UNAIDS’ 90-90-90 goals establish important benchmarks for controlling the AIDS epidemic by focusing on treatment as prevention. For those living with HIV, knowing one’s HIV status is the critical first step for initiating and sustaining antiretroviral therapy, and achieving viral suppression.

Health facility-based HIV testing services (HTS) are a longstanding and important method for identifying individuals living with HIV. Compared to those diagnosed outside of a health facility, men and women who receive their HIV diagnosis at a clinic or hospital are more likely to enter into care.

Unfortunately, facility-based HTS remains underutilized in many settings, including South Africa—even in the context of opt-out testing. Additionally, linkages to care (LTC) are often not made in a timely manner after an HIV diagnosis, limiting access to ART and the possibility of viral suppression.

This brief summarizes findings from formative research conducted by Project SOAR and The Aurum Institute to understand the dynamics of HTS and the key constraints to its optimal delivery. Our system-level analysis was conducted in 10 primary care clinics in Ekurhuleni District, Gauteng Province, and used a variety of data collection methods (Figure 1). The sites were selected by the District Department of Health. The second phase of this implementation science research will entail developing and testing a rapid tool to guide improvements in HTS and LTC in health facilities.

**KEY MESSAGES**

- Overall, only a small proportion of clinic patients are offered HIV testing services.
- Health providers and clinic patients identified a range of barriers to offering and accepting HIV testing services, respectively.
- The quality of counseling messages fell short in terms of accuracy, client engagement, and linkages to care and care retention.
- This systems-level analysis sparked a call to action by clinics to bridge gaps in service delivery.
reason clients refused testing when offered is that they already knew their status. Other reasons were “not ready” or “in a hurry.”

**Health providers and clinic patients identified a range of barriers to offering and accepting HTS, respectively.**

To gain a richer understanding of the barriers to and opportunities for HTS from different perspectives, the researchers conducted 22 in-depth interviews with clinic patients, clinicians, and HTS counselors. Most HTS counselors are part of NGOs, and therefore not employees of the Department of Health. Although they are paid a stipend, they receive no benefits. Despite spending more time with patients and having a greater role within HTS than a nurse or a doctor, HTS counselors often feel undervalued. This explains some of the constraints they identified to providing HTS (Figure 3).

Despite the barriers to testing noted by clients, when offered HTS, many accepted. For example, over half of acute care patients offered HTS agreed to test (16/23, Figure 2).

### RESULTS

**HTS added nearly an hour to an already long period patients spent at the clinic.**

The researchers followed 567 clients through a clinic visit. They spent a median time of 104 minutes waiting to be seen by a health provider—much longer than the median time of 10 minutes a provider spent with the client. Among patients agreeing to HTS, the total visit time increased by 52 minutes (with added waiting and time for HTS). Providers often wait until the end of the consultation to offer HTS.

**Offers of HTS varied greatly by the type of service sought, with many patients being completely overlooked by providers.**

The researchers conducted nearly 3,000 exit interviews across the 10 clinics, representing 65 percent of patients receiving care at the study facilities on the interview days. Overall, only 10 percent of clinic attendees were offered HTS. However, this varied by type of service sought (Figure 2). Women were more likely to be offered and accept HIV testing than men. The main

**Figure 2  HTS offered by service type (exit interviews)**

<table>
<thead>
<tr>
<th>Type of Service</th>
<th>Offered HTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>STI patients</td>
<td>67%</td>
</tr>
<tr>
<td>ANC patients</td>
<td>62%</td>
</tr>
<tr>
<td>Acute care</td>
<td>14%</td>
</tr>
<tr>
<td>Family planning</td>
<td>12%</td>
</tr>
<tr>
<td>Other categories</td>
<td>&lt;10%</td>
</tr>
</tbody>
</table>

*Regardless of HIV testing history
The quality of counseling messages fell short in terms of accuracy and client engagement.
The researchers assessed counseling messages through audio-recording of 40 post-test counseling sessions conducted by different providers across the 10 facilities to determine the quality of the counseling. Most sessions consisted of a recitation of “do’s and don’ts.” Major problems were unclear or incorrect instructions, a lack of motivational interviewing or client-centered counseling, and limited mention of LTC and care retention.

At one study clinic more than 80 percent of clients initiated ART within 90 days.
LTC was assessed for 991 sequential individuals testing positive at one of the 10 study facilities. A total of 804 (81 percent) initiated ART within 90 days (Figure 4).

In this particular clinic there were no notable differences in LTC between men and women.

Figure 3 Barriers to offering and accepting HTS

Clinicians
- Huge workloads (HTS not congruent to roles and working environment)
- Targeted offer of HTS based on suggestive symptoms
- Client refusal of services

HTS counselors
- Lack of clearly defined roles
- Lack of motivation (limited remuneration & acknowledgement)
- Structural barriers (i.e., workspace)

Clinic patients
- Long queues and additional waiting times
- Privacy and confidentiality
- Fear of knowing HIV status

You said, if it’s positive it’s not the end of the world. I have to change my life and use a condom.

Mmm, because if you do not use a condom the virus multiplies in your body, isn’t it? And then at the end your body soldiers become weak. When your body soldiers are weak then you will start getting sick due to opportunistic diseases like TB, pneumonia, endless flus, isn’t it?

Figure 4 ART initiation at one clinic

804/991 (81%) clients initiated ART within 90 days

29 (6%) had previously received ART

8 days: Median time to initiate ART after diagnosis (IQR: 0, 16)
CONCLUSIONS

- Many clinic patients are not offered HTS.
- Clinicians appear to select those who they suspect have HIV and wait until the end of the consultation session to offer HTS, missing multiple opportunities to offer HTS earlier during queuing periods.
- Despite playing a central role in delivering HTS and providing LTC guidance, HTS counselors feel underappreciated and are not always available during the clinic’s operating hours.
- Post-test counseling fails to highlight LTC and care retention and does not reflect good counseling techniques (motivational interviewing, etc.).

Stakeholder engagement and response

The research team presented formative findings to a variety of stakeholders, who overall, found the results highly informative and sparked a call to action. Through group discussions, the district coordinators and staff and managers from all 10 facilities identified the following core changes to implement:

- Promote and provide information on HTS to all clients.
- Offer HTS during queuing periods prior to seeing a nurse or doctor to take advantage of otherwise wasted time without substantially increasing the total clinic visit time.
- Increase supervision and training of HTS counsellors to be more available and to provide client-centered LTC counseling.