STRONG PARTNERS DRIVE ROBUST RESPONSES TO HIV & TB IN EASTERN UGANDA

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













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THE STRENGTHENING TB AND HIV & AIDS RESPONSES IN EASTERN UGANDA PROJECT

UGANDA'S HEALTH SYSTEM

Uganda's health system operates on a referral basis, with the complexity of services and level of care increasing at each higher level.

Village health teams (VHTs): Volunteers provide a basic package of services to their communities.

Health center (HC) II: Represent the first level of interaction between the formal health sector and the communities. They provide only out-patient care. Each parish ideally should have an HC II.

HC III: Provide more complex care, including deliveries and limited inpatient services, and supervise the HC IIs. Every sub-county ideally should have an HC III.

HC IV: Offer more extensive services, such as maternal health care and deliveries, inpatient services, and minor surgical operations. Every subdistrict ideally should have an HC IV.

Hospitals: Offer full range of health facility services. Each district ideally should have a hospital.

Referral hospitals: Offer full range of health facility services, handle complicated cases, and provide specialist services and testing. Referral hospitals are at the regional level.

INTRODUCTION

COMMUNITY-BASED SERVICES		PRIMARY HEALTH FACILITIES	I	REFERRAL HEALTH FACILITIES
Prevention Stigma reduction Care and support Adherence to treatment Demand creation Promotion of living positively HIV counseling and testing TB screening and referral Community directly observed treatment short-course	Case managers, mentor mothers, and linkage facilitators Peer educators People living with HIV (groups) Family support groups Civil society organizations and nongovernmental organizations Religious leaders VHTs Subcounty community development officers and health workers	All prior services, plus: Family planning and reproductive health Maternal and early infant diagnostics Prevention of mother-to-child transmission Pre-ART and ART Treatment for TB and other opportunistic infections Laboratory services Mentor mothers	Clinical providers	All prior services, plus: Treatment for multidrug- resistant TB Cancer treatments Complications Specialist lab services

STAR-E supports a continuum of care for HIV and TB patients by linking patients to a wide range of community and health facility services.

he Strengthening TB and HIV & AIDS Responses in Eastern Uganda (STAR-E) project is a US Agency for International Development (USAID) initiative funded by the President's Emergency Plan for AIDS Relief (PEPFAR) and implemented by a Management Sciences for Health (MSH)-led consortium of national and international partners.

The project works 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 those services delivered by laboratories.

STAR-E is a key partner with the Government of Uganda in scaling up these HIV and TB services. When the project began in 2009, STAR-E supported just 16 health facilities, with only one that provided antiretroviral therapy (ART). By 2015, the project had scaled up support to 154 health facilities in 12 districts, all of which provide a wide range of HIV and TB services.

A key component of this scale-up is supporting a continuum of care between the health facilities and their served communities, through linking patients to a wide range of community and health facility services, as shown in the graphic above.

Today, thousands of people in the 12 target districts have access to comprehensive services along the continuum of care, involving both public and private health care providers, local nongovernmental organizations (NGOs), community-based civil society organizations (CSOs), peer educators, VHTs, and religious and other community leaders. Through the continuum of care, they form a safety network for HIV-infected and affected people and their families.

PERFORMANCE-BASED FINANCING GRANTS HELP EXPAND HIV AND TB SERVICES

HEALTH PROMOTION AND SOCIAL DEVELOPMENT PROGRAM ACHIEVEMENTS (ROUND 2)

- 10,383 people referred for HIV counseling and testing
- 1,158 women referred for safe motherhood information
- I,881 people referred for TB screening
- **3,686** men referred for voluntary medical male circumcision
- 4 facility-based family support groups established and supported
- **70,000** community members reached with HIV-prevention messages
- 308,121 condoms distributed
- II0 VHT members trained on HIV prevention sensitization and mobilization

sther Nyende, 45, is a member of her VHT and a community leader in Uganda's eastern Pallisa District. When she visited the local health center as part of her duties, Nyende noticed a woman who was always seeking care, but whose condition never seemed to improve.

Nyende discovered that the woman's name was Beatrice Takali, and then followed up with her at her home. After getting to know her, Nyende encouraged Takali to be tested for HIV. Eventually, Takali agreed to be accompanied by Nyende to the AIDS Information Center for testing, 52 km away in the town of Mbale. After testing positive, she was started on ART there.

"She found me in a bad state," said Takali, 48. "I thought I was going to die. I also feared to go for the HIV test, and she tried to convince me several times before I agreed to take the test. But now I am healthy and can do activities to support my family."

In her role as a VHT member, Nyende worked with the Health Promotion and Social Development (HEPS) Program, a Pallisa-based CSO that received a performance-based financing (PBF) grant from STAR-E.

Through the PBF program, STAR-E partnered with district-based CSOs to work with VHTs to sensitize and mobilize their community members in order to create demand for HIV and TB services provided by project-supported health facilities.

In two rounds, the project provided 13 CSOs with PBF grants, with payments based on the CSOs' achievement of agreed-upon deliverables, which were measured each quarter by validating data.

Takali currently receives ART from Kamuge HC III near her home. She has also sensitized others and encouraged them to get tested for HIV. "I have a brother who had been falling sick. I told him about my situation and encouraged him to go for an HIV test. He accepted and is now on treatment," she said.

Brian Wafiire, HEPS program assistant, cited a number of benefits from the PBF grant. "With support from STAR-E, HEPS has now developed a good relationship between the community and the health centers and they are making use of the VHTs, especially for referrals and follow-up," he said. He added that VHTs are now effectively supporting health centers to follow up with clients to ensure their adherence to treatment for HIV and TB.

