CASE STUDY

Addressing the 3rd 90 Gap through Integrated Health Delivery Camps in 4 Health Facilities in Nwoya District, Uganda

In 2014, the Joint UN Program on HIV/AIDS set ambitious goals to eliminate the HIV/AIDS epidemic by 2020 through the 90-90-90 three-pronged approach. The Uganda Ministry of Health together with implementing partners, including USAID ASSIST, adopted the approach. Nwoya, one of the 16 districts in Uganda under ASSIST support, prioritized the 3rd 90 target – viral load (VL) suppression for 90% of ART patients. A baseline assessment in May 2016 indicated that VL suppression was at 89% and yet only 41% of the eligible clients had received VL. To initially close the VL backlog, the following changes in June and July 2016 were implemented: client chart color coding, client flow reorganization, and VL sample collection during both clinic and non-clinic days. However, these interventions increased VL access from only 41% to 57%, leaving a backlog of 1,202 tests. The District Quality Improvement Team proposed an integrated health camp approach to completely clear the backlog. With support from ASSIST, integrated camps were organized at the facility level and the following changes tested: client file audits, eligible patient list generation, linkage facilitator and peer-to-peer mobilization, and HIV testing and nutrition assessment at the camps. During the camps, 41% of the VL eligible clients were reached and samples collected. To completely clear the VL backlog, health facilities adopted the camp model and continued the mobilization of VL eligible clients. By September 2016, 92% of the eligible clients had received a VL test reducing the backlog to 113, which was later cleared by October 2016.

Background

USAID Applying Science to Strengthen and Improve Systems project (ASSIST) is implementing the approach in Nwoya district in northern Uganda (it is one of the 16 districts under ASSIST support).

Nwoya district has a total population of 128,094. Its aggregated HIV prevalence rate is 4.2% (however, the differentiated prevalence rate by sub-county is 6.2% for Purongo, 4.6% Kochgoma, 4.3% Anaka town council, and Alero at 3.2%). Nwoya has four accredited and functional ART sites (Anaka Hospital, Purongo HC III, Kochgoma HC III, and Alero HC IIIs). There are 5,679 people estimated to be living with HIV and in May 2016, 4,472 (79%) had been diagnosed of whom 3,056 (54%) are on Antiretroviral therapy (ART) with only 1,142 having accessed a VL. In a prior assessment done by ASSIST in May 2016, it was observed that VL suppression was 89% with access at 41% (1,142 of 2,804 eligible) implying that there was a backlog of 1,662 patients who are yet to have a VL test.

In June 2016, USAID ASSIST organized a quarterly performance review for all districts under their support during which the district based performance for the 90-90-90 targets was reviewed. The District Quality Improvement Team (DQIT) members appreciated their gaps in regard to the 90-90-90 targets and

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prioritized VL access as a proxy to improve the third 90. In this case study, VL access is defined as the proportion of eligible clients (those on ART for 6 months or more) who have had a VL test done. VL access is considered as a proxy to suppression because it is practically, logically, and scientifically incorrect to measure suppression without having a significant number of patients doing a VL test.

**Implementation**

**Phase 1 of Improvement:** Over the next two months (June-July 2016) with support from ASSIST, several interventions were put in place, as displayed in Box 1. These interventions yielded a 57% improvement of patients accessing a VL (1,602 of the 2,804 active eligible clients), however, there still remained a gap of 678 clients who had to be reached to clear the backlog.

**Phase 2 of Improvement:** Having not achieved their target, the DQIT (composed of all District Health Team departmental heads, and chaired by the District Health Officer- DHO with representation of the clients and ASSIST) held a brainstorming session during its monthly review meeting regarding the reasons for backlog persistence despite the interventions, displayed in Box 2. The DQIT identified several challenges and proposed the use of integrated health camp targeting HIV patients who had not accessed a VL test. The camp was scheduled for August 2016 and would run concurrently for 5 days in all of the 4 ART sites. In addition, it would provide a comprehensive package that included rapid nutrition assessment by Mid Upper Arm Circumference (MUAC), Tuberculosis (TB) screening, CD4 testing (cluster of differentiation4- an indicator of immune system, a strong predictor of HIV progression and marker for response to ART) and HIV Counseling and Testing (HCT) for children and partners for People Living with HIV (PLHIV) and the general population.

**Box 1: Phase 1 Changes Tested**

1. Tagging of charts and files of eligible patients with colored stickers so that they can easily be identified as soon as they arrived in triage.
2. Reorganizing clinic flow so as to ensure VL sample collection is done first before seeing the clinician or nurse counselor for a refill.
3. Shifting tasks for staff to ensure that sample collection and routine clinic activities involving laboratory and nurse staffs continue.
4. Setting up non-clinic appointments for VL testing, sample collection, and bleeding in the ART during non-clinic days.
5. Updating all of the VL tests performed in the data capture using HIV care card tools.

**Box 2: Reasons for Persistence of VL Backlog**

1. Representation for some clients.
2. Poor clinic process that could not readily identify the eligibility for the VL tests.
3. Knowledge gap fn some staff who could not easily collect samples and fill out appropriate documentation.

