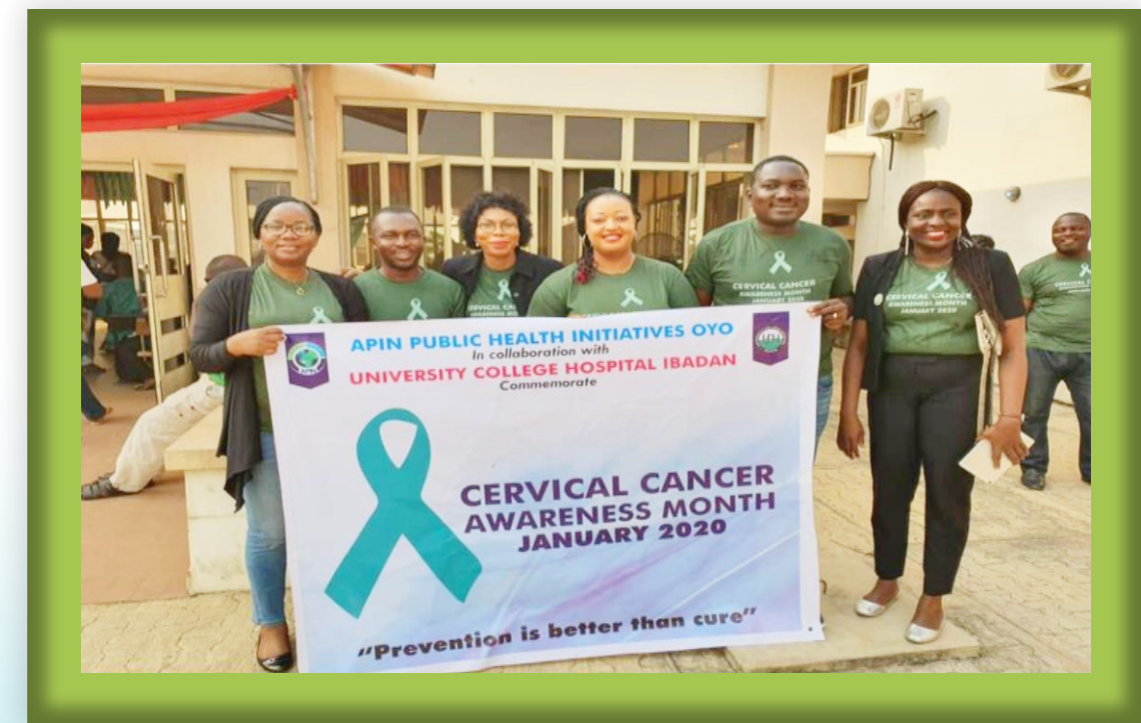




APIN PUBLIC HEALTH INITIATIVES

MINI-PROJECTS





Public Health Initiatives

APIN PUBLIC HEALTH INITIATIVES

MINI-PROJECTS

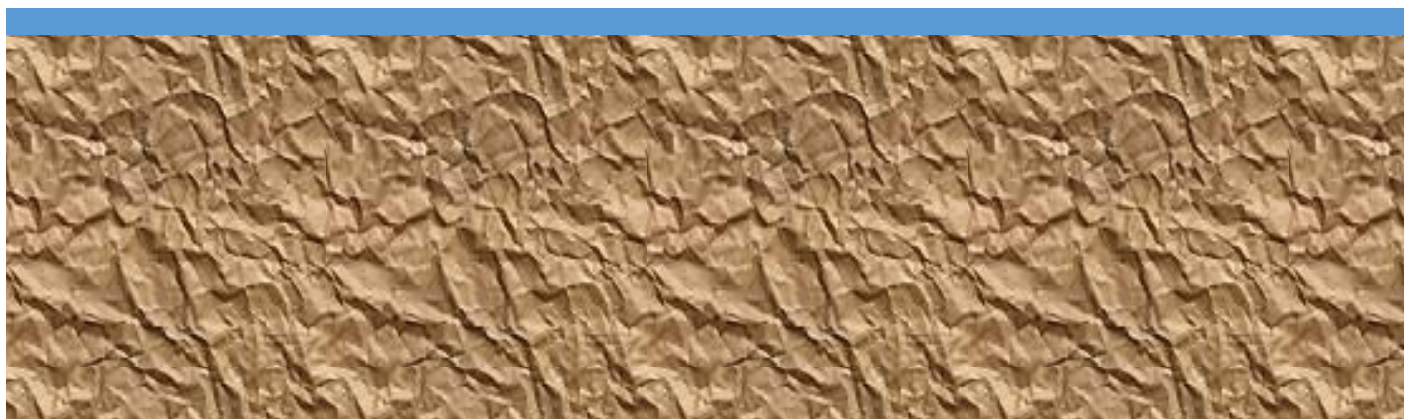


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Abbreviations

ANC	Antenatal Clinic
DSD	Differentiated Service Delivery
EMR	Electronic Medical Record
HCW	Health Care Workers
IPC	Infection Prevention and Control
ITF	International Task Force
OSS	One Stop Shop
PLHIV	People Living with HIV/AIDS
PMTCT	Prevention of Mother to Child Transmission
SBCC	Social and Behavior Change Communication
SDP	Service Delivery Point
VIA	Using Visual Inspection with Acetic Acid
VILI	Visual Inspection with Lugol's Iodine
WLHIV	Women Living with HIV/AIDS
TPT	Tuberculosis Preventive Therapy
PSS	Patient Satisfaction Survey

Executive Summary

Aside from its core mandate of providing comprehensive HIV/AIDS services to people living with the infection, APIN Public Health Initiatives has been involved in numerous “mini” projects. These included research-to-implementation projects aimed at deploying the latest evidence-based public health interventions to improve lives. Seven of such innovative mini-projects are presented in this document: (i) Cervical Cancer Screening and Treatment Program; (ii) Patient Satisfaction Surveys as a tool for Quality Improvement; (iii) Adoption of Innovative Approaches to Ensure Continuity of Quality TB Services During COVID-19 Pandemic; (iv) TB/COVID-19 Service Integration using mHealth application for TB/COVID 19 Data management; (v) TB Clinic-laboratory interface-Continuous Quality Improvement Initiative (TB CLICQI) as an approach for improved TB case finding and treatment; (vi) Sustained Care Seeking for Antenatal and Fever-Related Services in Nigerian Health Facilities in the context of COVID-19 Pandemic; and, (vii) Key Populations Investment Fund (Ensuring Comprehensive HIV/AIDS Response and Building Sustainable KP-Led and KP Friendly Community Approach – EnCOMPARS- project).