Since last year, Nyende alone has referred 20 clients who are now receiving ART. Kasifa Mugala, 34, is among them. She started feeling ill while she was pregnant, and started ART after referral for prevention of mother-to-child transmission (PMTCT).

"I am very happy. I gave birth to a healthy baby who is now turning one year old," she said. "I did not know that I would ever be fine. I am grateful to our VHT."

"My job as a linkage facilitator has enabled me to fully accept my HIV-positive status and gain support from my own family members and friends. I underwent many trainings and interacted with different people, which made me stronger and able to handle difficult clients... When I meet and talk to my fellow people living with HIV, it brings a smile to their faces, especially when I share my own testimony... Most clients are so free with me that they approach me even at home."

— Mary Berna Achom, linkage facilitator



USING **PARA-PROFESSIONAL CASE MANAGERS** AND LINKAGE FACILITATORS TO SCALE UP HIV SERVICES

critical element of HIV prevention, care, and treatment is linking and ensuring that clients continue to receive HIV services through the formal health system, community, and at home. However, this often poses challenges. Clients, fearing stigma if their neighbors discover their HIV-positive status, may relocate, or simply give a false address to the health workers.

To focus on such challenges, STAR-E trained two tiers of facility-based HIV para-professionals. Case managers were deployed to larger-volume health facilities for five days a week, while linkage facilitators were often deployed at smaller heath facilities for three days a week. As volunteers drawn from groups of people living with HIV (PLHIV), the para-professionals link clients from one service point to another, address client misunderstandings, and help reduce stigma within health facilities and communities.

STAR-E trained the para-professionals with health workers from selected health centers, thereby creating a task-shifting partnership between them. Following training, the para-professionals received on-site coaching and a monthly stipend to cover their costs. In all, STAR-E trained, deployed, and supported 288 para-professionals at all 154 project-supported health facilities.

Working directly with clients, the case managers and linkage facilitators provided health education, psychosocial support, and adherence counseling, and helped with access to facility-based services and resources, such as family support groups, nutritional services, and family planning. They accompanied clients newly identified at health facilities to the various service points, such as from the ART clinic to the laboratory and the pharmacy. Being HIV positive themselves, they were able to relate to the clients and answer their questions.

Case managers also played a key role in promoting positive living and prevention-with-positives practices, including family planning, diagnosis and treatment of sexually transmitted diseases, partner testing, and adherence to ART.

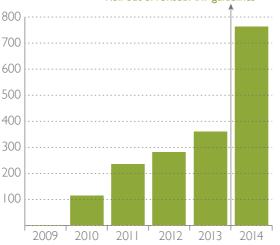
The case managers and linkage facilitators were also key contacts for community partners such as VHTs, PLHIV groups, peer educators, local NGOs, and community-based organizations to refer clients to services. To improve retention in care, they:

- helped clients to access health services and guided them through the process to ensure that services were received;
- tracked patient appointments and initiated community tracing of those who missed their appointments—by themselves or through community partners—to encourage them to return to HIV care and treatment;
- acted as key task-shifting resources to complement and strengthen the depleted public sector health workforce;
- ensured facilitation of inter- and intra-facility linkages and made referrals to non-clinical but urgent wrap-around services; and
- after being trained in adolescent counseling, helped enroll and retain orphans and vulnerable children (OVC) in care and treatment, improved their quality of services, and referred them to community care and support services.

Case managers and linkage facilitators also played a key role in promoting positive living and prevention-with-positives practices, including family planning and consistent use of condoms for dual protection, diagnosis and treatment of sexually transmitted diseases, partner testing, and adherence to ART.



UGANDA MOVESTO NATIONAL TEST-AND-TREAT POLICY FOR HIV-INFECTED CHILDREN



Roll-out of revised ART guidelines

he World Health Organization (WHO) in 2013 recommended providing ART to all children under five years of age, regardless of their CD4 count or WHO clinical stage, and that ART be provided to children older than five years with a CD4 count below 500.¹² Under these recommendations, 83 percent of HIV-infected Ugandan children were expected to be enrolled on ART following full implementation of the WHO guidelines.

However, at 41 percent, CD4 monitoring of HIV-infected children remained low, and WHO clinical staging was being done correctly for only 60 percent of children in care. Resource and staffing constraints contributed to lapses in carrying out CD4 counts and clinical staging, leaving many children without treatment.

To help close the pediatric HIV treatment gap, the Ministry of Health (MOH) revised the national ART guidelines in 2014, based on the precedent of having adopted Option B+ for HIV-infected pregnant women in 2012, and instituted "test and treat." This strategy involves initiation on ART regardless of CD4 count or WHO staging for all HIV-infected children under 15 years of age.³

The revised guidelines also initiated this strategy for other populations, including HIV-infected pregnant and lactating mothers, commercial sex workers, HIV-infected partners in discordant relationships, and people co-infected with TB/HIV or hepatitis B/HIV. In addition, the MOH revised ART eligibility for HIV-infected adolescents and adults with a CD4 count below 500.

To assist the MOH with the roll-out of the new guidelines, STAR-E used a facility-based approach. The project supported 15 multidisciplinary training teams, each with at least four trainers, to provide three days of on-site training to health providers and other staff at all

^{1.} The count is a measure of CD4 cells per cubic millimeter of blood. HIV attacks CD4 cells, which play a major role in protecting the body from infection. A normal CD4 count in a healthy person is 500 to 1,200.

