American Journal of Men's Health
March-April 1–13

DOI: 10.1177/15579883211011381
journals.sagepub.com/home/jmh
SAGE

"You Cannot Catch Fish Near the Shore nor Can You Sell Fish Where There Are No Customers": Rethinking Approaches for Reaching Men With HIV Testing Services in Blantyre Malawi

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Abstract

HIV testing is the entry point to the cascade of services within HIV care. Although Malawi has made positive strides in HIV testing, men are lagging at 65.5% while women are at 81.6%. This study explored the preferences of men on the avenues for HIV testing in Blantyre, Malawi. This was a descriptive qualitative study in the phenomenological tradition in seven public health facilities in Blantyre, Malawi, among men and health-care workers (HCWs). We conducted 20 in-depth interviews and held 14 focus group discussions among 113 men of varying HIV statuses. All our participants were purposively selected, and data were digitally recorded coded and managed through NVivo. Thematic analysis was guided by the differentiated service delivery model. Men reported a preference for formal and informal workplaces such as markets and other casual employment sites; social places like football pitches, bars, churches, and "bawo" spaces; and outreach services in the form of weekend door-to-door, mobile clinics, men-to-men group. The health facility was the least preferred avenue. The key to testing men for HIV is finding them where they are. Areas that can be leveraged in reaching men are outside the routine health system. Scaling up HIV testing among men will require targeting avenues and operations outside of the routine health system and leverage them to reach more men with services. This suggests that HIV testing and counseling (HTC) uptake among men may be increased if the services were provided at informal places.

Keywords

Men, HIV testing, differentiated service delivery, informal workplace

Received October 27, 2020; revised March 17, 2021; accepted March 24, 2021

Despite the reduction in human immunodeficiency virus infections (HIV), HIV and AIDS remain a global burden with 38 million people living with HIV by 2019 and the majority of these being in sub-Saharan Africa (SSA) (UNAIDS, 2019). As a measure of fast-tracking the response to the epidemic, the Joint United Nations Programme on HIV/AIDS (UNAIDS) has set the 95:95:95 targets for countries to reach in HIV testing, ART initiation, and Viral load suppression by 2030 (UNAIDS, 2020). Realization of the 95:95:95 goals will require deliberate efforts to include the populations that are less frequently reached with HIV testing to trigger initiation of care. As of 2019, 81% of people living with HIV knew their status (UNAIDS, 2019). HIV testing is

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the entry point to the cascade of services within HIV care. HIV testing involves pre- and post-test counseling and could either be through self-testing, provider initiated, or voluntarily requested. In Malawi, avenues for HIV testing for men are primarily through HIV counseling and testing centers, where men have to voluntarily opt for an HIV test, following a medical referral or through prevention of mother-to-child transmission (PMTCT) services once men accompany their pregnant partners (Government of Malawi, 2020).

Although positive strides have been registered with HIV testing, men are disproportionately affected in the uptake of HIV services and have fewer avenues for HIV services, unlike women who are further advantaged with the availability of PMTCT services that prioritizes their access to HIV services (DiCarlo et al., 2014; Herce et al., 2019; Le et al., 2009; Quinn, 2019). PMTCT of HIV is a package of interventions aimed at reducing the rates of pediatric HIV infection, and constitutes maternal and infant HIV testing, antiretroviral therapy (ART) for mothers and infants, and safe breastfeeding practices (Mulewa et al., 2019). Men have lagged in HIV testing, and those living with HIV are 20 % less likely to know their HIV status in SSA (UNAIDS, 2017). An analysis of the 2016 Malawi Population-Based Impact HIV Assessment of 2016 showed disparities between men and women and reported that 65.5% of men and 81.5% of women had an HIV test before the assessment (Ministry of Health, 2017). Forty percent and 29.6% of men living with HIV in the urban and rural areas of Malawi were unaware of their HIV status compared to 25.7% and 23.6% of women in the same settings in 2016 (Ministry of Health, 2017). There is a need to close the HIV testing gap between men and women because a delayed HIV test leads to suboptimal access to successive services a man may need.

HIV testing in men remains fundamental to all HIV services especially in African societies where men are decision-makers for their households including health-seeking behaviors (Kasenga et al., 2007; Kura et al., 2013). Men are passive in health seeking, resulting in limited contact with health services, which contributes to the lack of prioritization and uptake of health services (DiCarlo et al., 2014; Dovel et al.,, 2015; Mills et al.). Men generally have poor access to health services but also shun HIV services because of stigma that affects men more than women (Fleming et al., 2016; Sibandakunda et al., 2015). Notably, the lack of male friendliness coupled with the plethora of female-oriented services in the health system contribute to the lack of access to health services among men (Dovel et al., 2020; Higgins et al., 2010). The gender disparity in the provision of HIV services requires country-specific measures to address the needs of men because the interventions may vary (Sia et al., 2016).