Cervical Cancer Screening and Treatment Program: With support from PEPFAR/CDC, APIN introduced cervical cancer screening using visual inspection with Acetic Acid (VIA) into its routine HIV program in December 2019. Piloted with two APIN-supported tertiary institutions – Jos University Teaching Hospital (JUTH) and University College Hospital (UCH) Ibadan, the project has been expanded to 86 implementing health facilities across seven APIN-supported states spread across North-Central (Benue and Plateau States) and South-West (Oyo, Osun, Ogun, Ondo, and Ekiti) geo-political zones of Nigeria. From inception in FY20 to FY22 semi-annual program reporting (SAPR) period, a total of 27182 women (ages 15 to 50 years) were screened for cervical cancer via Visual Inspection with Acetic Acid (VIA) or visual inspection with Lugol’s iodine (VILI) across the implementing sites.

Patient Satisfaction Surveys as a tool for Quality Improvement: The patient satisfaction survey involved 8,678 PLHIVs who returned to care. Lack of transportation fare, relocation to another residential area and travelling out of their usual base were the three most important reasons given by people living with HIV for interruption of treatment. The APIN team used this result to strengthen its programming such as the multi-month ART dispensing for patients who meet specified criteria to reduce the need for frequent facility visits and transportation costs. The results also support the scale-up of the Vitira Health project intervention that enables patients to access care at facilities other than where they are enrolled, especially when constrained or hindered by circumstances beyond their control.

Adoption of Innovative Approaches to Ensure Continuity of Quality TB Services During COVID-19 Pandemic: A bi-directional TB and COVID-19 screening and testing was implemented in Benue and Plateau States using the existing GeneXpert platforms. Four-fifths (80%) of the clients accepted the bidirectional screening approach and the approach resulted in reduced missed opportunities and increased TB and COVID-19 case finding. This project provides a critical lesson that integrated screening and testing offers an opportunity to streamline evaluation for diseases using existing multiplex diagnostic platforms.