The WHO clinical staging system is primarily used in resource-constrained settings without access to CD4 cell count measurements or other diagnostic and laboratory testing methods. It classifies HIV disease on the basis of clinical manifestations that can be recognized and treated by clinicians with varying levels of HIV expertise and training.

^{3.} Option B+ recommends providing lifelong ART to all HIV-infected pregnant and breastfeeding women regardless of CD4 count or WHO clinical stage.

"The beauty of mentorship is the approach used, and we also had tools. Standard operating procedures, registers, charts, and other materials were provided to the health facilities. The facility-based approach to rolling out national guidelines is very good because it helps us train so many health workers at a facility and gives them a hands-on experience as well."

— Jocelyn Nagami, district-based mentor and certified nurse at Siroko HC III

154 project-supported health facilities in Eastern Uganda. A regional MOH team monitored the teams and ensured the quality of the training. District government staff—including practicing clinicians, data personnel, nurse-midwives, and logistics officers—made up the multidisciplinary teams.

STAR-E provided a training-of-trainers (TOT) workshop for all district-based mentors. The mentors and STAR-E technical advisors then rolled out the new guidelines in health facilities, bringing copies of MOH job aids for continuous reference.

During coaching sessions in the ART clinics, staff placed MOH yellow stickers on files of children eligible for ART for easy identification and follow-up. Mother-baby care points were established at the maternal and child health departments, where mother-baby pairs are followed up until the child is 18 months of age, regardless of HIV status. At that point, the mother and HIV-infected child are transferred to the ART clinic. A child whose final HIV rapid test is negative is discharged.

Since the exercise was facility-based, rather than off-site, more health service providers were trained. The 1,364 providers who received training included 759 clinicians, 192 nursing assistants, 95 records assistants, and 135 laboratory technicians, as well as facility-based counselors, vaccinators, and linkage facilitators.

Following the roll-out of the new guidelines and the training, the number of HIV-infected children receiving ART nearly doubled at project-supported health facilities in 2014.

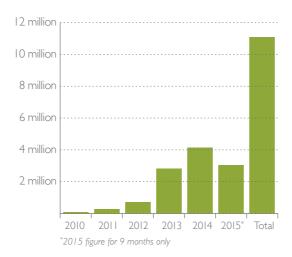
The facility-based training and follow-up conducted and supported by MOH district-based mentors was an efficient way of introducing the revised ART guidelines to service providers, allowing for their rapid scale-up. The use of yellow stickers to draw attention to pediatric patient folders, on-site coaching, followed by routine mentorship, resulted in an almost doubling of the number of pediatric HIV patients receiving life-saving ART.

Despite this success, an important number of pediatric HIV patients already in the health system still do not access ART. One reason may be the limited capacity of new health providers. In Uganda, where health facility staff regularly rotate to new health facilities, the long-term success of the facility-based approach will depend on continuous mentorship and on-site trainings, so that providers at all facilities will be able to offer quality, comprehensive HIV care and treatment, especially to children.



PEER EDUCATORS HELP **PREVENT HIV INFECTION** AMONG FISHER FOLK

STAR-E trained more than 1,200 peer educators. In addition to fisher folk, the peer educators also reached transportation workers, female sex workers and their clients, youth, and boda-boda taxi cyclists and their partners with HIV-prevention messaging. Number of condoms distributed among key populations and hard-to-reach, highly vulnerable groups, including fisher folk, 2010–2015



isher folk are a mobile population of fishermen, fish handlers, fish vendors, and other merchants who operate in and around Uganda's lakes and islands. They are among those most at risk for contracting HIV because of their transient lifestyle, daily access to disposable cash, alcohol consumption, high levels of illiteracy, transactional sex with multiple partners, and limited condom use.

HIV prevalence among fisher folk is estimated at 22 percent—three to four times higher than in the general population.¹ Yet, fisher folk are difficult to reach with HIV-prevention and treatment services because of high mobility and low rates of literacy among them.

More than 8,000 fisher folk live within the STAR-E project area, mainly around Lake Kyoga in Pallisa District and Lake Victoria in Busia District. With the arrival of about 40 fishing boats each day, Opeta is one of the busiest landing sites in Pallisa District. Condoms are used infrequently because fisher folk complain that they reduce pleasure or are difficult to find. With guidance from Pallisa local government, STAR-E identified Opeta as a target for outreaches to enable the fisher folk to access HIV-prevention services.

Opeta leaders and STAR-E staff discussed how the fisher folk and residents of neighboring fishing villages could best access HIV services and decided that 30 people from each village would be trained as peer educators. After being identified by other fisher folk, the peer educators participated in two weeks of training on HIV prevention and treatment, received job aids to use during one-on-one and group education sessions, and distributed condoms.

STAR-E supported HIV-infected para-professional linkage facilitators from the nearby Obutete HC II and Gogonyo HC III to provide refresher sessions on HIV prevention to the peer educators, and replenished their condom supplies. The project also collaborated with the AIDS Information Centre-Uganda, a local NGO, to provide integrated outreach to Opeta. This included HIV counseling and testing, with immediate results and referral of those testing positive for care and treatment; distribution of condoms for dual protection; and counseling and referral of eligible HIV-uninfected males for voluntary medical male circumcision.

Opio A., Muyonga M., Mulumba N. (2013) HIV Infection in Fishing Communities of Lake Victoria Basin of Uganda – A Cross-Sectional Sero-Behavioral Survey. PLoS ONE 8(8): e70770.

