ANNUAL PERFORMANCE REPORT

Supporting HIV-Related Laboratory Networks and Partnerships to Facilitate Laboratory Strengthening and Management Activities for Countries Supported under PEPFAR

End of Year Report for cooperative agreement number

6 NU2GGH002140-01-04

BACKGROUND INFORMATION				
Project start & end dates	Start:	01 March 2018	End:	29 September 2023
Reporting period	From:	01 April 2021	To:	31 March 2022
CoAg Year	Year 4			
Date report submitted				
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Executive Summary

The African Field Epidemiology Network (AFENET) through its AFENET-Lab initiative received funding from the Centers for Disease Control and Prevention (CDC) in March 2018 to support HIV-Related Laboratory Networks and Partnerships to Facilitate Laboratory Strengthening and Management Activities for Countries Supported under PEPFAR. From April 2021 to March 2022, AFENET has implemented a number of laboratory-strengthening activities in selected African countries, Dominican Republic and other multicounty scopes of work in collaboration with Centers for Disease Control and Prevention (CDC) and National Ministries of Health. Laboratory strengthening activities implemented include:

1. Provide Technical support in to Angola MoH to 1) strengthen point of care (POC) testing (including rapid testing, and POC VL and EID) at central level, provincial, and municipal levels, 2) Fully implement viral load system management (VLSM), including dashboards for disaggregated data visualization, in central and regional laboratories. Areas of focus include; HIV viral load (VL) testing scale-up; support the expansion of LIS Jamaica; provide VL diagnostics support through quality Improvement activities for HIV Rapid Test Quality Improvement Initiative (RTQII) and quality systems strengthening
2. Providing Technical Assistance (TA) to the PEPFAR supported sites in Dominican Republic to achieve the 3rd 95 of the cascade and support the implementation of Recency Testing in 23 PEPFAR-supported sites, to enhance and guide HIV index testing activities.
3. Support strengthening of laboratory Management Towards Accreditation (SLMTA)
4. Support Quality Improvement activities for HIV Rapid Test Quality Improvement Initiative (RTQII)
5. Facilitating implementation of continuous quality improvement initiatives for TB diagnostics.

This report describes activities carried out under this program for the period 01 April 2021 to March 2022. AFENET registered several achievements under the various funded scopes of work as highlighted in the scope specific report.

Reports are presented by region, scope of work, highlighting activities, achievements, challenges encountered, solutions, best practices, lessons learned and recommendations.

Acronyms

AFENET	African Field Epidemiology Network
ART	Anti-retroviral therapy
CD4	Cluster of Differentiation 4
CDC	Centers for Disease Control and Prevention
CQI	Continuous Quality Improvement
CONABIOS	Consejos Nacional de Bioética en Salud
DATIM	Data for Accountability, Transparency and Impact Monitoring (PEPFAR)
DBS	Dry Blood Spot
DH	District Hospital
DNA	Deoxyribose Nucleic Acid
DTS	Dried Tube Specimen
ECHO	Extension of Community Health Outcomes
EID	Early Infant Diagnosis
EQA	External Quality Assessment
EQAS	External Quality Assessment Scheme
HEID	Health Center IV
HIV	Human Immunodeficiency Virus
HIV-RT	HIV Rapid testing for HIV
MoH	Ministry of Health
NHRL	National HIV Reference Laboratory
PEPFAR	President's Emergency Plan For AIDS Relief
PEEC	Programa de Evaluación Externo de la Calidad
PMTCT	Prevention of Mother To Child Transmission
PT	Proficiency Testing
QMS	Quality Management System
RTCQI	HIV Rapid Test Continuous Quality Improvement
SLMTA	Strengthening Laboratory Management Toward Accreditation
SLIPTA	Stepwise Laboratory (Quality) Improvement Process Towards Accreditation
VL	Viral Load of HIV
VLSM	Viral Load Sample Management System

SECTION I: PROGRESS SINCE PREVIOUS ANNUAL REPORT

1.1: Successes/ accomplishments

ANGOLA

In FY21-22 the activities focused in four Angola Provinces Benguela, Lunda-Sul, Huambo and Cunene in 22 health facilities.

Through PEPFAR support, AFENET – LAB has the main goal to assist Angola Ministry of Health in all HIV programs, namely the first lady´s inititative "Born Free to shine". In FY22, the activities will continue to focus in four Angola Provinces Benguela, Lunda-Sul, Huambo and Cunene in 22 health facilities.

(1) SCOPE: Quality Improvement of POC testing

- Develop a training curriculum for HIV point of care (POC) testing: HIV rapid testing and POC VL/EID
- Conduct trainings and mentorship for implementation at site level
- Modernize EID policy, create central and provincial level systems for implementation of EID testing
- Create a tracking and regular competency assessment system for certified facility-level HIV testers
- Develop and implement EQA/PT programs for HIV-RT, VL/EID, TB Xpert

(2) SCOPE: Expand HIV Viral Load Testing (HIV-VL/EID)

- Conduct training and supervision of HFs in sample collection and referral
- Provide VL/EID sample transport between HFs and referral laboratory; train and supervise sample transport networks
- Support quantification exercises in VL supply chain and promote continuous quality improvement practices in referral laboratories

(3) SCOPE: Improve Monitoring & Evaluation for Viral Load and Early Infant Diagnosis

- Implement laboratory information system (LIS) in referral laboratories, including dashboards for disaggregated data visualization
- Develop facility-level M&E tools for VL and EID testing and implement them to PEPFAR supported provinces

(4) SCOPE: ARPA - Support POC expansion for VL/EID

- Hire personnel to support VL/EID processes and procure POC equipment, reagents and consumables
- Support structural improvements for POC implementation

SUCESSES AND CHALLENGES

The following successes and challenges were encountered during implementation:

1. SCOPE: Quality Improvement of POC testing

1.1 Training Curriculum for point of care (POC) testing:

In this period, the quality packages for POC mPIMA and Xpert VL/EID testing were finalized with INLS review. We also provided technical assistance at the training of trainers in counseling and rapid HIV testing conducted by INLS in Benguela

2. **Implementation of POC testing of VL/EID**

a) PEPFAR partners and INLS continued the pilot implementation of POC testing of VL/EID at Lunda Sul province, which in this period mainly included: liaison with Lunda Sul health departments and INLS for optimization of POC testing; switching sample type; supporting POC reagents stock monitoring and distribution; and continuous monitoring of POC testing.

Figure 1: POC testing productivity up to FY22 Q2 for Lunda Sul Maternity

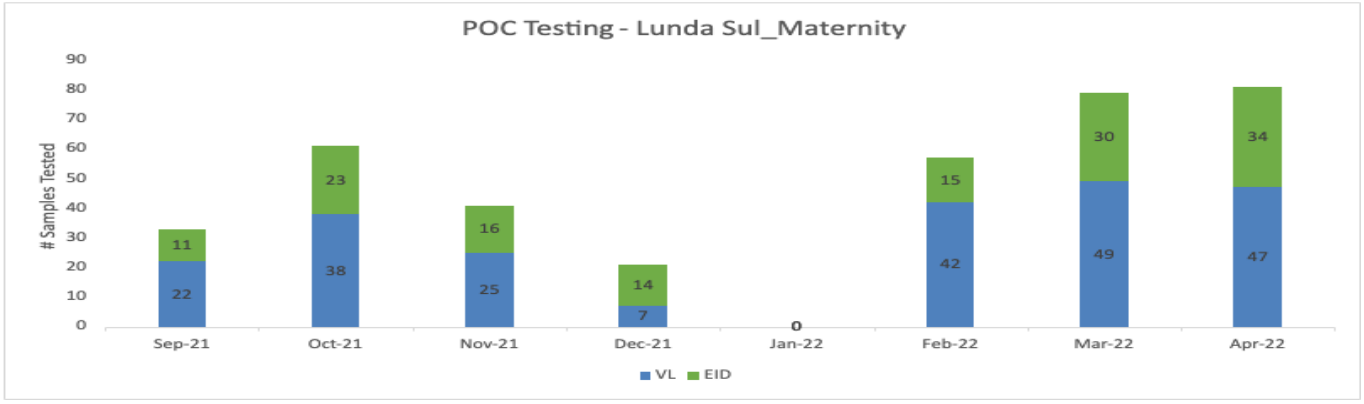
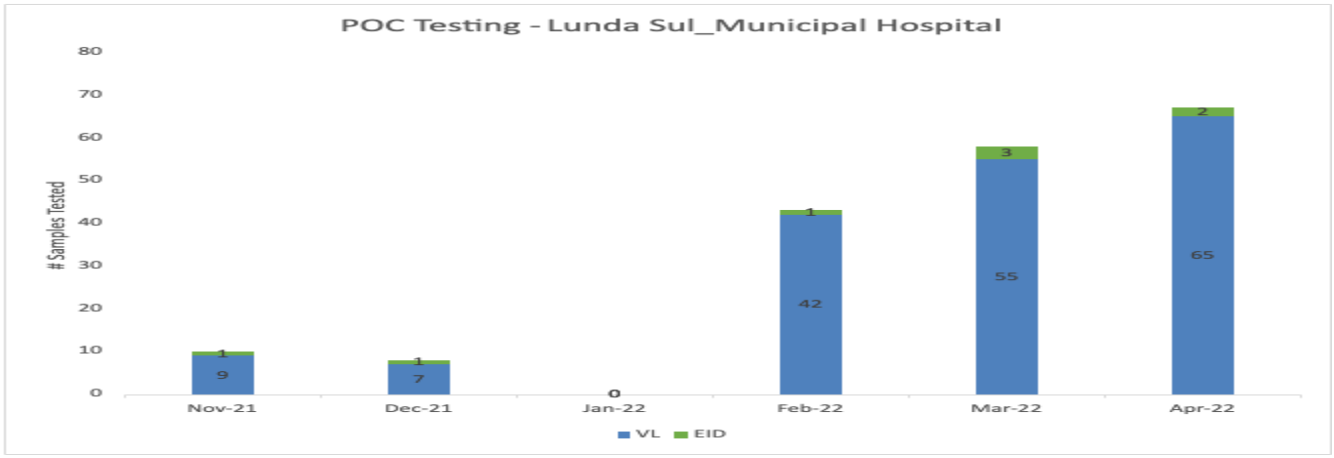


Figure 2: POC testing productivity up to FY22 Q2 for Lunda Sul Municipal Hospital



From the above two figures, it can be observed that there was an increase in POC testing in the two facilities, however reagent stockouts between December 2021 and January 2022 affected sample testing.

b) Technical assistance to CDIA & AISA (DoD partner) for POC GeneXpert implementation for VL/EID and TB testing in military sites, which comprised laboratory assessments and POC trainings to Luanda and Huambo technicians

c) Technical assistance to PNUD for POC GeneXpert TB implementation in Benguela and Kwanza Sul, which included promoting several multi-partner meetings for activity discussion and review terms of reference for TB network organization

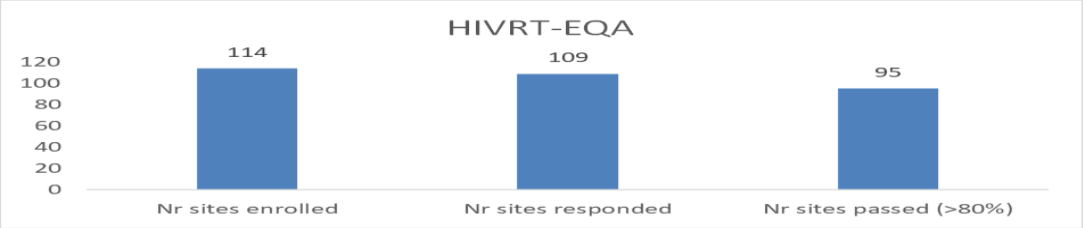
d) Reception of LASEC order of supplies for POC VL/EID implementation as part procurement of LABYR3 PEPFAR funds.

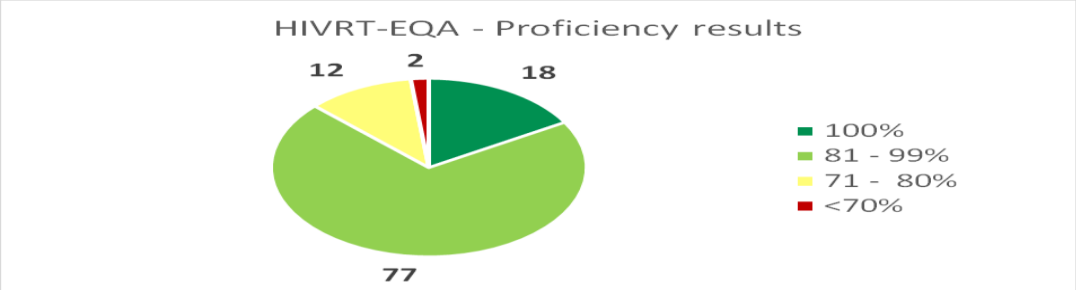
3. External Quality Assurance Programs for POC

In order to ensure quality of HIV testing, and to comply with LAB_PTCQI indicator reporting on DATIM, AFENET implemented Proficiency Testing Schemes for POC testing for HIV-RT; VL/EID and MTB/RIF tests in all the 4 provinces. Under HIV-RT EQA scheme, AFENET developed a Proficiency Testing (PT) program, which includes producing, distributing and analyzing an annual panel of HIV-DTS samples. This program was developed in partnership with INIS and has now been fully transitioned to INLS for sustainability.

Under the HIV RT EQA 2021 scheme, AFENET mentors compiled, analysed and reported HIVRT EQA panel results from the PEPFAR supported facilities and partners; and conducting supervision visits for corrective actions in Huambo, Benguela and Cunene.

