STRENGTHENING TB AND HIV & AIDS RESPONSES IN EASTERN UGANDA (STAR-E) PROJECT

HVICAL BRIEF IV SERVICES:

Photo by Rui Pires

ONE-STOP SHOP FOR TB/HIV SERVICES: A MODEL FOR INCREASING ANTIRETROVIRAL THERAPY UPTAKE IN UGANDA

STRENGTHENING TB AND HIV & AIDS RESPONSES IN EASTERN UGANDA (STAR-E) is a US Agency for

International Development (USAID) initiative funded by the President's Emergency Plan for AIDS Relief and implemented by a Management Sciences for Health (MSH)-led consortium of national and international partners. The project has worked in the Eastern Region of Uganda to support district health offices, health facilities, and communities to deliver quality, comprehensive HIV and TB services that are integrated with and strengthen other services, including those for maternal, newborn, and child health; reproductive health and family planning; sexually transmitted diseases; malaria; chronic diseases; nutrition; and services delivered by laboratories.

Background

ganda ranks among the top 20 countries in the world with the highest number of TB/HIV co-infection cases and the highest rate of TB cases among people living with HIV (PLHIV).¹ In 2015, HIV prevalence was estimated at 7.1%, and approximately 45% of TB patients were co-infected with HIV.^{2,3} HIV infection remains the leading risk factor for developing TB, while TB is the leading cause of death among PLHIV.⁴

Despite the country's high rate of TB/HIV co-infection, TB and HIV have been treated separately under the National TB and Leprosy Program (NTLP) and the National AIDS Control Program (NACP).⁵ Under Ministry of Health (MOH) guidelines, TB patients suspected of HIV infection are referred to antiretroviral therapy (ART) clinics and PLHIV suspected of TB infection are referred to TB clinics.⁶

- 2. UNAIDS Estimates http://www.unaids.org/en/regionscountries/countries/uganda
- 3. Global TB Report, WHO, 2015.int/tb/publications/global_report/en/
- 4. Global TB report , WHO. 2016 http://www.who.int/mediacentre/factsheets/fs104/en/.
- Uganda national policy guidelines for TB and HIV colloborative activities in Uganda 2006. MOH
- International Review of the TB program done by the International Union against TB and Lung Disease and Global Drug Facility in 2005







World Health Organization. Use of high-burden country lists for TB by WHO in the post-2015 era. April 2015

Figure 1. One-stop-shop model for TB/HIV services



* Maternal, newborn, and child health

To address these challenges, the MOH recommended adoption of the "one-stop shop" approach in 2014 based on World Health Organization (WHO) and Global Fund initiatives to roll out the model.⁷ This integrated approach for TB/HIV treatment ensures that co-infected patients are managed for both infections at the same clinic, by the same provider, at the same time. As such, the model is an important strategy to contribute to achieving the UNAIDS 90-90-90 treatment targets, particularly by increasing the number of TB patients who are tested for HIV (first 90) and the number of TB patients with HIV who initiate ART (second 90).⁸

To test this approach, the USAID Strengthening TB and HIV & AIDS Responses in Eastern Uganda (STAR-E) Project, in collaboration with the NTLP, NACP, and the MOH, has been piloting the one-stop shop model at five health facilities in Kapchorwa District, Eastern Uganda, since January 2015. This technical brief describes implementation of the model and assesses its impact on ART uptake among TB patients infected with HIV.

The STAR-E Approach

For this small-scale pilot of the one-stop shop model for TB/HIV services, STAR-E selected four health center IIIs and one hospital in Kapchorwa District. This district was selected because its rate of ART initiation among TB/HIV co-infected patients was the lowest among the 12 districts supported by STAR-E.

The project introduced the one-stop shop model in partnership

with the district health management team and the health facility staff. At the selected facilities, TB and TB/HIV patients were seen on the same day while PLHIV without TB were seen on other days to prevent TB infection during patient visits. All providers working in HIV clinics, TB clinics, and mother-baby care points (MBCPs) were trained and supervised to provide integrated TB and HIV services (see Figure 1).