The peer educators mobilized the general community around Opeta to access services at the nearby health centers and during the outreaches. For example, they screened community members for TB and referred suspected TB cases to the health centers for further investigation. During two integrated outreaches at Opeta, in October 2013 and March 2014, STAR-E–supported peer educators reached more than 1,800 people with HIV-prevention messages, HIV testing services, family planning counseling, and screening for TB.

STAR-E has demonstrated that, when mobilized through their leadership, fisher folk can be reached effectively with HIV-prevention services. Peer educators were able to reach their peers, even on remote islands, with HIV-treatment and -prevention messages. In addition, linkage facilitators from nearby health facilities proved effective in linking the fisher folk to other health services not provided during outreach, such as screening and management of sexually transmitted infections.



SEX WORKERS **RAISE AWARENESS** ABOUT HIV

ommercial sex workers (CSWs) in Uganda have one of the highest rates of HIV infection in the world, with about 34 percent estimated to be HIV positive.¹ Yet special programs for CSWs and their clients in the country are limited, according to a 2009 analysis by UNAIDS and the Uganda AIDS Commission.

STAR-E foresaw an urgent need to scale up access to quality HIV-prevention programs for CSWs in four of its 12 supported districts, including Busia District, which is located along the main transport corridor linking Uganda with Kenya. One of the project's key interventions was the use of peer educators.

With the help of town council leaders, STAR-E identified and trained 60 CSWs operating in Busia District and trained them as peer educators, discussing the importance of HIV testing, safe sex, and using condoms. During the training, participants talked openly about risky practices that expose CSWs to HIV infection and other sexually transmitted infections. For example, one participant said clients often pressure CSWs to have unprotected sex for higher pay and many take the risk.

After sensitization, 43 of the CSWs decided to be tested and counseled. Results indicated that only five were HIV positive. The outcome shocked many of the CSWs because they believed they were infected.

"I am really very happy about this workshop because I have been able to know my HIV status," said Susan.* "I have been fearing to test because I thought I am already infected with HIV and I did not take the issue of condom use for HIV prevention very seriously, but from today I am going to use a condom always."

The CSWs adopted a slogan, "No condom, no sex," and say they will always carry condoms. They formed an association called Ba-HIPA, the Badigize HIV Prevention Association, and registered it with Busia District as a community-based organization. The association was formed to respond to the needs of members for improved and safe livelihoods, including a savings scheme.

One CSW, Sarah,* has taken steps to start a new life. "Sometimes a man enjoys sex with you and does not pay you," she said. "I have opted to run my second-hand clothes business to support my daughter's school fees and I hope to get married in the future."

Peer education has proven to be an effective tool for mobilizing commercial sex workers for HIV services such as counseling and testing, TB screening, male and female condom distribution, and the benefits of voluntary medical male circumcision for its potential to reduce HIV transmission.

I. HIV & AIDS Uganda Country Progress Report, 2013, p. xi. Crane Survey Report-High Risk Group Study 2008/9.

^{*}Only first name used to protect anonymity.

STAR-E EXPANDS TB DETECTION AND TREATMENT SUCCESS RATES

ariam Nangobi was first diagnosed with TB in 2010 when she was 12 years old. After completing a full, eight-month course of treatment, she still tested positive for the disease. She was referred to a larger health facility where she stayed for two months, receiving daily injections. Again, after treatment, she continued to test positive for TB and missed a year of school. Health workers eventually diagnosed her with multidrug-resistant TB (MDRTB)—a strain of TB that cannot be treated with the two most powerful first-line medicines.

Finally, Mariam received treatment with the help of STAR-E, which supported rapid scale-up of TB and HIV services in the 12 districts of eastern Uganda where it operates. The project addressed managing MDRTB by rolling out national guidelines to health facilities and providing other support.

"I have been on treatment for one year and one month now and my life has improved greatly," Mariam said. "I no longer fall sick and can now continue with my studies."

Although the incidence of TB in Uganda is declining, the nation is among 22 identified by the WHO as having among the heaviest TB burdens in the world. Of those infected with HIV in Uganda, half also have TB. Some develop drug-resistant TB when they do not receive the correct treatment regimens or do not complete the full course. A patient who develops active disease with a drug-resistant TB strain can infect other people.

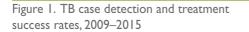
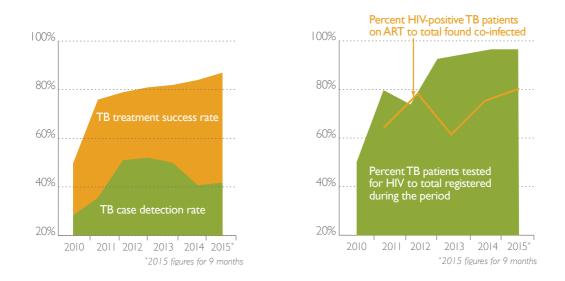


Figure 2. TB patients tested for HIV and those HIVpositive who started or continued ART, 2010-2015



STAR-E improved TB case detection and treatment in the Eastern Region. The case detection rate rose from 29 percent at the start of the project to 42 percent by 2015 because of project-supported mentorship, provision of TB registers and standard operating procedures, and expanded TB screening (Figure 1, above). The TB case treatment success rate improved from 50 to 87 percent, with key support from the 192 STAR-E-trained sub-county health workers monitoring client treatment and check-ups. To support them, STAR-E provided monthly allowances and bicycles.

HIV testing of TB patients was not commonly practiced at the time STAR-E began in 2009, but the percentage of TB patients tested for HIV rose from 50 percent in 2010 to 97 percent in 2015 (Figure 2). Those testing HIV positive and receiving ART rose from 64 percent in 2010 to 80 percent in 2015. The project trained and mentored 732 health providers; provided guidelines, job aids, and equipment; and supported district health management teams to conduct support supervision that included TB/HIV co-infection care and treatment services.

