HIV Testing Strategies to Reach People Living with HIV Who Are Unaware of Their Status

The Challenge

HIV testing services are the critical entry point to the care and treatment cascade that can lead to viral suppression among people living with HIV and, consequently, the prevention of new HIV infections. Data from the Population-based HIV Impact Assessment (PHIA) Project, funded by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) and supported by ICAP in 14 African countries, show that progress toward the UNAIDS goal of 95 percent of people living with HIV knowing their status by the year 2030 (the “first 95”) varies widely (see Figure 1). Common challenges are reaching young people, men, and children under the age of 15. There are also substantial gaps in reaching key populations, such as sex workers, men who have sex with men, and people who inject drugs.

Reaching the first 95 will require investing in innovative, targeted strategies that make the most efficient use of available resources to close remaining gaps in HIV testing programs.

*Adjusted for the presence of detectable antiretrovirals
ICAP’s resource-efficient approach to HIV testing maximizes both coverage and yield. Strategies focus available resources on the populations and locations with the highest burden of HIV and the largest proportion of people living with HIV who have not been diagnosed (e.g., men).

ICAP supports ministries of health and national HIV programs to apply a menu of adaptable HIV testing approaches to best meet the needs of specific sub-populations with higher rates of undiagnosed HIV infection (e.g., key populations, children and sexual partners of index clients, adolescents, young women, and men).

Data are used to define:

- The number and characteristics of people living with HIV who do not know their status
- Priority populations who are at higher risk for HIV infection, who are more likely to transmit HIV if positive, and who are less likely to test at health facilities

The data are then used to determine the most effective approaches to HIV testing (i.e., those that reach priority populations and yield the greatest proportion of new HIV diagnoses) and to prioritize them based on the resources available.

Programs are then supported to design a strategic mix of differentiated HIV testing services that feature client-centered mobilization, linkage to antiretroviral therapy (ART) and index client testing for individuals testing positive, and linkage to HIV prevention services and re-testing for individuals testing negative (see Figure 2). Rapid linkage to ART ensures progress toward the “second and third 95,” which focus on HIV treatment and viral suppression. Programs are also supported to continuously monitor and evaluate coverage among priority populations, the yield of different testing approaches, and progress toward testing and linkage goals—and to tailor services accordingly.

**FIGURE 2**
Framework for Strategic HIV Testing Services

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**Technical Approach**

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Outcome

The project’s success in the Kagera Region of Tanzania has led regional health management teams to adopt the model across all nine ICAP-supported regions of Tanzania. (Box 1 summarizes key outcomes from these nine regions.) The approach has since been adopted by PEPFAR partners in other regions of Tanzania and has attracted interest from ministries of health and implementing partners in several other PEPFAR-supported countries.

Context

Community-based HIV testing and linkage services are essential for populations who are at risk for HIV but lack access to health facilities. In Tanzania, this includes men who have sex with men, sex workers, and people who inject drugs, as well as adolescent girls, young women, mobile and migrant workers, and families in remote areas with higher HIV prevalence.

Approach

Since 2014, with support from PEPFAR through the U.S. Centers for Disease Control and Prevention (CDC), ICAP has partnered with regional and council health management teams in Tanzania to deliver large-scale, community-based HIV testing programs that bridge the gap between populations in need and facility-based services. The innovative care and treatment center outreach project being implemented combines adaptable mobile testing approaches and peer-led outreach, targets services to the priority populations above, and emphasizes fast turnaround between positive test results and ART initiation.

Specialized teams of peer outreach volunteers visit “hotspots” where key populations and young women and girls gather within their social networks to promote upcoming testing events, distribute condoms, and deliver HIV prevention education. They also offer screening and referrals for sexually transmitted infections, tuberculosis, gender-based violence, drug and alcohol use, and family planning needs. At the community level, they use a screening tool1 to improve the yield of testing services by identifying members of priority populations and others at higher risk.

Mobile HIV testing sites and service hours are chosen strategically to maximize uptake by each target population. Health care workers from care and treatment centers work in testing tents set up at mining and fishing camps, as well as transit hubs. Testing is also offered at large events that feature educational entertainment and local leaders, as well as at sports matches and concerts.