TB CLICQI as an approach for improved TB case finding and treatment: TB CLICQI strategy was implemented to strengthen TB case finding and the interface between clinics and laboratories for continuous quality improvement (CQI) in the TB services. The project implementation started with a baseline data assessment of the health facilities selected. The assessment was conducted to identify data gaps, areas for improvement in service delivery and interventions were designed and implemented to address the gaps. A data collection tool was designed and used for baseline and exit assessment. Series

of workshop were conducted to empower officials of relevant government agencies as well as program and facility staff on CQI.

Sustained Care Seeking for Antenatal and Fever-Related Services in the context of COVID-19 Pandemic:

To understand the community facilitators and barriers of care seeking for fever and antenatal care (ANC) services within the context of COVID-19, the project conducted a baseline assessment in the catchment communities of selected health facilities. Gaps were identified in the following areas within the health facilities: Knowledge of health care workers in providing needed services within the COVID-19 context, availability of resources to support infection prevention and control practices at health facilities and provider service communication practices among others. The result from this assessment was used to develop social and behavior change communications (SBCC) interventions as well as structural changes at health facilities to give communities and healthcare workers the confidence to use required services within the context of COVID-19 and safely provide needed services to clients. In addition, capacity building and trainings were conducted for health care workers in facilities where gaps were identified; and the required personal protective equipment and other resources were provided to build the confidence of health care workers to provide quality services. The impact of these interventions were assessed during the midline and endline survey and necessary adjustments were made to strategies and approaches for optimal effect to promote continued care-seeking for fever and ANC.

Key Populations Investment Fund: The “Ensuring Comprehensive HIV/AIDS Response and Building Sustainable Key Population Led (KP-Led) and Key Population Friendly (KP-friendly) Community Approach (EnCOMPARS) project was implemented to strengthen the institutional and technical capacity of local KP-led and KP-friendly Community Based Organizations (CBOs) to appropriately plan and manage KP programs to ensure sustainability. The project built the institutional and technical capacity of 4 KP led and 2 KP friendly CBOs in eight local government areas in Benue state to increase HIV case finding, linkage and retention in care to achieve viral suppression among female sex workers, men who have sex with men, persons who inject drugs, transgender and persons in prison. With the support of the key population investment fund, CBOs reached 9903 KPs, provided HIV testing services to 8623 clients, diagnosed 621 KPs living with HIV and linked 551 of them to care, and 438 of them have been retained in care.

The ENCOMPARS project worked across 6 core elements and several approaches to Increase capacity of KP-led local organizations, Increase KP Testing Coverage and HIV Case Finding, Enroll HIV-negative KP who are at elevated HIV risk into PrEP, Improve HIV treatment retention and viral load suppression among KP, reduce structural barriers to HIV services and ensure real-time results monitoring.

1. APIN CERVICAL CANCER SCREENING AND TREATMENT PROGRAM

1.0 Background

Globally, cervical cancer is the fourth most common cancer among women with 90 percent of the estimated 600 000 and 300 000 new cases and deaths respectively occurring in low- and middle-income countries. ¹ Women living with HIV (WLHIV) are six times more likely to develop persistent pre-cancerous lesions and progress to cervical cancer, often with more aggressive forms and higher mortality than HIV-negative women. ¹ However, cervical cancer is a preventable disease that can be averted through prevention interventions such as screening and vaccination and early detection in populations at risk. Routine screening by Papanicolaou smear test (Pap smear) and HPV testing may not be feasible in low-and-middle income countries (LMICs) due to their associated costs. In Nigeria, according to the Nigeria bureau of statistics report in 2019, approximately 40 percent of the population live below the poverty line, and the healthcare system is predominantly dependent on out-of-pocket expenditure.² This has negatively influenced access to cervical cancer screening among eligible women.

The World Health Organization (WHO) has, therefore, recommended a cheaper alternative - the “see-and-treat” approach using visual inspection with acetic acid (VIA) or visual inspection with Lugol's iodine (VILI). These techniques are less expensive and require minimal infrastructure, thus more sustainable in resource-limited settings like Nigeria. Some studies done in LMICs using VIA to screen HIV-positive women have shown demonstrable success with a test performance that compares favorably with cytology (range of sensitivity of 52–89% and specificity of 87–95% for cervical erosion suggestive of cervical intraepithelial neoplasia.³ Recognizing the preventable and curable nature of the disease, and the cost effect on accessing the services, the Nigerian Federal Ministry of Health adopted the WHO and PEPFAR recommended “screen and treat strategy”. This involves the visualization of the cervix with acetic acid (VIA) or Lugol iodine (VILI) in a single ‘point-of-care’ visit followed by “same-day” treatment of identified pre-cancerous lesions using cryotherapy or thermal ablation.