The project also strengthened the facilities' capacity to order and manage TB drugs, and procured laboratory equipment. STAR-E included an important community focus supporting community-based screening and referrals by peer educators, NGOs and CSOs, and sub-county health workers to provide community-based directly observed treatment short-course.

Further, the project institutionalized TB case finding at all entry points of health facilities, including outpatient departments, maternal and child health clinics, and young child clinics. STAR-E strengthened 149 laboratories to conduct TB and HIV lab tests, up from only one supported in 2009, and had four labs accredited by international standards.

By simultaneously strengthening and linking community, facility, and laboratory services for TB case detection and management, including MDR TB, and testing and treatment for TB/HIV co-infection, STAR-E decreased the burden of TB in HIV patients and the burden of HIV in TB patients.



EXPANDING MENTORSHIP WITHIN A DECENTRALIZED GOVERNMENT SYSTEM

TAR-E began its work in 2009 with four clinical mentors and a small cadre of technical advisors who provided assistance to health workers in hospitals and clinics in eight districts. At its inception, STAR-E supported only one health facility to provide ART, with the goal of supporting 38 facilities to provide ART by the end of the project.

This target was subsequently revised to support a national scale-up of the provision of ART, as well as prevention of mother-to-child transmission (PMTCT) services, down to the level of HC III. STAR-E supported this ambitious scale-up, subsequently reaching 154 heath facilities in 12 districts, by supporting trainings of over 8,000 health workers that were reinforced by ongoing, on-site mentorship.

It soon became evident that project personnel alone would not be sufficient to provide the mentorship support required by such a large number of facilities, and especially the lower-level health facilities, which are only staffed by nurses and clinical officers.

In response, the project, in close partnership with the district health offices, identified competent health professionals from supported health facilities to become district-based mentors (DBMs). The table below shows the different phases of this training.

Period	Intervention
2011	Forty district health staff (medical officers, clinical officers, nurses, and lab personnel) were oriented on the MOH PMTCT/early infant diagnosis guidelines and tools. STAR-E then conducted joint mentorship visits with these district staff to supported health facilities.
2012	Thirty-six district staff from the above group (three per district) were selected and trained in the national MOH clinical mentorship course. They were then designated as DBMs, and subsequently supported to conduct mentorship visits to lower-level health facilities.
2013	The 36 DBMs were trained in the TOT course on the new Option B+ approach for PMTCT. With STAR-E staff, they trained 997 health workers from 154 health facilities over a five-week period at district venues. This was followed by quarterly mentorship visits to the facilities.
2014	The number of DBMs was expanded to 60 (five per district) and they were trained on the revised national ART guidelines. They then conducted three-day, facility-based trainings on the guidelines at all 154 health facilities.

Zaina Wazemwa, a certified midwife at Namakwekwe HC III was among the 60 trained on the national MOH clinical mentorship course, the TOT course on Option B+, and the revised national ART guidelines.

"The trainings were really good. And with the roll-out of the new ART guidelines we adopted the Ministry of Health approach of facility-based trainings," Wazemwa said. "We supported the health staff through mentoring, giving them skills and knowledge, working at their side, and problem-solving."

STAR-E supported health facility professional staff to provide mentorship to other health facilities, including training and support to a pool of 60 DBMs to provide mentorship to lower-level health facilities. The region now has a cadre of technically competent resource people to provide sustainable mentorship to district heath facilities for ensuring quality HIV and TB service delivery.

The DBMs enabled the project and districts to support a rapid scale-up and expansion of health facilities providing PMTCT and ART services. This was accomplished by supporting multiple concurrent trainings of district health workers across all districts and supporting their follow-up mentorship at the participating health facilities. Some of the DBMs have even been used as national-level trainers to support training activities in other regions.

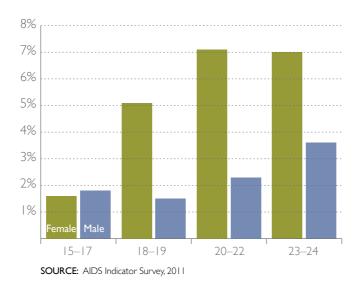


FEMALE STUDENTS **GAIN KNOWLEDGE** ABOUT HIV

hen Sylvia K. entered Mbale Progressive Secondary School in Eastern Uganda, she knew little about HIV, how it was transmitted, or where to get tested. The 16-yearold's knowledge about the disease was based on conjecture passed among her peers. Less than 40 percent of Ugandan women aged 15 to 24 have comprehensive knowledge about HIV, according to the 2013 Uganda Demographic Health Survey.

Yet teenage girls in Uganda, like in much of the rest of sub-Saharan Africa, are among the most vulnerable groups for HIV infection. Adolescent girls are two to four times more likely to become infected than boys, for biological reasons, with gender discrimination, inequality, and poverty as contributing factors, UNICEF says. For example, adult males might lure impoverished teenage girls to engage in sex in exchange for money or material gifts.

In Uganda, young women generally become infected with HIV at an earlier age than young men (see figure opposite). A community-based survey in 2012 using the Lot Quality Assurance Sampling methodology revealed that 12.4 percent of Ugandan youth under the age of 15 were sexually active.



"I am not scared by the pressure from boys and other girls to engage in early sex. I know my rights and am determined to fulfill my vision of completing my education."

— Sylvia K.