The strategies that have been used to reach men with HIV testing in SSA include HIV and AIDS sensitization campaigns, medical referrals, community-based HIV testing, home-based HIV testing, providing incentives for HIV testing, self-HIV testing, and partner (index) testing (Dowden et al., 2019; Hensen et al., 2014; Hlongwa & Hlongwana, 2019). HIV testing services for men in PMTCT services only benefit the woman more, as men are only included at the testing level and are left out in the rest of the stages in antenatal services (Dovel et al., 2020). Other strategies involve increased access to HIV counseling and testing (HTC) services through flexible clinic hours and the use of multiple convenient places that allow men to access the services at their preferred time and place (Camlin et al., 2018). Given that men are lagging in HIV testing rates and one of the reasons for that is the limited testing avenues as evidenced in the literature, this descriptive qualitative study explored the perceptions of men and health workers on the preferences of men on the avenues for HIV testing in Blantyre, Malawi. The results will inform the development of interventions that will reach more men with HIV testing, thereby closing the gendered HIV testing gap.

Methods

Study Design and Setting

This is a descriptive qualitative study that explored the avenues that men prefer for HIV testing in Blantyre, Malawi, and data were collected using in-depth interviews (IDIs), focus group discussions (FGDs), and key informant interviews (KIIs) (Lambert & Lambert, 2013). FGDs entail moderating research questions among six to 12 participants, and they have an advantage over individual interviews in that they create a platform that promotes sharing, commenting, or questioning views that have been expressed by others in the group (Tausch & Menold, 2016). As such, FGDs generate more views that have deeper insights than individual interviews (Tausch & Menold, 2016). The study was conducted from January to July 2017 at six health centers located in rural, semiurban, and urban areas of Blantyre district, Malawi, and one tertiary hospital in urban Blantyre. The selection of sites was varied according to geographical locations and included two sites from each of the following areas rural, semiurban, and urban. This variation was done to gather comprehensive information on the subject by including different contexts that may yield various options. The semiurban health centers were used during a male involvement in the PMTCT project in 2013–2015 that led to the conceptualization of this project (Nyondo et al., 2015). The urban health centers are located in areas that are high densely populated in Blantyre city. The tertiary

hospital was included because it is the main referral center for Blantyre district and Southern Malawi.

All facilities included in the study are owned by Malawi's Ministry of Health. All study sites provide HIV testing, ART initiation, and follow-up in care. HIV testing in all sites is provided from Monday to Saturday by designated HIV health workers, called HIV Diagnostic Assistants (HDAs). Each facility has a designated room or section where HIV testing services occur on weekdays from 8 am till 4 pm.

Sample Size

The study followed a purposive sampling approach with maximum variation (Palinkas et al., 2015). Maximum variation implies inclusion of participants with unique or diverse variations with an aim of capturing common patterns or experiences that cut across variations thereby broadening the scope of sources of information in our study, which enriches the insights and depth of information (Palinkas et al., 2015). The selection of men was varied according to the area of residence, age, and HIV status to cover views from men with different experiences with HIV services and guarantee collection of data that are transferable to different settings of similar characteristics as the study sites.

A total of 20 men were sampled for the IDIs, while 113 were included in FGDs each comprising 6–12 participants at each study site.

A total of 14 FGDs, two per site, were conducted among men that were segregated according to age (young men 18–24 years and older men >25 years old). Seventeen health-care workers (HCWs) were included in KIIs, and these were drawn dependent on their role in the provision of HIV services. The sample size calculation was guided by Guest and Bunce (2006), who contend that with a sample size of 12, one achieves 97% of the codes on a particular phenomenon.

Data Collection

Ethical approval was obtained from Malawi's College of Medicine Research and Ethics Committee (COMREC-Number P.11/16/2064) before the commencement of any study-related activities. The institutional heads provided support for us to conduct the study in facilities under the Blantyre District Health Office and Queen Elizabeth Central Hospital (QECH). All participants in the study voluntarily participated after providing written informed consent. The data collection tools were pretested to ascertain validity and consistency with the objectives of the study, and amendments were made as necessary. The entire research team except for MK and VM conducted the interviews. All interviews and discussions were held only once, were face-to-face, and were digitally audio-recorded. Interviews and discussions with men were conducted in Chichewa, the local language while we mixed Chichewa and English during KIIs among HCWs as per preference. Researchers captured field notes to supplement audio recordings during analysis, which focused on non-textual data and the context where the study was done; these field notes acted as cues for reflection and support initial coding (Phillippi & Lauderdale, 2018). The privacy and confidentiality of the study participants were safeguarded by using codes instead of names to maintain anonymity and by conducting all study-related procedures in private spaces. The research team reflected and bracketed their views on avenues for HIV testing for men and were aware of their position before data collection and during analysis to avoid their views from influencing data collected and the interpretation of it as a means of achieving credibility of our findings (Fischer & Fischer, 2009; Jennings, 2012). At the end of each interview and discussion, researchers summarized the key findings to participants who would verify them, this enhancing the credibility of our findings (Leung, 2015). Researchers held multiple discussions over the data and interpretations to achieve consensus and dependability (Leung, 2015). Transferability of the findings to another setting was maximized by describing the setting of the study, eligibility of participants, and methods followed, so that the context where the study was conducted is apparent (Leung, 2015). Triangulation of the methods of data collection and sites enhanced the trustworthiness of our findings (Heale et al., 2013). The interviews ranged from 30–45 min, while FGDs were 60–90 min long. The concept of data saturation guided data collection, and it was reached when there was no more new information coming from the participants (Baker et al., 2018).

