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**To cite this article:** Sithembiso Ndlovu, Andrew Ross & Mutshidzi Mulondo (2023) Interventions to improve young men's utilisation of HIV-testing services in KwaZulu-Natal, South Africa: perspectives of young men and health care providers, African Journal of AIDS Research, 22:4, 316-326, DOI: [10.2989/16085906.2023.2276897](https://doi.org/10.2989/16085906.2023.2276897)

**To link to this article:** <https://doi.org/10.2989/16085906.2023.2276897>



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Published online: 20 Dec 2023.



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## Research Article

# Interventions to improve young men's utilisation of HIV-testing services in KwaZulu-Natal, South Africa: perspectives of young men and health care providers

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**Introduction:** HIV-testing services (HTS) are an important point of entry to prevention and treatment of HIV in South Africa. Despite the availability of HTS across the region and in SA, the uptake among men remains low, especially young men residing in rural and peri-urban communities. This study aimed to explore interventions that could improve the uptake of HTS among young men in KwaZulu-Natal.

**Methods:** A descriptive exploratory qualitative study was conducted in which 17 young men and two health care providers in Ladysmith were purposively and conveniently sampled. Data were collected through semi-structured interviews using WhatsApp and landline audio calls between September and December 2021 and thematically analysed.

**Results:** An improvement in the health care provider attitudes and service delivery, establishment of adherence clubs for young people living with HIV, ensuring a diverse and balanced health care provider staff composition at primary health care facilities, and increased demand creation in spaces frequented by men are vital for enhancing access and utilisation of HTS among young men. Additionally, health care providers believe that the presence of male health care providers, investment in health education, prioritising men in the morning at the primary health care facilities, and the establishment of male clinics within communities as key factors in improving the uptake of HTS among young men.

**Conclusion:** To attract and retain young men in HTS and in HIV treatment and care, several improvements at primary health care facilities need to be implemented. These should focus on addressing the specific needs and preferences of young men, ensuring their comfort and engagement in health care.

**Keywords:** HIV-testing services, HIV prevention, men, knowledge, rural, peri-urban

## Introduction

HIV and AIDS continues to be a global public health concern, with over 38 000 000 people living with HIV (PLHIV) and 1 500 000 new cases of HIV reported in 2021 (UNAIDS, 2022a). Among these cases, more than 36 000 000 were adults aged 15 years and above (UNAIDS, 2022a; Mannoh et al., 2022). The sub-Saharan Africa (SSA) region continues to bear a disproportionate burden of the HIV epidemic with above 50% of all new HIV infections worldwide occurring in this region (Mannoh et al., 2022; UNAIDS, 2022b). Over the last 20 years, governments in the SSA region have made significant progress in scaling up HIV testing and treatment services in order to manage the epidemic and reduce HIV-related deaths (Luwanda et al., 2021; Reniers et al., 2017).

HIV-testing services (HTS) play a crucial role in the prevention and treatment of HIV in SSA, particularly in South Africa (SA) which has the highest number of existing cases of HIV in the world (Hamilton et al., 2021; Statistics South

Africa, 2022). In addition, HTS is an important entry point into prevention and treatment services. However, despite the widespread availability of HTS across the region and in SA, there is a persistently low uptake, particularly among men (Hamilton et al., 2021; Harichund & Moshabela, 2018). Research evidence has repeatedly shown that in SA, women are more likely to utilise HTS and adhere to their antiretroviral therapy (ART) on diagnosis (Bruns, 2021; UNAIDS, 2022a). To achieve the UNAIDS fast-track testing and treatment targets of 95-95-95 (95% PLHIV aware of their HIV status; 95% of those who are living with HIV are on ART; and 95% of those on ART achieve viral suppression) by year 2030, it is essential to actively engage men in the HIV care and treatment cascade (Bruns, 2021; UNAIDS, 2015). Efforts should be made to address the barriers and challenges that hinder young men's participation in HTS and subsequent treatment and care.

Little attention has been paid to HTS-testing patterns of males in general (De Allegri et al., 2015; Hensen et al., 2014). To improve HTS uptake and access to prevention

and treatment services, it is vital to understand those factors which contribute to the low HTS uptake in the general male population in order to plan relevant, and appropriate male-specific intervention strategies (Hensen et al., 2014; Hlongwa et al., 2022). However, there is little current evidence to show the effectiveness of various intervention strategies aimed at increasing the uptake of HTS in this population (Hensen et al., 2014). There is, therefore, a need to develop evidence of interventions which would enhance HTS uptake among men, including young men. Such evidence would assist countries to develop evidence based effective HTS interventions which encourage men's engagement and participation and contribute to improved HIV prevention and treatment outcomes (Bell et al., 2021; Hensen et al., 2014).