A key focus of STAR-E is providing HIV support and information to vulnerable groups, such as teenage girls, as well as other hard-to-reach and key populations. This has included outreach to young students residing in hostels with the aim of preventing new HIV infections. STAR-E staff and health workers trained teachers and peer educators about abstinence, safe sexual practices, and HIV counseling and testing. In addition, they discussed HIV with the students, the dangers of early pregnancy, managing peer pressure, and making the right choices for good health. Although teachers and health workers encourage abstinence, they also educate on and support condom use for those who are sexually active, and link any student infected with HIV to a health facility for ART.

The HIV education program reached 485 girls in six schools, including 247 at Sylvia's school, within six months, all in Mbale District. The students said they learned about how to avert HIV infection by delaying sexual debut or, if already sexually active, using condoms. They communicated strong self-esteem and commitment to their futures.

Annette A., 15, said the program has empowered her to resist peer pressure and seek guidance from her teachers and parents if she is pressured into sex by male peers and adult men.



OPTION B+: HOPE FOR HIV-INFECTED PREGNANT WOMEN, HIV-FREE NEWBORNS

hen Rose Chebet was five months pregnant with twins, she visited Kapchorwa Hospital in Eastern Uganda for a routine antenatal visit. She was devastated to learn that she was HIV positive and she feared her twins would not survive. Health workers referred Chebet, a first-time mother, to an ART clinic where she began taking medication.

Four months later, Chebet gave birth to two healthy boys, Chekwech and Chesuro. Said Chebet, 22, "I was given strict instructions on how to feed and look after them."

Chebet is seven months pregnant and is optimistic that her third child will be HIV free. Her husband, who is HIV negative, is supportive: "We hope to have two more children and then stop."

The boys were immediately put on antiretroviral prophylaxis. When both the mother and child are treated with antiretrovirals, the risk of transmitting the virus during pregnancy, labor, delivery, or breastfeeding is reduced from 15 to 45 percent to just over one percent.

At six weeks old, Chekwech and Chesuro tested HIV negative.

PMTCT of HIV is one of the key activities supported by STAR-E. The project's efforts have greatly reduced mother-to-child transmission in the Eastern Region, with the rate dropping from about nine percent in 2012 to six percent in 2015.

In 2012, Uganda became the second country in Africa to formally adopt Option B+ for PMTCT as a national strategy to provide for lifelong ART for all pregnant HIV-infected women regardless of gestational age and CD4 cell count. Option B+ was first pioneered in Malawi, with support from MSH. STAR-E has trained and mentored more than 1,000 facility-based health workers to provide Option B+ at all 154 project-supported health facilities.

In addition to training health workers, STAR-E has also trained linkage facilitators to follow up with HIV-infected mothers and others to ensure they continue treatment. Linkage facilitator Helen Chelengat routinely follows up with Chebet to make sure that she keeps health care appointments and takes her medicine at home. Chelengat also gives Chebet and her husband guidance on feeding practices for their children to ensure good nutrition.

Chebet is seven months pregnant and is optimistic that her third child will be HIV free. Chebet is grateful to staff at Kapchorwa Hospital for their support and encourages other mothers to seek early treatment. She said, "I am very happy to have healthy children."

STAR-E LOT QUALITY ASSURANCE SAMPLING

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"LQAS has now become recognized as a key data source for use and comparison at various levels. Districts are using the LQAS surveys for their HIV programming and decisions."

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—Denis Busoboozi, Uganda AIDS Commission official

To enhance sustainability, STAR-E trained and engaged a pool of national LQAS facilitators—70 percent of whom are local government staff.

INTRODUCTION

or many years, the main official sources of data in Uganda available to districts for planning and decision-making were national demographic and health surveys and national population surveys. But they are conducted every five and two years, respectively, and only provide aggregated national and regional data. In addition, the Ministry of Health (MOH)'s health management information system is health facility, not community, focused.

Districts' lack of timely data on key community-level health and social service indicators has posed challenges to their annual planning and budgeting processes, and has affected their capacity to guide implementing partners.

In response, Strengthening TB and HIV & AIDS Responses in Eastern Uganda (STAR-E), a US Agency for International Development (USAID) project funded by the President's Emergency Plan for AIDS Relief (PEPFAR) and led by Management Sciences for Health (MSH), promotes and facilitates simplified and sustainable methods for districts to routinely monitor, evaluate, and improve their community performance trends in health and social services. STAR-E, with technical assistance provided by the Liverpool School of Tropical Medicine, has been collaborating with the ministries of health and local government; gender, labor, and social development; and USAID implementing partners since 2009. The project trains and supports district teams to use three interrelated processes:

Lot Quality Assurance Sampling (LQAS): A random sampling survey methodology originally developed and used by the industrial sector to control the quality of outputs of industrial production processes, LQAS requires much smaller sample sizes and is thus less time-consuming and expensive than many other survey methods. In 1996, the World Health Organization recommended it's use for monitoring immunization programs in low-income countries. In 2003, Uganda's MOH, with World Bank support under the Multisectoral AIDS Project implemented by the Uganda AIDS Commission, applied LQAS to monitor key public health indicators at the community level.

The STAR-E LQAS component supports districts to carry out and use LQAS surveys to assess community knowledge, attitudes, practices, and uptake of social services provided at the district level in the areas of HIV,TB, malaria, sexually transmitted infections, reproductive health and family planning, water and sanitation, child health, nutrition, education, and orphans and vulnerable children (OVC) services.