During the camp, the integrated camp team, whose composition is displayed in Box 3 below, accomplished the following:

- Profiled patients who were active on ART and clients who were eligible, and created a list of those who had not received a VL test clearly detailing patient addresses.
- Tagged client charts using stickers so as help health workers be able to retrieve charts with ease, and also to act as reminders during triage and after the camp.
- Assigned linkage facilitators to particular parishes where they moved from door to door informing clients of the camp and what services would be provided (ASSIST provided some transport facilitation to enable them to reach most clients, including the distant ones).
- Requested family members who did not know their HIV status to visit the facility during the camps for other health services.
- Conducted peer-to-peer mobilization, including at the ART clinics, to reinforce the drive for those clients who were not reached by the linkage facilitators.
Utilized mentors provided by ASSIST to build the capacity of health workers on sample collection and records management, while also providing a comprehensive package that included rapid nutrition assessment by MUAC, TB screening, CD4 testing, and HCT for children and partners for PLHIV and the general population.

Provided technical support on data management through mentorships with the aim of ensuring that all efforts are documented using the facility Health Management Information System (HMIS) tools to communicate to the national electronic health information management system DHIS 2 (district health information software 2).

## Results

During the camp, 497/1,202 (41%) of the eligible clients were reached and had viral samples collected. 589 patients were tested for HIV, 14 of which were identified as new HIV positive clients. 20 CD4 tests were done for the 14 new HIV positive patients and the 6 pre-ART clients. A congregate assessment for TB was done using the ICF (intensified case finding) guide, and 64 presumed cases were identified and tested using GeneXpert; of this, 2 TB positive cases were identified and linked to care. These results are displayed in Table 1 above. The community mobilization and mentorship was responsible for sustained results for the months of August and September 2016.

Figure 1 below indicates that the backlog from May 2016 was cleared by October 2016; the negative values indicate current timely VL tests being done for eligible patients as part of the routine clinical processes.

### Table 1: Results from the Camp

<table>
<thead>
<tr>
<th>Service Offered</th>
<th>Total</th>
<th>Positives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viral Samples Collected</td>
<td>497</td>
<td></td>
</tr>
<tr>
<td>HIV Testing</td>
<td>589</td>
<td>14</td>
</tr>
<tr>
<td>TB Genexpert Testing</td>
<td>64</td>
<td>2</td>
</tr>
<tr>
<td>Syphilis Screening - RPR</td>
<td>165</td>
<td>10</td>
</tr>
<tr>
<td>Nutrition Assessment</td>
<td>633</td>
<td>9 (SAM 3, 6 MAM)</td>
</tr>
<tr>
<td>CD4</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

**Box 3: Camp Team Composition**

1. USAID ASSIST regional mentors for HIV Continuum of response (CoR) and laboratory.
2. Facility staff from the ART clinic, laboratory, and ANC (including midwives, clinical officers, and nurses).
3. Linkage facilitators (fellow PLHIV in the different clinics who have received a formal training in basic counselling, communication, and interpersonal skills).

**Figure 1:** VL tests against the backlog (May 2016-November 2016)
Table 2 below illustrates that VL access had from 41% in May 2016 to 92% by the end of September 2016 for all of the eligible (clients on ART for more six months) (2,691 of 2,928).

Discussion and Lessons Learned

In the case of Nwoya district, while routine interventions in ART clinics geared at increasing VL testing access yielded results, they were only effective in clearing the backlog in small increments and would require a longer time to clear the entire deficit. Given this, the health camp provided a booster opportunity for:

- Reaching the most eligible clients through community mobilization by linkage facilitators and returning them to the health facility for samples to be collected.
- Providing mentorship so as to build the skills of health workers on patient and VL sample handling; this improved the routine provision of VL sample testing services by increasing the number of trained clinic staff whilst reducing the sample rejection rates.
- Integrating other services in the camp, like the TB assessment, nutrition assessment, and the HTS, STI, and CD4 tests, which were accessed by the large number of non-HIV patients who came to the facilities following the community camp mobilization drives.

To clear out the high VL testing backlogs, and improve routine VL access and HIV/TB services at the facility level, integrated camps, as in this case, resulted in a tremendous boost.

Challenges

It was difficult to mobilize for VL alone for reasons of patient confidentiality. As such, ASSIST and facility teams integrated other services and did blanket mobilization, informing specific clients independently.

Table 2: Improvements in Viral Load Access from May to September 2016

<table>
<thead>
<tr>
<th></th>
<th>Baseline - May</th>
<th>Follow up - September</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active on ART (Jan- March 2016)</td>
<td>3056</td>
<td>3242</td>
</tr>
<tr>
<td>New on ART (Oct-Dec 2015)</td>
<td>142</td>
<td>140</td>
</tr>
<tr>
<td>New on ART (Jan-March 2016)</td>
<td>110</td>
<td>174</td>
</tr>
<tr>
<td>Active on ART for More than 6 Months</td>
<td>2804</td>
<td>2928</td>
</tr>
<tr>
<td>clients tested</td>
<td>1142</td>
<td>2691</td>
</tr>
<tr>
<td>% Access</td>
<td>41%</td>
<td>92%</td>
</tr>
</tbody>
</table>

Source DHIS 2 and VLCPHL Dashboard