



UNITAID-PSI
HIV SELF-TESTING AFRICA

HIV STAR RESEARCH NEWS

Issue 4

April to June 2017

Welcome

As we approach the end of phase I of the STAR project, we would like to share some of STAR's main achievements so far:

STAR has generated public health evidence on safety, acceptability, feasibility and cost-effectiveness, with seven different distribution models being investigated for cost, client preferences, and linkage to care and prevention.

The project distributed 466,000 self-test kits from May 2015 to June 2017, and plans to distribute a total of 4.8 million self-test kits by 2020.

Rapid accumulation of multi-country data by STAR has led to: WHO guidelines for HIV self-testing being released in 2016; price reductions for HIV self-test kits from \$40 in 2013 to just \$2; and updated country policies and regulations that include HIV self-testing.

We feel great pride to be part of this work with our STAR consortium colleagues and look forward to phase II beginning in the next quarter.

For more information on the STAR research team, our activities and our abstracts and publications, visit the [STAR Research website](#) and follow us on Twitter: @HIVSTAR_LSHTM.

Liz Corbett and Cath Beaumont



MLW's Augustine Choko presenting at the Interest Conference

London
School of
Hygiene
& Tropical
Medicine



Coming Events: STAR

- ◆ STAR Phase II kick off consortium meeting: September 2017, TBC
- ◆ STAR Economics Network meeting, September 2017, TBC
- ◆ STAR Qualitative Research Network Meeting, 8th—9th September 2017, Blantyre

Coming Events: Other

- ◆ [International Health Economics Association Congress](#): 8th to 11th July 2017, Boston
- ◆ [IAS Conference](#): 23rd to 26th July 2017, Paris. This includes a STAR satellite session on Sunday 24th July from 5:00pm to 7:00pm, as detailed inside.

Inside...

- ◆ Facility-based HIV self-test kit distribution in Zambia
- ◆ Blog highlights on the QERN and on costs incurred by patients accessing HIVST kits in Malawi
- ◆ Abstracts accepted for IAS, Paris
- ◆ STAR satellite session for IAS

Facility-based HIV self-test kit distribution: A model for strengthened HIV health services delivery in Zambia

Namuunda Mutombo¹ & Mutinta Nalubamba²

¹ Department of Research, Monitoring & Evaluation, Society for Family Health, Lusaka, Zambia.

² Department of Health Services, Society for Family Health, Lusaka, Zambia.

The public sector health facility-based distribution (FBD) model is one of many distribution models being used to deliver HIV self-test (HIVST) kits to individuals; other approaches include community based, door to door distribution of HIV self-test kits through community based health workers or distribution through the voluntary medical male circumcision (VMMC) program (HIV testing being one of the components of VMMC). The health facility-based model is being implemented in all the facilities participating in the UNITAID/PSI HIV Self-Testing Africa (STAR) Project in Zambia.

The facility-based distributor has three major roles. The first role is to distribute the HIVST kits to the community based distributors (CBDs) and account for and maintain stock levels using project specific stock control cards and registers. The facility-based distributor also distributes kits to people who prefer to access them from the facility as opposed to obtaining them from the community. Thirdly, he or she also acts as a link for individuals who have self-tested at the facility or within the community to post-test services such as confirmatory HIV testing and VMMC. Testers present a "self-referral card" to the facility distributor on which the post-test service required is recorded by the distributor, who then links the testers to the facility providing the service.

Demand for FBD is created through CBDs at community level and from within the facility. Clients who would normally be accessing conventional HIV testing services (HTS) either through voluntary counselling and testing (VCT) and provider initiated testing and counselling (PITC) at the facility can opt to self-test.

HIVST kits are offered through services of the out-patient department (OPD) or at any location within the facility as deemed appropriate through facility assessment, which is conducted by the Society for Family Health (SFH) in liaison with health facility staff. Acceptors collect HIVST kits on-site, together with information brochures, envelopes for putting used test kits into, and self-referral cards to access post-test services



Facility based distributor giving a group demand creation talk in the OPD department

(confirmative HIV testing and treatment care in case of a reactive HIV self-test or referral HIV prevention services in case of an HIV negative result) after HIV self-testing. Each potential tester is provided with verbal instructions and demonstration by the distributor on how to conduct a self-test, interpret results and follow important post-test steps (e.g. link to confirmative testing, care or prevention services). Testers have the option of being assisted by the distributor to do the test or take the kit to conduct the test at their own convenience.