Figure 3: HIVRT EQA 2021 scheme results





From figure 2, it can be observed that HIV RT EQA program was implemented in 114 HIV RT testing sites including public, Military and community sites supported by PEPFAR. The Proficiency results show that 109 sites responded and 95 sites scored higher that 80%

Under HIV VL/EID-POC EQA in Q2, the new POC sites were enrolled for the 2022 SmartSpot program with expected 1st cycle in April 2022. As for MTB/RIF in Q1 we conducted the 3rd cycle of SmartSpot 2021 program 2021 at the PEPFAR supported sites with Xpert machines. From 5 sites enrolled, 1 participated and 1 passed. The lack of participations was due to equipment's breakdown and lack of maintenance. In Q2, the sites were enrolled for the 2022 EQA program provided by CDC-Atlanta. AFENET technical assistance included procurement of EQA panels, distribution, training and corrective actions to participating sites.

4. In service trainings

AFENET mentors have been conducting in service trainings as per the SIMS action plans, for continuous quality improvement of HIV testing and biosafety.

Some of the challenges of Scope 1 were:

- Reduced availability of testers at the testing points to participate in the trainings
- Lack of maintenance of Xpert equipments and Interruptions in Supply chain of mPIMA reagents

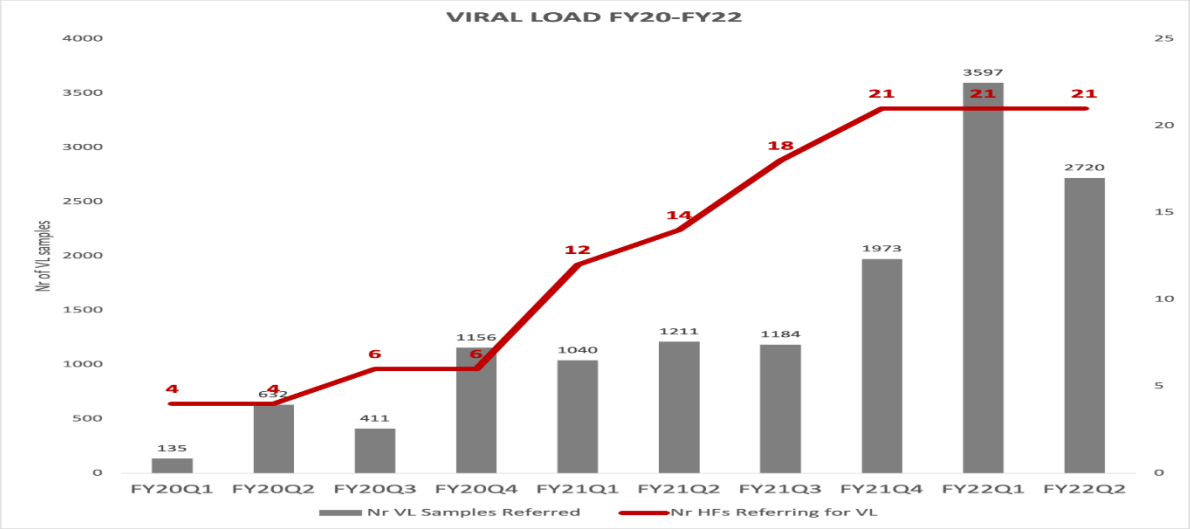
2. SCOPE: HIV-VL

In FY22 AFENET technical assistance to expand access and ensure quality of VL/EID testing, encompassed the following activities:

I. **Training and supervision for sample collection and referral**

In FY22 AFENET continued to provide technical assistance to all PEPFAR supported health facilities for VL and EID sample collection and referral. Main activities included trainings to laboratory technicians in sample collection and referral, supervision of collection and referral, monitoring of VL laboratory records and transmittal forms.

Figure 4: Progress of HIV VL sample collection



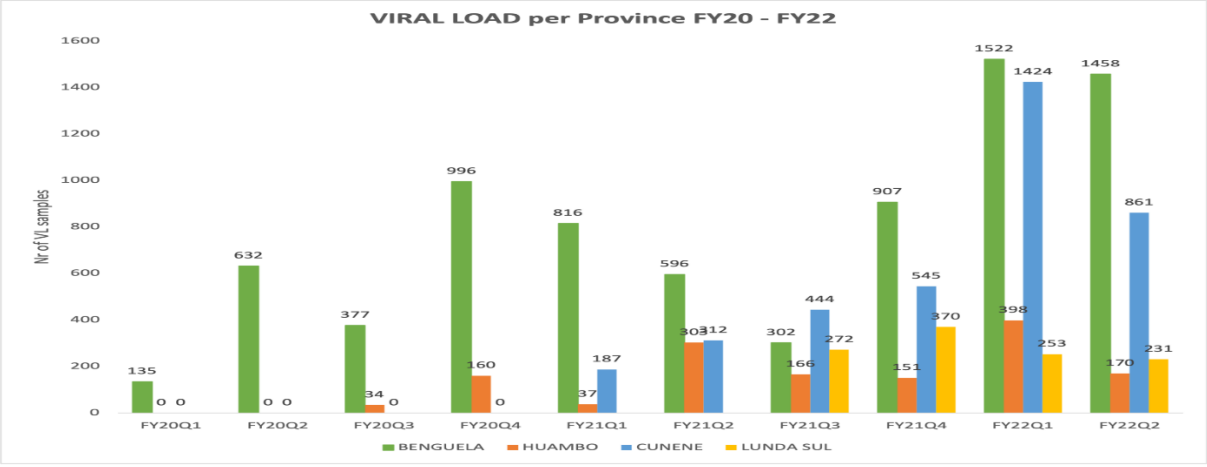
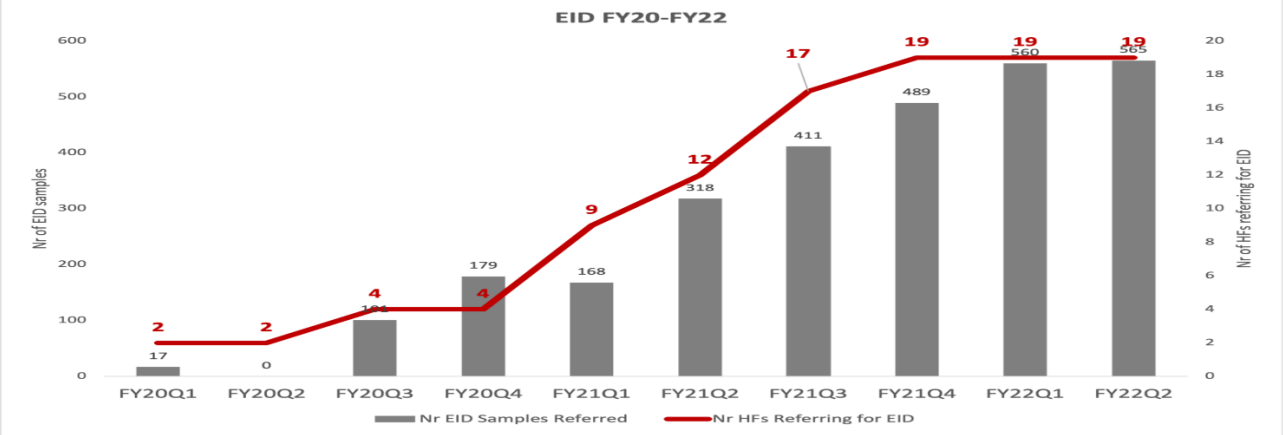
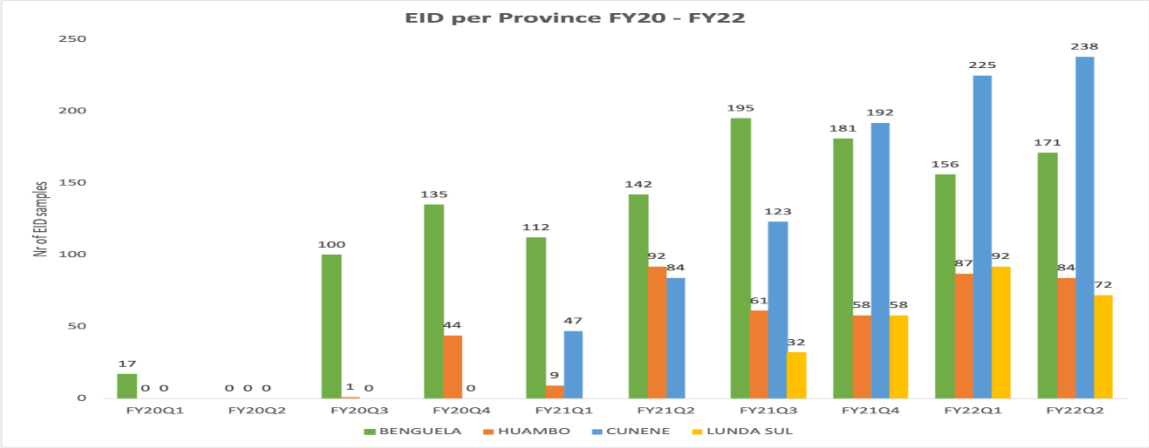


Figure 5: Progress of HIV EID sample collection





2. Support to sample transport networks

In FY22 Q1-Q2 AFENET continued to supportsample transportation between 4 PEPFAR supported health facilities and the referral laboratories. In Benguela and Huambo the service is conducted by two transport companies *Marcelina Express* (Benguela) and Cardimar Service, Lda. Staff from these two companies received sample transport and biosafety training from AFENET mentors. Lunda Sul and Cunene provinces are using MACON which isa regular goods transport company, paid by AFENET.

In this period AFENET also provided technical assistance to UNDP to develop sample transport networks in Benguela and Kwanza Sul.

3. Continuous quality improvement practices at Benguela Laboratory

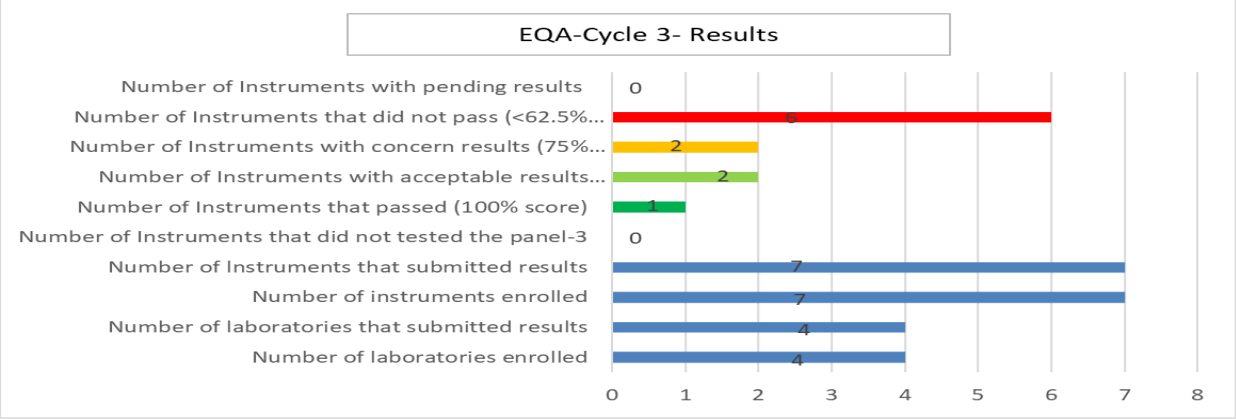
AFENET continued to support quality improvement activities in Benguela regional laboratory (LRVM) to strengthen/EID sample testing from 3 PEPFAR supported provinces (Benguela; Huambo and Cunene).

AFENET support mainly included mentoring, EQA, trainings in Quality SOPs, troubleshooting, and technical assistance for stock monitoring and reporting. AFENET also provided supplies and other needed auxiliary equipment, printing supplies; testing and collecting supplies; centrifuge.

4. External Quality Assurance Programs for VL/EID in central platforms

In order to ensure the quality of VL/EID testing, and to comply with LAB_PTCQI indicator reporting on DATIM, AFENET enrolls central laboratories for EQA at SmartSpot-South Africa. In Q1, we conducted the 3rd cycle of SmartSpot 2021 program 2021, and in Q2, the sites were enrolled for the 2022 SmartSpot program with expected 1st cycle in April 2022. AFENET technical assistance includes EQA panels' procurement, distribution and training and corrective actions to participating sites.

Figure 6: HIV VL/EID Smartspot 2021- 3rd Cycle results



From figure 5, it was observed that for the different sample types tested in each of the instruments enrolled and for the results released, there was a decline in panel scores between the cycles indicating that a possible technical error from the testers. Follow up vivits were conducted and it was observed that some of the laboratories did not maintain testing quality between the three submission periods and also some laboratories did not test the EQA panels.

5. VL/EID Quantification and procurement

In Q1 AFENET participated in several procurement meetings with INLS and PSM to support VL/EID commodities to be procured by PEPFAR in FY22; AFENET contributed with consumption analysis and reviewing items list.

In the Scope 2 the major challenges were:

- Inconsistent supply of sample collection supplies & testing reagents
- VL/EID service interruptions at LRVM due to lack of reagents and equipment problems
- High TAT due lab interruptions and Lack of QMS at LRVM.

- Delays to formalize national transport contract

3. SCOPE: Improve Monitoring & Evaluation for Viral Load and Early Infant Diagnosis

3.1 Activities for LIS implementation at VL/EID referral laboratories:

In Q1 a major milestone was achieved with LIS implementation at the VL/EID referral laboratories: LBM in Luanda and LRVM in Benguela. AFENET activities through PEPFAR funds provided technical assistance to MoH IT teams, installed internet links and IT equipment, and worked with the labs to develop the LIS map of indicators.

a) **VL/EID dashboard development:**

AFENET developed a draft dashboard for VL testing and in this period, the focus was to discuss and create the interface with the LIS at the reference laboratories.

b) **Facility level M&E tools for VL/EID**

AFENET has been supporting the health facilities with the implementation of standardized laboratory logbooks and forms such as VL Laboratory logbook; EID Laboratory logbook; Sample transmittal forms; General QMS records

The technical support included tool´s training, monitoring, analysis, and indicators reporting. A web-based form and database are being developed to improve monthly indicators reporting.

