

# Implementing HIV Self-Testing Barriers and Facilitators for Truck Drivers Having Sex Men-to-Men and Transgender Women in Local Region of Lahore to Islamabad Gt Road, Pakistan: A Qualitative Study

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## Abstract

**Objectives:** Our study identified Implementing HIV Self-Testing Barriers and Facilitators for Truck drivers Men-Having-Sex-with-Men and Transgender Women in Local Region of Lahore to Islamabad GT Road, Pakistan: HIVST. In addition, we looked into MSM and TGW populations' present HIVST knowledge, practices, and potential. Design Semi-structured interviews were used to conduct qualitative in-depth Key Informant Interviews (KIIs) in Local Urdu Language. After transcribing all audio recordings, the findings were thematically analyzed. Setting the study was done in the National Highways N5 Lahore to Islamabad, Pakistan. Setting The study was done Local Region of Lahore to Islamabad GT Road, Pakistan using forms designed in local language. Participants Participants in the study were either MSM or TGW, aged 18 to 40, and living/working in the Lahore – Gujranwala region. Non HIV AIDS samples were excluded. **Results:** Twenty interviewees were asked, with the majority of them that are MSM who have used HIVST. Acceptability, dissemination, and monitoring and tracking were the three important components identified as HIVST usage facilitators and impediments. Because of its convenience and anonymity, as well as the country's normalisation of HIV testing services, the participants preferred HIVST (HTS). HIVST implementation, on the other hand, was impeded by a lack of privacy and secrecy during kit distribution. In particular, social media has been considered as a viable means for spreading HIVST. Because of the significant HIV stigma, using a positive tone and terminology is essential. **Conclusions:** The Pakistan AIDS Control Program may take into consideration the study's identified facilitators and hurdles (PACP). In addition to the current HTS, the HIVST approach might be applied. It will be tremendously advantageous to involve the MSM and TGW communities, as well as other stakeholders.

## Strengths and Limitations

1. Because the community-based organisations are well-known among critical demographics (MSM and TGW) and HIV advocacy in Pakistan, gathering participants and gaining their trust to share their perspectives was difficult. Our study only involved respondents from the Local Region, which may limit its generalizability to other regions of the country where HIV cases are still increasing.
2. Because of the COVID-19 epidemic, personal interview interviews were conducted solely; as a result so that the interviewer and interviewee may remain safe.

3. The sources' opinions of HIVST's acceptability are suggestive, since the majority of participants had never used it previously.
4. Our research entirely focused on the MSM and TGW communities, leaving out other at-risk and elevated groups, restricting its application to various groups.

## Introduction

Infections with the Human Immunodeficiency Virus (HIV) are estimated to total 115 million, with 45 million HIV-related deaths and 32 million people living with HIV

(PLHIV). Since 2011, the Pakistan has been recognized as having one of the world's fastest-growing HIV epidemics due to rapid and sustained increase in new diagnoses<sup>1</sup>. Additionally, the HIV prevalence in the country changes and expanded fast in the previous five years, with 38 new cases detected every day<sup>3</sup>. Between 1998 and 2018, there were 51,430 HIV diagnoses, with 93 percent of the men and 51 percent of those in the 28-35 age bracket.

Early HIV testing and mindfulness can help to slow the spread of the virus. Early diagnosis, which is required to begin treatment, has been linked to a 96 percent reduction in HIV transmission in randomized controlled trials<sup>2</sup>. However, it must be emphasized that the decreased forward HIV transmission as a result of increased HIV testing awareness must be accompanied by comprehensive initiatives to enable these educated people to test. Furthermore, government actions in partnership with community-based organisations, engaging area pioneers for open events, and increasing HIV testing in facility-based settings and community-based events are all viable options. Furthermore, the public health worry that late HIV conclusion is significantly influenced by the health-seeking behaviour of many at-risk people 96 was heightened by this time - overview of screening and conclusion<sup>3,4</sup>.

Between 2012 and 2018, HIV testing services (HTS) increased significantly, with more than 600 million people receiving adequate HTS in 122 low - and - middle countries. The greater use of supplier testing and treatment, as well as various society techniques, that are now regarded mainstay of treatment, may account for the spread of HTS in these nations<sup>4</sup>. Not with standing these novel treatments, nearly 40% of all HIV infections in the world remain undetected. As a result, numerous nations had already begun looking for ways to encourage people to get diagnosed for HIV in order to meet the first Nations' 90-90 Hiv transmission and care plan, which called for the identification of 90 percent of all HIV-positive people<sup>5</sup>.