Existing HIV-prevention strategies in communities are not as effective with men as with women because they do not address HTS challenges specific to the male population (Fleming et al., 2019). To improve HTS among men in the SSA region, it is necessary to adopt a practical and feasible health promotion approach that inspires and empowers men to prioritise their own health (Fleming et al., 2019). Exploring feasible and effective HIV-prevention strategies that will improve HTS uptake among men is therefore pivotal. Efforts to improve HTS among men requires access to and the targeting of men and boys for HTS and other health care services — despite the challenges involved (UNAIDS, 2017b). The establishment of inclusive health care policies and practices that promote equitable gender norms is one potential avenue that will benefit everyone. Moreover, implementing numerous community-based interventions is essential to achieve sustainable HTS rates among men and young people (Iwuji et al., 2020; Iwuji & Newell, 2017). Interventions such as public health facility testing should be supported by the workplace and community-based linkage to health care should be strengthened (Iwuji & Newell, 2017; UNAIDS, 2017b, 2017a).

Community-based approaches to HTS in the SSA region have strengthened HTS uptake and attracted new testers, surpassing facility-based HIV-testing services (Kranzer et al., 2013; Nglazi et al., 2012; Sekandi et al., 2011; Sweat et al., 2011). Research has shown that various community-based HTS approaches can increase HTS uptake by more than 80%. These approaches significantly reduce negative attitudes towards HTS, such as HIV related stigma, which remains a major barrier to HTS globally (Madiba et al., 2021; Ncitakalo et al., 2021; Treves-Kagan et al., 2017). HIV self-testing (HIVST) and mobile HTS units have shown promise in addressing the aforementioned challenges, particularly by assuring confidentiality in a home setting compared to a facility-based service, where issues of privacy and confidentiality by HCPs have been a concern (Harichund et al., 2019; Harichund & Moshabela, 2018; Sekandi et al., 2011). Approaches such as HIVST can reach the more inaccessible populations, men who have sex with men (MSM), the general male population, youth, and those individuals inconvenienced by the facility-based HTS services (Hamilton et al., 2021; Sithole et al., 2021; Thompson et al., 2022). As such, this approach has a greater potential for improving HTS uptake in Africa compared to facility-based services (Njau et al., 2019).

Despite the evidence supporting the effectiveness of community-based approaches, key stakeholders in SA, Malawi, and Kenya have continued to promote facility-based HTS due to concerns about the lack of counselling and unaided linkage to care for individuals testing HIV-positive (Bateganya et al., 2010).

Mobile HTS is a widely adopted community-based approach that has gained popularity due to its convenience and accessibility. Unlike facility-based HTS, mobile HTS allows individuals to undergo testing within the proximity of their homes at times which are convenient for them, as well as ensuring confidentiality. In SA, organisations such as the Desmond Tutu Health Foundation (DTHF), have implemented mobile HTS drives to reach adolescents and adults, living in underserved communities around Cape Town, in order to reach the 90-90-90 testing and treatment targets (van Schaik et al., 2010). Notably, over 40% of the youth seeking HIV testing in Cape Town initiated their testing and treatment journey at the mobile clinics provided by the DTHF (Desmond Tutu Health Foundation, 2022). The implementation of mobile HTS has focused primarily on peri-urban and rural areas, which are often located in hard-to-reach geographical settings. This approach has not only enabled community members to learn more about HIV and HTS, but has also increased their awareness of HIV and their risk of infection. However, despite the success of mobile HTS in these communities, there is still a pressing need to reach more individuals in these communities, especially young men. Interestingly, in the peri-urban areas of Cape Town, mobile HTS has shown greater appeal to men — including young men — than women (van Schaik et al., 2010). Similarly, in rural Kwa-Hlabisa District in KwaZulu Natal (KZN), mobile HTS has been predominantly utilised by a young male population (<25 years old) rather than by women (41% vs 31% respectively) (Maheswaran et al., 2012). It is evident that there is a need to encourage men of all ages, regardless of their employment, education, and relationship status, to utilise mobile HTS, as well as any other practical and feasible HTS approaches at their disposal. This study aimed to explore possible interventions that can enhance the uptake of HTS among young men in KwaZulu-Natal. By identifying effective strategies, targeted interventions can be developed that will encourage young men to engage in HTS and contribute to the overall goal of reducing HIV transmission rates in the region.