Major challenges encountered include:

- Delays to implement LIS due long approval processes on the side of MoH and system provider
- Lack of national standardization of laboratory logbooks

4. SCOPE: ARPA - Support POC expansion for VL/EID

Through ARPA funding, AFENET aimed to support expansion of POC network for VL/EID testing. In this reporting period, AFENET supported INLS and hired a VL/EID supervisor for Benguela regional laboratory and recruited 5 facilitators of VL/EID processes for the PEPFAR supported facilities. The procurement of POC equipment's and reagents was carried for Abbott-mPIMA and Cepheid-Xpert machines. Several meetings were held between PEPFAR agencies, partners and INLS to discuss the pros and cons of each platform. With INLS consent, it was decided to move forward with the procurement of mPIMA machines through the national representative and a reagents rental contract.

RECOMMENDATIONS

I. Considering POC quality activities (Scope 1), we recommend PEPFAR partners and MoH to make a coordinated approach for the expansion the implementation of VL/EID POC testing after a diagnostic network optimization.

II. In the expansion for VL/EID scope 2, we advise MoH to disseminate the national plan for VL expansion to all partners and improve the supply chain for laboratory commodities.

III. For the M&E scope (3), we recommend a national standardization of VL/EID tools and the completion of the LIS interface with VL/EID dashboards.

IV. For the ARPA scope (4) we recommend continuing with the procurement process in a expedite way.

TB Diagnostic Test Continuous Quality Improvement (CQI)

Under this scope, the following activities were planned

1. TB Clinic-Lab Interface Continuous Quality Improvement (CLICQ!) ECHO Project

AFENET in conjunction with CDC and Ministry of Health in Uganda launched the TB Clinic-Lab Interface Continuous Quality Improvement (CLICQ!) ECHO program in October 2021. This program guided healthcare workers and laboratory staff through review of their clinic-laboratory data and identified gaps within their patient cascade

Curriculum review

The curriculum review was intended to customize the Laboratory Regional Collaborative (LARC) curriculum to generate training material to support TB continuous quality improvement (CQI) approach.

A two days' workshop was held in Kampala in September 2021 by National TB and Leprosy Program (NTLP) and AFENET which involved document review, power point presentations and discussions to generate training material that were used during the two learning sessions.

Field testing of DiCE tool kit

The DiCE tool was piloted at Ndejje HC IV and TASO Entebbe, prior to its use in the intended study sites in both high and low volume facilities. The purpose of the pilot was to check the DiCE tool kit's functionality before conducting baseline assessment, identify area of improvement and help assessors familiarize with the DiCE tool.

Following communication from the NTLP, a team from the Ministry of Health and AFENET visited the two facilities on September 24-25, 2021. Suggestions were made for enhancement of the DiCE tool based on the pilot results.

DiCE Tool Entry Assessments

NTLP, CDC and AFENET conducted project entry assessments (Baseline assessments) in all the 12 project facilities. This was a 2 weeks' activity carried out in the month of October 2021. The activity was commenced by entry meetings with regional implementing partners, District Health Teams to brief them on the aim of the

project and the objectives of the activity. The entry assessments generated baseline data, which was used to evaluate performance of the project.

At facility level, the assessors conducted entry meetings with the facility in-charges to provide a brief background about the project and the activities. Later, document review was done to collect data from the TB HMIS tools (Presumptive TB register-HMIS 013, TB Laboratory register-HMIS 010, Health Unit TB register-HMIS 009) using the DiCE tool. The collected data was cleaned to ensure quality.

Mentorship and Oversight- ECHO Virtual Training Sessions

NTLP in collaboration with AFENET and CDC Uganda held weekly ECHO virtual training sessions for six health facilities between November 3rd 2021 and February 2nd, 2022. The one-hour sessions included didactic presentations from numerous presenters on a variety of topics aimed at increasing participants' knowledge in various elements of TB diagnosis and management. Mentors also supported facilities in implementation of the chosen improvement projects and facilitated peer to peer mentorships. During these sessions facilities, presented progress of their Quality improvement projects. Appendi1 and Appendix 2 show results of the aggregate Gap analysis (DiCE + CLICQ! Facilities)

From the above analysis, there was a marked improvement in facilities that received DiCE and CLICQ! compared to those that received DiCE only.

Conclusion

The project is still underway and currently drafting the final report. It is going to be followed by dissemination and publication in a peer reviewed journal. Planning for phase 2 activities is underway.

2. Electronic Performance Evaluation Platform for GeneXpert MTB/RIF Sample Processing and addition of XDR PT testing, provision of test environment, enhanced reporting, usability & security improvements, general maintenance to existing performance evaluation platform

SystemOne were engaged by AFENET to complete and extend the Electronic Proficiency Testing (ePT) system for evaluating the quality of testing for tuberculosis using GeneXpert diagnostic instruments.

In 2021, the scope of work was increased to allow participants to capture results from the new Cepheid XDR cartridge. After many delays, it was considered to adjust this work to create a PT test for Truenat tests developed by MolBio in India. For various reasons the TB Monitoring & Surveillance tram decided to stick to capturing results for only Cepheid MTB/Rif & MTB/Rif Ultra assays and the time budgeted for building

a) Expected deliverables

The following deliverables were agreed upon for the 2021 scope of work:

1. Cepheid XDR Cartridge integration – Delayed. CDC team not yet ready for this.

2. Demo/Test server setup for testing and QA. Completed.
3. General support and maintenance as needed while conducting performance evaluations throughout 2021. Ongoing.

b) Delivery progress

i. GENEXPERT XDR submissions

The uptake of Cepheid Dx Software v6.3, 10 color modules and XDR cartridges has been slower than expected and SystemOne evaluated the potential prospect of rather creating a performance test for MolBio Truenat test kits.

The TB Monitoring & Surveillance Team's resources were strained during the latter half or 2020 and new performance evaluation test was designed for the Truenat or XDR. It was decided to redirect efforts to:

- Improve the reporting of panel stability in the field
- Improve the accuracy of reflexive comments on participant reports
- Ensure that raw data exports could be used to verify the system's report outputs for certification purposes
- Report on mean Ct values submitted by MTB/Rif Ultra users using the algorithm that is used bythe instrument.

ii. Demo/test server setup

A staging environment was created for changes to be tested by the TB surveillance and monitoring team before being moved to the live system.

iii. General system maintenance and web hosting

While undergoing the process to obtain ISO certification the CDC TB Monitoring and surveillance team has been focused on verifying report outputs by performing manual calculations on raw data exports and reproducing the report results. Several discrepancies were identified, mostly involving the rules thattrigger reflexive comments for cartridge expiry and instrument calibration dates. These discrepancies ledto more system refinements.

Raw data exports allowed the team to identify parts of the system where validation rules needed to be enforced such as on the Assay field and on the individual result selections on the mobile app. The enrolment screen, which was present on the original open-source system that this system is basedoff, was improved for better usability.

iv. 2020-A PANEL

A panel was sent to 811 participants in November 2020. The deadline for submission on the 2019-Apanel was 15 February 2021. (752 participants responded to the survey; 629 participants received their panels; 616

participants were able to submit test results and 575 participants scored 80% or higher)

The TB monitoring and surveillance team, at CDC HQ finalizing the results of this panel.

v. Ongoing work

The TB monitoring & surveillance team has asked for instrument calibration information to be entered into its own dedicated section on the mobile app. General usability enhancements continue to be made, that reduces the number of steps required tocreate new panels and enroll participants. The landing page redesign is live on the staging site and awaits sign off/feedback from the TB monitoring& surveillance team at the CDC.

DOMINICAN REPUBLIC

AFENET with funding from CDC- Dominican Republic office supported several laboratory-strengthening initiatives in the Dominican Republic under the following objectives:

Achievements:

Objective One: provide technical assistance (at) to the 74 accredited comprehensive HIV care centers in the dominican republic.

In this reporting period, AFENET provided technical assistance to 73 SAIs with the aim of improving indicators for HIV care cascade in each of the SAIs.

The data obtained from the FAPPS reports in each SAI were disaggregated by nationality, age groups, by sex, status according to the FAPPS classification, VL status for patients undergoing active treatment and who have also undergone HIV VL test in the previous year.

A consolidation of the indicated variables of the 73 SAIs was prepared, the results of which are contained in the document “Description of indicators of the HIV care cascade”.

The summary of those findings is:

- The total number of patients enrolled in the 73 is 68,285, of which 74.4% are of Dominican nationality; those of Haitian nationality correspond to 24.6% and 1% to other nationalities.
- Of the total number of patients, males constitute 47% and females 53%; 1% are in clinical follow-up; 58% active in treatment; 7% inactive in follow-up and 34% are inactive in treatment.

The indicators described above give a clear idea of the existing gap to achieve the 2nd. 95 of the HIV care cascade and suggest urgent corrective action.

For the 3rd. 95, of the total number of active patients in treatment, 63% have suppressed VL. In the exercise, the number of patients with suppressed VL was obtained from those who had been tested in the previous year.

Taking as reference the FAPPS cut-off data of the National Health Service of 4/30/2021 in the TREATMENT CASCADE sheet 95-95-95 for 2021, relating to those obtained with the SAI FAPPS report, it can be indicated that the 1st 95 as a goal is achieved.

For the 2nd. 95, what has been achieved reaches 64%, with a gap of 36%. For the 3rd.95, what has been achieved is 83% of the active patients in treatment with updated viral load in the last year.

The data supports for the elaboration of the summaries (Excel file with sheets with descriptive data of each one of the 73 UPS) accompany the mentioned document.

The collection of data from each SAI had the participation of the clinical team of AFENET RD under the coordination of M&E officers.

Specific activities conducted during this reporting period:

1. **Level of preparation for increased viral load in Clinical Facilities**.

   AFENET Technical mentors concluded site evaluations in the 74 Integrated HIV Care Sites using "HIV VL Checklist." During this reporting period, mentors' condcucted second evaluation of HIV Care sites in Zone1 (has 27 SAIs), Zone 2 (has 25 SAIs) and Zone 3 (has 23 SAIs).

2. **Follow-up visits to monitor the progress of improvement plans.**

Table below shows the number of visits conducted from Q1 2020 up to Q4 2021 period in all the 74 UPSs per AFENET zones.

During the reporting period, a total of 713 visits were made to all comprehensive HIV Care Services (SAI's), significantly increasing the number of visits made during Q1. In October 2021, the Project recruited a total of six (8) Community Laboratory Technicians to work closeley with the clinical teams to address all challenges being faced by the SAI's while providing HIV services.

Table 3: Number of visits conducted from Q1 2020 up to Q4 2021

AFENET AREAS	No. of SAI's	Q1	Q2	Q3	Q4	TOTAL
Zone one	27	9	52	97	64	**222**
Zone Two	25	7	54	48	48	**157**
Zone Three	23	3	88	127	116	**334**
Total	**75**	**19**	**194**	**272**	**228**	**713**

Source: Reports of visits to AFENET RD Technical Advisors

In the reporting period, Q4 (2021), 228 visits were made in the three AFENET supported zones.

As can be seen in the table above, 713 follow-up visits were made to follow up on status of action plans in the different SAIs. During Q2, Q3, and Q4, the increase was significant due to the fact that there were exclusive personnel to assist the clinical area, although in zone 2 it was only for one quarter.

Four SAIs did not receive any technical support visits during this reporting period since there was no record of HIV patients seeking services form these facilities. These SAIs are La Victoria Prison and the Materno Dr. Reynaldo Almánzar (from Zone 1) and Casa Rosada, of H. Ramon de Lara and H. Dra. Evangelina Rodríguez Perozo (Hospital de la Mujer) (from zone 2).

2.1. Improvement plans

During this reporting period, both the laboratory and clinical teams focused on supporting SAI's to implement activities that were included in their action plans. These action plans were base don the HIV VL checklist assessment that had been conducted to establish level of Preparedness for Increased Viral Load testing in Clinical Facilities. No new improvement plans were initiated, visits by the field team were focused on following up on the Action Plan drawn up on the basis of the implementation of the Checklist to establish

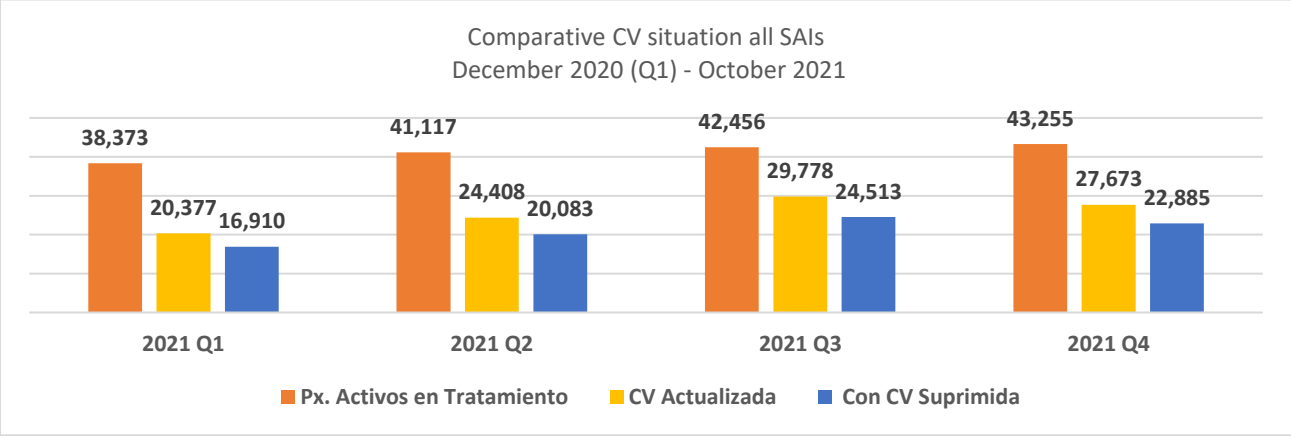
2.2. Implementation of Standard Operating Procedures (SOPs) in SAIs

During this reporting peeiod, the Technical Assistants and Clinical staff supported SAIs to develop SOPs, these SOPs are in line with the action plans and also address gaps identified during assesments using HIV VL checklist establish level of preparedness for increased viral load tessting in Clinical facilities.