Fears of rejection, social stigma, and absence of availability to screening continued public health concerns in many regions, posing a continuing danger to HTS acceptability worldwide. Since 2006, the US Centers for Disease Control and Prevention has recommended routine HIV screening for people aged 17 to 60; however, many challenges have hampered use of these HTS. As a result, internationally accepted and easily available HTS are desired to expand diagnostic coverage, allowing infected patients to get early antiretroviral treatment<sup>6</sup>. Furthermore, it will prevent HIV transmission to those who are at risk<sup>6</sup>. Furthermore, there is growing evidence that HIV self-testing (HIVST) can assist reach persons who are unwilling to use HTS in approved sites, resulting in an increase in the number of HIV-17 diagnoses. According

to one research, 70% of people who'd already ever had an HIV test had already self-tested.

As a result, a well-designed and implemented AIDS Control Program might significantly boost Hiv treatment acceptance while also improving access to HIV prevention, care, and therapeutic services. HIVST may also involve fewer human resources and be less expensive than competing alternatives. The Health Department in the Pakistan has 'NO' HIVST policies or procedures in place to control HIVST kits purchased<sup>7</sup>. In Pakistan, a small study has established the feasibility and effectiveness of HIVST. Our study looked at how men-having-sex-with-men (MSM) and transgender women (TGW) HTS users and non-users on HIVST perceived hurdles and enablers to HIVST implementation. In addition, we investigated current HIVST knowledge, practises, and possibilities among MSM and TGW populations in the Province of Punjab.

## Materials And Methods

From January 2021 to August 2021, the study was conducted in the Lahore and Gujranwala regions using a well-defined questionnaire. To determine the barriers and facilitators to adopting HIVST, research the gaps for absence of availability to HTS, and examine HIVST adoption and linkage to further diagnosis and treatment among MSM and TGW, qualitative methodologies were used.

### Study Participants

The following criteria for inclusion were used to screen all study participants: MSM or TGW, 18 to 49 years old, and living or working in the NCR. In addition, for the key informant interviews (KIIs), recruited study subjects were divided into four groups: (1) MSM who have been tested/screened for HIV at least once, (2) TGW who are diagnosed with The disease at least once, (3) MSM who have never been tested for HIV, and (4) TGW who have never been tested for HIV. Participants who were biologically born female and/or were taking pre-exposure prophylaxis (PrEP), antiretroviral therapy (ART), or were HIV-positive were not included in the study. Furthermore, the participants were recruited and referred through online platforms such as social media and recommendations from LYS participants.

### Data Collection

Data was gathered through qualitative quasi-in-depth conversations with KII respondents, which were conducted in simple local language URDU. Participants were required to appear before interviewer for to the interviews and discussions.

Three separate segments were covered in the topic interview guides. The very first section examined participants' knowledge, acceptability of using HIVST,

recommendation of HIVST to others, and the addition of other materials or services to make HIVST more appealing, particularly to first-time testers. The second portion offered recommendations for HIVST kit distribution and marketing. It also featured the client's preferences for how to get samples (blood or oral fluids), how to request and obtain kits across multiple platforms, the intended price, and how to advertise HIVST and reach MSM and TGW users<sup>8</sup>. The final portion covered results monitoring and tracking, as well as post-counseling services, follow-up, and referral systems for responsive and non-reactive outcomes. In the final session, various concerns and the incorporation of mental health services, primarily for clients who become reactive after using the kit, were also addressed<sup>9</sup>.

Data was collected and analysed until saturation was reached. It was done to develop a more solid, valid, and in-depth understanding of HIVST based on MSM and TGW perspectives. Furthermore, saturation gave the study team a sense of the data's validity as well as its quality. All of the participants' conversations in form of papers and were audio-recorded. Additionally, post-interview conversations among the investigators were held to define a strategy for data analysis.

## Data Analysis

The descriptive qualitative data was coded using a template analysis framework, which involved creating an initial set of themes or logical codes based on the interview subjects and then applying these codes to the data. An analytical methodology was used to index transcripts from the audio recording. Summarized data was entered into a framework matrix, which was then subjected to in-depth interpretation and analysis.

Inductive codes were utilized to indicate data on themes that appeared within or across the subjects based on the review of the deductively coded data. One reviewer mostly coded after participating in an independent coding activity that resulted in agreement on a single coding system. The team discussed the major concepts and researched and drew correlations between the topics using the code reports. To provide quotes from qualitative research, anonymous sources were utilized.