## Methods

### Setting

The study was conducted in Ladysmith, KwaZulu-Natal, a small town located on the banks of the Klip River in the Battlefields Region of uThukela District, KZN (Travelground, 2021). As of 2016, Ladysmith had a population of 242 707 residents (Emnambithi Local Municipality, 2016). Regarding employment, Ladysmith faced an overall unemployment rate of 34% (Emnambithi Local Municipality, 2016), with the youth unemployment rate higher at 43%. Educational attainment is low with only a third of residents having completed grade 12 (31%), and a mere 9% having completed their tertiary education (Municipalities of South Africa, 2021). In terms of

HIV prevalence, there is a lack of specific data on incidence and prevalence rates among men in Ladysmith.

### **Study design**

This descriptive exploratory qualitative research study used semi-structured interviews to gain an in-depth understanding of the experiences and perceptions of young men regarding HTS. It also sought to elicit the experiences and perceptions of health care providers of HTS who have treated young men at their respective primary health care facilities.

The Humanities and Social Sciences Research Ethics Committee of the University of KwaZulu-Natal (HSSREC/00000588/2019) and the Department of Health's KwaZulu-Natal Provincial Health Research and Ethics Committee (KZ\_202008\_006) provided ethical approval. Due to the inability to conduct in-person interviews under COVID-19 lockdown restrictions, all respondents gave verbal informed consent.

### **Study population and sampling strategy**

The study population consisted of young men purposively chosen from the peri-urban Steadville Township and rural Driefontein based on their ability to provide valuable insights and experiences relating to HTS. To recruit participants, the researcher phoned young men in Steadville and Driefontein who had responded to the poster(s) shared on WhatsApp and Facebook communication platforms. The poster contained the researcher's contact details, and those interested sent the researcher a direct message either on WhatsApp or Facebook to signify their willingness to participate in the study. Interviews were scheduled according to the availability of the participants. Those selected needed to meet the inclusion criteria and be willing to share their personal perceptions of HTS. Through these platforms, 11 participants from Steadville were recruited.

The rural Driefontein community participants were conveniently sampled due to a lack of response from Facebook and WhatsApp communication platforms. To reach potential participants in Driefontein, the researcher collaborated with an employee from a research institute in Ladysmith who is actively involved in HIV programmes targeting young men in the area. The researcher requested that he forward the poster to his contacts in Driefontein. The research employee contacted 13 potential participants and briefed them about the study. They were asked for permission to share their names and details with the researcher. The researcher contacted these potential participants who had agreed to share their details with him and asked if they were informed about the study and whether or not they were willing to participate. Six of the 13 young men who met the inclusion criteria agreed to participate and were interviewed. It is worth noting that the researcher complied with the Protection of Personal Information Act (POPIA) 4 of 2013, which allows the researchers to use and re-use subject information for research purposes, should they agree. Their identifying particulars are concealed to ensure anonymity and confidentiality (Republic of South Africa, 2013; Staunton et al., 2021; Swales, 2021; Townsend, 2022)

Permission to interview the two HTS counsellors at the PHC facilities in Steadville and Driefontein was granted by

the Provincial Department of Health, the Ladysmith Regional Hospital Chief Executive Officer, the PHC facility manager and the operation managers responsible for the two PHC facilities. The HCPs were also conveniently sampled given the specifically targeted PHC facilities' easy access to participants and their meeting the inclusion criteria (one at each facility).

Young men, needed to be aged between 18 and 35 years, provide verbal informed consent, have no close relations to the researcher, be able to access and use the WhatsApp communication platform and be willing to participate. Furthermore, HCPs needed to have been working in HTS for at least two years in the identified PHC facilities; experience working with men (particularly young men); provide verbal informed consent; have no close relations to the researcher; be able to access and use the WhatsApp communication platform and be willing to participate. Young men and HCPs who did not satisfy the inclusion criteria were excluded from the study. A mutually convenient time for the interviews was agreed upon.