2.3. HIV Viral Load Indicators (HIV VL)

The graph below shows comparative Q1 and Q2 data for all active patients on antiretroviral treatment, patients with updated HIV VL results and total number of patients with suppressed HIV VL results in the 74 SAI sites supported by the Project.

Figure 7: Comparative CV situation all SAIs (December 2020 (Q1) - October 2021 (Q4)



Source: FAPPS/CDC

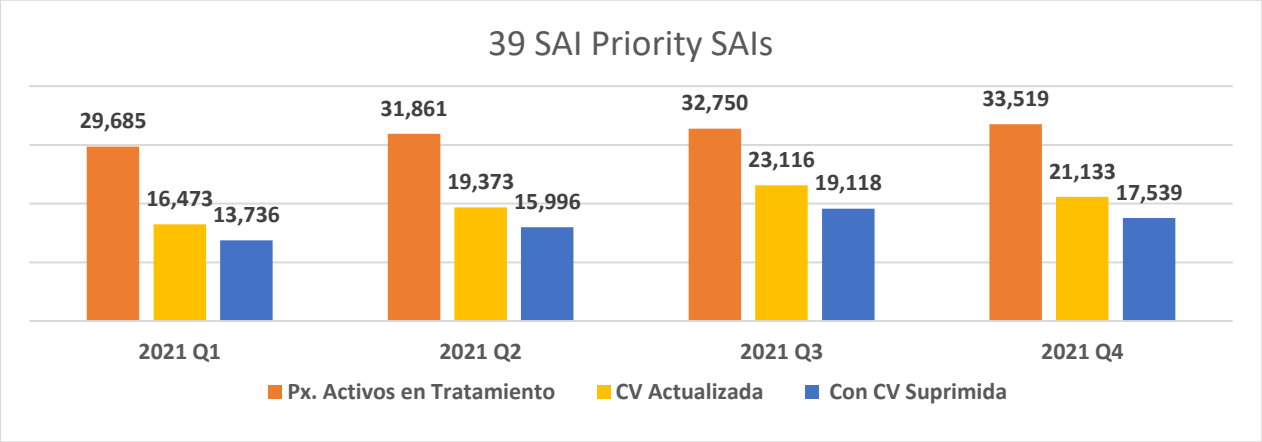
Number of patients undergoing ART treatment between Q3 and Q4 increased by 799 users, that is, 1.9%;as well as old patients that have been reinitiated on ART (patients that had abandoned treatment). During this reporting period, a total of 4,882 patients had their HIV VL results updated as compared to Q1 period. This

was posible due to the different interventions carried out by the field team, where SAI staff were encouraged to quickly identify patients who had expired resumes, as well as new ones who had just started ART treatment. Technical support was also provided to strengthen data entry of HIV VL test results into the FAPPS system by all HIV VL testing laboratories.

There were an additional 5,975 patients in Q4 with suppressed HIV VL CV results in Q4 as compared to Q1 reporting period. This increase is due to the revised guidance by CDC DR, where patients with CV updated in the last 12 months are taken into account

The following graphs shows HIV Viral load suppression rates in 39 Prioritized and Un prioritized SAIs compared to the previous quarter (Q1):

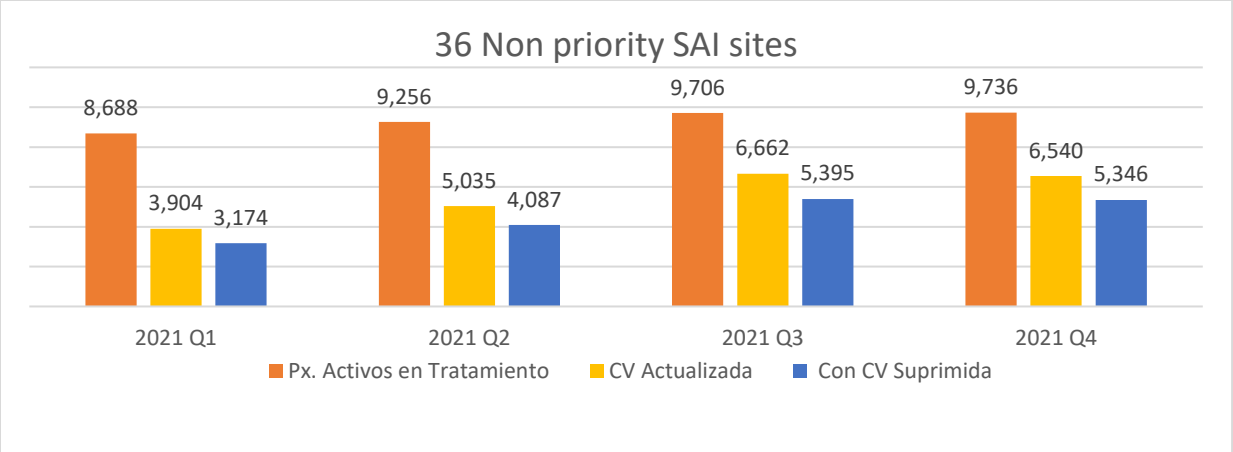
Figure 8 : Comparative situation CV 39 SAI Prioritized December 2020 (Q1) - October2021 (Q2)



Source: FAPPS/CDC

From the above graph, it can be observed that the number of patients undergoing ART treatment between Q3 and Q4 increased by increased by 769 users (2.3%); and throughout the year they increased by 3,834 (12.9%).. In Q4, there no laboratory tests conducted and as such the number of patients with updated VL results decreased.

Figure 9: Comparative situation CV in 36 Non Prioritized SAI sites (December 2020 (Q1) - October 2021 (Q4)



Source: FAPPS/CDC

From graph above, it can be observed that the number of patients on ART tratement increased by 1,048 (12%) between Q1 and Q4.. In this sense, it is worth noting that non prioritized SAIs are the ones with the least number of patients as compared to the priority SAI sites. Due to stock out of essentila laboratory supplies, there was no laboratory testing for Viral load carried out between Q3 and Q4 and this led to a decrease in the number of HIV patients with updated VL results as well as those with suppressed VL results.

2.4. HIV VL sample collection in project supported SAIs

In order to achieve HIV Viral load supppression, there is need for increased sample collection for HIV VL testing and monitoring. AFENET Technical mentors provided technical assistance to all the project supported SAIs to increase number of HIV VL sample collection days per week. However, most of the SAIs experienced stock of essential laboratory supplues since May 2021 and this affected sample collection, transportation and testing.

AFENET Laboratory Technical Assistants will keep supporting each of the SAI laboratories to ensure that there is an established HIV VL sample collection routine in support of HIV VL testing and monitoring.

2.5. HIV Viral load testing cascade monitoring

In reference to the WHO APRIL 2019 technical guidance " TECHNICAL UPDATE - DEVELOPMENT OF A MONITORING FRAMEWORK AND EVALUATION FOR THE VIRAL LOAD TEST", an additional tool (HIV VL monitoring tool) was developed by the Technical Asistants to be able to collect data on the following indicators:

- Number of HIV Viral load tests sent by SAI sites to the sample transport network and laboratory.
- Number of HIV Viral load tests received by the site lab.
- Number of HIV Viral load tests performed by the lab.

The HIV VL Monitoring tool was deployed during this reporting period and all the 73 SAIs are currently using the tool for data reporting.

2.6. Other activities.

Rapid tests carried out in laboratories

In order to promote the reporting of new HIV cases in SAIs, CDC RD instructed the AFENET technical team to obtain data on the number of rapid tests performed in SAI laboratories, as well as the number of positive tests and the corresponding %.

Table 4: HIV RT test data obtained from Q2 to Q4 2021

Q2			Q3			**Q4**			**TOTAL**		
No. Tests	**Pos.No.**	**%**	**No. Tests**	**Pos.No.**	**%**	**No. Tests**	**Pos.No.**	**%**	**No. Tests**	**Pos No.**	**%**
61,955	2,360	4%	63,603	2,570	4%	68,711	2,461	4%	**194,269**	**7,391**	**4%**

Source: Report of Technical Advisors

In the period Q2 to Q4, 194,269 rapid tests were performed, of which 7,391 were positive, representing 4% of the total tests.

2.7. Technical advisory team reports: ZONE 1

Approach

Scheduled visits and follow-ups were conducted in all the health facilities that make up zone 1. In-person visits were made to 99% (25 of 26) of the EESS (SAI and Laboratory) in zone 1. (Pending visit SAI of the La Victoria Prison). Likewise, all the AFENET supported SAIs of Zone 1 were visited in a timely manner and on several occasions to deliver educational material (printed national guides, Brochures about CV and CD4, medical infographics), with which we contributed to educating patients about their viral load status,

Technical assistance was provided to clinical laboratories, 34 visits were completed, which took place in the 21 laboratories that make up the zone 1. Site visits were conducted to each of the SAI depending on their indetified gaps, some of the laboratories received up to three visits in the quarter, while others received only one site visit.

SAI were coordinated through HIV supervisors and Clinical Laboratory Services Supervisors of the National Health Service (SNS) with participation of respective Regional Health Service focal persons. AFENET Technical teams worked together with Doctor in charge of Comprehensive Care Service and the laboratory manager (each in their work area).

Progress

As a result of the routine follow up visits and technical assistance provided to SAIs (comprehensive care services) in zone 1, there was improved data quality relating to number of active ART patients, patients with updated HIV Viral load test results and patients whose Viral load has been suppressed.

AFENET supported the care sites with selected equipment/supplies. This intervetion led to four laboratories increasing the number of HIV VL sample collection days and this inturn enabled same day sample collection from patients there by reducing loss to follow up and improving patient care/management.

With resumption of sample reception at LNSPDD, and requirement to have HIV VL tests carried out for patients that have expressed need to update their HIV VL results, AFENET Laboratory technical team provided technical assistance to each health facility to be able to increase the number of samples collected in additon to proper sample collection procedures, sample preparation and shipment to the reference lab. On average, about 350 samples are being taken weekly for Viral Load testing at health facility Laboratories in Zone 1. This has been possible due to the increasedl HIV VL sample collection days in addition to traditionally established ones.

Activities

a) Accompaniment of the Clinical and Laboratory Team.

   Where the work plans were followed up, as well as the revision of the SOPs already established, the tool provided by the AFENET Monitoring and Evaluation manager was used to track HIV VL results generated by the FAPPS.

b) Laboratory follow up visits:

   The team utilized these visits to share general information on the AFENET technical assistance objectives, review of work plans developed during previous visits, review of SOPs implemented and those in process, monitoring progress of activities implemented to achieve the 2nd and 3rd 90 of the cascade. The team also reviewed lab records (Sample collection registers) and monitoring timely receipt of HIV VL test results.

Review of registers

This action is meant to ensure that the records in use are completed correctly, in their entirety and in a timely manner, thus guaranteeing the easy access and availability of reliable data. The following registers/records are reviewed by the team

- Sample registration book for CV, CD4 and DNA-PCR tests sent for processing and received results
- Rapid HIV Test LogBook, also known as "Visa Book".

Data from these registers provides valuable information that can be used to monitor the flow of services provided at each site and corresponding demand for the services offered, from the moment the tests are indicated.

Viral Load Checklist Application:

Face-to-face visits were made to 12 laboratories located in the National District, Santo Domingo province, eastern and northern parts of the country to establish their level of preparation to increase HIV Viral load testing.

AFENET Technical advisors provided technical support to all AFENET supported laboratories in zone 1 to close out all identified gaps and prepare the laboratories for upcoming assessments.

Laboratory technical mentors were also able to carry out the second Viral Load checklist assessment and results will guide on the development of corrective actions. The following sites in Zone 1 were assessed; Yamasa Municipal Hospital; Dominican Bra

Record tracking

- Periodic review of the data record books, the completeness of the variables that are requested in them and the quality of the recorded data.
- Periodic review of patient records with more than 1000 copies to assign the most appropriate treatment.
- Updating of medical records on the SIRNAI platform, Sample record book for VL, CD4 and DNA-PCR tests.
- Computer tool for the referral of sample data for VL, CD4 tests and follow-up to the report of results. (FAPPS module), Rapid HIV Test Record Book
- Nominal Registry System for HIV Tests" (SIRENP-VIH). Installed in eight AFENET supported clinical laboratories

Continous Education:

The following continous proffessional development trainings were conducted for AFENET technical during this reporting period: Epi-Info course for laboratory personnel taught by CDC and Improvement Plan Training (CQI initiative CDC-CAR.

Planned Activities:

- Promote periodic review of FAPPS data by clinical staff to identify patients whose viral load will soon be outdated, as well as the identification of patients with VL ≥ 1000 copies/ml, appointment to strengthen adherence, identification and management of virological failure, supported by education guidelines for adherence and Care for PLHIV, with a view to achieving viral suppression in these.

- Optimization of diagnosis, treatment and monitoring of patients with HIV, with improvement in the quality of interventions, for greater efficiency.
- Implementation of the improvements identified from the evaluation carried out with the Viral Load checklist (extension of the calendar and hours for taking samples for VL tests and shipments to the processing laboratory).
- Coordination of actions with the National Health Service and Regional Health Services in order to continue aligning our interventions and thereby achieve the sustainability of the improvements achieved.