Data Analysis

Our data were managed using NVivo, and we followed a thematic approach in analyzing the data (Braun & Clarke, 2014). The overarching themes for the analysis were deduced from the differentiated service delivery model (DSD) (Grimsrud et al., 2016). The model has four tenets that describe the provision of services and these include who provides the service, what is provided, where the services are provided, and when the services are provided (Long et al., 2019). Therefore, this model provided a lens to present HIV testing avenues for men in a comprehensive manner.

Preliminary analysis commenced during data collection to enhance quality and inform successive interviews. All data were transcribed and translated into English before loading in NVivo. Researchers listened to the audio recordings multiple times and read transcripts repeatedly

to become familiar with the data whilst making note of striking aspects for further discussion. During the reading phase, discussions were held to clarify the data to ensure that there was no misrepresentation of the data. After multiple discussion, a coding framework was developed to analyze the data. The data were deductively coded using the DSD model and also inductively from the data (Burla et al., 2008; Fereday, 2006); later, all similar codes were grouped under an overarching theme through an iterative process to achieve the best fit for the codes. The codes that were not a perfect fit were dropped during refinement, following discussion among team members. The themes were reviewed against the quotes under them to avoid losing meaning whilst applying them to the DSD model.

Results

Characteristics of Study Participants

Of the 17 HCWs, 15 were male and their median age was 38 years old (interquartile range [IQR] 32–48). We had nine HDAs, four nurses, two medical assistants, one HIV testing coordinator, and one ART coordinator respectively. One HCW refused participation and cited time limitations as a factor.

The median age of the men was 27 (IQR 21–35). Most men were unmarried, had a primary level of education (Grade 1–Grade 8), and were self-employed. Of the 133 men, only 32 had not taken an HIV test before, and of those living with HIV infection, only eight were not on ART (Table 1). Of the participants we approached, five men for in-depth interviews and seven men for FGDs refused participation and cited time constraints as the main reason.

Table 1. Characteristics of Men in the Study.

Variable	Number	Percentage (%) $N = 133$
Age	27 (IQR 21–35)	
Marital status		
• Married	65	48.87
• Unmarried	68	51.13
Literacy		
• Able to read	120	90.22
• Unable to read	13	
Education level		
• No Education	7	5.26
• Primary	41	30.83
• Secondary	69	51.88
• Tertiary	16	12.03
Employment		
• Not employed	52	39.10
• Employed	33	24.81
• Self employed	47	35.34
• Missing	5	3.76
HIV testing*		
• Had an HIV test	101	77.10
• HIV infected	40	39.60
• HIV uninfected	61	60.40

Note. *This section will not add up to *N* because it is a subsection of *N*.

Preferred HIV Testing Modality

As presented in Figure 1, we have classified the results of preferred HIV testing modality according to the following four domains: places where to provide services, when the services can be provided, who should provide the services, and what should be provided. This classification gives a comprehensive view of HIV testing services for men to optimize uptake (Figure 1).

Where Should HIV Services Be Provided? Participants study stated that HIV testing services for men could either be provided at the health facility or in the communities in which men reside or work. Our study considered community to mean beyond geographical communities and include communities of purpose such as bars and other social communities. Men stated that an HIV test should be readily and widely available in a community to reduce the distance covered to access services.

Fixed Formal Place in a Community That Is Not a Hospital But Located Close to Men. Participants recommended having a permanent place where men can access HIV testing that is closer to where men are mostly found other than a health facility because it promotes access and eliminates stigma. The designated space should be open for longer hours to allow men to access the services even after their busy schedules. Men were very particular about the location of such places albeit aiming for convenient places and spaces that have more men than women or male-only spaces and that assure their privacy.

> It would be better to have a formal place apart from the hospital, in our areas where men can go, the places should be closer to men. . . If there are going to be near, maybe it may help and if these centers will be working till a bit late, it might also help since some men are shy to go there during daylight, it shouldn't be a mobile center, no, it should be a fixed formal place, where service providers are always available. (FGD, 25 years and above, QECH)

The need to maintain privacy and to avoid any form of unintended disclosure was an underlying factor among men that determined suggestions for the provision of services. In a way, HCWs corroborated the men's views and discouraged having services administered from a village chief's place and advocated for neutral places with only male service providers attending to men. Once such