1.1 CERVICAL CANCER SCREENING: THE APIN EXPERIENCE

Nigeria currently has very few screening programs available to meet the needs of the populace. To address this gap, APIN Public health Initiatives with support from PEPFAR/CDC introduced cervical cancer screening using VIA into its routine HIV program in December 2019. The program started with a pilot phase in two APIN-supported tertiary institutions; Jos University Teaching Hospital (JUTH) in Plateau state and University College Hospital (UCH) in Oyo State. Integrated routine free cervical cancer screening services were offered to women living with HIV aged 15 to 49 years at these pilot sites. The capacity of HCWs in both facilities was built on VIA screening techniques. The pilot phase was a learning process for expansion to other sites. Following the pilot phase, APIN conducted a site assessment and implementation readiness for the cervical cancer screening program. Each proposed site was assessed using the WHO’s Service Availability and Readiness Assessment (SARA) tool which assessed domains such as human

resources, adherence to protocol, equipment and commodities, diagnostics, infrastructure, and service availability. The domains' weighted average was computed for each site, and the findings from the assessment informed the phase 1 expansion.

Cervical cancer state focal persons were identified across APIN offices in the seven APIN-supported States. These officers were trained as trainers of trainees by certified national trainers using an adapted WHO cervical cancer screening agenda. With support from the APIN's state leadership, the state cervical cancer focal persons engaged the management of the selected sites via an informal leadership climate assessment. The engagement was to get their commitments to drive the process at the site level. Understanding patient flow for cervical cancer screening among women living with HIV (WLHIV) at clinics and including cervical cancer screening health talks within the general HIV health talks were two main lessons learned from the pilot phase. Three expansion phases of the cervical cancer project have occurred, leading to the establishment of 86 implementing health facilities across the seven APIN-supported states spread across North-central (Benue and Plateau States) and South-West (Oyo, Osun, Ogun, Ondo, and Ekiti) geo-political zones of Nigeria (Figure 1.1). The screening did not involve any out-of-pocket payment from the clients.

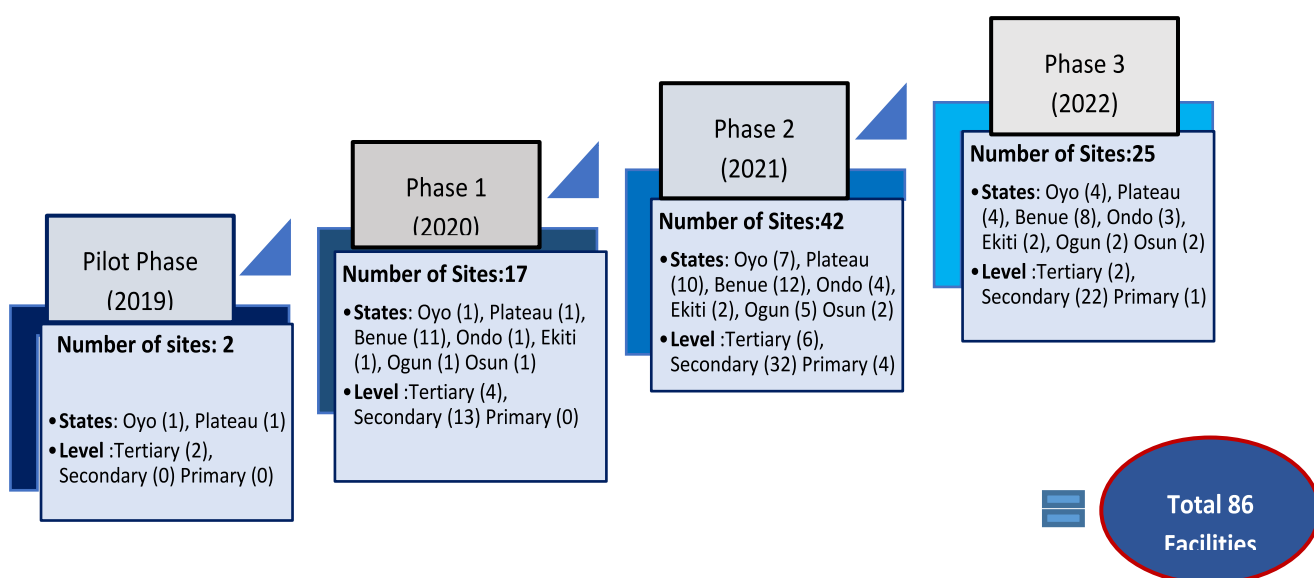


Figure 1. 1: APIN Cervical Cancer screening programme expansion by phases

1.2.1 APIN CERVICAL CANCER SCREENING ACHIEVEMENTS

Cervical Cancer Screening (CXCA_SCRN)