2.8. Technical mentor report for Zone 2

Activities conducted and achievements

A. HIV VL assessments and follow up visits.

During this reporting period (Q2), AFENET technical teams continued to support SAIs in Zone 2. A total of 48 visits were conducted, of which 13 visits were assessment visits using the HIV VL checklist and 24 were follow-up visits. The following activities were conducted by the technical mentor

- Review of the clinical records of patients with more than 6 months on ART who maintain viral load ≥1000 copies/ml, in order to define the possible causes of Non-suppression.
- Identification of patients in therapeutic failure (especially virological failure), cases that were discussed with the clinical staff and the files were separated so that the clinical and psychology staff reinforced adherence in cases where it was necessary.
- Follow-up of the work plan with the viral load checklist and preparation of service providers for the evaluation with the viral load checklist.
- Evaluation of 12 SAIs with the viral load checklist, 33% obtained a qualification percentage greater than 90% (Level 4), 33% greater than 80% (Level 3) and the remaining 33% greater than 60% (Level 2)
- Follow-up of work plans prepared with the findings of the evaluation with the SPI-RT list and strengthening of the quality of the process of carrying out the RT-HIV.

Laboratory technical mentors were also able to carry out the second Viral Load checklist assessment and results will guide on the development of corrective actions. The following sites in Zone 2 were assessed; Our Lady of Altagracia Municipal Hospital; Taiwan Azua Hospital; Alejandro Cabral Hospital; Federico Armando Aybar Hospital; Rosa Duarte Provincial Hospital; Application of a checklist to evaluate the activities of the HIV and CD4 viral load testing laboratory at the Gurabo Processing Center.

B. Implementation in COIN of the Epi-info form for registering viral load

AFENET technical team in Zone 2 continued to support implementation of Epi-info form to the COIN manager as an option for recording the HIV VL samples sent to reference laboratories and the HIV viral load results received. This intervention aimed at strengthening timely data analysis and reporting.

- Tracking viral load results with data generated by FAAPS using tool developed by M&E manager. The tool tracks the process of collecting and sending samples, as well as receiving results sent by the reference laboratories.
- Follow-up to initiated improvement plans.
- Provided technical support to laboratories in the development of quality improvement SOPs for PR-HIV process, with a view to the implement HIV Rececency Rapid tests.

C. Implementation of clinical activities in Zone 2

During this reporting period, the clinical assistants conducted visits to project supported sites in Zone 2 during which the following were carried out:

- Implementation of standardized operating procedures to address identified gaps during the CDC viral load checklist assessment.
- Carried out analysis of the HIV VL samples collected and HIV VL samples wi status of each unit with data analysis based on: Analysis of coverage status, review of un suppressed patients to identify the causes of non-suppression in patients over 6 months of ARV
- Status and follow-up of patients with viral suppression and linkage to the treatment scheme.
- Follow-up to identify and address factors that are affecting increased ART coverage and viral suppression in both HIV patients that are adhering to ART treatment and those that are not.

Challenges encountered:

1. Shortage of reagents and supplies in the processing laboratory, which led to the suspension of sampling IN May 2021
2. Limited service hours in the SAIs and laboratories, the service hours are Monday through Friday from 8:00 am - 12 noon.
3. Shortage of Human Resources in the clinic and the laboratory (doctors, psychologists, counselors, typing navigators) and in the laboratory (Bioanalysts).

2.9. Technical mentor report for Zone 3

Activities carried out and results obtained

1) Laboratory technical assistance

a) Follow up visits and VL monitoring

During this reporting period, AFENET technical team in zone 3 made follow-up visits and provided technical support to all 23 clinical laboratories of zone 3 with the support of Lic. Natys Lantigua. The team focused on updating viral load test results of each qualifying patient. The team was also able to support staff in all the SAIs to develop data tools and protocols that would be used to accurately anlayse VL suppression trends for each of the health centers visited. Technical support was also provided by the technical teams to

- assistance in the nominal HIV registration system program SIREMPE), and in the use of the FAPPS tool, in the following laboratories: Cien Fuegos Diagnostic Center, Arturo Grullón Hospital and Bella Vista Comprehensive Care Center.
- develop SOPs and improvement plans, work plans to address based findings from each of the visits conducted.
- Request for the number of HIV tests carried out, and the number of positive tests per month, by reviewing the SIS 01 registration forms, and strengthening the epidemiological surveillance system by notifying SINAVE.
- Visits to the 23 SAIs in preparation for an external assessment of their Viral load processes.
- Participation in the ECHO-LAB virtual tele-mentoring on quality management system in the laboratory.
- Coordination meeting with an epidemiologist, laboratory manager and epidemiological surveillance personnel of the Bella Vista Comprehensive Care Center, to strengthen the notification to SINAVE system by STI-HIV tesing sites.

b) HIV VL tracking tool

Technical mentors also continued to provide support in the use of HIVviral load tracking tool and how it can be filled with the data provided by the FAPPS platform The analysis and feedback of the data was carried out in each of the corresponding units followed by regular and continuous monitoring of the VL data.

The technical teams were also able to continue providing support and feedback to the SAI site staff through providing electronic versions of guides, instructions and forms for feedback and input.During this quarter, a number of meetings were conducted to create awarenes but also build capacity of the team in order to achieve project targets.

Laboratory technical mentors were also able to carry out the second Viral Load checklist assessment and results will guide on the development of corrective actions. The following sites in Zone 3 were assessed: Bella Vista Comprehensive Care Center; Hospital Estrella Urena; John XVIII Hospital; Arturo Grullon Hospital; Jose De Jesus Jimenez Almonte Hospital; CEPROSH; Morillo King Hospital; Ricardo Limardo Hospital; Saint

Vincent de Paul Hospital; Yun Peralta Profamily San Francisco de Macorís; Luis L. Bogaert Hospital; Rosa Cisneros Profamily Santiago and Diagnostic Center Cien Fuegos

Best practices/recommendations that can be adopted by others.

- Use of the tools provided by FAPPS platform to obtain more standardized data.
- Conduct routine meetings with regional managers involved in HIV programmes to obtain support and also present them with the data obtained to enable them understand actaul realities in these health sites.
- Constant communication with SAI and lab staff via phone calls, emails and messaging app like WhatsApp.
- Encourage staff from the health units to conduct routine data monitoring and analysis so as to indetify any gaps in ART that might affect VL suppression in patients.

c) Laboratory strengthening activities for Zone 3

Laboratory Technical assistants were able to :

- Implement the SPI-RT checklist assessments in both the PEPFAR priority and non prioruty sites.
- Implement the viral load monitoring tool and evaluation indicators with the laboratory managers.
- Supported development and review of SOPs for clinical care to adapt and implement these SOPs in the SAI.
- Supported development and review of SOPs for Viral load and CD4 testing in order for them to be implemented in the laboratories.
- Provided remote support to the SAIs to tracking and monitor implementation of improvement plans that had been initiated.
- Follow-up to increased viral load sampling days in establishments that only took weekly and fortnightly.

2) Implementation of clinical activities in Zone 2

During this reporting period, the clinical assistants conducted visits to project supported sites in Zone 3 during which the following were carried out:

- Training personnel in all Zone 3 SAIs on the proper use of the HIV viral load monitoring tool.
- Review of data present in the SIRNAI platform for statistical and clinical analysis, as well as analysis of the quality of HIV Viral load data.
- Conducted training for unit in charges on the importance of the different HIV viral load indicators. They were also trained on the national HIV guidelines to improve their knowledge and guarantee adequate management of patients.

- Monitoring of improvement plans and Identification of patients with outdated viral load to proceed and rescheduling them for sample collection and testing
- Identification of patients with viral load greater than 1000 copies for clinical follow-up and identification of therapeutic failures or poor adherence.
- Reviewed HIV VL data quality in each of the units and identification of inconsistencies in order to enter the correct data.
- Identification of patients who did not have an antiretroviral treatment regimen entered but were receiving treatment and those that needed a change in the medication regimen.

AFENET Clinical Assistants were also able to carry out the second Viral Load checklist assessment and results will guide on the development of corrective actions. The following sites in Zone 3 were assessed: Ramon de Lara military hospital; Evangelina Rodríguez Center (Profamilia Santo Domingo); COIN; Casa Rosada; Yolanda Guzmán Urban Clinic; Municipal Hospital of Yamasá; Dominican BRA; Sanitary Center of Santo Domingo; Taiwan Hospital; Alejandro Cabral Hospital; Federico Armando Aybar Hospital; Rosa Duarte Hospital and Miches Municipal Hospital.

Challenges encountered

- Changes in regional authorities and even the dismissal of personnel belonging to some units greatly affected smooth implementation of planned activities.
- Lack of HIV Viral load testing reagents.

3) Strengthening the capacity of 4 viral load testing laboratories in the Dominican Republic

a) Visits and/or virtual meetings made to the CV test processing centers.

During the quarter, a total of 18 visits were made to the processing centers as shown in table 5 below

PROVINCE	AREA/ REGION	PROCESSING CENTER	Q4(2021)			TOTAL
			July	August	Sept.	
Santiago	Region II	Gurabo Diagnostic Center	1	1	1	3
Sto. Say. DN	Region 0	Dr. Defilló National Laboratory	3	2	2	7
Sto. Say. DN	Region 0	Santo Domingo Health Center	3	1	1	5
MPS	Region V	SPM Diagnostic Center	1	1	1	3
TOTAL VISITS MADE			**8**	**5**	**5**	**18**

b) Follow-up on HIV VL testing in all the four testing laboratories

There was minimal to no HIV testing in all the four HIV VL testing laboratpries due to stock out of HIV VL testing reagents/supplies since June 2021.

c) External quality assessment for HIV VL

During this reporting period, The Dr. Defilló National Public Health Laboratory (LNSPDD) and Gurabo Processing Center in Santiago received feedback from CDC regarding EQA pnales provided in 2021 LNSPDD scored 80% and Gurabo Processing Center obtained satisfactory (100%) results for all the five panel samples that were tested. See figure below.

Figure 10: HIV VL External quality assessment results for LNSPDD and Gurabo Processing Center

Proficiency Testing Program for HIV-1 Viral Load using Dried Tube Specimen

Laboratory ID : 5002
Laboratory Name : Laboratorio Nacional Dr. Defillo
PT Panel Name : VL2021-A(16-Apr-2021)
Results Due Date : 23-Jul-2021
Platform/Assay Name : Roche Cobas8800 HIV-1
Panel Received Date : 21-Apr-2021
Panel Tested Date : 03-May-2021
Results Submitted Date : 03-May-2021

Individual Participant Results Report

		All Participants Results Summary			Your Lab Performance		
Specimen ID	Your Results (log_{10} copies/ml)	Number of Participants	Assigned Value (log_{10} copies/ml)	Robust Standard Deviation	z Score	Your Grade	Score
VL2021-A1	3.23	5	2.18	0.36	2.89	Warning	80.00
VL2021-A2	5.20	5	4.07	0.41	2.75	Warning	
VL2021-A3	0.00	5	0.00	0.00	0.00	Acceptable	
VL2021-A4	3.42	5	2.18	0.34	3.60	Unacceptable	
VL2021-A5	5.23	5	4.45	0.55	1.42	Acceptable	

0.00 indicated Target Not Detected (TND) results and NA for Not Applicable

Proficiency Testing Program for HIV-1 Viral Load using Dried Tube Specimen

Laboratory ID : 5445
Laboratory Name : Gurabo Diagnostic Center
PT Panel Name : VL2021-A(16-Apr-2021)
Results Due Date : 23-Jul-2021
Platform/Assay Name : Roche Cobas8800 HIV-1
Panel Received Date : 21-Apr-2021
Panel Tested Date : 28-Apr-2021
Results Submitted Date :

Individual Participant Results Report

		All Participants Results Summary			Your Lab Performance		
Specimen ID	Your Results (log_{10} copies/ml)	Number of Participants	Assigned Value (log_{10} copies/ml)	Robust Standard Deviation	z Score	Your Grade	Score
VL2021-A1	2.44	5	2.18	0.36	0.72	Acceptable	100.00
VL2021-A2	4.80	5	4.07	0.41	1.77	Acceptable	
VL2021-A3	0.00	5	0.00	0.00	0.00	Acceptable	
VL2021-A4	2.84	5	2.18	0.34	1.91	Acceptable	
VL2021-A5	5.43	5	4.45	0.55	1.79	Acceptable	

0.00 indicated Target Not Detected (TND) results and NA for Not Applicable

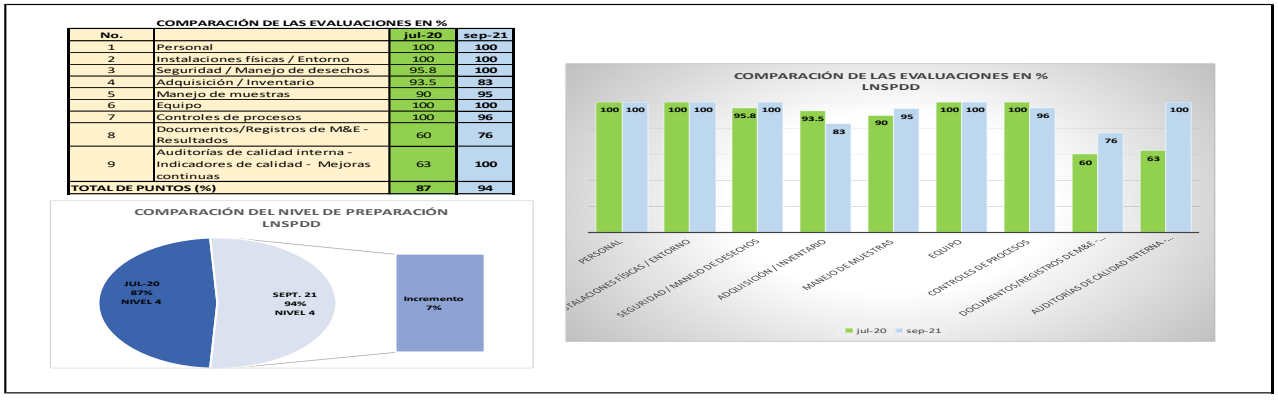
Note that, processing Centers in San Pedro de Macorís and the Santo Domingo Health Center have not yet started conducting HIV VL testing.