Training and supervision activities focused on managing patients with presumptive and diagnosed TB, including providing HIV testing services (HTS) and HIV-prevention interventions, as well as providing cotrimoxazole preventive therapy (CPT) and ART to TB patients with HIV. For PLHIV management, training and supervision focused on TB screening and TB case-finding, preventive treatment with isoniazid preventive therapy (IPT), and early initiation on ART as well as TB infection prevention and control. Providers working in the maternal and child health clinics with MBCP patients were supported to continue providing prevention of mother-to-child transmission of HIV (PMTCT) services; routine services, including nutrition counseling and infant growth monitoring; as well as HTS, ART, and nevirapine and cotrimoxazole for HIV-infected children. The providers were trained and supported to provide co-infected MBCP clients simultaneously with TB treatment and ART and to closely monitor their dual treatment.

Providers at the five health facilities also received refresher training on treatment for opportunistic infections and sexually transmitted infections. The project ensured that the health facilities and providers had copies of the national guidelines, as well as material support, medical equipment, and management tools and job aids, including patient registers and diagnostic charts, necessary for integrated service delivery.

Throughout, STAR-E worked in close partnership with health

^{7.} http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0046988

UNAIDS treatment targets: 90% of all PLHIV know their HIV status, 90% of all people with diagnosed HIV infection receive sustained ART, and 90% of all people receiving ART have viral suppression. http://www.unaids.org/en/resources/ documents/2014/90-90-90

Figure 2. Increase in ART initiation among TB patients with one-stop shop



facility managers and supervisors using MOH policy guidelines for integrated TB/HIV services. In addition to training and supervision support, STAR-E conducted monthly on-site mentorship of TB clinic providers on ART care and HIV service providers on TB screening. MBCP providers were mentored on both HIV and TB service delivery. Health facility providers and managers also received mentorship on change management processes to clarify new roles, responsibilities, and accountabilities. Furthermore, the health providers received ongoing on-site mentorship from their district supervisors – medical or clinical officers – using the Uganda national guidelines for treating TB/HIV co-infection. Supervisory and mentorship visits were documented in a booklet to ensure continuity in follow-up.

The project collected data on HIV testing, ART initiation, and CPT initiation among TB patients and HIV patients diagnosed with TB between October 2014 and June 2016. The provider recorded data in the patient records and registries, and the facility TB focal person collated the data into monthly reports. The district TB and leprosy supervisor and STAR-E mentors then collated and entered the data into MS Excel for data cleaning and analysis. The proportions of TB patients who were tested for HIV, HIV positive, started on ART, and initiated CPT were calculated each quarter. Analysis included simple comparisons between results before and after the introduction of the one-stop shop model in January 2015.

Qualitative information on the process of implementing the one-stop shop model was obtained from health facility providers, managers, district supervisors, and project staff through periodic group discussions and individual mentorship visits. The information was organized thematically, reviewed, and summarized at the end of the pilot intervention at the five health facilities.

Results

Between October 2014 and June 2016, a total of 190 new TB cases were detected. Among them, 51% (97) were found to be HIV infected.

Prior to implementing the one-stop shop model, 93% of new TB patients were tested for HIV. Following the introduction of the one-stop shop model in January 2015, the proportion of TB patients who tested for HIV increased to and stayed at 100% for six consecutive quarters.

The integration of TB/HIV service delivery took place according to plans, and mentors reported that a majority of providers at both the health centers and the hospital succeeded in providing both TB and HIV services during the same patient visit. However, during the process, a number of clinical and managerial challenges were noted and addressed. The most commonly cited issues are presented below.