### **Data collection**

Data collection took place during the COVID-19 lockdown with regulations declared by the South African Government that halted most economic activities, restricted individuals' movements and mandated social distancing and wearing of face masks to curb the spread of the virus (Ndlovu et al., 2022). The pandemic prevented face-to-face interviews and, as a result, we opted for virtual data collection. Verbal informed consent was obtained from all participants prior to the interviews. Semi-structured interviews were conducted via WhatsApp and landline audio calls using an interview guide between September and December 2021 with 17 young men and two health care providers. The interview guide was developed based on the constructs and sub-constructs of the integrated model of behaviour prediction (IMBP), which served as the study's conceptual framework. This framework is premised on several background factors: belief measures, including behavioural (attitude); normative (subjective norm); and efficacy (self-efficacy) beliefs, which influence a person's intention to execute behaviour; skills and knowledge; and environmental constraints (Diteweg et al., 2013). The researcher conducted the interviews in IsiZulu and English, allowing participants to use their preferred language. The data collection process was exhausted when the researcher felt he had reached data saturation—there was no new emerging information from young men—and the information provided was becoming repetitive (Saunders et al., 2018; Sebele-Mpofu, 2020). After the twelfth, the researcher conducted his first analysis, although he felt that the information provided was insufficient. He then conducted an additional five interviews, until he felt that the information provided by the 17th participant was very similar to what other participants had already mentioned, and as such, no new data was emerging. The purpose of interviewing the two HCPs was not to reach data saturation but to supplement the data provided by the young men with a different perspective to enable data triangulation.

### Data analysis

All interviews were recorded, transcribed verbatim, translated into English where necessary by the primary author, and thematically analysed using Braun and Clarke's six stages of thematic analysis. These stages of thematic analyses entailed familiarisation with the research data, developing initial codes, searching for themes, reviewing and refining themes and categories, defining and naming themes, and writing up of findings (Braun & Clarke, 2019). Interviews lasted between 24 and 72 minutes. Data analysis was abductive, which is a combination of inductive (findings that emerged during data collection but did not fit the guiding model) and deductive (using predetermined model themes to guide the questions) approaches. Each participant was given a unique identifier to ensure confidentiality of participants.

### Ensuring trustworthiness

To ensure dependability of the study, the researcher applied appropriate research methods and provided a thick description of all the processes utilised in the study. The study limitations were noted.

### Results

The study included 17 young men (see Table 1) who were all Black African and isiZulu first language speakers. Eleven were from the peri-urban township of Steadville, while six were from rural Driefontein and all were single. Their ages ranged from 18 years (one) to 30 years of age (two). In terms of employment, six were employed, three were full-time high

school students, three were studying at a tertiary institution, three were unemployed, and three were self-employed (this includes one person who was employed and still studying at school).

Two of the HCPs who participated in the study (see Table 2) were African females (each qualified nurses). The older HCP had 13 years of service in the health care field, while the younger HCP had been working as an HTS counsellor for two years. Both were home language IsiZulu speakers. One HTS HCP worked in a rural PHC facility and the other in a peri-urban PHC facility.

The findings revealed two main themes and various sub-themes. Interventions to improve HTS among young men was the main theme. Sub-themes were: HCP staff attitude and service delivery; adherence clubs for the youth living with HIV; balanced HCP staff make-up; and increased demand creation in spaces frequented by men. The main theme for the HCPs was the interventions to improve the uptake of HTS from HCPs. In this regard, the sub-themes were: the need for male HCPs; the importance of health education; incentive programmes; prioritising slots for men in the mornings at PHC facilities; and establishing male clinics.

### HCP staff service delivery

The behaviour of the HCP providing HTS services played a significant role in men's engagement with the testing. Negative experiences such as stigmatising behaviour or lack of confidentiality, acted as barriers to men accessing HTS. Positive experiences such as friendliness, non-judgemental attitudes and good communication were reported as factors which encourage men to test. Participants highlighted areas

**Table 1:** Sociodemographic details of young men participants

Alias	Age	Ethnicity	Home language	Education	Marital status	Employment status	Location
Participant 1	30	Black African	IsiZulu	Postgraduate	Single	Employed	Steadville
Participant 2	30	Black African	IsiZulu	Higher Cert.	Single	Self-employed	Steadville
Participant 3	20	Black African	IsiZulu	Grade 12 (university student)	Single	Unemployed	Steadville
Participant 4	26	Black African	IsiZulu	Grade 12 (university student)	Single	Unemployed	Steadville
Participant 5	29	Black African	IsiZulu	Grade 12	Single	Unemployed	Steadville
Participant 6	21	Black African	IsiZulu	Grade 10 (high school pupil)	Single	Unemployed	Steadville
Participant 7	22	Black African	IsiZulu	Grade 12 (college student)	Single	Unemployed	Steadville
Participant 8	22	Black African	IsiZulu	Bachelor's degree	Single	Employed	Steadville
Participant 9	29	Black African	IsiZulu	Grade 12	Single	Employed	Steadville
Participant 10	26	Black African	IsiZulu	Diploma	Single	Unemployed	Steadville
Participant 11	28	Black African	IsiZulu	Grade 12	Single	Employed	Driefontein
Participant 12	25	Black African	IsiZulu	Grade 12	Single	Self-employed	Steadville
Participant 13	21	Black African	IsiZulu	Grade 11 (high school pupil)	Single	Self-employed	Driefontein
Participant 14	25	Black African	IsiZulu	Grade 12	Single	Unemployed	Driefontein
Participant 15	27	Black African	IsiZulu	Grade 12	Single	Employed	Driefontein
Participant 16	26	Black African	IsiZulu	Grade 12	Single	Employed	Driefontein
Participant 17	18	Black African	IsiZulu	Grade 11 (high school pupil)	Single	Unemployed	Driefontein

