



MALAWI: DISTRICT HEALTH SYSTEM STRENGTHENING AND QUALITY IMPROVEMENT FOR SERVICE DELIVERY

TECHNICAL BRIEF
JANUARY 2018



INDEX CASE TESTING: A PROMISING STRATEGY FOR ACHIEVING HIV EPIDEMIC CONTROL

Photo by Henry Nyaka

Background

Malawi adopted the 90-90-90 strategy as part of the National Strategic Plan to end HIV/AIDS by 2030 which calls for: identifying 90% of people living with HIV (PLHIV); initiating and retaining on antiretroviral therapy (ART) 90% of PLHIV identified; and achieving 90% viral suppression for ART patients.

To achieve the first 90, the identification of PLHIV through HIV testing is key to the strategy's success. Adult HIV prevalence in Malawi is 10.6%, but the HIV-positivity rate of HIV tests (the proportion of HIV tests performed with an HIV-positive result) dropped from 13% in 2012 to 4% in 2017.^{1,2} The drop in the HIV yield prompted implementing partners supported by the President's Emergency Plan for AIDS Relief (PEPFAR) to identify more people with HIV through targeted testing and start them on treatment.

In index case testing, a person with confirmed HIV infection (index case) is asked to contact family members (children, spouse, sexual partners, siblings, and parents) to see if they will accept an HIV test. The approach has proven to be a key intervention in diagnosing PLHIV and enrolling and sustaining them on treatment and care in other settings.³

To increase HIV case identification, the District Health System Strengthening and Quality Improvement for Service Delivery (DHSS) Project introduced index case testing in June 2016. All patients attending ART clinics were encouraged to bring their family members for HIV testing during family testing days that are organized at health facilities in the DHSS-supported districts. This brief describes the results of this intervention in 90 health facilities in six districts (Blantyre, Chiradzulu, Mwanza, Neno, Nkhata Bay, and Thyolo).

THE DISTRICT HEALTH SYSTEM STRENGTHENING AND QUALITY IMPROVEMENT FOR SERVICE DELIVERY (DHSS) PROJECT (2012-2018)

supported the Government of Malawi in implementing the National Strategic Plan for HIV and AIDS in line with the Country Operational Plan and supported implementation of the Health Sector Strategic Plan through the project's work in seven districts of Malawi: Nkhata Bay, Likoma, Blantyre, Chiradzulu, Thyolo, Mwanza, and Neno.

Funded by the President's Emergency Plan for AIDS Relief (PEPFAR) through the US Centers for Disease Control and Prevention (CDC) and implemented by Management Sciences for Health (MSH), DHSS contributed to Malawi's goal to become a healthy and prosperous nation free from HIV and AIDS. The project focused on district strengthening and key populations, using targeted evaluation, and providing technical support to the Ministry of Health. The main objective of DHSS was to improve quality, access, and coverage of priority HIV-related health services at priority sites in the seven districts by: identifying 90% of people living with HIV (PLHIV); initiating and retaining on antiretroviral therapy (ART) 90% of PLHIV identified; and achieving 90% viral suppression for ART patients.

Interventions

Family testing days were established in these facilities on Saturdays to maximize access, but services were also accessible during the week. The focus for testing during the family testing days was the spouses, sexual partners, and children of HIV-infected adults as well as the siblings of HIV-infected children receiving any HIV service at the facility, such as HIV testing services (HTS), HIV care and support, ART, prevention of mother-to-child transmission, and tuberculosis-HIV treatment.

The project developed standard operating procedures and data-collection tools for use by providers during counseling of HIV index case patients and meeting their relatives. Documentation for clients tested using this strategy was done under the remarks section in the standard Ministry of Health HTS register and recorded as FT/Family. A facility-based index case testing orientation for staff to be involved in the activity was conducted, and 1,000 health workers were oriented on index case testing in all supported facilities. In particular, the project trained HIV diagnostic assistants (HDAs)—a para-professional cadre of health workers dedicated to HTS. The HDAs provided HTS to index cases and their sexual partners, children, and other family members. In addition, the project supported expert clients, who are HIV-infected volunteers, to motivate patients attending HIV care or ART clinics to bring their partners and family members for HIV testing during family testing days. The index case testing program makes use of the family referral slips system. These referral slips already

Figure 1: Total number of people tested through index case testing across DHSS-supported facilities (October 2016 – November 2017)



Figure 2: HIV-positive yield by age and sex



existed and were issued by the Ministry of Health. They were given to the index case, which could be someone who was already in HIV care or who received an HIV-infected diagnosis. One referral slip was given for each sexual partner of the index case (spouses and others) and children. A note was made in the remarks column in the HTS register for each contact of the index case who came for an HIV test on the basis of a family referral slip.

Ongoing facility mentorship was introduced to support case identification, documentation in the register, and the generation of monthly reports. Routinely collected data from HIV testing registers were used to prepare monthly index-case-testing reports from each of the 90 health facilities. Data in the reports was further analyzed for this brief.