## Ethical Considerations and Data Protection

An independent research ethics committee gave its approval to the study's research protocol. The data acquired, including participant information, was kept personal and private under the Pakistan AIDS Control Act and the Pakistan Data Privacy Act of 2012. The primary investigator and the study team never divulged the individuals' identities. The investigators were responsible for the data's integrity, which included accuracy, thoroughness, accessibility, originality, comprehensiveness, and uniformity.

## Patient and public involvement

Our study's design, conduct, reporting, or distribution

strategies were not influenced by patients or the general public.

## Results

Twenty (20) people were questioned, with 75 percent of them being MSM and the remainder being TGW. The age category of 25-35 years old has the biggest proportion of people in it (55 percent).

Socio-demographic characteristics of the Key Informants (N=20). Characteristics n (%) Gender Identity MSM 15 (75%) TGW 5 (25%) Age, years 18 – 24, 6 (30%) 25 – 35, 11 (55%) 36 to 49, 3 (15%) Employment Status Unemployed 1 (5%) Employed 19 (95%) Already tested for HIV 17 (85%)

In addition, one informant was jobless, one was employed by the state, sixteen (15 full-time and one part-time) worked in the private sector, and two (2) were self-employed. Thirteen of the fifteen MSMs had tested positive for HIV, whereas four of the five TGWs had been tested. Furthermore, only one informant has ever utilized an HIVST kit obtained over the internet.

### About HIVST

Different facilitators and barriers to using HIVST were identified based on the information gathered from the MSM and TGW participants. These included three primary themes: (1) acceptability, (2) distribution, and (3) monitoring and tracking.

### Acceptability of HIVST

Understanding of HIVST, contentment using the HIVST kit, choice for HIVST or facility-based HIV screening, pre-counseling for first-time testers to HIVST offering, and selection among oral fluid-based and blood-based HIVST kits were all documented as significant aspects for HIVST acceptability by MSM and TGW whistleblowers.

### What We Know About Hivst

Volunteers from HIV/AIDS campaigns offered HIVST to informants at testing centres, online shopping sites, and social media accounts.

According to one insider, this is the first time he has heard of an organization directing this endeavour.

*"I'd never heard of it before, but several of my friends get HIV testing kits online. There are no rules or procedures governing how the kits are obtained. They're doing it on their own, and they're the ones performing the self-screening. This is the first time I've heard of an organization that will introduce this."* - [MSM1]

Most of the informants said HIVST is convenient and saves time. In addition, some informants described HIVST as "discreet" and "very confidential."

*"I've heard of it and think it's OK. This will save you time, particularly while going to the centre, and is especially beneficial for people who are afraid of visiting*

the centre. It was difficult for me to get to the facility for my first exam. The self-testing equipment is quite useful. - [MSM2]

Participants who had never heard of HIVST, on the other hand, stated it is handy, but they are anxious about the HIVST results and what to do next.

*"This is advantageous since everyone has a unique personality, and not everyone is courageous enough to reveal their position at a community centre."* - [TGW4]

### Is There Any Comfort In Using The Hivst Kits

The majority of the interviewees were confident in their ability to use the HIVST kit, whereas some were not. The uneasy participants said that their trust in using the kit was impacted by their want to know the results, the psychological health of the individual using it, and their preference for counselling sessions before doing the HIVST.

*"My main focus is the client's preparedness. Are they capable of determining the outcome? Even when they have a counselor to help them, it might be challenging at times. It's possible that it'll lead to something we don't want to occur. The HIVST kit is useful, but it must be accompanied with a set of requirements before it can be distributed to everyone who is interested."* - [MSM2]

### Preference of Hivst or Facility-Based for Hiv Screening

For the following reasons, several informants prefer HIVST over facility-based HIV screening: accessibility to testing centers, decongestion of testing centres, and privacy.

*"I'm looking at the concerns of folks who live far away from any testing facilities." HIVST will assist us in reaching out to such individuals. HIV testing is not just available to LGBTQIA persons, but also to cisgender people."* - [TGW2]

HIVST, in addition to other screening options, should be made accessible to all clients. One source claimed that he would use HIVST for the sake of his "sanity," but that he would use multiple methods of screening for verification purpose.