**Table 2:** Sociodemographic details of participating HIV-testing services health care proviers

Code	Age	Ethnicity	Sex	Home language	Education	Location	Role	Years of service
HCP1	50	Black African	Female	IsiZulu	Enrolled nurse qualification	PHC facility 1	Enrolled nurse	13
HCP2	42	Black African	Female	IsiZulu	Enrolled nurse auxiliary qualification	PHC facility 2	HIV-testing services counsellor	2

which could be improved to encourage young men to test for HIV. They suggested reducing the waiting times and providing hope for those who test positive. Young men had the following to say:

*As usual, a person goes inside the testing room alone. They need to treat people in a good way, and to give them hope if it happens that one is found to be HIV-positive.* (Participant 4)

*My brother, I think... I don't know... maybe if the service was faster because men don't like waiting for long. It would be better if one goes in, and is directed to the testing room for counselling and testing, and leave. But now, I have noticed that they ask about the reason for the clinic visit. You cannot say what you are there for, maybe because you are scared of someone next to you. You can say you have come for HIV testing. This thing of them asking one by one about the reason for the visit and now you must explain ... I am here for injection, and they ask what is wrong and where you are feeling pain.* (Participant 5)

#### **Psychosocial support options for the youth living with HIV**

Young men who participated in the study highlighted the need for the establishment of various psychosocial support options specifically tailored for young people living with HIV. Participants said the following:

*There need to be ways that will encourage people... maybe have groups of people living with HIV, maybe at the clinic where people advise one another. Or maybe there could be sessions... maybe individual sessions where people will be counselled.* (Participant 4)

#### **Balanced HCP staff make-up**

Some participants raised concerns about the staff make-up of HCP at clinics, specifically highlighting the need for more male HCPs in the HIV-testing services. While most participants indicated that the gender of the HCP did not matter to them, some young men expressed a preference for male HCPs and/or male-only clinics. This was expressed in the following ways:

*I think that they should also have male nurses because male nurses will make it comfortable for gents to come and feel comfortable, to talk about your situation rather than female nurses.* (Participant 6)

*Changes that could be implemented, a balance of gender, more males are needed as service provider[s], because it is one of the reasons males do not go to clinics. Sometimes women do not speak appropriately [professionally], I will not lie. Unlike males, guys are able to speak to each other openly and motivate each other, plus heal emotionally.* (Participant 16)

*I think, we need more men's clinics that will welcome only men, so that they will no longer be doubtful.* (Participant 17)

While most of the of participants expressed the need for improvements in health care provider attitudes and service delivery, it is worth noting that one participant held a different view. According to this participant, he did not see the need for any improvements, as he felt that the clinics already provided a safe space for everyone, and privacy was guaranteed.

*I haven't seen any faults because everything is private...inside the clinic it is private and you go to a room and it is secure.* (Participant 9)

#### **Increased HTS demand creation in spaces frequented by men**

One participant expressed that, although alcohol establishments and other places may not be appropriate environments to conduct HTS among young men, there remains a lack of information, particularly advertisements about HTS, at establishments that men frequent. He said:

*People aren't taking advantage of entertainment places because I have never seen any poster or material in such places talking about testing... those are the places that men frequent, but there are no messages on testing, it is only beer adverts, that's all... those are all places that people frequent... yes we see messages in the grounds, but nothing in taverns... and also in public transport, you see them being painted with messages, but there isn't much at the rank where they play pool, so if such places can be targeted, there are a lot of men there.* (Participant 10)

#### **Interventions to improve uptake of HTS from HTS HCPs**

The HIV-testing services health care providers who participated in this study provided valuable insights into possible interventions that could be adopted to encourage young men to test for HIV. They emphasized the significance of staff make-up, particularly the presence of a male HCP, health education, incentive-driven HTS interventions, prioritising clinic slots for men in the morning at the primary health care facility which they felt were key improvements that would encourage young men to test for HIV. Participants had the following to say:

*What we observed is that during the presence of the male nurse over the past years, they [young men] tested frequently... now they are told to test, but they will just leave... If we could have just one male... not to say that we won't talk to them, but we will supplement what the sir [male nurse] has said, and after he has tested them, it becomes easier because they even come back on their own if there's a male.* (HCP2)

*Health education is important. It could be a one-on-one consultation and also address them as a collective, when there is a lot of them [young men] at the clinic, when they are still completing their clinic cards. There could be someone who educates them, so that they can pass on the information to others, and they would tell others about the importance of testing for HIV.* (HCP 1)

Incentives were also reported by one of the HCPs as a potential solution to attract young men to test for HIV at primary health care facilities.