The cervical cancer screening project recorded an impressive growth in the number of women aged 15 to 50 years who were screened for cervical cancer via VIA/VILI approaches. From an initial figure of 2,168 in FY20 semi-annual program reporting (SAPR) period, the figure grew to 10,900 in FY22 SAPR; a total of 27,182 women were recorded over the FY20–FY22 SAPR across the implementing sites (figure 1.2).

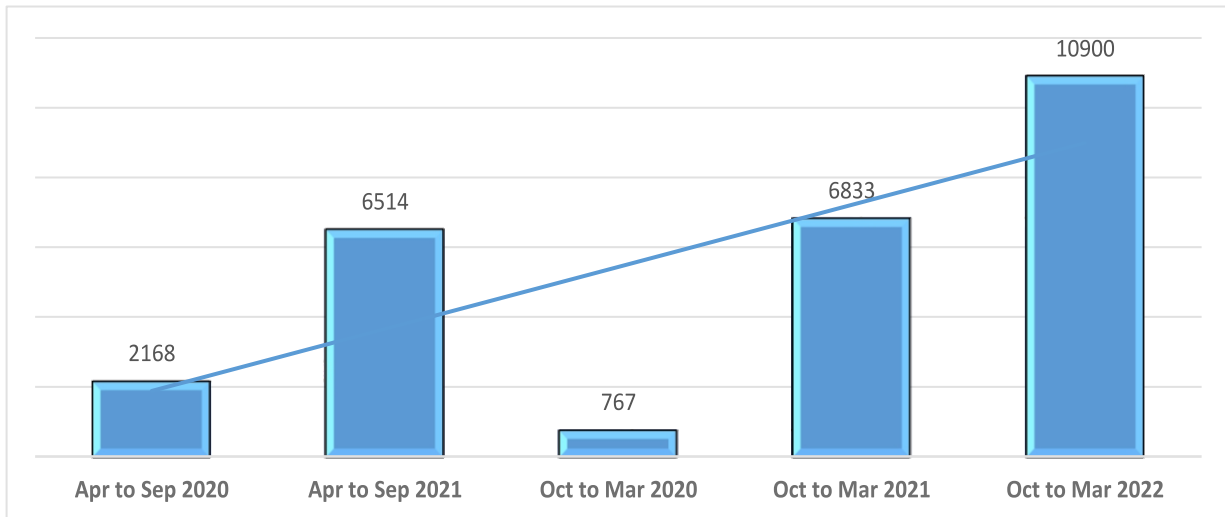


Figure 1. 2: Quarterly uptake of cervical cancer screening conducted from April 2020 to March 2022

Cervical Cancer Screening Positive pre-cancerous lesion; Cervical Cancer Positive pre-cancerous lesion Treated (CXCA_SCRN_POS; CXCA_TX)

A total of 1,589 suspected VIA/VILI positive precancerous lesions were identified. Of these, 820 confirmed positive precancerous lesions recorded by state-based obstetrician and gynaecologist (OBGYN) specialists (figure 1.3) who treated the women using thermal ablation.