Backpack health care workers visit bars, guest houses, work places, homes, and social gathering places on foot, carrying HIV rapid tests, self-test kits, starter packs for immediate ART initiation, and pre-exposure prophylaxis (PrEP) medication. ART starter packs are offered in line with national treatment guidelines and peer outreach volunteers ensure that people newly diagnosed with HIV are rapidly linked to either ART initiation or treatment services, and that their partners and children are tested as soon as possible.

Case study

Scaling Up Community-Based HIV Testing Services to Reach Priority Populations in Tanzania

\[1\] Screening form for key and vulnerable populations available at: http://icap.columbia.edu/ptb-kp-screening
The success of the global HIV response depends on ensuring that people know their HIV status and on facilitating timely linkage to ART for those who test HIV-positive. Several considerations for implementing strategic HIV testing programs are offered below:

Health facility-based testing should include provider-initiated testing and counseling at high-volume entry points (e.g., outpatient wards) and entry points for populations at higher risk (e.g., tuberculosis units), as well as routine testing and follow-up of HIV-exposed infants to maximize case identification. In Kisumu, Kenya, ICAP-supported wellness booths at the hospital entrance have successfully attracted men by offering multi-disease screening and testing services, and by opening during evenings and weekends.

Venue-based testing is an effective way to bring testing to populations less likely to visit health facilities (e.g., workplace testing to reach migrant workers).

Community-based testing can be provided at both fixed and mobile sites where the target population congregates. This should be a key component of testing strategies in areas that have high HIV prevalence but low testing coverage. Mobile health workers can bring services directly to people’s homes, and mobile sites (e.g., tents at health fairs and community events) attract clients less likely to test at health facilities. Mobile and venue-based approaches are also effective at bringing HIV testing directly to key populations at the “hotspots” where they congregate.

Considerations for Implementation

Best practices that increase yield and coverage should be incorporated into health facility-, venue-, and community-based testing. These include:

• Index client testing for infants, children, and partners of people who already know their HIV-positive status or who are newly diagnosed
• Partner notification services with linkage to HIV testing services
• Opt-out testing where the patient is informed that an HIV test will be conducted unless explicitly declined
• Primary and secondary distribution of HIV self-testing kits, with support for linkage to confirmatory testing for positive results, ART, and HIV prevention services
• HIV recency testing, which identifies areas of ongoing transmission and informs targeted strategies for education, prevention, and testing
• Regular re-testing for members of priority populations

Rapid linkage to ART for people who are newly diagnosed with HIV or who report not being on treatment is a critical component of HIV testing. Effective strategies include physical escort to the ART clinic, two-way referrals (tracked by both testing and treatment providers), and appointment reminders. Individuals who test HIV-negative should be linked to appropriate prevention services.

Real-time use of data to determine which current strategies are working and where new strategies are required is critical to the success of HIV testing programs. Health facility teams should review cascade data (number of people tested with HIV-positive or -negative results, number initiated on ART, and number linked to HIV prevention services, disaggregated by site, geographic area, and sub-population) at least monthly to identify gaps and modify services. The use of unique identifiers within patient-level electronic databases supports tracking of patients across different sites and services.
Latest data from PHIA surveys.
Available at:
https://phia.icap.columbia.edu/

ICAP Grand Rounds webinar.
**HIV Recency Testing.** October 2018.
Available at:
http://icap.columbia.edu/ptb-gr-recency

ICAP Grand Rounds webinar.
**Updates on HIV Self-Testing.** January 2018.
Available at:
http://icap.columbia.edu/ptb-gr-selftest

**Handbook on Implementing HIV Retesting for Verification Before/At Antiretroviral Therapy Initiation.**
Available at:
http://icap.columbia.edu/ptb-retesting

**ICAP Approach to Strategic HIV Testing.**
New York: ICAP at Columbia University; 2017
Available at:
http://icap.columbia.edu/ptb-hiv-testing