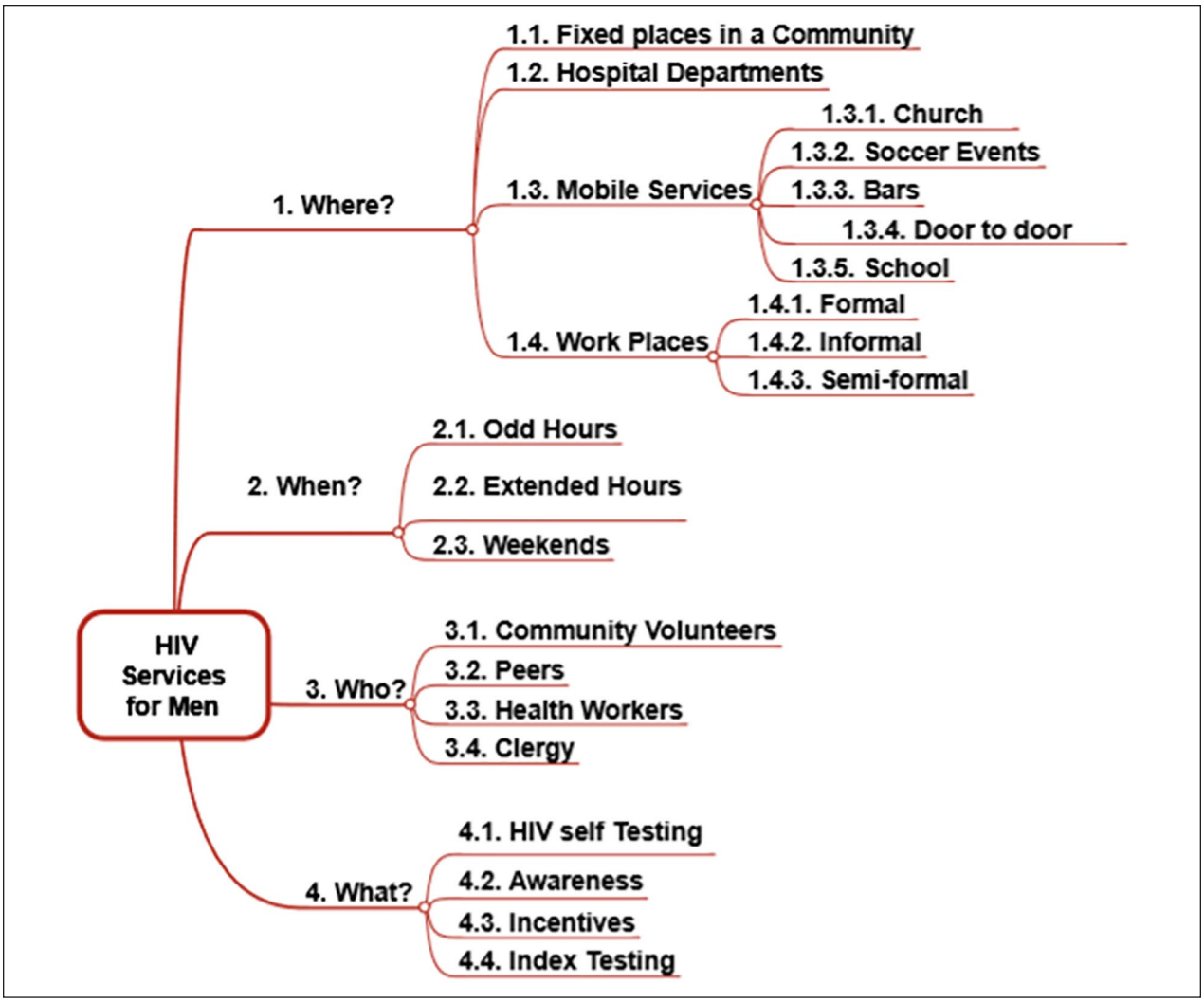

Figure 1. Summary of findings on HIV testing services for men.

centers have been established, men have to be made aware of the existence of the services.

> The places should be separate away from the health setting so that people should be free to come, and even from the homes of other people or the community as a whole and I believe that men will be able to come. . . . (IDI, HCW male, MA Madziabango)

Hospital-Based HIV Testing. Men reiterated that in a hospital setting, health service providers should actively approach and offer every man who has reported at the facility an HIV test. Men explained that this will require health service providers offering HIV testing services outside of the currently designated areas where voluntary HIV testing takes place. Men further encouraged HCWs to offer HIV services at every point when a man interfaces with them and eliminate fragmented care.

> If you want to catch a fish there is no way you can catch it at the base of the waters or near the land meaning to say that you cannot sell your fish at a place where there are no people present there, so if the government would want to encourage all the men to be able to access the HIV testing then they need to use this method (of actively searching for men in the various sections of the facility) by encouraging each man who has come here at the hospital to access the HIV testing. (FGD, 25 years and above, Madziabango)

Mobile Clinics in Places Where Men Socialize or Congregate. Finding men where they are was a recurrent suggestion across the interviews and discussions. Men and HCWs highlighted that mobile HIV testing services that target areas where men commonly congregate will result in more men taking up HIV testing. Some HCWs believe that men shun away from visiting a health facility for an HIV test because it takes them away from their work or

business and this was corroborated by the men. The need to provide for their family and also visit the health facility for an HIV test create a dilemma, and, in most cases, men would choose the former over the latter. Men and HCWs suggested that mobile clinics may use a community ground, school, or a place designated by the chief for service provision.