HIVST kits are not given to third parties to assure their use and to also avoid distortion of information, especially when the person who has collected the kit is unable to pass on the information properly. The FBD model is being implemented in all 16 health facilities participating in the STAR project in Ndola, Lusaka, Kapiri-Mposhi and Choma Districts. All health facility distributors have been trained on how to distribute HIVST kits, provision of information and demonstration on the use of the kit as well as provision of support to the clients.

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Number of kits distributed and returned

A total of 6,524 self-test kits were distributed through the facility-based model between July and December, 2016. This represents about 9 per cent of all kits distributed from all of three distribution models implemented in Zambia. Most kits (80%) were distributed through the CBD model, followed by the VMMC model at 11 per cent. However, on average, distributors under the FBD model distributed higher number of kits (72 per distributor) per month compared with 67 kits per distributor per month under the CBD model (see Figure 1). The VMMC model had the highest rate per distributor per month, with 88 kits being distributed.

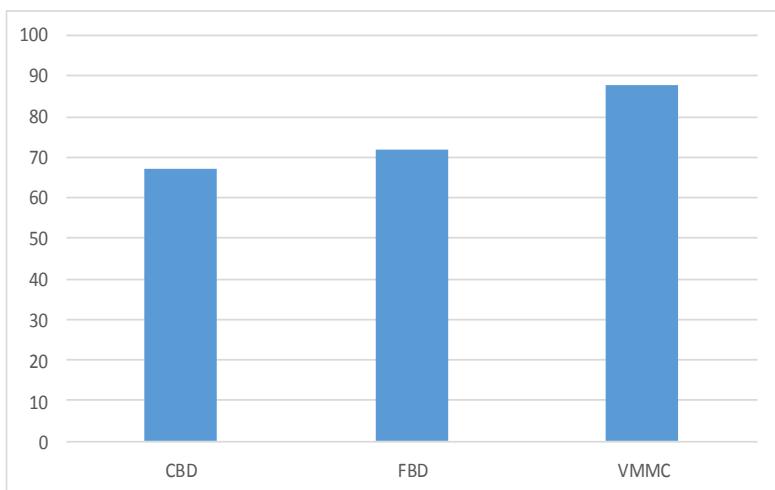


Figure 1: Average monthly per capita number of kits distributed by distribution model, July to December 2016

Further, although the FBD model had the lowest number of kits distributed, it has the highest used self-test kit return rate, followed by the VMMC model (see Table 1). Close to half (46%) of the kits distributed under the FBD model were returned after use by clients. Overall, a third of kits were returned between July and December 2016.

Programme implications

Our data show an average of two to three kits were distributed per day per distributor during the reference period, with the FBD model. These data demonstrate that it is feasible to effectively distribute HIVST kits to individuals seeking healthcare services at public sector health facilities. As such, facility-based distribution of self-test kits has the potential to increase efficiency of provider initiated testing and counseling if distribution is expanded to all service delivery points within each health facility.

Month	Distribution Model						Total	
	CBD		Facility-based		VMMC			
	Kits distributed	% Re-turned	Kits distributed	% Re-turned	Kits distributed	% Re-turned	Kits distributed	% Re-turned
July	1,906	22	301	32	509	27	2,716	23
Aug.	4,046	31	739	40	929	42	5,714	34
Sept.	5,110	37	717	51	627	37	6,454	38
Oct.	12,912	27	1,267	41	1,191	32	15,289	29
Nov.	15,772	29	1,384	43	1,939	36	19,095	31
Dec.	15,913	36	2,116	52	1,674	51	19,703	39
Total	55,659	31	6,524	46	6,869	39	68,971	33

Table 1: Number of kits distributed by distribution model and return rate, July to December 2016

Blog Highlights from the [HIV STAR Research Website](#)

Much-Ado About Data! Feedback from the Quantitative & Epidemiology Research Network

Mary Tumushime, STAR Research Coordinator, CeSHHAR

Our first STAR Quantitative and Epidemiology Network (QERN) data analysis meeting for the year took place in chilly London early in February. We were an intimate group of ten attendees from the three STAR countries plus the LSHTM team. It was literally a walk in the park (Russell Square garden park) to get to the CILIP building, where we would spend two meeting days before dispersing – it's always a pleasure meeting face-to-face!

Interestingly and perhaps not surprisingly, common themes emerged from the country presentations shared on the first day. These included difficulty recruiting male and younger participants, and surveys with multiple heads of household despite the fact that only one was expected. We brainstormed possible ways of systematically handling such responses, including reinforcing training of survey teams to ensure that household level questions are answered once per household. We also discussed developing shared standard operating plans to facilitate data analysis and the need to share statistical programming files for adaptation by country teams. All agreed these would be useful to have.