*And also, it works if they [young men] are given some incentives. There was a programme called "Mina Ndoda" [I, a man], which was also active on social media, that emphasised that "I am a man. I test for HIV. I take care of my family." I also noticed that the programme encouraged men to test for HIV because of the earphones... or even talk to them about voluntary medical male circumcision ... before they can get circumcised, they test for HIV. (HCP1)*

Participants felt that that males' attendance at HTS and other services offered at the clinics, was limited because of their lack of patience. One of the facilities implemented a potential solution to this by attending to men first in the morning. The participant said:

*We were then advised to start with men when they arrive at the clinic in the morning, and that would make a difference because they were able to be attended to in the morning and then go to work. (HCP1)*

Also, the presence of male clinics was seen as important in getting men to test for HIV. One HCP expressed it in this way:

*In fact, there should be a male clinic even with women working in it, just so there could be education on primary health care and such matters... Men would rather sit outside the clinic and not come in. (HCP2)*

## Discussion

To the best of our knowledge, this research adds to a few existing studies on access and utilisation of HIV-testing services specifically targeting young men and HCPs in the rural and peri-urban communities of Ladysmith, KwaZulu-Natal.

Globally, effective service delivery in health care facilities is crucial in ensuring that individuals continue to access and utilise HIV-testing services (World Health Organization, 2023). One way to achieve this is by focusing on improvements within these facilities. Based on the findings of this study, young men identified the unpleasant behaviour and attitude of health care providers offering HTS as a critical factor in attracting and retaining young men for testing. This finding is consistent with a South African study by Tshivhase, Makuya and Takalani (2022) conducted among tertiary students at a university in SA, which highlighted that a negative attitude among health workers constituted a significant barrier leading to the low uptake of HTS among students. As such, unpleasant attitudes from HTS HCPs have the potential to hinder young men's utilisation of these services. However, these findings are contrary to those by Dapaah (2016) in Ghana, who showed that clients who utilised HIV-testing services were treated pleasantly by the health care providers at the hospital.

In addition, young men believed that being questioned about the purpose for their visit to the clinic, particularly in the presence of other people, was unnecessary, raised doubts about the professionalism of the HCPs, and

compromised confidentiality. As a result, this practice has led to a reluctance among young men to seek HTS at the clinic. In order to encourage more young men to visit public health care facilities for HIV treatment and care in hard-to-reach communities, it is important to re-evaluate and address this practice, to ensure that this perception of a lack of confidentiality is effectively addressed. A study by Mathews et al. (2020) among African American men and women in rural and urban North Carolina in the United States of America (USA), found that breaching confidentiality was one of the barriers to HIV testing. Various literature reports on the factors contributing to the youth's reluctance to test for HIV, including masculinity and confidentiality in the SSA region (Conserve et al., 2018; Hlongwa et al., 2020; Mavodza et al., 2021; Muravha et al., 2021; Sileo et al., 2018). However, there is paucity of literature focusing mainly on young men in the underserved communities in SA.

Living in communities where HIV and AIDS are still stigmatised and discussions around them are considered taboo, young men often experience intense fear that their reputations will be irreparably damaged, should they test positive for HIV. This unfortunate reality underscores the profound influence of stigma on HTS, and highlights the challenges young men might face if they were to test HIV positive. As a result of this, they may choose not to test for HIV until they are forced to, by which time the virus might have progressed to full-blown AIDS. This delayed testing may significantly compromise the timely application of safe sex messages (if they were to test HIV negative) or the initiation of antiretroviral treatment should they test HIV positive. Existing literature confirms and supports the role stigma plays in delayed HIV testing among young men and youth in the SSA region (Gyamerah et al., 2020; Ha et al., 2019), and also in SA (Belli et al., 2011; Madiba & Mokgatle, 2017; Treves-Kagan et al., 2015).

