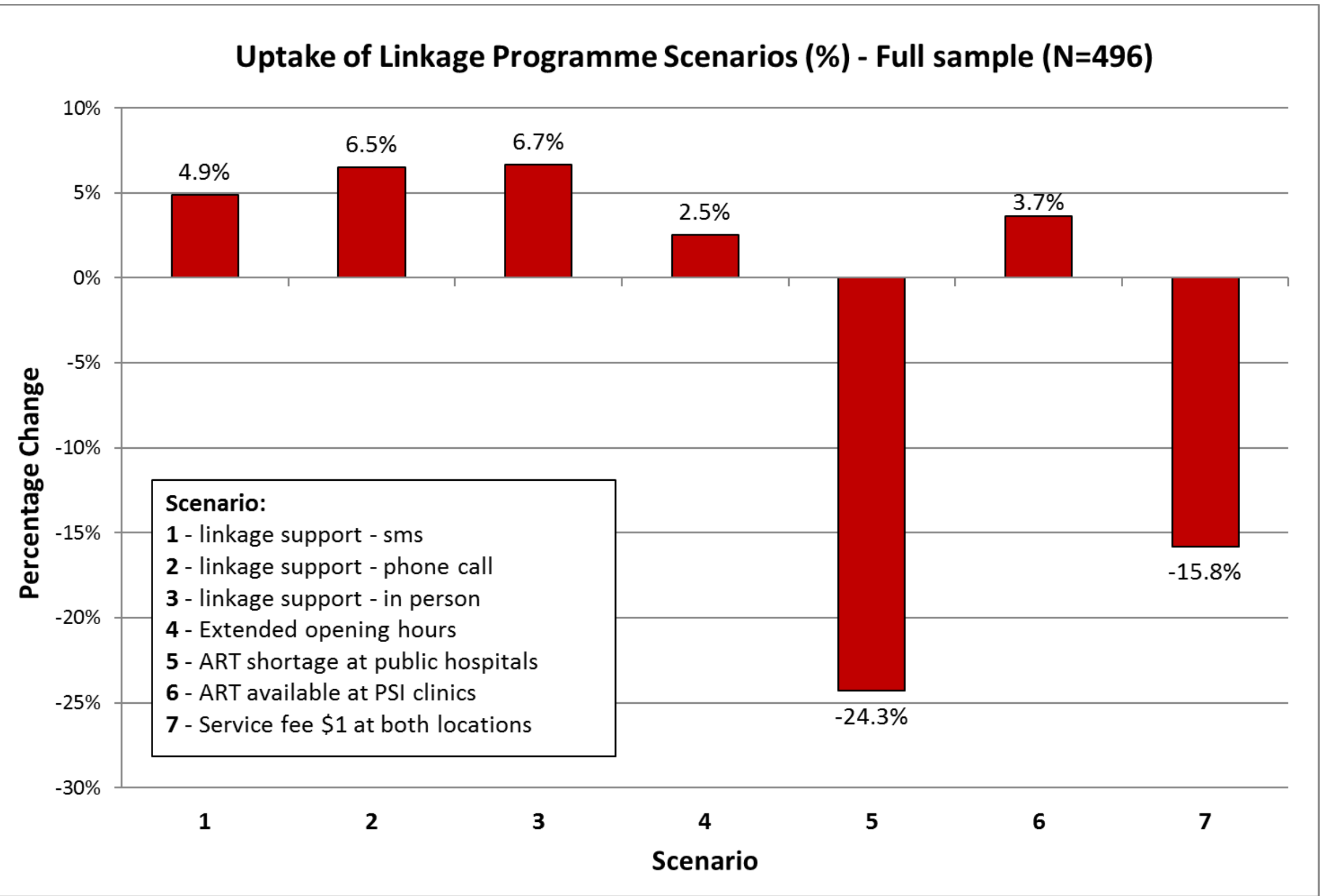
“Participants were presented with twelve different scenarios where we varied the service attributes”

RESULTS

Distribution and linkage DCEs surveyed 296/329 (90%) and 496/747 (66%) participants; 81.8% and 84.9% had ever-tested, respectively (Table 1.). The strongest distribution preferences were for i) free kits – a \$1 increase in kit price was associated with a utility (U) of -2.017; ii) door-to-door kits delivery (U=+1.029) relative to collection from local/mobile clinic; iii) telephone helpline for pre-test support (U=+0.415); iv) distributors from own/local village (U=-0.145) versus from external community (U=-0.145). Never-testers valued phone helpline more than ever-testers.

Table 1. Sample characteristics

Sample size	Distribution DCE		Linkage DCE	
	n	%	n	%
Sex				
Male	128	43.2%	189	38.1%
Female	168	56.8%	307	61.9%
Age mean (standard deviation)	37.10 (16.68)		38.61 (18.08)	
Education level				
O level incomplete	192	64.9%	312	62.9%
At least O level completed	104	35.1%	184	37.1%
HIV testing experience				
Never tested	54	18.2%	75	15.1%
Self-tested	136	45.9%	260	52.4%
Tested but never self-tested	106	35.8%	161	32.5%



The strongest linkage preferences were i) immediate ART availability: U=+0.614 and U=+1.052 for local and outreach clinics, respectively; ii) free services: a \$1 user fee decreases U=-0.381 at local and U=-0.761 at outreach clinics, respectively; and proximity of clinic (U=-0.38 per hour walking). Participants generally preferred to link to either location; while never-testers were more averse to linkage. Simulations (Graph 1.) showed importance of availability of antiretroviral therapy (ART) – unavailability of ART at local clinics would reduce linkage by 24%.

Graph 1. Simulated uptake of linkage compared to base case

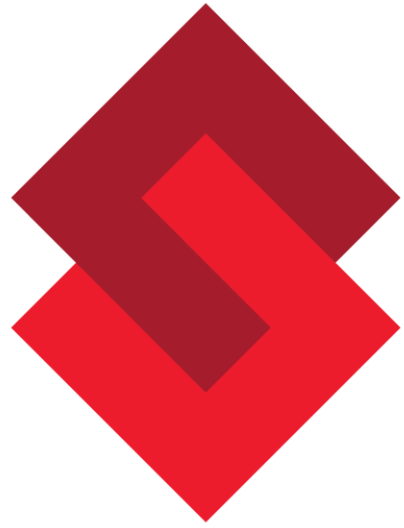
CONCLUSION

Free distribution of HIVST by local volunteers, and immediately available ART were the strongest relative preferences identified. Accommodating linkage preferences, notably ensuring ART at mobile outreach clinics, could facilitate “resistant testers” to test while maximising uptake of post-test services.

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