### Pre-Counseling Service For First-Time Hivst Testers

Pre-counseling should be given as part of the HIVST programme for first-timers, according to the majority of participants, however some indicated it should be optional. They also stressed the need of pre-screening counselling and the provision of a helpline or website in case the customer needs assistance with how to utilise the kit.

*"We must take into account a person's emotional and mental well-being. Determine first if they are capable of handling the event and the outcome. If they do not satisfy the qualifications, they may be provided pre-counseling. Some people, though, may feel uneasy in counselling. It must be voluntary, and it is dependent on the individual's preferences."* - [MSM 14]

"At the very least, provide a hotline for reporting the results and informing them on what to do next." It has to be in the instruction manual.

### Oral Fluid-Based Vs. Blood-Based Hivst Kits

Blood-based HIVST kits were favoured by the majority of participants over oral fluid-based HIVST kits. Participants who preferred blood-based kits did so because of their accuracy and dependability. Informants who preferred oral fluid-based kits, on the other hand, were terrified of needles but said the kits were easier to administer.

"I became accustomed to blood testing since that is what the facilities utilise." *I believe it is more accurate than the oral fluid-based method.*" - [TGW5]

*"Oral fluid-based is my preference." Will you simply swab it correctly? I don't want to poke myself. Swabbing is less difficult. When it comes to blood-based, I don't see anything better."* - [MSM6] kits are distributed.

### Requisition of Hivst Kit

Clients might obtain an HIVST kit via a site or a smartphone app, according to the majority of informants. In addition, social media, community centres with riders, pharmacies, and phone and/or text-based companies may all be used to purchase an HIVST kit<sup>9</sup>.

"I'm trying to figure out the best approach for the general public to order the kit." Whatsapp and Facebook are fantastic messaging apps, however I'm thinking of folks who don't have internet connection. Texting is the most efficient and easy method for everyone." - [MSM6]

### Obtaining Hivst Kit and Desired Price

The majority of responders preferred to have their kits delivered via an online delivery service. Other distribution routes, such as pharmacies, health facilities, vending machines, organizational collaborations, and pick-up from a single employee, were also discovered<sup>10,11</sup>.

"I like courier delivery since access and privacy are important to me... It is preferable if the equipment is supplied to your residence. Staff delivery will also be satisfactory. Partnerships with internet retailers will also be a viable alternative." - [TGW2]

### Strategies to Reach Hivst Targeted Population

The majority of the interviewees believed that social media must be used to reach the HIVST target audience. Others, on the other hand, stated that HIV ambassadors or activists, institutions, private enterprises, local government units, mainstream media, and online dating services all needed assistance. In addition, initiatives should emphasise simplicity and confidentiality for HIVST kit users<sup>13</sup>.

"...via social media, particularly Twitter or any other site, because everyone utilises social media." Because some people still retain the stigma, they don't need to go to a facility.

It reduces the anxiety of being assessed by others. Emphasize the importance of privacy and convenience." - [MSM1]

"...employ influencers; I'm confident that everyone will copy and use it." Encourage influencers to promote the kit on their pages and teach how to utilise it." - [MSM3]

The maturity, social economic, and academic status of the clients, data on the current number of HIV cases across the country, affordability and availability, use of positive tone, the benefits of using an HIVST kit, and the treatment after being diagnosed with HIV are among the other strategies considered.

"We may promote the kits based on advantages such as being able to do it from the comfort of home and so on." Introduce information on the severity of HIV/AIDS and the number of people who have died as a result of it. This isn't meant to scare them; rather, it's meant to make them realise that they can't be counted among the numbers." - [MSM6]

Participants provided information on HIVST program tracking and monitoring, including (1) reporting of client results and (2) post-counseling options for non-reactive and reacting clients.

## Discussion

To combat the spread of HIV/AIDS, four measures have been implemented: (1) prevention, (2) HIV testing or diagnosis, (3) antiretroviral treatment (ART), and (4) pre-exposure prophylaxis (PrEP)<sup>14</sup>. The growth in the incidence of various diseases is attributed to the population's active participation in sickness screening. According to a recent poll by the Pakistan Medical Council, 78 percent of MSMs have never had their HIV tested. Around 30% of the 22% of persons who were tested for HIV indicated they felt safe going to the SHC for HTC services. According to primary care providers, societal stigma, the conservative nature of some communities, and a lack of privacy make HIV testing difficult.<sup>15, 16</sup>