 Facility Assessment (FA): An assessment of the performance of a service delivery point (facility) as judged against nationally recognized sector-specific service delivery standards, the health facility assessment (HFA) is a district-led process that rapidly assesses the quality of services delivered at health facilities, from the level of HC III to general hospital, with a view of promoting use of the findings for performance improvement. The assessment is based on modularized tools and is conducted by district staff. The HFA utilizes interviews with health workers and clients, and observation checklists to generate data on the quality of services offered, in accordance with the expected performance standards for the level of care. At the community level, the OVC facility assessment (OVC-FA) seeks to generate data on the performance of service points offering OVC services in line with nationally recommended service standards.

Service Performance Assessment and Improvement (SPAI): This is a process that engages district teams to use structured steps and formats to analyze their LQAS and HFA result—as well as data from other sources, such as the health management information system—to identify and prioritize service gaps and choose and plan interventions for improving services.

STAR-E LQAS facilitates districts to conduct seven annual rounds of LQAS surveys. Starting with 10 districts participating in 2009, up to 73 (of Uganda's 112 districts) participate in a single year's round of LQAS surveys. FAs of health facilities are conducted in 35 districts, while FAs of community OVC service points are carried out in six districts.

To enhance the sustainability of the LQAS process, STAR-E has trained and engaged national LQAS facilitators, including 73 in the LQAS survey, 6 in the FA, and 9 in the SPAI process. This results in a pool of facilitators, 70 percent of whom are local government staff, to sustainably support districts to conduct the processes, including training of district data collectors, supervising field activities to ensure quality data, and guiding data tabulation (hand data analysis) activities.

Further, a national LQAS technical advisory group was formed, comprised of key ministry, donor, national university, and implementing partners to review resulting data, provide guidance on its use, and advise on its institutionalization. The participating national universities, Makerere University College of Health Sciences and Nkozi University, also incorporate LQAS into their teaching curricula.

To enhance sustainable access to survey data, the STAR-E LQAS team partners with the Ministry of Local Government to establish a web-based database at the ministry to allow multiple stakeholders and districts to access LQAS data. A number of products have been generated from the database, including consolidated yearly reports for all participating districts, district-specific reports, wall charts of district and regional results, and print media such as fliers and newsletters. The project also partners with the MOH to establish a web-based database allowing multiple stakeholders and districts to access HFA data.

In addition, the MOH, working with the STAR-E LQAS team, has added additional indicators to the HFA to allow it to capture more assessment areas, and then adopted the expanded format as its sustainable tool for assessing public and private health facilities, called the Health Facility Quality Assessment Process.

In summary, the STAR-E LQAS, FA, and SPAI processes improve the sustainable capacity of government ministries and districts to identify and address gaps in service delivery through evidencebased planning and execution. Districts acquire skills in data management, data entry and analysis, and report preparation, allowing them to better manage the processes and utilize the results.



"LQAS has enabled us to 'red flag' problem areas in the health sector and provide appropriate interventions and hence, save lives."

-Dr. George Oundo, Busia District health officer

BRIDGING THE **DATA GAP** IN BUSIA DISTRICT THROUGH LQAS

r. George Oundo, Busia District health officer, was concerned with the district's performance on key health indicators derived from its health facilities, including a low number of health facility deliveries by mothers, low uptake of family planning, and a poor response to HIV counseling and testing services. But he lacked data to inform an appropriate response that targeted poor-performing sub-counties, especially as he was unsure if health facility data accurately reflected the situation on the ground.

The LQAS survey supported by STAR-E that was conducted in the district in 2011 revealed that two sub-counties in particular, Busitema and Buteba, were performing poorly. The LQAS survey found that in Busitema sub-county, only six percent of women with a child under one year of age delivered in a health facility, family planning uptake was just 30 percent, and there was insufficient staff at its main health facility to deliver quality services, including HIV testing. In Buteba sub-county, only 15 percent of mothers delivered at a health facility.

Dr. Oundo used these survey results to initiate corrective measures, including posting a clinical officer and laboratory assistant to Busitema HC III. He also posted a midwife to one of the lower-level health facilities in Buteba sub-county to increase access to delivery services. In addition, he collaborated with implementing partners to train village health teams in the two sub-counties on family planning education and the need for mothers to deliver at a health facility.



LQAS HELPS BUTALEJA DISTRICT **RESPOND** TO A CHOLERA OUTBREAK

n January 2010, Butaleja District faced a cholera outbreak resulting from heavy rains that affected the entire Eastern Region of Uganda. The flooding displaced communities, flooded latrines, and damaged protected drinking water sources. Emergency relief agencies quickly responded, but a lack of up-to-date community-level data on key water and sanitation indicators posed a serious challenge. To prevent further spread of disease, relief providers needed to better understand the outbreak to facilitate both short- and long-term interventions.

The district decided to conduct a water and sanitation survey using the LQAS methodology that they had learned from STAR-E. LQAS allowed them to rapidly collect data from a small sample of households to determine the most affected sub-counties.

"There was no training needed since, as a district, we were already exposed to the methodology during LQAS community surveys," said Apollo Olowo, Butaleja District assistant health officer. The use of the LQAS methodology demonstrated its effectiveness in providing timely, community-level information for directing rapid responses during health emergencies.

The district team was able to collect a small sample of data within a week, and found that water and sanitation coverage was lower in five sub-counties. In these locales, only 38 percent of the sampled households were accessing a protected water source, 15 percent were observing food hygiene and safety, and 18 percent were washing their hands with soap and water.

District sanitation officers communicated the LQAS findings to district leaders, the ministries of health, education, and local government, and relief agencies. The district formulated the District Cholera Rapid Response Taskforce to handle the cholera emergency preparations, planning, budgeting, and actions to control the outbreak in the district. From the rapid LQAS survey that was conducted, the five sub-counties of Busabi, Budumba, Busaba, Nawanjofu, and Mazimasa were identified as priorities and became taskforce intervention focus communities.