4) Application of the checklist for viral load in the processing centers

In September, the viral load checklist was applied to the four processing centers, in order to measure their progress during this reporting period. The LNSPDD maintained its score at level 4, although an increase of

7% was observed in relation to the list applied in July 2020 (87%) and the one applied in September 2021 (94%)

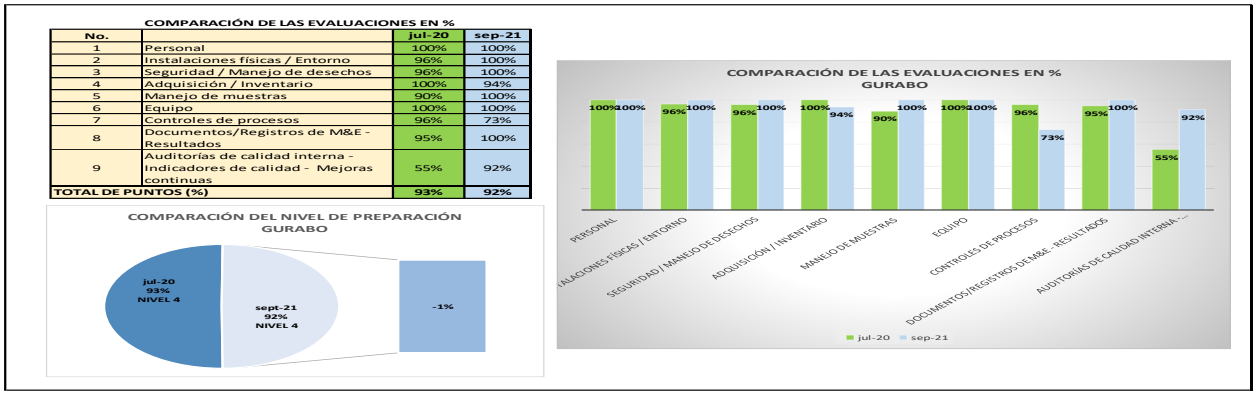
Figure 11: HIV VL assessment results per HIV VL checklist item



COMPARACIÓN DE LAS EVALUACIONES EN %

No.		jul-20	sep-21
1	Personal	100	100
2	Instalaciones físicas / Entorno	100	100
3	Seguridad / Manejo de desechos	95.8	100
4	Adquisición / Inventario	93.5	83
5	Manejo de muestras	90	95
6	Equipo	100	100
7	Controles de procesos	100	96
8	Documentos/Registros de M&E - Resultados	60	76
9	Auditorías de calidad interna - Indicadores de calidad - Mejoras continuas	63	100
TOTAL DE PUNTOS (%)		87	94

Gurabo Diagnostic Center maintained its score at level 4. Although it decreased by 1% when compared to assessment results of July 2020 (93%) and the one applied in September 2021 (92%), the center has not yet started implementing EQA for CD4 testing. However the testing center shown a lot of progress in section 9 (Internal quality audits - Quality indicators - Continuous improvements), in which it increased from 55% to 92%. In the acquisition/inventory section, a small decrease was observed due to the shortage of reagents.



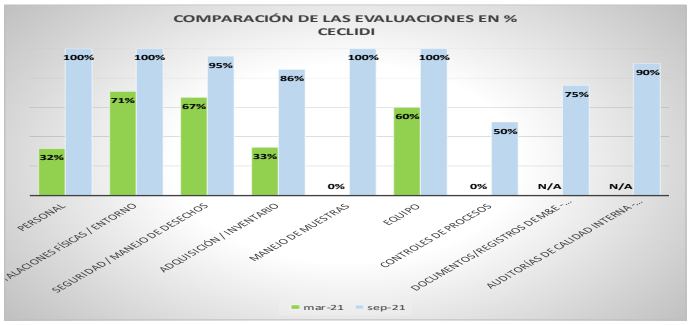
COMPARACIÓN DE LAS EVALUACIONES EN %

No.		jul-20	sep-21
1	Personal	100%	100%
2	Instalaciones físicas / Entorno	96%	100%
3	Seguridad / Manejo de desechos	96%	100%
4	Adquisición / Inventario	100%	94%
5	Manejo de muestras	90%	100%
6	Equipo	100%	100%
7	Controles de procesos	96%	73%
8	Documentos/Registros de M&E - Resultados	95%	100%
9	Auditorías de calidad interna - Indicadores de calidad - Mejoras continuas	55%	92%
TOTAL DE PUNTOS (%)		93%	92%

San Pedro de Macorís Diagnostic Center increased its score from 46% to 83%, in relation to the survey carried out in March 2021, going from level 0 to level 3 of preparation. Although they are not yet carrying out the viral load (VL) test, since May, they began carrying out the CD4 test for the entire Health Region V and are ready to start processing the viral load of HIV, as soon as they receive the reagents.

COMPARACIÓN DE LAS EVALUACIONES EN %

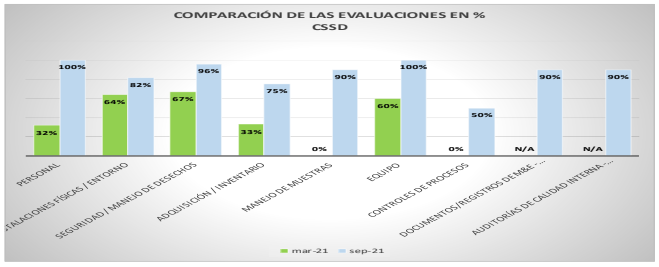
No.		mar-21	sep-21
1	Personal	32%	100%
2	Instalaciones físicas / Entorno	71%	100%
3	Seguridad / Manejo de desechos	67%	95%
4	Adquisición / Inventario	33%	86%
5	Manejo de muestras	0%	100%
6	Equipo	60%	100%
7	Controles de procesos	0%	50%
8	Documentos/Registros de M&E - Resultados	N/A	75%
9	Auditorías de calidad interna - Indicadores de calidad - Mejoras continuas	N/A	90%
TOTAL DE PUNTOS (%)		46%	83%



Santo Domingo Health Center also experienced an increase in its preparedness level, going from level 0 to level 3 compared to the survey carried out in March (44%) and the evaluation carried out in September (82%). They have not started the viral load (VL) test either, but they have started the CD4 test for their own SAI and are ready to start the VL as soon as they receive the reagents. This center will receive samples from the collection centers of Health Regions 0 and I.

COMPARACIÓN DE LAS EVALUACIONES EN %

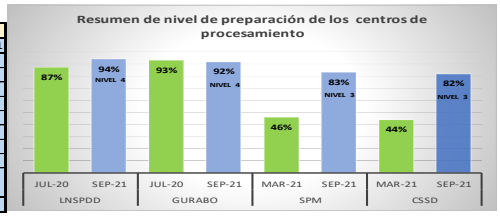
No.		mar-21	sep-21
1	Personal	32%	100%
2	Instalaciones físicas / Entorno	64%	82%
3	Seguridad / Manejo de desechos	67%	96%
4	Adquisición / Inventario	33%	75%
5	Manejo de muestras	0%	90%
6	Equipo	60%	100%
7	Controles de procesos	0%	50%
8	Documentos/Registros de M&E - Resultados	N/A	90%
9	Auditorías de calidad interna - Indicadores de calidad - Mejoras continuas	N/A	90%
TOTAL DE PUNTOS (%)		44%	82%



Summary of preparation level of processing centers using the HIV VL assessment checklist

At the end of this reporting period, two processing centers (LNSPDD and the Gurabo Diagnostic Center) were at level 4 and two other facilities (San Pedro de Macorís Diagnostic Centers and the Santo Domingo Health Center) were at level 3.

		LNSPDD		GURABO		SPM		CSSD	
No.		jul-20	sep-21	jul-20	sep-21	mar-21	sep-21	mar-21	sep-21
1	Personal	100	100	100%	100%	32%	100%	32%	100%
2	Instalaciones físicas / Entorno	100	100	96%	100%	71%	100%	64%	82%
3	Seguridad / Manejo de desechos	95.8	100	96%	100%	67%	95%	67%	96%
4	Adquisición / Inventario	93.5	83	100%	94%	33%	86%	33%	75%
5	Manejo de muestras	90	95	90%	100%	0%	100%	0%	90%
6	Equipo	100	100	100%	100%	60%	100%	60%	100%
7	Controles de procesos	100	96	96%	73%	0%	50%	0%	50%
8	Documentos/Registros de M&E - Resultados	60	76	95%	100%	N/A	75%	N/A	90%
9	Auditorías de calidad interna - Indicadores de calidad - Mejoras continuas	63	100	55%	92%	N/A	90%	N/A	90%
TOTAL DE PUNTOS (%)		87%	94%	93%	92%	46%	83%	44%	82%



CRITERIOS DE CALIFICACIÓN DE LA LISTA DE VERIFICACIÓN DE CARGA VIRAL		
CV/CD4 NIVEL	%	DESCRIPCIÓN DE RESULTADOS
0	< 55%	Necesita mejorar en todas las áreas y necesita solución inmediata
1	55 - 64%	Necesita mejorar en áreas específicas
2	65 - 74%	
3	75 - 84%	
4	85 – 94%	
5	≥ 95%	

5) **Other capacity building initiatives**

a) Training workshop on sample management and delivery of CD4 and HIV viral load results

One training workshop was conducted for personnel from all the CD4/HIV VL sample collection sites, the training focused on proper sample collection, handling/packaging and proper follow-up of the results until their delivery to the Comprehensive Care Service units (SAI). 21 Participants (22 bioanalysts, 1 bioanalysis student and 1 nurse.) were selected from health facilities in Region 0 (17) and Region I (4) as they prepare to refer samples to the Processing Center of the Santo Domingo Health Center. Three (3) SNS/AFENET Laboratory Coordinators facilitated the training.

b) RTQII-HIV training workshops

AFENET conducted two RTCQII training workshops for all the priority SAIs, these trainings were to build capacity of HIV testers in preparation for HIV Recent infcetion testing. A total of 32 bioanalysts were trained.

The training was conducted in Santo Domingo and the practical sessions at the Dr. Defilló National Public Health Laboratory. Training objectives included equiping HIV testers with knowledge and skills in performing Qaulaity assuarnce practices for HIV rapid tetsing and also implementation of corrective actions.

c) Workshops for AFENET and SNS evaluators using the viral load checklist

During this reporting period, AFENET conducted an HIV VL checklist evaluation workshop to build capacity of field auditors on the use of the tool. Six SNS field auditors were trained.

Objective 2: To provide TA and support the implementation of Recency Testing in 23 PEPFAR-supported sites, to enhance and guide HIV index testing activities.

Specific Objective: Strengthen the Dominican Republic's capacity in the implementation of evidence of HIV Recency.

<u>Implemented activities</u>

1) **Submission of the HIV Recency testing protocol to CONABIOS (National Council for Bioethics in Health) for approval**

The protocol was presented to the National Council of Bioethics in Health (CONABIOS) on January 15,2021. There after a conditional approval was issued by CONABIOS on 24 March,2021. The Protocol for the implementation of the PRIR-HIV was reviewed by technicians from the CDC-Atlanta, as a result of this review, the protocol was modified. This protocol had already been approved by the National Council of Bioethics in Health (CONABIOS).

2) HIV Recency Testing Kits .

During this reporting period, AFENET supported distribution of 1,400 HIV Recency test kits will be distributed to selected health facilities/laboratories to carry out HIV Recency testing. Additional technical support was provided by the AFENET Technical mentor in charge of HIV Recency testing, this inlcuded

a) Preparation of HIV Recency testing panels

During this reporting period, the technical mentor supported collection and characteristaion of plasma samples so as to develop EQA panels for the HIV Recency testing kits. 69 plasmas were characterized, 37 HIV negative and 32 HIV positive, this process was done with 7 rapid tests and an ELISA, obtaining 100% agreement with the results obtained in the banks where the blood was collected. Of the 32 HIV positive plasmas, 2 turned out to be Recent infections and 30samples for Long Term infection. These panels are to be used during the scheduled Trainer of Trainers trainings. During the reporting period, site visits were conducted at Municipal of Villa Altagracia, Juan Pablo Pina, San Lorenzo de Los Mina Maternal and Child Hospital, Antonio Musa and Our Lady of Altagracia Maternity as they will be priority sites for Monitoring of Rapid Testing for Recent HIV Infection (HIV-PRIR).

b) Preparing the data entry tools for HIV Recency testing

A data entry form was developed on the Epi-Info platform to support collection of data on HIV testing including HIV Recency testing. The tool is currently being implemented first in all PEPFAR-supported sites and then at all SITES that test for HIV and provide comprehensive care for people with HIV.

The following activities were not implemented during this reporting period due to COVID 19 pandemic disruption of procurement processes for the HIV Recency test kits and also approval for the HIV Recency test kits;

- HIV Recency testing (PRIR-HIV) TOT Rapid Test Training for laboratory personnel.
- HIV Recency rapid testing (PRIR-HIV) Training for laboratory personnel from all PEPFAR-supported sites.

3) HIV tester certification/ evaluation using the HIV VL checklist (Step-by-Step Process) to improve the quality of rapid HIV testing (SPI-RT) in SAIs.