What I particularly enjoyed about the meeting was the practical, group work session on baseline data analysis and presentations to the larger group. We delved deep into our data as country teams, equipped with STATA 14 for real-time analyses. This was a meeting highlight

that needs to be repeated, possibly with more time carved out in the next meeting's agenda.

Analyses aside, we all went out on Thursday evening for dinner at an Italian-French restaurant hand-picked by Melissa. We had a lovely time interacting socially and unanimously agreed that we should definitely replicate this at our subsequent meetings!

Two months on:

We have continued our discussions from the meeting via Skype, with one cross-county Skype call thus far. In March, we were fortunate to have Melissa visit Zimbabwe to discuss the household survey analysis plan, strategies for data cleaning and issues related to programme data at large. We brainstormed about interesting sub-group analyses we can conduct with the survey data, including gender, social economic status and religion (one particular religious group in Zimbabwe has vastly different health seeking behaviours to others).

I look forward to our next meeting (31st May to 2nd June) in Harare, Zimbabwe, where we will develop analyses for the IAS symposium (Bonjour Paris!) and for research publications, share and discuss trial analysis plans and much more. As agreed in our meeting, additional in-country team members will be invited and we will have the chance for more hands-on data analysis, a highlight of our London meeting.



February QERN meeting attendees (L-R: Jeffrey Dirawo, Lucheka Sigande, Euphemia Sibanda, Melissa Neuman, Mary Tumushime, Helen Weiss, Eveline Otte im Kampe, Davie Chalira, Blessings Chisunkha)

Costs incurred by patients when acquiring HIV testing services in rural Malawi

Linda Sande, STAR Malawi Health Economist at the Malawi-Liverpool Wellcome Trust

In a country that is ranked number nine globally in terms of HIV prevalence and HIV/AIDS is the leading cause of death, one might expect the majority of the adult population to have knowledge of their HIV status. However, there is still a significant proportion of people living with HIV (PLHIV) in the country who still do not know their HIV positive status. We were therefore interested in finding out the extent to which financial costs incurred in accessing HIV Testing and Counselling (HTC) services hinder access to HIV testing for rural communities in Southern Malawi.

We interviewed 749 adults (16 years or above) who had an HIV test in the 12 months preceding the interview. We focused on two types of costs, namely direct (money individuals actually spend in order to access care) and indirect (lost income as individuals accessed care). The direct costs included the cost of childcare as the parent sought the HTC services, and the cost of transport, food and the consultation.

We noted that both user and service characteristics were important drivers of individual HTC user costs. There was a clear gender disparity in terms of the costs incurred in accessing HTC services, with men spending twice as much as women. Lost income was the largest category for both genders, accounting for more than 80% of individual costs. A regression analysis further demonstrated that these costs are approximately equal to 154% of average daily individual earnings.

The type of facility (static versus mobile) and duration of a test, including travel time, were also key drivers of costs, with costs increasing as individuals tested outside of their communities and each additional hour spent at the facilities leading to an average of 20% increase in user costs.

Our paper: "A Tobit Analysis Of User Costs For HIV Testing Among Rural Communities In Malawi" by Linda Sande, Collin Mangenah, Lawrence Mwenge, Hendramoorthy Maheswaran, Melissa Neuman, Cheryl Johnson, Pitchaya Indravudh, Marc d_Elbee, Karin Hatzold, Liz Corbett and FernTerris-Prestholt, was accepted for oral presentation at the International Health Economics Association, Boston July 10, 2017.

It is important to understand the role played by individual costs in accessing HTC services and general health treatment services, as these costs have effects on health care demand. Such an understanding will help in better targeting populations with high user costs and increase health care demand. It is relatively easy for individuals who are unwell to choose to visit a facility, compared with those who think they are physically fit. Now the question is: How do we get asymptomatic PLHIV to test for HIV, when going for a test implies a trade-off to raising money for that day's survival - Could HIV self-testing provide the solution?