Our qualitative research confirmed the adoption of HIVST among certain demographics, including those at risk of contracting HIV, MSMs, and TGWs. The informants' willingness to use HIVST kits was influenced by a number of characteristics<sup>17</sup>. Including their current knowledge of HIVST, their comfort with using kits, their choice for HIVST over facility-based testing, and their preference for oral-based vs. blood-based kits. Informants backed the creation of an HIVST system because they saw it as a way to increase the scope of HIV screening<sup>18, 19</sup>. HIV testing is commonly recognized in most countries. In Malawi, HIV testing at home with minimal supervision was shown to be quite popular<sup>20-22</sup>. Furthermore, at least 67 percent of high-risk MSMs in the United States reported utilizing HIVST.

Following the delivery of HIVST kits to MSM communities in Mpumalanga, South Africa, researchers observed excellent uptake and acceptance of the kits<sup>23</sup>. Furthermore, a recent research in Australia found that HIV-positive people tested twice using HIVST compared to HIV-

positive people who had clinic-based screening<sup>24</sup>. Other nations' findings on the acceptance of HIVST backed up our findings.

Furthermore, the participants' HIVST information came through SHCs, social media, and internet purchasing. Online sites in China have been shown to give HIVST information, including instructional movies and rudimentary counselling, according to studies<sup>25,26</sup>. The content on these sites was geared for HIVST marketing<sup>27</sup>. In China, online shopping is also one of the most popular outlets for displaying HIVST information. Online purchases of HIVST, on the other hand, are subject to a lack of quality assurance and monitoring. In terms of HIVSTK distribution, our research revealed both restrictions and potential<sup>28</sup>. The best method to get these kits is through social media, and they may be sent through reputable courier firms with the utmost discretion<sup>29</sup>. The usage of social media has already expanded HIVST's reach, allowing for new ways to target testing among crucial populations<sup>30,31</sup>. Various smartphone channels, including as Facebook, and Twitter, have been found to be effective in reaching MSM and TGW populations that were tested with HIVST<sup>32-36</sup>. Using social media to promote HIVST helped people overcome barriers to testing at a facility, such as privacy concerns or the risk of sexual orientation data being leaked<sup>37</sup>. Furthermore, some nations employ a variety of online platforms to promote and disseminate HIVSTK among MSMs and TGWs, such as WhatsApp in Nigeria, which reported an increase in the adoption of HIV testing among MSMs when HIVSTK was pushed via WhatsApp<sup>38</sup>. WeChat has been consistently used to launch HIVST programmes in China; the Chinese MSM community trusts this messaging medium<sup>39-41</sup>. The utilisation of various social media platforms to target MSMs and TGWs in the Philippines in order to enhance HIVSTK use and distribution should be investigated right away. It's also worth noting that the distribution of HIVSTK is heavily dependent on the potential pricing of HIVSTK once it becomes accessible in the future. The majority of respondents chose a price range of Php PKR 160 - 960 (USD 1.00 - 6.00) for HIVSTK, according to our research. Furthermore, if the government's procedures for increasing HIVST testing uptake are accomplished, a lower price for the kits can be attained<sup>42</sup>. If manufacturers and sponsors work together with important health players in the country, this approach can be realized. Low-cost HIVSTK will build trust in the future availability of inexpensive kits<sup>43,44</sup>. Furthermore, inexpensive HIVSTK has the potential to improve HIV testing among critical groups linked to low-cost HIV therapies<sup>45</sup>. Many elements must be addressed while building algorithms and models to apply HIVST in Pakistan due to the abundance of evidence and data.

The discrepancy between HIVST results and services provided after utilizing HIVSTK must be addressed. Monitoring and adoption of HTC services after utilizing the kits are crucial characteristics to consider, according to the third topic addressed in our qualitative analysis. Results should be standardized, and post-counseling services for reactive and non-reactive clients should be made available, with mental health services serving as the primary HIV/AIDS awareness programme<sup>46</sup>. One study presented an HIVST