During the reporting period, the SPI-RT checklist was used to assess laboratories,the HIV VL checklist evaluates seven areas: Staff Training and Certification, Physical Infrastructure, Safety, Pre-Analytical, Analytical and Post-Analytical Phases and the implementation of the External Quality Assessment Program for Rapid HIV Testing. During the assessment it was observed that a number of HIV testers had not received

refresher training thus affecting quality of HIV testing. AFENET Laboratory Technical mentors conducted two refresher trainings for 32 HIV testers from PEPFAR priority sites as shown below:

Figure 12: Participants of the HIV RT refresher training per region

Region	Estableciemiento de Salud	Cant. Participantes
0	Maternidad Nuestra Señora de la Altagracia	2
	Hospital Materno Infantil Santo Socorro	1
	Clínica Urbana Yolanda Guzman	1
	Centro Sanitario Santo Domingo	2
	Centro de Orientación e Investigación Integral (COIN)	1
	Centro Policlínico - Lotes y Servicios	1
	Hosp. Mat. Infant. San Lorenzo de Los Mina/ Laboratorio	2
	Hospital Local Boca Chica	2
	Hospital Provincial de Monte Plata Dr. Ángel Contreras Mejía	1
	Hospital Municipal de Yamasá	1
VII	Hospital Regional Luis L. Bogaert	1
Total	Total	15

Región de Salud	Nombre del Estableciemiento	Cant. Participantes
0	Red Africana de Epidemiología de Campo (AFENET)	1
	Laboratorio Nacional de Salud Pública Dr. Defilló	1
I	Hospital Juan Pablo Pina/Laboratorio	2
	Hospital Municipal de Villa Altagracia	1
II	Hospital Presidente Estrella Ureña	1
	Hospital Periférico Dr. José De Jesús Jiménez Almonte (Ens Libertad)	1
	Hospital Periférico Dr. Rafael Castro (Cien Fuego).	1
	Centro de Salud Juan XXIII	1
	Centro de Salud Integral Bella Vista	1
V	Hospital Regional Dr. Antonio Musa	1
	Hospital Dr. Alejo Martinez Garcia	1
	Hospital Provincial Francisco A. Gonzalvo	1
	Hospital General Y De Especialidades Nuestra Señora De La Altagracia	2
VIII	Hospital Regional Universitario Dr. Luis Manuel Morillo King	1
	Hospital Pedro Antonio Céspedes (Constanza)	1
		17

In order to be certified, each participant had to score the theoretical evaluation with a minimum score of 80% and the practical evaluation with a minimum score of 85%. A total fo 29 out 32 participants were able to achieve the minimum score and received certification.

c) HIV VL checklist assesment results (Q2)

AFENET laboratory technical mentors carried out HIV Viral load verification assessment in selected SAIs and their corresponding laboratories. The assessment was conducted in the following health units: Hospital Salvador Welcome Gautier; Dominican Institute of Virological Studies (IDEV); Hospital Leopoldo Pou; Active Foundation Health Center 20 -30; José María Cabral y Báez Regional University Hospital; San jose hospital; Alejo Martinez Hospital; Divine Providence Health Center; La Victoria Penitentiary and First Level Care Center PALAVE.

Another HIV VL , DNA/PCR checklist assessment was conducted in the processing centers, Dr. Defilló National Public Health Laboratory and Primary Care Clinical and Diagnostic Center of San Pedro de Macorís Porvenir). All these two processing centers obtained levels 4 and 3, respectively. It is important to note that

the DNA/PCR checklist section was adapted for CD4 at the Porvenir Processing Center, since they do not process DNA/PCR.

Actions implemented from HIV VL assessment results:

- AFENET Technical team shared assement results with laboratories, the team also supported each laboratory to develop and implement corrective measures.
- AFENET technical teams conducted HIV rapid testing EQA refresher trainings for staff in PEPFAR priority sites that did not participate in the program, with the aim of strengthening quality of the HIV testing process and HIV Recency rapid testing.

Scheduled activities:

- Support implementation of HIV testing reporting form using the Epi Info tool.
- Conduct HIV Recency rapid testing training for selected laboratory staff.
- Follow up on final approval process for the HIV Recency testing protocol by CONABIOS.
- Conduct a Pre TOT training, this training will provide qualified staff that will be used to facilitate the Trainer of Trainers sessions for HIV Recency testing.
- TOT: training staff who will train staff in laboratories where HIV Recency testing will be implemented.
- Conduct HIV Recency testing training for staff from selected PEFAR priority sites where HIV Recency will be implemented.

Strengthening Laboratory Management Towards Accreditation

During this budget year, AFENET was to support implementation of SLMTA 3: Illuminating the Path to ISO 15189 and repurposing of the Quality Control and Method Validation training curriculum for online delivery

I. SLMTA 3: Illuminating the Path to ISO 15189 on line training sessions

Due to COVID 19 restrictions, SLMTA 3 training curriculum was repurposed for on line delivery. The SLMTA 3 curriculum was composed of four modules – QMS 1, QMS 2, QMS 3, and QMS4. Each module was further divided into sections and activities. The *on-line version* included an off-line/self-study component (lecture recordings and homework assignments) and an on-line/live component, as well as optional office hours and peer support discussion forum. The total time for completing the mandatory components of the on-line curriculum was 64 hours, as opposed to 86 hours of delivery time in the classroom-based version.

Four facilitators' i.e. Dr. Katy Yao, Mr. Elde Paladar, Ms. Beatrice van der Puije and Ms. Janet Scholtz delivered the course.

Planning Phase

The team began working in July 2020. All recordings were done in the months of September and October. Table 6 (**Appendix 3)** shows the period for Development, creation of new tools and revised PowerPoint slide and production, recording of lectures and construction of course website.

Selection of participants

The call for applications was sent out to the SLMTA family through different platforms like the SLMTA website and through laboratory CQI implementing bodies. Applicants were required make their applications through the CDC country Lab advisors. These would then send a selection of their best candidates to the course director. The facilitators would then make a final selection depending on the level of impact the candidate would have on the implementation of SLMTA in their country. The selected participants had to provide a recommendation letter from their employer allocating them time to attend to the course and its requirements. There were 28 participants at the start of the course and they all completed the course from 19 countries spanning 18 time zones. Table 7 **(Appendix 4)** shows list of the participants that completed the course and their respective countries.

Curriculum overview

The e learning course had 5 components ie

- Offline self-study; this included 185 recorded lecture videos (19 hours) and Homework (20 hours).
- Weekly live group zoom sessions; this included 15 weekly sessions of approximately 2.5 hours per session.
- Weekly office hours; There participants got assistance on homework and got to ask any questions they had.
- Peer support group; this was on WhatsApp platform and an online discussion forum on the course website.
- ECHO Series; Tele-mentoring for Improvement projects. This section is yet to start in June 2021

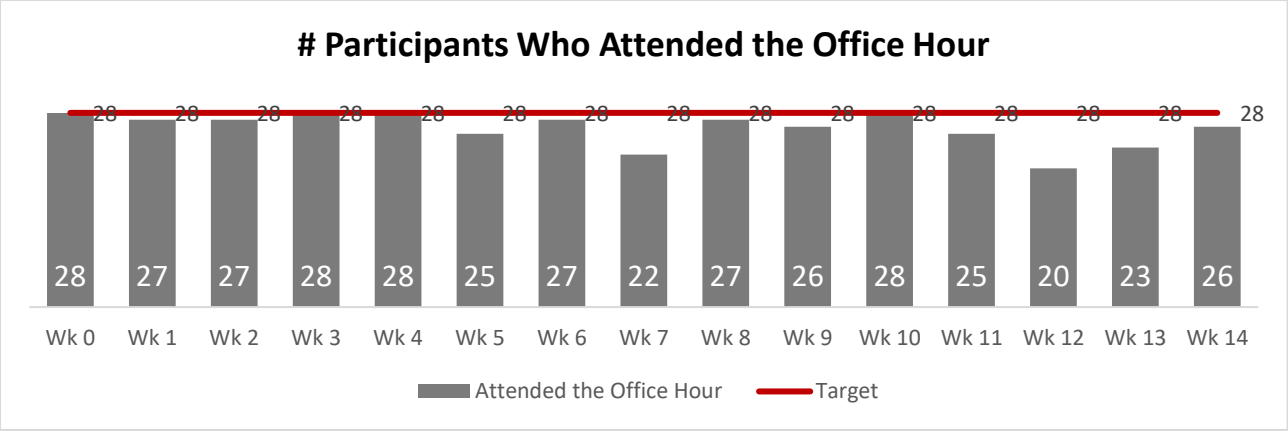
Detailed breakdown of curriculum and time spent on each section of the curriculum is shown in Table 8 **(Appendix 5).**

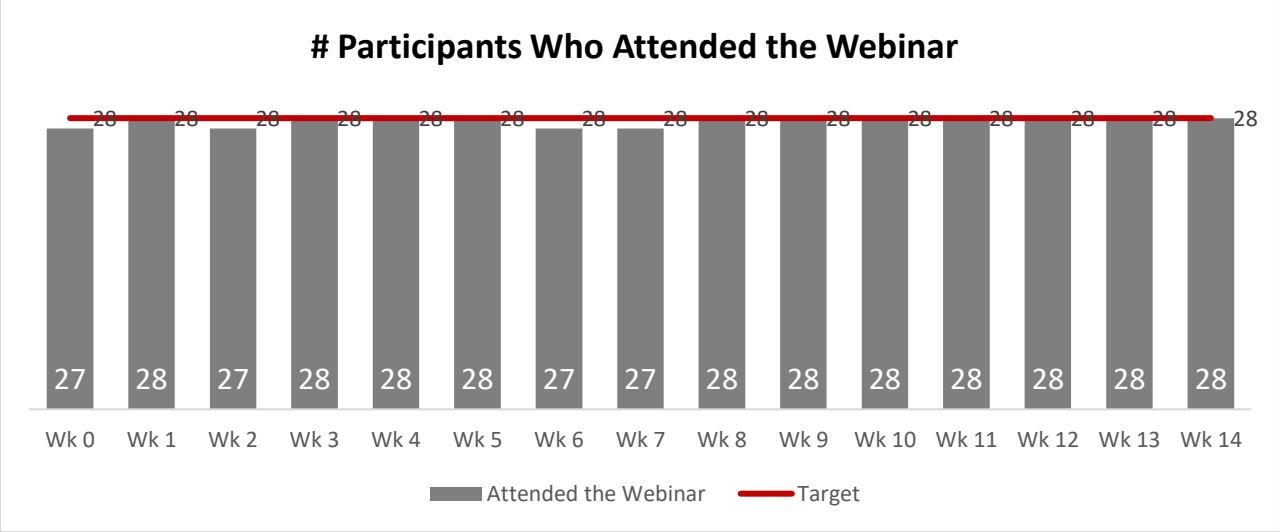
Course scorecard

Below are the statistics from the course activities over the 14-week duration the course was running

Although office hour was optional, it registered an average attendance of 26/28 (92%). Average attendance of live session was 99% and average submission of homework timely was at 92%. The attendance of webinar timely was at 92%

Figure 13: Number Participants who attended office hour



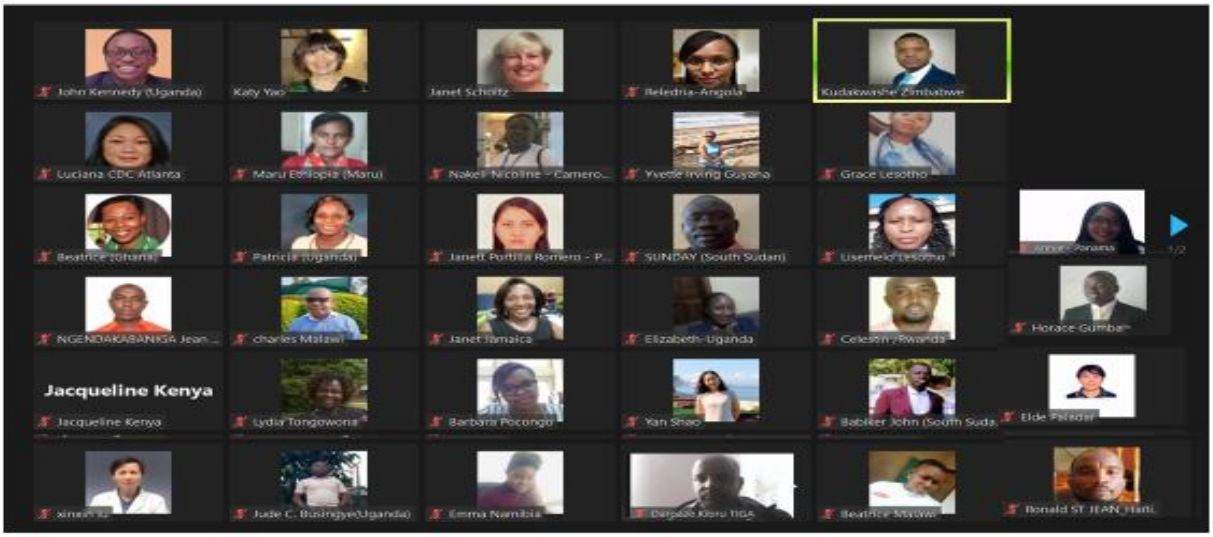


Best participants

A virtual bank was run during the period of project implementation and participant were awarded dollars from their contributions during live sessions, timely homework submission, outstanding homework and relevant contributions to the discussion forum. The best 5 participants were awarded gifts. Table 9 **(Appendix 6)** shows a list of the best participants and the total dollars each earned during the course

ECHO sessions

An ECHO session is started in November where participants worked on Improvement project planning and implementation with the facilitators and also got guidance and help from their colleagues.



II. SLMTA Symposium

The SLMTA symposium was carried out virtually. The conference had a total of 668 participants in attendance from over 40 countries. The welcome address was by Mr. Nqobile Ndlovu, CEO African Society of Laboratory Medicine and the key note speech was Dr. Talkmore Maruta. The keynote speech reflected on the SMTA's contribution to the fight against the COVID pandemic. The conference was graced with ministry of health officials from Angola, Zimbabwe and Uganda who gave testimonies about the role that SLMTA played during the COVID 19 pandemic.

Upcoming events

There are plans to conduct more SLMTA 3 e-Learning programs. This current budget year, we are conducting a master class of 43 participants and there is the first e Learning QC/ MV course.

SLMTA is also going to conduct an in person training for Spanish speaking participants in Peru

There will be another SLMTA symposium scheduled for November 2022

HIV RTCQI

During this reporting period, AFENET's scope of work included:

1. Support the maintenance and routine updating of the RT-CQII website maintenance and tools namely:
    a) All demo software (ePT, SPI-RT Tablet and Dashboard, Certification Training, Logbook Data management)
    b) Continue supporting the tester Certification and enhance current reports and SOP for implementation
2. Strengthen data Use and management to support policy decisions and patient care management.