Linda presenting at the International Health Economics Association in Boston

STAR abstracts accepted for IAS, Paris, July 2017



- Hatzold K *et al.* Closing the HIV testing gap: Facility-based integration of HIV self-testing, a way to improve testing coverage, yield and efficiency of client-initiated HIV testing services in Zimbabwe. [Poster presentation]
- Johnson C *et al.* A clinical utility risk-benefit analysis for HIV self-testing. [Poster presentation]
- Kapaku *et al.* Is OraQuick® HIV-Self-Testing valid among intended users? Analysis from a Clinical Performance Study in Lusaka, Zambia. [Poster presentation]
- Indravudh P *et al.* Optimising uptake of HIV testing among young people: a mixed-methods study on HIV self-testing preferences in Zimbabwe and Malawi. [Poster presentation]
- Kumwenda M *et al.* Peer-led delivery model for HIV self-testing in female sex workers: Designing the model based on research and participatory strategies in urban Blantyre, Malawi. [Poster presentation]
- Indravudh P *et al.* Masculinity and uptake of HIV testing: validity of the Conformity to Masculine Norms Inventory -22 in Malawi and Zambia. [Poster presentation]
- Neuman M *et al.* Prevalence of testing and preference for self-testing in Malawi and Zambia: baseline data from the STAR (HIV self-testing in Africa) project. [Poster presentation]
- Sibanda E *et al.* Preferences for Models of HIV Self-Test Kit Distribution: Results from a Qualitative Study and Choice Experiment in a Rural Zimbabwean Community. [Poster presentation]
- Mwenge L *et al.* HIV Testing and Counselling (HTC) costs in public sector settings in Southern Africa: Evidence from Malawi, Zambia and Zimbabwe. [Poster presentation]
- Gotsche C *et al.* HIV self-testing in Zambia: User ability to follow the manufacturer's instructions for use. [Poster presentation]
- Tumushime M *et al.* Views on HIV self-test kit distribution strategies targeting female sex workers: Qualitative findings from Zimbabwe. [Poster presentation]
- Sande L *et al.* A Gender Analysis of User Costs HIV Testing among Rural Communities in Malawi. This has also been accepted for the Interest conference, May 2017. [Poster presentation]
- d'Elbée M *et al.* Informing targeted HIV self-testing service delivery in Malawi and Zambia – A multi-country discrete choice experiment. [Poster presentation]. This has also been accepted for the International Health Economics Association (IHEA) conference in Boston, 8th to 11th July 2017.
- Sande L *et al.* A Tobit Analysis of User Costs for HIV Testing among Rural Communities in Malawi. [Poster presentation]. This has also been accepted for the Interest Conference, Lilongwe May 2017, and the International Health Economics Association (IHEA) conference in Boston, 8th to 11th July 2017.
- Watson V *et al.* Determination of OraQuick® HIV self-test result stability with delayed visual re-reading: An external quality assurance analysis [Poster presentation].
- Hermez J *et al.* Values and preferences of PLHIV and key populations in HIV self-testing (HIVST) and partner notification (PN) in the Middle East and North Africa (MENA) (to inform WHO guidelines). [Poster presentation].
- Anam F *et al.* Values and preferences of adolescent girls and young women in Kenya for three HIV prevention approaches: PrEP, HIV self-testing and HIV partner notification (to inform WHO guidelines). [Poster presentation].

Not funded by STAR:

- Mangenah C *et al.* Costs of non-financial incentives for uptake of couples HTC & incremental costs of SMS reminders for linkage to treatment, care & prevention services. [Oral presentation]
- Terris-Prestholt F *et al.* How quickly does external quality assurance to prevent early infant misdiagnosis of HIV save costs in four African countries? [Poster presentation] This was also accepted for the Interest conference in Lilongwe, May 2017.



Join STAR at IAS 2017

SAVE-THE-DATE
STAR Satellite Session
9th IAS Conference on HIV Science



UNITAID-PSI
HIV SELF-TESTING AFRICA

Sunday, 23 July 2017, 5:00-7:00pm
Bordeaux Amphitheatre, Palais des Congrès, Paris

**Evidence for Action: Key Findings from the HIV Self-Testing Africa (STAR) Project
in Malawi, Zambia and Zimbabwe**

hosted by

**Unitaid, Population Services International and World Health Organization with the
London School of Hygiene & Tropical Medicine**

The Unitaid-funded HIV Self-Testing Africa (STAR) Project is the largest multi-country study on HIVST. The project has demonstrated the potential impact that wide-scale HIVST could have on improved health outcomes of PLHIV, HIV transmission, and the cost effectiveness of HIV prevention and care.

This satellite session will present the key results from Phase I of the STAR Project and will officially launch the STAR Initiative, which will move evidence into action and make HIVST a reality in Africa.



Contact Us

London School of Hygiene & Tropical Medicine, Keppel Street, London, WC1E 7HT
Cath.Beaumont@lshtm.ac.uk +44 (0) 207 958 8235 www.hivstar@lshtm.ac.uk

Twitter: @HIVSTAR_LSHTM