Results

From October 2016 – November 2017 a total of 25,572 adults and children from families living with HIV/AIDS were tested through index case testing in 90 facilities in five southern districts (Blantyre, Chiradzulu, Mwanza, Thyolo, and Neno) and one northern district (Nkhata Bay). A total of 331 children under the age of one year were excluded from the analysis as a positive HIV test in this age group is not a definitive HIV diagnosis. Slightly more females (53%) were tested than males (Figure 1). There were more women tested than men across age groups except for those over 50 years of age.

The total number of people identified as HIV infected was 5,528 or 22% of all people tested. The HIV-positivity rate, or yield, increased with age, with a less than 10% positivity rate in children between 1 and 9 years of age and more than 20% positivity rate in people over 20 years of age (Figure 2 opposite page). There was a significant difference in the yield between men and women aged 25-49 years. In this group, 39% of all men tested positive vs 28% of women. Slightly more women (13,480) than men (11,761) were tested, and the positivity rate was higher in men at 25% (2,922/11,761) compared to women at 19% (2,606/13,480).

Conclusions

In the DHSS-supported health facilities the HIV-positivity rate was much higher (22%) through index case testing compared to the national average yield in HIV testing (4%). The yield increased with age and was higher in males compared to females. The HIV impact study showed that 76.3% of the HIV-infected females knew their status while only 66.7% of the HIV-infected males knew their status, which means that most index cases were females and brought their HIV-infected spouses for testing.¹ Besides bringing in more male clients for testing and increasing the yield, index case testing brought in significantly more children to access HIV testing, with 27% of those tested being children compared to routine testing where this number had ranged from 7% in 2012 to 16% in 2017.

Index case testing showed that with a focused strategy in actively testing contacts of those already infected with HIV, the program can increase HIV case detection. Moreover, this strategy supports Malawi in achieving equity in reaching the first 90 for males and children through family testing. Overall, index case testing is a promising strategy to maximize HIV case detection.

The index-case-testing approach described in this brief, using family referral slips and family testing days, is a form of passive referral whereby HIV-infected patients notify their partners and encourage their partner(s), children, and other family members to go for HIV testing. With the high HIV-positivity rates witnessed through passive referral, it might be worth trying assisted partner notification services, such as contract



Photo by Henry Nyaka

referral, provider referral, and dual referral. In contract referral, HIV-infected patients have a “contract” with a health care worker to refer their partner(s) and family members for HIV testing within an agreed time period. In case the partner does not show up for HIV testing the health care worker contacts the partner(s) directly. Provider referral means that providers directly contact partners of index patients and offer HTS. With dual referral the health care provider accompanies the index patient to disclose the status of the index case and offers HTS to partner(s) and family members. These options could improve HIV case detection and need further evaluation.

This summary brief was prepared by Licy Khongonyowa, Erik Schouten, and Aziz Abdallah.

References

1. ICAP 2016. Malawi Population-Based HIV Impact Assessment (MPHIA) 2015-2016. Summary sheet: preliminary findings, December 2016.
2. Government of Malawi, Ministry of Health. Integrated HIV Program Report April-June 2017. Lilongwe, 4th September 2017. 3. Malawi National AIDS Strategic Plan 2015-2020.
3. Catherine Kahabuka, Marya Plotkin, Alice Christensen, Charlene Brown, Mustafa Njozi, Renatus Kisendi, Werner Maokola, Erick Mlangi, Ruth Lemwayi, Kelly Curran, Vincent Wong. *Addressing the First 90: A Highly Effective Partner Notification Approach Reaches Previously Undiagnosed Sexual Partners in Tanzania.* AIDS Behav. 2017; 21(8): 2551–2560.

Testing Changes a Family's Course

Grace Mathunda often used to fall ill and was increasingly concerned about the poor health of her second child. He became so weak that he stopped going to school.

When Mathunda, 32, became pregnant again she went to Makhetha Health Center in Blantyre and was tested for HIV. As with over 30% of people living with HIV in Malawi, Mathunda was unaware of her status. She tested positive.

Due to Malawi's policy of Test and Treat, Mathunda was started on antiretroviral therapy (ART) and was enrolled in Malawi's Prevention of Mother-to-Child Transmission program, which resulted in her third child being born HIV negative.

When she heard about family testing days she decided that her two older children and husband should find out their HIV status as well. Her first child and her husband were negative but her second son tested positive. He was started on ART.

When people do not know if they are infected with HIV they can unknowingly transmit the virus to others through unprotected sex. In addition, mothers can pass it to their unborn children. In index case contact testing, the first family member identified as HIV infected (index case) is given a family referral slip for other members of the family to be tested. They are asked to go to an HIV clinic for testing on Saturdays or any other day that better suits them. Families receive priority testing services at clinics.

As a result of the testing, life has changed considerably for Grace Mathunda and her family. She said her husband is supportive and shows more care than before, and she and her son are healthy.

"My second-born child is now stable and able to attend school, unlike before," she said. "We are a happy family now and able to fend for ourselves. We enrolled him in the Teen Club [for HIV-infected adolescents] at the health center where he is supported by his friends and they encourage each other to live a positive and productive life."

- By Henry Nyaka



Photo by Henry Nyaka

Grace Nyaka

Additional information can be obtained from:
Management Sciences for Health
Aziz Abdallah, Project Director, aabdallah@msh.org
Lilongwe, Malawi