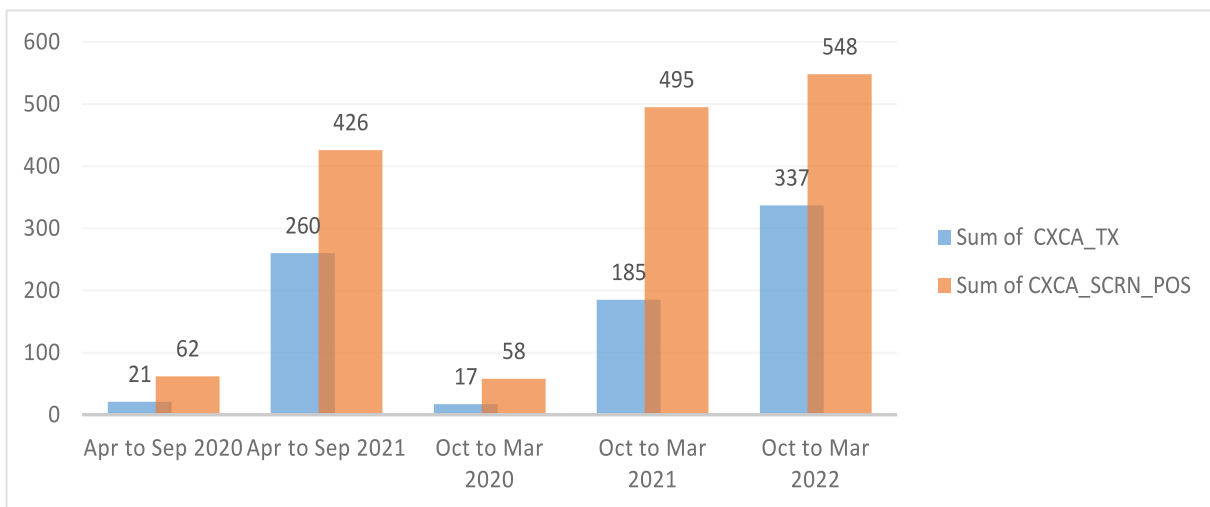


Figure 1. 3: Number of women with suspected VIA/VILI precancerous lesions and confirmed cases by quarters

1.2.2: USE OF IMAGING TO IMPROVE DIAGNOSTIC ACCURACY OF CERVICAL CANCER SCREENING: THE EMERGENCE OF APIN VIA VISUAL APPLICATION (AVIVA)

Despite the numerous benefits associated with the use of VIA, its limitations of low specificity implies a high false-positive rate that may lead to over treatment. It is also largely provider-dependent and, thus, subject to observer bias. Literature and programmatic experiences have shown high level of subjectivity with VIA.⁴ One of the challenges identified in the early phase of the APIN cervical cancer screening program was the over-diagnosis of patients as VIA positive by trained healthcare workers (HCWs). For

example, only 9 out of 35 presumed VIA positive patients in South-west states in FY20 were actually positive (26%) after consultant OBGYN's review. To address this challenge, APIN adopted an approach aimed at enhancing rapid and accurate diagnosis of precancerous cervical lesions. This involved the use of an android app developed in-house (AVIVA) to capture images of the cervix during VIA screening which is sent to an expert (gynecologist) for further review. AVIVA works by capturing VIA-stained cervix photos and transmitting them in real time to medical professionals known as reviewers, who provide diagnostic and treatment advice depending on the findings of the photographs. It operates in the following way: a health worker, known as a case finder, uses the AVIVA to capture the images and add relevant patient information, then upload them to the online server (the application has the ability to automatically trigger an offline mode if no network is detected). The reviewer assigned to the facility or state would receive a notification within the app and through SMS after a successful upload, prompting him/her to open the app, download the images, provide a diagnosis, and recommend a treatment option, after which the case finder gets a notification on the reviewer's diagnosis and makes appropriate documentation. Since its launch, the app has undergone a series of reviews and upgrades to further enhance the diagnostic accuracy of VIA in our cervical cancer screening and treatment intervention.

