

CASE STUDY

Increasing viral load monitoring of people living with HIV on ART in Northern Uganda in line with the 90-90-90 global targets

In Northern Uganda, the USAID ASSIST Project has supported Ministry of Health (MOH) sites to increase the percentage of people living with HIV (PLHIV) on antiretroviral therapy receiving viral load monitoring, reaching 73% of PLHIV on treatment and targeted for viral load testing between July and December 2015, with 90.2% of the valid results showing an improvement in viral suppression rates from 88.4% (August 2015) to 92.4% (December 2015). This was achieved through training sessions for 467 health workers from 50 health facilities in 15 districts on the new MOH viral load policy guidelines and monthly quality improvement support.

Background

Since 2014, UNAIDS has set a goal to eliminate the AIDS epidemic by 2020 through a three-pronged approach known as 90-90-90. UNAIDS has recommended scale-up of viral load monitoring to achieve the third prong, where 90% of all people on antiretroviral therapy (ART) should achieve durable viral suppression. Research has shown viral load monitoring to be a more effective means of HIV treatment assessment and management compared to CD4 testing and clinical monitoring.

Viral load testing was adopted by the Uganda Ministry of Health (MOH) in its revised HIV treatment guidelines that were rolled out nationally in 2014. Despite adoption of these guidelines, 42,905 PLHIV active on ART in Northern Uganda were still receiving treatment response monitoring using CD4 testing and clinical monitoring as of June 2015. In pursuit of meeting the 90-90-90 targets, USAID ASSIST, in collaboration with the MOH and Central Public Health Laboratories (CPHL), initiated viral load monitoring roll-out in July 2015 at 127 ART sites in Northern Uganda.

Steps Taken to Increase Viral Load Monitoring of PLHIV on ART

Trained health workers to conduct quality viral load (VL) testing: Two-week training sessions were conducted by CPHL staff for 467 health workers from HIV, PMTCT, and laboratory departments from 127 ART sites in the catchment of three hospitals. The trainings focused on improving facility staff skills on viral load sample collection for testing and transportation to CPHL through the sample/results referral system or hub system. Lab hubs are CPHL-equipped laboratories at higher volume health facilities that serve lower level health facilities by processing their samples and returning their CD4 results, Gene Xpert TB results, CBC, and

Figure 1: Changes introduced to increase VL testing at selected sites in Northern Uganda

1. Orient staff, not previously trained, to collect & package VL samples
2. Assign someone to identify eligible clients for VL testing and generate a list which is checked upon testing
3. Open up a VL eligibility register using a counter or an exercise book
4. Have the triaged nurse send all eligible clients for VL sample taking before being seen by clinician or dispenser
5. Inform clients about their VL due dates during their clinic visits
6. Assign staff to transfer VL results into client cards

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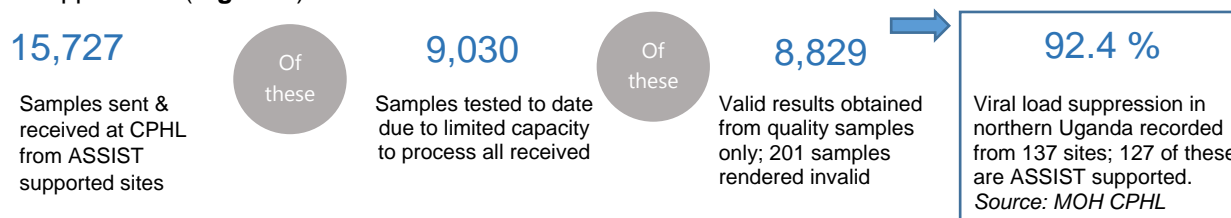
clinical chemistry results. The hubs send on DBS EID samples, TB sputum samples for culture and sensitivity, and viral load samples through the mailing system to the CPHL for processing. Each hub has a number of trained motorcycle riders who pick up samples from lower health facilities. During training sessions, starter VL testing kits and relevant documentation were also distributed to facility staff. ASSIST staff conducted immediate follow-up coaching to ensure that VL testing was being rolled out by the trained teams.

Applied quality improvement (QI) methods to scale up VL testing: On-site coaching for 50 high-volume ART sites was conducted within a month of training, and 77 low-volume sites were reached two months later. Coaching aimed to assess progress of VL testing in each site and encouraged sites experiencing slow roll-out to start working on their improvement aims. Changes introduced by sites to increase VL testing are listed in **Figure 1**.

Strengthening laboratory support for VL testing: Targeted coaching was conducted at 11 hubs on a monthly basis to ensure that progress toward timely sample collection and results delivery is sustained. Through the assistance of district technical officers, ASSIST tracked the use of VL test kits and dispatch forms to incentivize timely monthly ordering. ASSIST also distributed the supplied collection materials to the ART sites to avoid stock-outs that would otherwise interrupt testing.

Results

As a result of specific QI efforts, the percentage of ART clients receiving viral load testing improved from 0% in July 2015 to 37% in October 2015 at 30 of the 50 high-volume sites. This improvement was maintained such that 15,923 of a targeted 21,653 PLHIV on treatment at 127 ASSIST-supported ART sites and 13 other non-supported sites in the region received a VL test. Of those who got a VL test recording, 92.4% maintained VL suppression (**Figure 2**).



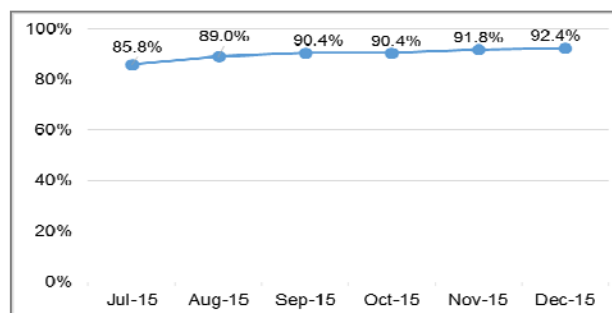
Challenges

There have been some setbacks as a result of interruptions in transportation of samples through the hub system mainly due to lack of fuel, test kit stock-outs, and CPHL's limited capacity. However, QI teams are dedicated to the continued implementation of their tested changes in order to achieve 100% access to VL testing. District coaches identified from the 50 intense support sites are now spreading improvement efforts to 82 low-volume sites.

Conclusion

The health facilities in Northern Uganda have been able to implement and scale up VL testing among PLHIV through applying a quality improvement approach with a focus on improving accessibility to the VL test and using the results for clinical decision-making. This performance has shown that achieving and sustaining the third prong of the 90-90-90 strategy in limited-resource settings is very possible.

Figure 2: VL suppression rates, July-December 2015



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