Clinical

- Delays in ART initiation of patients with severe TB. Some providers were concerned that patients would develop serious side effects from ART and therefore preferred to stabilize TB/HIV patients on TB medication and initiate ART two weeks later.
- Variable clinical expertise in managing HIV and TB. The level of experience and training varied greatly within and between facilities. This necessitated tailored follow-up and mentorship to assure that services were uniformly provided according to norms and standards.
- **Risk of TB infection.** The one-stop shop approach increases the potential spread of TB to immune-compromised patients and necessitates extra caution among providers to comply with infection-prevention guidelines, including the use of face masks, ventilation, and promotion of cough etiquette. Providers should also intensify case-finding, requiring all PLHIV to be screened for TB at each clinical encounter following a clinical algorithm, and offer IPT to all HIV-negative TB clients.⁹

Management

- Shortage of human resources for health. Like many public health facilities in Uganda, the five health facilities where STAR-E piloted the one-stop shop approach were understaffed. The increased number of patients per provider poses a risk to quality of care.
- *Physical space limitations*. The infrastructure of the health facilities was not adequate to optimize patient flow and ensure patient privacy. Inadequate space compromised comfort for both providers and patients.
- **Stock-outs of medicines and equipment.** Mentors reported frequent stock-outs of essential drugs as well as equipment and supplies for collecting samples, including test kits and TB reagents. Of particular concern were the national stock-outs of TB medicines that impacted their availability at facilities.

http://www.who.int/hiv/topics/tb/3is/en/Uganda MOH - NTLP/NTRL weekly GeneXpert report June-July 2016

STAR-E therefore sought to obtain TB medicines from outside the district to ensure that newly infected TB clients were immediately initiated on TB treatment.

• Limited availability of GeneXpert technology. GeneXpert machines were only available at a few health facilities, which posed a particular challenge for TB diagnosis. Furthermore, when a sample required transportation for TB testing using GeneXpert, patients did not immediately receive their test results, risking drop-out between TB testing and diagnosis. STAR-E minimized this problem by encouraging providers to send GeneXpert results electronically by SMS texting, thereby reducing the time it took to provide HIV patients with their test results and initiate TB treatment.

Discussion

This one-stop shop model is feasible in Uganda and can lead to increased uptake of ART among PLHIV. As TB tends to be clustered within families, transmission of HIV may be significantly reduced due to ART even as TB spreads to spouses in the future.

Multiple factors likely contributed to the success of fully integrating TB and HIV services, including: 1) the full support and participation of health facility managers and supervisors; 2) training that improved health providers' competencies to treat both diseases; 3) mentorship of TB staff on ART care and HIV staff on TB screening; 4) change in management processes to clarify defined areas of accountability for health staff; and 5) ongoing identification of clinical challenges and solutions through discussions between mentors, supervisors, and health providers.

However, the experience also underscored the challenges that health facilities may encounter when integrating TB and HIV services. Many of the challenges were not new and reflected known weaknesses in Uganda's health system. Therefore, continued efforts to strengthen the overall health system will need to complement scaling up the integration of TB and HIV services. Particular attention will need to be directed to ensuring the quality of care and identifying solutions to the chronic shortages of TB medicines.

The results of this analysis should be treated with caution, as they were based on a small sample of TB patients seen at a small number of health facilities in only one district of Uganda. The implications of results are also limited by the lack of comparison data to similar facilities where the one-stop shop model was not



implemented. Implementation of the one-stop shop at scale may reveal other challenges. Nevertheless, the experience showed ease of integration of services for both providers and clients was low cost and did not cause any harm.

Conclusion and Way Forward

The successful STAR-E pilot provides support to the MOH's decision to revise national TB/HIV guidelines in 2017 to include the one-stop shop model for TB and HIV. The roll-out of the one-stop shop approach will require increased collaboration between the national TB and HIV programs as well as close coordination and planning at the district and local levels.

Intensified TB case-finding among HIV patients, infection control measures in integrated health care settings, and provider-initiated HTS among TB patients should continue to be reinforced. It will be important to carefully monitor the nationwide adoption of the one-stop shop approach to shed further light on its successes and challenges over time and adjust programmatic directions accordingly.

Additional information can be obtained from: Mangagement Sciences for Health Uganda at Plot 15, Bugolobi/P.O. Box 71419 Princess Anne Dr, Kampala, Uganda, Tel: 256 31 230 3100

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