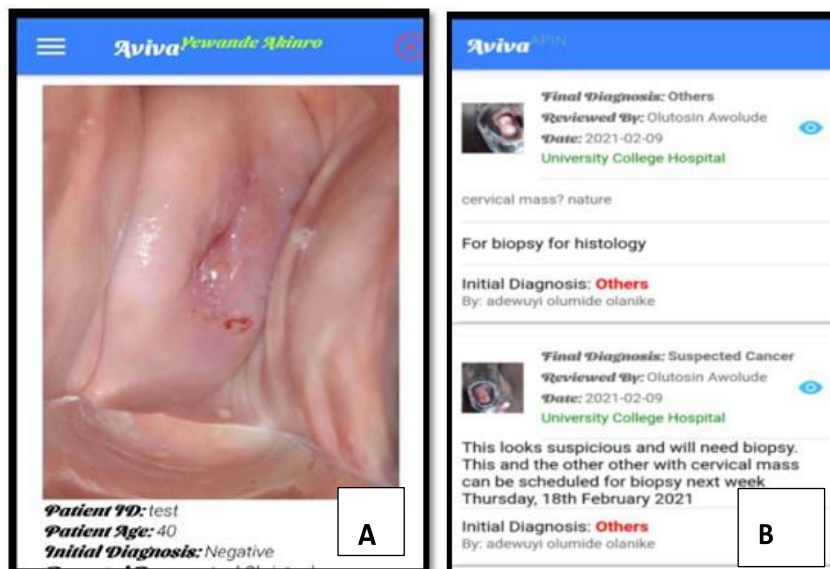


Figure 1. 4: VIA-stained cervix photo uploaded by a case finder; B: Comments of the case finder (initial diagnosis) and the State reviewer (final diagnosis)

1.2.3: FACILITY SUPPORT FOR CERVICAL CANCER SCREENING

APIN, with support from PEPFAR/CDC, supported health facilities across supported states to in terms of capacity-building and provision of equipment and supplies.

Capacity Building

Recognising the critical role that health care providers play in the delivery of high-quality health care, APIN built the capacity of different cadres of health providers across the cervical cancer screening implementation sites. During each implementation phase, the state cervical cancer focal persons, with

support from the trained OBGYN specialists, built the capacity of the care providers selected by the sites to screen, treat pre-cancerous lesions, and refer suspicious lesions to the nearest tertiary facilities for expert management. Overall, APIN trained a total of 346 health care providers including doctors, nurses and community health workers on the cancer screening initiative.

Equipment and supplies

APIN supported all implementing sites with consumables and equipment needed for cervical cancer screening. Measures were put in place by individual APIN state offices to ensure continuous supply of consumables to prevent stock outs. Some of the equipment and supplies are shown in Table 1

Table 1. 1: Equipment and consumables provided by APIN to support the cervical cancer screening program

S/N	Equipment and consumables
1	Angle poised lamp
2	Sponge holding forceps
3	Disposable speculum (Cuscos, Graves and Collins)
4	Metallic Vaginal speculum
5	3-5% Acetic acid
6	Bed screen
7	Lithotomy bed
8	Autoclave machine
9	Thermal ablation machine
10	Gally pot
11	Kidney dish
12	Cotton wool
13	Latex Gloves

Thermal Ablative Devices

To reinforce WHO ‘test and treat’ approach to cervical cancer screening, APIN procured thermal ablative devices to support cervical cancer screening in supported facilities. The first set of thermal ablative devices were procured for the two pilot facilities (UCH and JUTH) in January 2020 for the treatment of pre-invasive cervical lesions. Fifteen additional thermal ablation devices were supplied during the phase 1 scale up in August 2020 through the CHAI-UNITAID/CDC collaboration. APIN has so far supplied 25 thermal ablation devices to 25 facilities. APIN has put referral systems in place using a hub-and-spoke approach to ensure that patients eligible for thermal ablation in low-level facilities that do not have thermal ablation devices are referred to their hubs for treatment. So far, 820 persons have been treated with thermal ablative devices.



Figure 1. 5: Picture of a thermal ablation machine

Box 1.1: Testimonials of Facility Staff about the Thermal Ablation Device supplied by APIN

“At State Hospital, Ijebu-Ode, we appreciate the unique opportunity given to us to ensure we have a thermal ablator in our facility. Since we received the machine, we have applied it on two clients whose cervical cancer screening were positive, being handled by doctors and nurses. It is portable, thus guaranteeing that it will be maximized by health care providers in gynecology, family planning and HIV clinics.

Every user testifies to the simplicity of its mounting and application as well as its effectiveness within a short period, in addition to its adaptation to interruption in power supply.

Once again, we appreciate the maker and the donor. Thank you”

State Hospital Ijebu-Ode (August 2020)

“I find the thermal ablation machine easy to use, portable and effective. We have treated a good number of patients and it has been very effective. The patients feel remarkably comfortable during the procedures. It has been an asset to the Cervical Cancer Prevention program in our facility”

Dr T. I

*Consultant/ Head of Department,
Obstetrics and Gynecology,*

*University of Medical Sciences Teaching
Hospital (UNIMEDTH), Akure (August
2020)*

1.2.4: CERVICAL CANCER AWARENESS MONTH COMMEMORATION

Every January, the world commemorates the cervical cancer awareness month. This is an opportunity to raise awareness about cervical cancer and how it can be prevented through screening and vaccination. APIN, with support from PEPFAR/CDC, joins the world every year to commemorate this important event to raise awareness within local communities about the importance of getting screened for cervical cancer.