> When you consider that here in Blantyre, people have a lot of things to do, there are other people who work and others do businesses in the marketplaces. So maybe mobile cars and outreaches can help. (IDI, HDA, QECH)

Men further suggested that other areas to be considered in reaching men are bars, places where men play games such as a common local game called "bawo" (similar to draught), and churches because they already congregate in larger numbers in such places and would easily take an HIV test. A commonly occurring place stated by men, especially for younger men, were video centers that are locally available rooms in most trading centers and villages where films are aired at a price and this platform could be leveraged to offer HIV tests. Men deemed it difficult to find men in the community without properly targeting the spaces and areas that they frequently patronize. Responding to a probe on specific places where an HIV test can be offered, a young man in an FGD said as follows:

> One group may be at church, others at drinking joints, some at football games, and some at "bawo," some will be watching football games in video centers. (FGD, under 24 years old, QECH)

Football grounds are another potential testing site that was mentioned by men who recommended offering the test right after a football game. Men could be informed ahead of time about the services that will be provided alongside a particular event.

> There are several things that happen on the football grounds and people go there. For example, testing outreaches, they have been conducted there and people patronize. (IDI, male unknown status, Mpemba)

The recommendation for finding men where they commonly congregate was preferred by most men because it safeguards their confidentiality unlike at a health facility where it remains a challenge. The challenge is highlighted by the provisioning of HIV services in a fragmented manner in distinctly labeled spaces that indirectly disclose one's presumed status fragmented. HCWs reported that another advantage of running mobile clinics beyond privacy and eliminating embarrassment was the potential to shorten the distance that men usually cover to access HIV testing. Health workers stated that a longer distance to access an HIV test deters men from using the service. In other cases, HIV testing may happen using school premises especially for younger men above the age of 18.

Another commonly cited method for reaching men with HIV testing by men and HCWs was using the door-to-door method, where HCWs visit men in their homes and offer them HIV testing. Men further explained that the advantage of offering it to the family is the platform it offers a family to decide collectively about their life course dependent on the outcome of their HIV tests. Although men stated that a door-to-door approach offers less room for a man to provide excuses for not taking up an HIV test, they were quick to state that it is taken voluntarily.

> The best way as we have already said before is to use the door to door method so that those people should be able to access the HIV testing individually and I believe that this way can encourage a lot of men to be able to access HIV testing in the process because they are shy to come at this hospital and access the HIV testing right here . . .so on Sunday most men are not always at work and they do not go to work on this day, so it would be a good day or even on Saturday and Sundays to visit them in their homes. (FGD, 25 years and above, Ndirande)

Workplace HIV Testing (Formal and Informal Workplaces)

Formal Companies. Men reported that strengthening the provision of HIV testing in the various workplaces would reach more men. Notably, both men and HCWs reported that there are only a few companies that are implementing HIV work policies as recommended by the Malawi Government. Health workers further clarified that the services could either be owned by the company or could be run by health providers who make regular visits to such companies or workplaces.

> We (health service providers) have to go to the companies, let us find them right there in their offices and let us explain to them and again we must take the service right there at the company, then after explaining the issues to them we have to tell them that we have brought the service right there or ask them when they want us to come to and assist them. (IDI, HTS coordinator)

Although this was not reiterated by men, HCWs attested that in the past more men were reached with HIV testing services through such means because of the minimal disruption to the economic activities a man is involved in.

> It is easy for men to do the HIV testing when we have reached them in their workplaces unlike telling them to go to the hospital to do it because they feel like they cannot leave

> their businesses simply because of the HIV testing at the hospital but they will just leave their businesses for a short period then, later on, they go back to do their businesses. (IDI, HDA, Chilomoni)

Men asserted that strengthening of HIV testing in the workplace would require the government to set guidelines that companies and employers must follow, to ensure that services are being provided on site. The setup with workplace HIV policy at the time of the study was left to companies to opt-in with no consequences for those that are not implementing the policy. As a result of the aforementioned point or in general, the policy is more aligned toward private companies

Semiformal Workplaces: Markets. Both men and HCWs asserted that HIV testing at a market would ensure that men do not leave their economic activities to take an HIV test because services would be conveniently located for them. A similar practice was once done before, and health service providers noted that it requires more manpower and also raises the need of having ART teams alongside testing teams so that those diagnosed with HIV infection initiate on Antiretrovirals (ARVs) immediately. An HIV coordinator for Blantyre narrated her experience with HIV testing based in a market.