The LQAS findings informed the district leadership decision to allocate additional funds to the district water and sanitation department to provide emergency water containers (water purifiers), sanitation tools, and supplies to affected households, and helped in planning for longer-term interventions such as construction of boreholes. The district and sub-county health workers conducted a house-to-house hygiene and sanitation campaign to sensitize people in the sub-counties. After a month, the health team identified the best-performing homes, schools, and other institutions and awarded them at a public ceremony.

The use of the LQAS methodology by Butaleja District to respond to its 2010 cholera outbreak demonstrated the effectiveness of the methodology to provide timely community-level information for directing rapid responses during health emergencies, as well as assist in district planning.

²hoto by Rui Pires

MPIGI DISTRICT USES LQAS DATA TO GUIDE PARTNERSHIPS TO IMPROVE HEALTH SERVICES

hen the Joint Efforts for Youth (JOY) community-based organization planned to begin supporting HIV-focused activities in the Mpigi District sub-counties of Kammengo and Kituntu in 2012, it needed concrete data to gauge the magnitude of their HIV problem in order to draft funding proposals.

JOY approached Mpigi District leadership and discovered that the only community-level data available was from the annual STAR-E-supported LQAS survey. STAR-E's LQAS team had earlier partnered with the MSH-implemented and USAID-funded STRIDES for Family Health project to support the district's institutionalization of the LQAS methodology. JOY successfully utilized the district's LQAS data to develop a proposal and subsequently acquired four-year funding to implement HIV-related activities.

JOY's experience is one of many where LQAS data supported activities in Mpigi District. Although data is available from the Uganda Demographic and Health Survey and other sources, LQAS provided information that was more current and at the community level, which led to more effective planning and targeted interventions to improve the lives of district residents.

The 2011 LQAS survey revealed that only 35 percent of OVC in the district were receiving material support, which guided the USAID-funded SUNRISE OVC project to implement sub-county-targeted support to 485 OVC households.

The survey also revealed that only 19 percent of district children aged 12 to 23 months were consuming a minimum acceptable diet, which guided the World Vision Strengthening Partnerships Nutrition Research and Innovation for Improved Nutrition (SPIN) project to target its nutrition-focused interventions to the most-affected sub-counties.

Although data is available from the Uganda Demographic and Health Survey, LQAS provided information that was more current and at the community level, which led to more effective planning and interventions.





USING LQAS AND HEALTH FACILITY ASSESSMENT RESULTS TO **GUIDE PLANNING** FOR ORPHANS AND VULNERABLE CHILDREN

ganda's Ministry of Gender, Labor, and Social Development (MOGLSD), as part of a national review of the implementation of the National Strategic Program Plan (2012-2015), hosted review and experience-sharing meetings with districts on their community support to OVC. Among the key sources of data for reference were results from STAR-E-supported LQAS surveys and OVC-FAs that targeted OVC service delivery at the community level. LQAS findings effectively guided the district to turn greater attention to poorly performing OVC service areas and sub-counties, including focus on improved work planning, and coordination with the Ugandan Police and external partners.

One review meeting, conducted in June 2014, involved six districts of Eastern Uganda supported by STAR-E: Mbale, Sironko, Pallisa, Butaleja, Kibuku, and Kapchorwa. In attendance were representatives from the key stakeholders, including USAID, the MOGLSD, and the MOH; from participating districts; and USAID-supported projects, including STAR-E, SUNRISE-OVC, Sustainable Comprehensive Responses (SCORE) for Vulnerable Children and Their Families, Applying Science to Strengthen and Improve Systems (ASSIST), and Strengthening Decentralization for Sustainability (SDS).

The STAR-E LQAS team shared a variety of materials during the June 2014 review, including consolidated and district-specific reports and charts on annual LQAS and HFAs.

During the meeting, the districts presented results from their 2013 LQAS community surveys on OVC household indictors and HFAs of community OVC service delivery points. The presentations then led to plenary discussions, which highlighted the districts' use of the methodologies and results to improve OVC services, including targeted technical assistance to service providers, support supervision of service delivery points, increased OVC access to education and hygiene and sanitation, and the passing of new ordinances and bylaws to protect children.

One example was Sironko District's presentation. While it found that 98 percent of adolescent OVC and adults knew where to report cases of abuse—and 84 percent were in school—only 4 percent were receiving external support, 18 percent had their basic needs met, and 24 percent experienced abuse.

The presenting Sironko District officer noted that such findings effectively guided the district to turn greater attention to poorly performing OVC service areas and sub-counties, including focusing on improved annual work planning, and coordination with the Uganda Police and external partners such as Child Fund International and Compassion International.

The discussions also highlighted the importance of the OVC-focused data from LQAS surveys and OVC-FAs to complement data from the national OVC management information system. While completeness of data from district/sub-county reporting was above 90 percent, data from non-governmental partners was typically below 50 percent, leading to significant data gaps.





AFTERWORD

There has been demonstrated improvement in the lives of Ugandans in the 12 districts where STAR-E operates. This is due to an effective partnership between the project, the Government of Uganda, and especially its Ministry of Health, civil society, local and international partner organizations, donors, and communities. The impressive progress in the scale-up of HIV and TB services has lowered HIV prevalence to around two percent, which is well below the national rate. Despite this success, HIV and TB will remain major public health issues in Uganda for many years to come. The challenge now is to build on these successes and strategically integrate services for even greater health outcomes.



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