Psychosocial support options, particularly HIV adherence clubs led by men living with HIV provide a supportive environment and have been shown to help young men deal with stigma, come to terms with their diagnosis, enhance their understanding of and aid them in adherence to anti-retroviral therapy (ART). Other studies such as a Zambian study by Roy et al. (2020) found that adherence clubs facilitate better treatment adherence. A study among patients in an ART adherence club in the Western Cape (SA), by Mukumbang et al. (2019) found that these clubs were effective because they provided valuable lessons during these meet-ups regarding the importance of adherence to treatment. As a result, these adherence clubs not only enhanced patients' understanding of ART, but also contributed to their continued retention in care. In addition, the clubs have been shown to improve patients' self-efficacy and motivation to adhere to ART and to continue attending club sessions (Mukumbang et al., 2019). In addition, a South African study by Fox et al. (2019) highlighted the importance of adherence clubs to provide support and increase the retention of people living with HIV (PLHIV) in care. In this regard, it is vital to have psychosocial support options for young men who test positive for HIV to improve their ART adherence. It is important to derive innovative and effective interventions to address any possible limitations to men attending these clubs in SA, particularly in peri-urban and rural areas.

Despite most young men in this study reporting being attended to by female HTS HCPs during their HTS visits, a number expressed a desire for more African male HCPs to be involved with HTS, to enhance accessibility and retention in HIV care. This finding is consistent with a study by (Mak et al., 2016) in Swaziland (now called Eswatini), which found that some men were uncomfortable engaging about their sexual health and overall HIV services with female health care workers. The study finding is also supported by a South African study by Mbokazi et al. (2020), which demonstrated that men's engagement in HIV treatment and care was facilitated by having male HCPs who shared similar cultural and community experiences and backgrounds as them. Another South African study by Radingwana (2014), also found that men preferred being attended to by male HCPs rather than female HCPs. Those HCPs offering HTS who participated in this study expressed a similar opinion that having male counsellors would be more appealing to men. Providing such HCPs might encourage young men to open up about their situations, which, they believe, might not be fully understood by female HCPs. Ideally, young men should be provided with an opportunity to choose whether they would like to be attended to by a male or female HTS HCP. These findings, however, contradict those by Ndlovu (2017), who found that the gender of an HTS HCP had no impact on men's willingness to access and utilise HTS. In situations where it is not feasible to employ more male HCPs, female HCPs could be trained to be more sensitive to cultural issues when counselling young men.

To target HTS in places frequented by young men, participants highlighted the importance of appropriate messaging at alcohol establishments and taxi ranks. They believed that providing posters and promotional materials in prominent locations frequented by young men could encourage them to test for HIV. However, privacy and confidentiality would need to be ensured when conducting HTS awareness near alcohol establishments, considering the potential impact on men's HIV testing behaviour. In addition, a call centre number for testing inquiries and details about HIV self-testing could be provided. Details of HTS could also be combined with the promotion of voluntary medical male circumcision (VMMC), post-exposure prophylaxis (PEP), and pre-exposure prophylaxis (PrEP) programmes, to increase demand for all these services.

With regard to establishing services in difficult-to-reach populations, a report by Médecins Sans Frontières (2019) examined the experiences of men in rural and urban areas, highlighting the success of the male-only *Philandoda* [Man, be well] Clinic in Eshowe. This clinic focuses on men's health issues aims to increase men's HTS uptake and ART initiation, treat tuberculosis, sexually transmitted infections), and other non-communicable diseases (Médecins Sans Frontières, 2019). The report found that 70% of male visitors to the clinic sought HIV testing indicating a higher demand for HTS compared to other service offered (Médecins Sans Frontières, 2019). The strategic positioning of the *Philandoda* Clinic in places where men were found, such as the taxi ranks appealed to men who were reluctant to utilise PHC facilities or who could only access health care services after hours or on Saturdays between 8am until 5pm (Médecins Sans Frontières, 2019).

To increase knowledge of HIV/ AIDS and HTS among young men, participants highlighted the need to strengthen and improve health education at primary health care (PHC) facilities. These channels can provide accessible and widespread information which can reach a large number of young men motivated to visit the facilities. Globally, peer-to-peer health education has been found to be effective in improving HIV and AIDS-related knowledge and behaviour among young people (He et al., 2020; Khosravi et al., 2018). In addition, a study by Faust and Yaya (2018) in SSA suggested that peer-to-peer health education interventions were effective in improving knowledge but did not establish whether such educational interventions increased the uptake of HTS. South African literature also emphasises the importance and effectiveness of peer-led health education (Adeagbo et al., 2022; Bell et al., 2021). Implementing peer-to-peer education interventions could be advantageous as they allow young men to actively engage with peers, creating opportunities for learning at convenient times and places. Although the current study did not gather opinions about such initiatives, further research exploring young men's perspectives on peer education initiatives would be valuable.