> We targeted Manje and Bangwe, so we went there with six counselors at each site and we included the Health Education dancing group, they were dancing inside the Van until they reached Manje site. When we reached there, I climbed on the Van and started to give them the health talk, we had four tents and we explained to them that we found them at their right place and we had with us the testing kits for them to get tested . . . surprisingly we could not believe what we saw because a lot of men came for the test and it was a great shock to all of us and we could not believe it and we failed to test all these people and do you know why they came? It was because we found them in the right place where they are usually found. (IDI, HTS coordinator, Blantyre)

Another health worker provided a contrasting experience to the one narrated above of running HIV testing services in a marketplace that targeted men. Drawing from his past experiences, he narrated that they had provided mobile services before and more women than men presented themselves for an HIV test as such, they feared that implementation of such services will not result in more men testing.

> I do not think men would go there (market), you will find women flocking there. As for men, no! Because it has always been a problem and we did an exercise last year in December, we were only targeting men, so we had a van and then only a few men went there and another area we tested only less than a hundred but then the women were ready to go for the test and we tested the women and went on to another place and the same thing happened. (IDI, ART coordinator, Blantyre)

Informal Workplaces. Men recommended that HIV testing services in the workplace should extend to informal sectors that lack structured settings and include men that survive on a daily wage. Examples that were mentioned include companies that hire laborers and shops. Additionally, a participant recommended targeting HIV testing services to minibus drivers and conductors who hardly take an HIV test.

> You can find your people who will be able to find those people in town like approaching those working like minibus drivers or conductors because these are some of the people who do not like to go for HIV testing . . . because a lot of people are just lazy to go to the hospital to do the actual HIV testing. (IDI man, HIV infected, Ndirande)

When Should HIV Testing Services Be Provided?. In our study, men suggested that services should be provided for longer hours including over the weekends. This manner of timing ensures that men can access the services after they have completed their responsibilities unlike when services are only offered at specified times, which are neither convenient nor conducive for men who are breadwinners in their families. HIV services in most facilities are provided for 4 hr or a part of the day and rarely would they be offered in the evening hours.

> I think that the best way is for us men and young men to be visited in our usual places where we usually are found, like during the weekends we are always at the football ground or in the bars. (FGD, 25 years and older, SLHC)

Who Should Provide HIV Testing Services? Men suggested that local people who are trained should provide HIV testing services. Men stated that volunteers within a community may carry out door-to-door HIV testing services.

> HIV testing should be found easily like how condoms are found. Knowing that from here I can go to such and such a person and get tested. And that person should be taught well about privacy and secrecy, I think things would go very well, not going to the hospitals for testing. (FDG, 24 years old and under, QECH)

Men provided previous examples from other programs on how they incorporated community members to assist in raising awareness to improve uptake of the services amongst their peers. These peers could influence others in bars, schools, or any areas where men meet. Additionally, men recommended that there should be different HCWs servicing mobile clinics with each visit, thereby reducing the chances of knowing the men who

access the services from this avenue personally, which will optimize confidentiality. Notably, the need for privacy and prevention of unintended disclosure of an HIV status is the platform for viewing and providing HIV services for men.

> For example, when they come this week, then next week it should be another group of people coming. And if the people are familiar with those who are conducting tests, then people will not be going for the tests. (FGD, 24 years old and under, QECH)

The gender of service providers is an important factor to be considered in the provision of HIV testing in reaching men because some men were particularly concerned with women providing HIV services to them and stated that they preferred if fellow men provided the services.

> I don't know why in most clinics, testing is done by women, so I don't know if women are more professional in this than men. This is because more men are shy to go when a woman is conducting the test. Even here at the hospital, when a man is being assisted by a woman in any other way, he just accepts it because at that time he is in need. But deep down his heart, he is not happy. (FDG 25 years and older, QECH)

If HIV services are provided in churches, then the clergy or church leaders would have to be co-opted as entry points in the religious groupings. They will be the liaison between health services providers and congregants.

What Type of HIV Services Should Be Provided? As part of the door-to-door testing, men suggested that HIV self-testing (HIVST) kits could be distributed to men that would let them take the test in their comfort. This was regarded as empowering to the men and would not risk unintended disclosure of an HIV status or leaving others wondering and concluding about a man's HIV status with connotations about his sexual life by being seen at a testing unit.

> There is a need to use the method like what they do with the census, by visiting people using the door-to-door method and maybe dividing those people into groups and give them the test kit so that they should be able to conduct the testing on their own. (FGD, 24 years old and under, Madziabango)

Respondents were of the view that testing sessions in the community should be preceded by campaigns that promote HIV testing and ways should be found for attracting men to the testing events. These services could also leverage preexisting groups within a particular community and provide HIV testing on that platform.

Index Testing/Using Their Partners

HCWs asserted that index testing links men to an HIV test. Health workers reiterated that once a woman who has a partner tests positive for HIV, HCWs should immediately contact her partner to reach more men.