reporting method in which kits were bought online and sent by mail or self-pickup at a designated pharmacy, with a random personal identification number (PIN) assigned to track future distribution and requests<sup>47</sup>. Clients could also use their allocated PIN to anonymously report their results online and track their future connection to other HTC services<sup>48</sup>. After getting a reactive HIVST result, the requirement for confirmation testing, post-counseling assistance, and early connection to care is critical. Other studies addressed questions with HIVST, including whether post-test counselling should be done face-to-face to avoid exacerbating bad behaviours and poor outcomes<sup>49,50</sup>. There have also been reservations about HIVST, such as emotions following a reactive response and kit abuse. HIVST comes with a built-in absence of monitoring and post-counseling, and mental health suffering is a possibility<sup>17,51</sup>. As a result, as seen by the information received from the respondents, a strong mental health programme that complements HIVST implementation is critical<sup>49</sup>. As the HIV continues to spread, the addition of HIVST to facility-based screening may provide a new benefit in terms of increasing the number of individuals who are tested and informed of their HIV status. According to a recent research, effective coordination amongst Pakistani stakeholders is needed to create a patient-centered HIV testing programme that would increase testing coverage by 20 percent. Our study, which provided valuable information on the facilitators and barriers to HIVST implementation, might be used by policymakers and HIV programme implementers to establish a uniform method for cascading HIVST from the national to local levels. Due to many constraints, there is no single protocol that can provide an exact and precise manner to link HIVST usage with HTC services. However, as evidenced by the data given in our study, information on recognised variables in lowering probable limits of HIVST implementation can boost confidence and reduce the risk of failure<sup>50</sup>.

The utilisation of a local network of the specified community organization yielded the outcomes of our investigation. This community organization is well-known among important groups (MSM and TGW) and in HIV advocacy in the nation; consequently, participants and researchers have previously established confidence in each other to provide HIVST insights.

## Results

Maps of facilities and hotlines for customers to call if the result is reactive must be included in the kits.

"... contact numbers must be supplied, and an internal call centre must be built to answer the clients' complaints." - [TGW2]

"An incentive system must be implemented, as well as ongoing counselling." There must be a system in place for following up with clients." - [TGW1]

"There must be a message on the website stressing the importance of reporting the findings. They became clients the instant they took possession of the gear. Inform them that reporting their HIV status is the best approach to receive comprehensive healthcare. If the client does not wish to, we must respect their wishes. One of the reasons people are apprehensive of being tested is the lack of privacy. They will be confident in reporting their outcomes if this is secured." - [TGW3, 4]

## Post-Counseling Services and Follow-Ups

Both quasi and responsive clients will require a post-counseling service. In addition, customers who tested positive after utilizing HIVST tests must be followed up with via phone calls or text messages.

"Regardless of the state, prior to post-counseling, we must send text messages." This is to guarantee that both reactive and non-reactive customers are ready to accept the outcome. Post-counseling is required, but only with the client's permission." - [MSM15]

"The counsellor must speak with the client ahead of time and provide choices for follow-up so that the client does not feel as if their privacy is being invaded." This must be brought up during the pre-counseling process." - [MSM8]

## Mental Health and HIVST Services

The organisation must organise support groups to address, help, and enhance the mental health of customers whose tests are reactive. Furthermore, the inclusion of mental health professional contact information, links, and ongoing therapy to address the client's psychological health were also noted.

"Psychological support groups are beneficial, but they are not for me (personally); professional therapists may be a better alternative." In addition, contact information and mental health clinics must be included in the kits." - [MSM4]

## Limitations

Our study only included respondents from the National Capital Region, which may restrict its applicability to other parts of the nation where HIV diagnoses are still on the rise. Future research is also needed to find techniques to enhance connectivity to preventative and treatment programmes. Finally, quantitative studies may be done to confirm our findings and validate the parameters required for HIVST implementation in the nation.

## Conclusion

New HIV testing modalities must be created in order to reach a larger number of individuals who can learn about their HIV status and get preventive or treatment if necessary. The goal of this study was to determine the acceptability and

practicality of HIVST services as a novel testing option for MSMs and TGWs in the NCR. The study uncovered certain critical issues that must be addressed before HIVST programmes can be implemented in the country. To begin, HIVST must be made a national priority in order to reach additional people who are not currently being tested for HIV. Second, in order to maintain a patient-centered HIV prevention programme in the country and adapt to changing circumstances, implementers must leverage and enhance online platforms, since this is an effective means to reach and provide HIV prevention to hard-to-reach at-risk groups. Third, the HIVST programme must be supplemented with additional safeguards to preserve patient privacy throughout the process. Finally, irrespective of the HIVST results, regular monitoring, counselling, and linkage to care facilities must be offered to ensure that clients are aware of the next measures they must take. Given all of these factors to consider during implementation, an HIVST integrated programme will be a great way to get more individuals to know their HIV status.

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Ethical approval was taken before interviewing.

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