Method

AFENET continued to engage services of Deforay Technologies to carry out maintenance and routine

updating of the RTCQI website in addition to development of all the relevant tools. A simplified agile methodology was utilized during which development is done in short cycles and feedback is received continuously.

Regular engagements were conducted with the key stakeholders and discuss/demo and then work on feedback received. This helps us in getting real-time feedback as and when we develop.

Achievements:

The following are the various projects maintained/developed during this period.

- Assisted in trainings or demonstrations as requested by AFENET and CDC
- Ensured that the test instances of ePT, RT Tester Certification, ODK, SPI RT Dashboard were up and running and available when needed
- Provided country support as and when requested.

a) RTCQI Website

During this reporting period, the project was able to develop a new admin section that will be used to manage certain parts of the website; add new form to collect request for demo from visitors (User visits the specific tools page and fills the form to requestfor an online demo). See detailed activity description in Table 10 **(Appendix 7).**

Next Steps: This will include

1) Continue performing content updates content as and when required

2) Install demo instances of the tools and continue working on content and functionality for the tools pages

b) ePT

During this reporting period, the Project supported addition of a COVID 19 module, Recency Module on to the ePT page. See detailed activity description in Table 11 **(Appendix 8).**

ePT is available on GitHub as a free and open source project: https://github.com/deforay/ept

c) Logbook Application

S. No.	Type ofActivity	Description
1	Development	● Developed new web-based application to help in collecting and aggregating HTS Logbook data ● Developed web form to allow users to enter data ● Added Excel upload functionality to help users add data in bulk

		• Added support for Data to be received from ODK Central API • User Management, Facilities Management etc. added to give more control to the administrator • Added reports

d) SPI RT/SPI RRT Dashboard

S. No.	Activity	Description
1	Development/ Enhancement	• Fixed map centering. Now admin can specify the center longitude/latitude in configuration • Few other minor issues fixed across the application • Menu changed to handle multiple versions of the form active at the same time. • Added functionality to pull data from the ODK Central servers, which will soon replace ODK Aggregate servers • Minor textual and visual changes done as per feedback
2	Support	Provided support, training, customization as requested

SECTION II: NEW BUDGET PERIOD PROPOSED OBJECTIVES AND ACTIVITIES

Proposed objectives for the upcoming budget period. *These objectives must support the intent of the original Notice of Funding Opportunity (NOFO).*

Component 1: COP/TOM22 Q1 Part 1 Targets/Activities - SLMTA SCOPE OF WORK

AFENET has been supporting implementation of activities aimed at Strengthening Laboratory Management towards Accreditation (SLMTA). AFENET has been able to implement SLMTA in over seven countries with a number of laboratories achieving accreditation. During the 2021/2022 budget period, AFENET will continue implementing the following activities:

1. Conduct one SLMTA 3 (illuminating the Path to ISO 15189 Accreditation) ToT on line training
2. Support maintenance and routine updating of the SLMTA website
3. Conduct one regional in person SLMTA 1 ToT training in South Africa

Expected Outcomes:

1. Increased capacity of senior level laboratory staff/ lab management to guide and implement activities to achieve accreditation

2. Increased number of laboratories implementing quality management systems and/or achieving international accreditation

Component 2: COP/TOM22 Q1 Part 2 Targets/Activities - TB CQI SCOPE OF WORK

Under this scope, the following activities are planned to be implemented:

1. Extend the Electronic Proficiency Testing (ePT) system for evaluating the quality of testing for tuberculosis using GeneXpert diagnostic instruments.
2. Support implementation of ECHO CLICQ! In 12 selected TB sites in Uganda
3. Support implementation of XTPT ECHO sessions

   Expected Outcomes:

   a) Increased number of TB testing laboratories submitting their results from performance evaluation panels provided by CDC Atlanta.
4. Use of an electronic meeting and tele-mentoring platform (ECHO) to rapidly, efficiently and economically improve the interface between HIV treatment clinics and tuberculosis diagnostic laboratories

Expected Outcomes:

a) Reduce turnaround times associated with screening of PLHIV for TB, TB laboratory receipt of specimens for testing, lab-confirmation of TB disease, return of TB laboratory test results.
b) Increased number of clinic/lab staff using monitoring tools to identify cascade gaps, propose and successfully initiate improvement projects.

Component 3: COP/TOM22 Q2 Part 1 Targets/Activities- DOMINICAN REPUBLIC

Objective one: To provide Technical Assistance (TA) to the 74 accredited Integrated HIV Care Sites throughout the Dominican Republic in addition to the primary care centers that will be providing HIV services under PEPFAR, to achieve Viral Load Suppression

a) Conduct assessments in 74 testing sites using the VL checklist for lab and clinical HIV services: (two visits per year in each of the testing sites in close coordination with the Government of Dominican Republic (GoDR) regional and provincial health authorities.
b) Provide ongoing training to health care workers (HCWs) and clinic staff to increase the prescription of viral load tests to HIV patients on Anti-Retroviral Treatment (ART).

a) Provide TA to the 4 laboratories that process viral load samples in the country (National Reference Lab Dr. Defillo, Gurabo, Porvenir and Centro Sanitario) to guarantee the quality in the processing of the samples and to ensure timely and reliable results.

Expected outcomes under Objective One:

a) 90% of all PLHIV identified and their Viral load routinely monitored as per the Government of Dominican Republic guidelines
b) Improved results turnaround time for all Viral load samples tested in all the 74 accredited Integrated HIV Care Sites across Dominican Republic
c) Improved access to VL testing in the communities particularly for hard-to-reach patients.
b) Capacity of four Reference laboratories strengthened to guarantee quality of viral load sample processing and to ensure timely and reliable results.

Objective 2: To provide TA and support the implementation of Recency Testing in 23 PEPFAR-supported sites, to enhance and guide HIV index testing activities

1. Provide training on Rececy testing to laboratory personnel from all PEPFAR supported sites. (for 50 people in total)
2. Monitor Recency test results in PEPFAR supported sites and their timely reporting using a custom indicator (23 visits per quarter = 104 visits in total)

Out comes:

a) Capacity of HIV testing sites strengthened to carry out quality HIV Rececy tests in the country (23 PEPFAR-supported sites).
b) Revised and updated national HIV testing guidelines to include HIV Rececy testing
c) 100 laboratory personnel trained in HIV Rececy testing
d) Increased number of HIV Rececy tests carried out (8000 Recency test kits procured)

Component 4: COP/TOM22 Q2 Part 2 Targets/Activities -RT-CQI SCOPES OF WORK

The main aim of this project is to ensure the quality of HIV rapid testing and expand upon current in-country HIV rapid testing quality improvement work.

3. Support the maintenance and routine updating of the RT-CQII website maintenance and tools namely:
    a) All demo software (ePT, SPI-RT Tablet and Dashboard, Certification Training, Logbook Data management)

b) Continue supporting the tester Certification and enhance current reports and SOP for implementation

c) Strengthen data Use and management to support policy decisions and patient care management.

d) Support continuous quality improvement for HIV rapid testing in Malawi and Uganda through project ECHO

Component 5: COP/TOM22 Q3 Part 1 Targets/Activities - ANGOLA

AFENET through PEPFAR support will continue to implement activities four priority PEPFAR supported provinces of Angola (Benguela, Lunda-Sul, Huambo and Cunene). 18 health facilities will be provided with technical assistance in addition to National level reference Laboratories.

Objective One: Develop a TOT curriculum for HIV point of care (POC) testing (including rapid testing, and POC VL and EID) trainings at central level to implement at central, provincial, and municipal levels. Create a tracking and regular competency assessment system for certified facility-level HIV testers

Expected outcomes:

- HIV Rapid Testing Certification package complete and first regional RT TOT training conducted by INLS;
- All 18 PEPFAR supported facilities participating in EQA/PT for all POC tests;
- Competency assessment by INLS rolled out in all the 4 PEPFAR supported provinces;
- At least 90% of all POC labs and testing points with satisfactory performance in EQA/PT per type of test

Objective two: Fully implement viral load system management (VLSM), including dashboards for disaggregated data visualization, in central and regional laboratories. Train central and provincial level personnel for appropriate system use to ensure results are delivered to health facilities in a timely fashion

Expected outcomes:

- VLSM completely functional in both labs and all VL data visible on a national dashboard;
- Improved capacity of Central level monitoring VL quality metrics such as VL tests performed by type of specimen collected.
- Central and regional labs using VLSM to produce semi-annual VL reports disaggregated by age, sex and type of VL testing performed;
- Central lab reporting VL quality metrics quarterly and semi-annually

Objective three: Develop facility-level M&E tools for VL and EID testing and distribute them to sites

Expected outcomes:

- EID M&E tools finalized and approved;
- 18 PEPFAR facilities have VL and EID M&E tools in place and fully utilizing the tools for data reporting

Expected outcomes:

1. Up to date RT-CQII website with links to all RT-CQII tools and resources

Increased uptake of RT-CQII tools and coverage to demonstrate impact on quality of HIV rapid testing

Component 6: COP/TOM22 Q3 Part 2 Targets/Activities - Recency

Objective 1: Support field validation of Antibody Based Multiplex assay to track for mother to child transmissions including, but not limited to HIV 1&2, Syphilis, Rubella, HSV 1&2, Hepatitis B and Hepatitis C in Nigeria.

Planned activities

- Support the level of effort of the national public health laboratory personnel in Nigeria (NCDC) for the study activities
- Collect plasma samples from ANC visits and use for testing at NCDC
- Procurement and shipment of supplies, reagents, and equipment as needed for the validation

Objective 2: Support characterization of Inconclusive or Discordant Samples According to Rapid Test for Recent Infection in 5 countries

- Perform additional characterization on samples reported as inconclusive or invalid according to the rapid test for recent infection (RTRI).
- Unlinked archived or prospective seropositive specimens collected from recency testing sites and use for characterization testing at national reference lab or CDC Atlanta
- Procurement and shipment of supplies, reagents, and equipment as needed for the characterization

Objective 3: Support field assessment to determine elite controller population(those with natural immunity to HIV) among clients who are confirmed recent by the Recent Infection Testing algorithm (RITA) in 5 countries

Planned activities

- Support for viral load testing countries that have not implemented RITA
- Support ARV testing on samples reported as recent according to the rapid test for recent infection (RTRI) and have a viral load <1,000 copies.
- Unlinked archived or prospective seropositive specimens collected from recency testing sites and use for ARV testing at the Department of Clinical Pharmacology in the Department of Medicine at the University of Cape Town (UCT) in South Africa or CDC Atlanta

- Transportation of specimens to central lab performing viral load and/or ARV testing
- Procurement and shipment of supplies, reagents, and equipment as needed for the ARV testing

Component 7: COP/TOM22 Q4 Part 1 Targets/Activities- Population based HIV Impact Assessment (PHIA) Laboratory Fellowship program

The main of objective of these fellowship is to collaboratively develop and implement a fellowship program that will help address immediate Population-Based HIV Impact Assessment (PHIA) so as to make timely adjustments to programs, leading to increased efficiencies and positive outcomes for community members, including people living with HIV.

The following activities will be implemented in the next funding period:

Activity 1: Provide continued logistical support for the fellow recruitment, training and deployment in countries conducting PHIA.

Activity 2: Contribute to the skill building of active and reserve fellow through training and continuous face-to-face and remote mentoring; Work with different partners such as AFENET, ASLM, Africa CDC and others to create and deploy a training curriculum for fellow soft and technical skill building.

Activity 3: Continue to build the fellowship structure & framework, factoring in long term professional plans of the fellows, in partnership with relevant public health partners and ministries of health. Increase the visibility of the program through a communication strategy adequately targeting candidate fellows, relevant national stakeholders, public health partners and funding agencies.

Activity 4: Build fellows database that can be accessible to partners such as Africa CDC, AFENET, ASLM, etc.

Expected Outcomes:

a) Fellows recruited and facilitated to support selected countries in implementing immediate Population-Based HIV Impact Assessment.

Component 8: COP/TOM22 Q4 Part 2 Targets/Activities

HIV VL scale-up initiatives have resulted in growing waste management (WM) and biosafety challenges in many laboratories and health facilities, especially those in low-income and middle-income countries.

This project seeks to provide expert guidance and build capacity of health facilities to implement sustainable, affordable biosafety and viral load waste mitigation strategies to prevent further exacerbation of public health impact in Africa.

We propose to implement the following activities in 6 selected countries:

1. Strengthen capacity of biomedical engineers and waste management professionals through conducting specialized trainings and certification

2. Support calibration and servicing of laboratory equipment including biosafety cabinets through establishment of equipment service contracts

Expected outcomes:

1. 150 Biosafety cabinets serviced and maintained routinely in 6 selected countries
2. Biosafety and waste management guidelines, policies developed and implemented by countries.
3. Improved capacity of selected laboratories to properly handle viral load and other related wastes and minimize impact on the environment.
4. Five biomedical engineers trained and certified in servicing and maintenance of biosafety cabinets.

Component 9: Emerging Public Health Priorities Part 1

HIV VL scale-up initiatives have resulted in growing waste management (WM) and biosafety challenges in many laboratories and health facilities, especially those in low-income and middle-income countries.

This project seeks to provide expert guidance and build capacity of health facilities to implement sustainable, affordable biosafety and viral load waste mitigation strategies to prevent further exacerbation of public health impact in Africa.

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2. Biosafety and waste management guidelines, policies developed and implemented by countries.
3. Improved capacity of selected laboratories to properly handle viral load and other related wastes and minimize impact on the environment.
4. Five biomedical engineers trained and certified in servicing and maintenance of biosafety cabinets.

Work plan and performance measure for the upcoming budget period

The work plan is submitted as a separate document.