> Yes, and for us to get more men, we need to have index testing. For example, if we find a problem with the woman, then she should call the husband to come. And the facility can send one person to go there to explain and test him right there in their village. . . . . Yes. We can ask the lady if we can go to her house, and if she agrees then we will go there, but not the same day. (IDI, HDA, Mpemba)

Subtheme: Providing Incentives for Testing

Some men felt that men need the motivation to take an HIV test in the form of incentives that are provided alongside the services, which will encourage men and motivate others to report for HIV testing. It was suggested that incentives should build upon economic activities that men are involved in.

> If there are men who do farming or businesses, if they are in their groups, they should be counseled together and f they are in groups of businesses, offering them loans would help; because we are trying to attract them, then we should find a chance of testing them. When we approach them and they learn that this group is giving loans, they'll join so that they should find money to promote their businesses. . . .you will then teach them the advantage of HIV testing. In doing so, we have attracted them. (FGD, 25 years and older, Ndirande)

Other men were not keen on using incentives and argued that such initiatives would only benefit a few people.

Discussion

As UNAIDS aims at reaching the 95:95:95 goal by 2030, men who have lagged in HIV testing could be reached via the avenues as reiterated in our study. Our study on the preferences of men on avenues for HIV testing in Blantyre, Malawi, revealed that HIV testing should be provided in places where men converge. The services should be provided by peers or volunteers from a community. The preferred services to be provided are HIVST kits, information for men to be aware, and incentives to encourage men to take an HIV test. To reach more men with HIV testing, the services need to adapt and target those who have been left out while taking the preferences of men into account. In light of the DSD model, the "where" to provide services was the most discussed section amongst the four tenets.

Where Should Services Be Provided?

The participants in our study recommended a tweak in the current health facility-based testing and suggested that health workers deliberately attract more men at all entry points within the routine health services (Hubbard et al., 2020). Notably, this may not be an optimal strategy because hospital-based HIV testing services have been criticized for suboptimal results in reaching out to men and for continually neglecting them (Colvin et al., 2014; Hlongwa & Hlongwana, 2019).

Our study found that men preferred workplace-based HIV testing services because of its convenience and elimination of stigma associated with testing at a clinic. This is consistent with a systematic review in Africa that reported that workplace testing is feasible and acceptable among men and reaches more men (Corbett et al., 2006; Gottert et al., 2019). Finding men in their workplaces diffuses existing gendered health delivery system norms that have negatively affected HIV testing uptake among men (Grimsrud et al., 2020). There is a need to strengthen the existing HIV work policy in Malawi to optimize HIV testing.

As previously demonstrated in other studies, social events are another avenue for offering HIV testing to men (Africa et al., 2020; S Croxford et al., 2020; Dovel et al., 2020; Gottert et al., 2019; Hlongwa & Hlongwana, 2019). As such, mobile clinics may target places where men usually congregate, thereby increasing access to HIV testing services, reducing the distance, and also reducing HIV-testing related stigma (Camlin et al., 2018; Colvin et al., 2014; Hensen et al., 2014; Hlongwa & Hlongwana, 2019; Sharma et al., 2017; Van Rooyen et al., 2013). Although more men test when approached in various settings, caution has to be exercised when providing outreach services to ensure proper linkage to care for men who test HIV positive (Colvin et al., 2014; Dovel et al., 2020; Quinn, 2019).

Men suggested having HIV testing centers away from a health facility at a place where they can have access, which is consistent with earlier findings (Mark et al., 2018; Osoti et al., 2015). This is a departure from the norm where most HIV testing places have been criticized for being closely located to the maternal and child health services, thereby undermining men's privacy and sense of masculinity (Dovel et al., 2020). Such services could latch on the platform of providing male-friendly health services, which include screening for other conditions as well, as reported previously (Abongomera et al., 2017; Dowden et al., 2019). Our findings on door-to-door HIV testing have been well researched previously (Hlongwa & Hlongwana, 2019; Ostermann et al., 2011; Sharma et al., 2017). Notably, offering or taking services to where the men are will require maximizing the level of confidentiality between providers and users (Abongomera et al., 2017).

Who Should Provide Services?

Male respondents in our study preferred male service providers and were concerned with current services being dominated by female service providers, which build on earlier findings that emphasized reducing the number of female-gendered health service providers for male-specific services (Colvin et al., 2014; Grimsrud et al., 2020). At the time of the study, in the health system, the visibility of men as providers and users is less as compared to women, which further derails innovations toward increasing HIV testing among men (Dovel et al., 2020; Grimsrud et al., 2020). An interim measure while training and appointing men to such services would be gender training among HCWs so that they remain sensitive to such gender differences (Colvin et al., 2014). Our findings that other community members and peers could provide HIV testing services are similar to suggestions by Colvin et al. (2014), who stated that local people or those in NGOs could take up this responsibility.

When Should Services Be Provided?

