

Study finds HIV self-kits distributed by people on HIV treatment reach first-time testers

The South African government has supported HIV self-tests since 2016. Six years on, however, the public sector is still reliant on rapid tests administered by healthcare professionals. A group of HSRC researchers set out to find out how distributing free self-tests via people already on treatment affected the uptake of testing among hard-to-reach populations. Their results suggested that the strategy reaches first-time testers – but not the sexual partners of the distributors.

By Andrea Teagle

An estimated 92% of people in South Africa know their HIV status, according to 2019 estimates from the Joint United Nations Programme on HIV/AIDS (UNAIDS). However, small reservoirs of people remain who do not, including some men, sex workers, and people living in rural communities with limited access to healthcare. Helping these individuals access testing and treatment is critical to ensuring they enjoy long and healthy lives. It is also necessary if South Africa is to reach its 95-95-95 goals by 2030: 95% of people living with HIV (PLHIV) knowing their status, 95% of those being on treatment, and 95% of people on treatment achieving and sustaining viral suppression (where the amount of the virus in the bloodstream is too low for that person to be able to transmit it to someone else). One of the initially under-accounted-for difficulties in curbing the epidemic is the disproportionate transmission impact of high-risk individuals soon after infection – and so helping people to initiate treatment quickly is key.

Barriers to testing and initiating treatment include stigma around HIV, and the financial and time costs associated with travelling to a healthcare clinic. Self-testing kits are a neat way of [overcoming some of these obstacles](#), by providing individuals with a means to test themselves at a convenient time in a private space. But self-testing kits are not freely available through the public healthcare system. Instead, would-be testers must purchase the kits from pharmacies. At the time of writing, prices for available tests ranged from R35 (RightSign [HIV rapid test](#)) to R210 ([Clicks](#)).

“R35 may sound cheap, but considering that almost half of South Africa’s population lives below the poverty line, this is significant,” says Nsika Sithole of the Africa Health Research Institute.

What if free self-kits were distributed in hard-to-reach areas? Led by Sithole, a team of researchers from South Africa (including from the HSRC), the United Kingdom and the United States set out to explore the role that free HIV self-kits could play in reaching individuals who might not know their HIV status. Between July and November 2018,

the team distributed kits to people already on antiretroviral treatment (ART) to give out to sexual partners and friends.

The study took place in the peri-urban district of uMgungundlovu and the rural district of uMkhanyakude in KwaZulu-Natal. The province has the highest rate of new infections across the country, at around 27%, compared with a national prevalence of 19.5%. uMkhanyakude is one of the most deprived districts in the country, marked by high unemployment and limited infrastructure and access to healthcare.

Finding first-time testers

The distributors were participants in an ART trial. Sixty-three participants – 33 women and 30 men – accepted 218 kits between them to distribute in their social networks. A total of 66% of recipients reported their results telephonically to the study team. Reporting was voluntary and incentivised by a conditional airtime voucher of \$2. Of those who called in, 92% reported negative results.

While the prevalence was comparatively low, the team notes that self-reported results and linkage data are subject to some bias. ‘If kit recipients already knew their status but had not disclosed it to the distributor, this could have led to [their] accepting a test but not using it or not reporting their results,’ they write.

Encouragingly, close to half (42%) of the recipients were first-time testers. By comparison, in a [parallel study](#) that Sithole led – also in uMkhanyakude, just 14% of individuals reached through the primary distribution strategy were first-time testers. In that second study, the researchers were particularly concerned with reaching men, and distributed free self-test kits through workplaces, social venues, taxi ranks, and homesteads. Of the 2,634 kits that were distributed, 98% were to men.

The differing results of the two studies show that secondary and primary distribution could play complementary roles in increasing HIV testing, Sithole said.

“The strength of primary distribution is that one is able to target certain areas where the targeted population congregates, meaning that the distribution of kits can be large in number ... The strength of secondary distribution, especially using PLHIV as index distributors, is that the chances of finding first-time users are higher.”

Other studies, such as those in a [systematic review](#) published in *Nature*, have found that HIV prevention campaigns promoting self-testing in schools and communities in Tanzania, Uganda, Malawi and Kenya were effective in increasing the acceptance and uptake of HIV testing via self-test kits.

Not reaching partners

The sexual partners of people with HIV have an elevated probability of also being HIV positive, and so reaching partners is important for managing new infections. Although 84% of the distributors in this study reported having a sexual partner – and three-quarters (76%) did not know their partner’s HIV status – just 13 (6%) of the tests were intended for sexual partners. This finding contrasts with similar studies elsewhere: for example, a [clinical trial in Kenya](#) found that distributing self-test kits to women was an effective means of reaching male partners and linking them to treatment.

The participants’ reluctance to distribute to partners might be the result of unequal gendered power relations within couples, and reflect the high prevalence of intimate partner violence (IPV) in South Africa. The researchers recommend that additional components be added to reduce the risk of IPV. For example, the Kenya study team set up an IPV hotline for participants in case of violence, and counselled participants on how to use discretion in introducing the tests to partners.

“Secondary distribution of HIV self-test kits to partners is an important strategy for reaching men who are less likely to use public health facility services,” said the HSRC’s Prof Alastair van Heerden, a co-investigator on the study. “We need to find ways of supporting and empowering women to provide these kits to their male partners without putting them at risk and reducing the fear they may have of the potentially negative consequences of doing so.”

Linking to treatment

Test recipients who called in with their results received appropriate counselling. Those who tested positive were counselled to go to their nearest clinic for a confirmatory test and to be linked to care. However, of the 11 test recipients (8%) who tested positive, just one person reported initiating treatment. By comparison, the linkage rate in the primary distribution study – which also included community sensitisation campaigns – was 78% (102 of 130 participants who tested positive).

Sithole and his colleagues suggest that future research explores the reasons that people testing positive through secondary HIV self-testing kit distribution, particularly, do not seek treatment at clinics.

Because of its effectiveness in reaching first-time testers, the study teams recommend scaling up secondary distribution. However, programmes should include additional efforts to make linking to care easier. For example, Sithole told the *Review*, clinics could be supported to offer ART initiation services at weekends or in the evenings, to cater for those who work long hours or weekend shifts. Community ART programmes would also facilitate easier access to ART, he added.

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