Health care providers felt that the introduction of incentive-driven programmes such as VMMC encouraged young men to test for HIV. During this intervention, young men were given free earphones, data bundles, and USB flash drives. The HCPs felt that such programmes contribute to retaining young men in HIV treatment and care, but also provide HTS HCPs, community health workers (CHWs), and community mobilisers an opportunity to educate them about HIV and AIDS and HTS. Additionally, during these interventions, young men can be asked about possible sexual behaviour change solutions enabling tailored interventions specific to their sexual needs. In addition, these intervention programmes might be more effective if young men were attended to by male HTS HCPs which might enable them to open up about other issues that they may have. This finding is consistent with findings from a study by Ndyabakira et al. (2019) in Ghana among men on HIV testing and South African studies by Choko et al. (2019) and Nglazi et al. (2012), who found that incentive-driven interventions played an important role in facilitating men's decisions about whether to test for HIV. However, it is important for the National Department of Health (NDoH) and public health organisations to ensure that the incentive-driven programs that are implemented are cost-effective, sustainable, and effective in achieving the desired outcomes.

One of the reasons suggested for young men's reluctance to attend health facilities for HTS, was slow service delivery. The HCPs suggested prioritising men during the first hour when the facility opens as young men lack patience when visiting public health care facilities. However, this solution may become highly problematic from a standpoint of gender equity. In this regard, a possible solution to this would be for public health care facilities to have a section that prioritises men for the first two hours of the morning, which will also necessitate additional HCPs to not disrupt daily operations. Another solution suggested was to have special dedicated times for males at the facilities. For example, dedicating Saturday mornings specifically for attending to young and

older men's health care needs could be considered. It is important to investigate the effectiveness of implementing these dedicated times in order to assess whether it improves young men's access and retention in HIV care. Another possible solution to addressing the barriers to access faced by young men, could be the establishment of male clinics. These clinics could be staffed by both male and female HTS HCPs offering comprehensive health care services tailored specially to the needs of the general male population. By creating male clinics, young men in rural and peri-urban areas around Ladysmith, could have access to dedicated spaces which might facilitate an improved use of HTS and other health care services. To further improve accessibility and accommodate working young men, these male clinics could operate after regular hours from 16:30–19:00, Monday to Saturday. The need to have male-clinics is also highlighted in global and South African literature in an effort to improve HIV testing among men in general (Cornell et al., 2015; UNAIDS, 2022c).

### Limitations

1. The study was conducted during the COVID-19 pandemic, which affected the data collection process, as the laws in place at the time prevented in-person interviews. The challenges entailed the inability to observe bodily and facial expressions during WhatsApp audio calls. Also, it was difficult to establish a close and harmonious relationship with the participants (Brown, 2022; Varma et al., 2021).
2. The fact that only young men who had tested for HIV were included may have affected the breadth of possible responses regarding the barriers to getting tested. In the absence of including young men who had not made use of the HTS, the experiences and perceptions of the participants was used to identify barriers to the uptake of testing services, which may not have been as comprehensive as if those young men had been included.
3. No one who was married responded to the invitation to participate, making it difficult to know what factors may influence their uptake of services, given that polygamy and multiple partners is not uncommon in the communities.
4. It may also be a limiting factor that the two HCPs were female, making it difficult to know if male HCPs would have had a different experience with young men.
5. Given the qualitative nature of the study, the findings cannot be generalised to other research settings. However, as data saturation was reached with young men, and the Zulu culture predominates in many parts of the KZN province, it is possible for the findings to be transferred to similar setting(s).

### Conclusion

To effectively attract and retain young men in HIV treatment and care several improvements could be implemented at primary health care facility level. These include:

1. Implementing youth friendly services that are tailored to the unique needs and preferences of young men. This would involve creating a welcoming and non-judgemental

environment, providing information and resources in a format which resonates with young men and providing services that address their specific health concerns.

2. Streamlining service delivery to ensure minimal waiting times and maximum convenience for young men, by improving appointment systems and enhancing overall efficiency.
3. Employing male health care providers who share similar backgrounds and experiences and who are better able to meet the preferences and needs of young men.
4. Targeting outreach and education and other community-based initiatives which focus on raising awareness about HIV and AIDS, the importance of HTS, and addressing misconceptions to encourage proactive health care seeking behaviours.

**Acknowledgement** — Sithembiso Ndlovu expresses his heartfelt appreciation to the two respondents for participating in the research project. The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any affiliated agency of the authors.

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