Our study findings of providing HIV testing services at hours convenient to men are consistent with a study conducted in Kenya and Uganda on men's engagement with HIV services, which highlighted that men preferred HIV testing provided even after working hours (Camlin et al., 2018). Our findings extend on an earlier assertion that highlighted that most HIV testing services in Malawi are either linked to Antenatal Care Services or are provided for limited hours only (Dovel et al., 2020). Our findings further highlight the various attributes that need consideration when designing and delivering HIV services for men, hence confirming assertions made by a Tanzanian study (Ostermann et al., 2011). Implementing partners in Malawi have experimented with the rollout of offering HIV testing services as early as 6 am, but the effectiveness is yet to be evaluated (EGPAF, 2018). Men in our study viewed weekend testing services as an avenue to reach those who are unable to test during the week due to economic responsibilities, which corroborates with previous findings (Camlin et al., 2018). This highlights the importance of and need for a shift in offering testing services outside of routine practice and time to capture and be convenient to men who are otherwise constrained to access the services during routine operating times. Besides, services that are provided during social events have a potentially positive response (Osingada et al., 2019)

What Services Should Be Provided?

The services to be offered include distribution of HIVST kits to men, as reflected in our study. This cements what has been reported earlier on the effectiveness, uptake, and benefits of HIVST self-testing among men (Africa et al., 2020; Hlongwa & Hlongwana, 2019). Our findings were different from other studies because our participants did not mention women as conveyors of test kits, which highlights the need to maintain privacy and independence in taking the test (Agot et al., 2020; Napierala et al., 2020). This avenue was regarded as a safeguard against unwanted disclosure of one's test results, considering that only the subject of the test would know their status and as such would be in control of who to share the results with thus retaining autonomy (Hlongwa & Hlongwana, 2019; Napierala et al., 2020). Going forward, there needs to be a guideline that promotes the availability of HIVST kits with considerations on pathways to post-self-test care (Makusha et al., 2015), and pharmacies and/or drug stores could be options for men to access the HIVST kits (Mugo et al., 2017).

Index testing as suggested in our study is an effective strategy for reaching men. Participants in our study cautioned that index testing has challenges that may impede effective results. This is maybe averted by embarking on active index testing, which is much more effective than the passive approach. There is a need for less reliance on it for linkage to care (Hlongwa & Hlongwana, 2019; Mwango et al., 2020; Napierala et al., 2020). compared to passive index testing (Hlongwa & Hlongwana, 2019). Trained male community volunteers, expert clients, or health diagnostic assistants could take up this role.

Education on HIV as part of services within HIV testing programs also resonates with earlier findings (Croxford et al., 2018; Dovel et al., 2020; Hlongwa & Hlongwana, 2019; Katirayi et al., 2017; Ntsepe et al., 2014; Sharma et al., 2017) and will require a revision in the conduct in health facilities. Specifically for Malawi, Dovel et al. (2020) noted that health education services are rarely provided in areas where men interface with the health system, which is further compounded by the limited encounter that men have with health services. The recommended information should be tailored to men (Hlongwa & Hlongwana, 2019), empowering them to make informed decisions on HIV testing (DiCarlo et al., 2014; Fleming et al., 2016) while targeting prevailing misconceptions of HIV that threaten notions of masculinity (Katirayi et al., 2017; Orr et al., 2017).

Previous studies have reported that incentives such as cash transfers (Colvin et al., 2014) influence the uptake of services including linkage to care for an HIV-infected result (Africa et al., 2020; Hlongwa et al., 2020). Incentivized services like lotteries are considered a risk-tolerant attribute consistent with notions of masculinity, which is likely to increase test uptake (Barnabas et al., 2020). Although incentives have the potential for reaching the vital few remaining men, on their own, they will not sustain the initial pull of men attracted and must be complemented with other measures (Barnabas et al., 2020; DiCarlo et al., 2014). The use of incentives to promote testing remains an ethical issue in SSA because of the potential of bribery and coercion for one to take an HIV test (Hlongwa & Hlongwana, 2019).

Strengths and Limitations

Our study's strength lies in drawing of information from various players in the provision of HIV services to men including the recipients of HIV tests. We triangulated our findings between the male respondents and service providers. We varied the sites from where we collected the data and that offered varying insights to the problem under investigation. Although we only used female data collectors and that could potentially have affected what men could possibly share with them, our data collectors were well trained in qualitative data collection skills and measures of ensuring active participation of respondents. Our study sample did not include a lot of young males in universities or higher education institutions, which is an important group as well in HIV testing aspects. Future studies should focus on this group and on men found in communities and not those who have presented themselves at the clinic.

Conclusion

There is no one size fits all when it comes to reaching men with HIV testing services. Scaling up of HIV testing among men will require targeting avenues and operations outside of the routine health system and leveraging them to reach more men with services. Informal workplaces are a neglected avenue for reaching men with HIV services. The health system needs to be robust and adaptive to achieve the desired goals while delivering services that are tailored to men. Policies that are specifically targeting men will need to be in place to support the services.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this

article: This study was funded by the Malawi HIV Implementation Research Scientist Training program (Fogarty: D43 TW010060).

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