2. PATIENT SATISFACTION SURVEYS; A VERITABLE TOOL FOR QUALITY IMPROVEMENT.

2.1 BACKGROUND

Surveys are an important means of collecting health and social science information from a sample of people in a standardized way to gain an understand of situations relating to a larger population. Survey information can provide information to measure health services quality, thereby highlighting the areas where improvements are required. Our multi-disciplinary Continuous Quality Improvement teams (CQI-MDTs) conduct periodic patient satisfaction surveys (PSS) covering diverse areas of interest. These surveys capture self-reported patient assessments of multiple touchpoints during their medical care experience in supported facilities.

The latest PSS conducted from January to June 2022 focused on TX_RTT (patients who interrupted treatment but later returned to care) patients and aimed at understanding the reasons why patients interrupted treatment. The survey objectives were to assess patient satisfaction with the level of service delivery in APIN-supported facilities, and to analyze findings and then take necessary actions through CQI interventions.

2.2 METHODS

The survey focused on persons living with HIV (PLHIVs) enrolled on ART, who interrupted treatment and returned to care within the survey period. The survey employed the use of Interviewer-administered questionnaires, leveraging on the availability of case management teams and data entry clerks in the supported facilities. Implementation partner backstopped and supervised the survey team in the rollout and data collection processes. The use of Open Data Kit (ODK) made the data collection seamless, as it allows data collection using Android mobile devices and data submission to an online server. The analysis of collected data was shared weekly, thereby guiding state CQI-MDTs on the level of uptake. The questionnaire included 21 questions with each relating to a particular category of the dimensions of the survey. A 5-point Likert scale was used in measuring the level of patient satisfaction.

2.3 RESULTS

Some 8,678 PLHIVs who returned to care were interviewed, of which 7,049 (81%) had interrupted treatment for 1-6 months. More than two-thirds (5,860; 67.5 %) of the respondents were females (Figure 2.1). About two-thirds of the females (5,698; 65.7%) were married. Eighty-seven percent (87.0%) had some form of education ranging from primary to tertiary. Most of the clients were contacted in person (4113; 47%), and others through caregivers (3144; 36%) and partners (1001; 12%).



Figure 1. 6: World cervical cancer awareness celebration by APIN in Oyo, Benue and Plateau States

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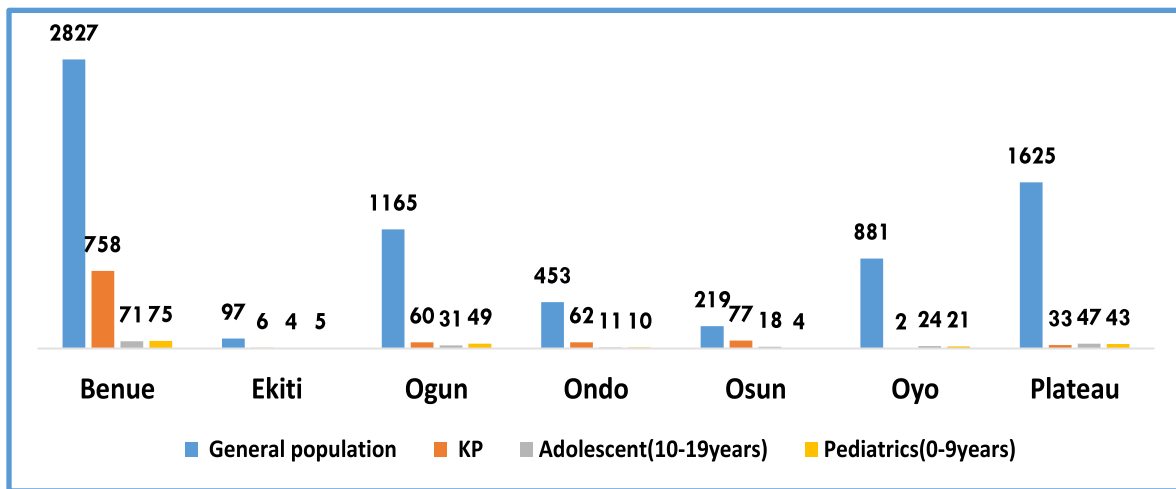


Figure 2. 1:Categories of clients who participated in APIN’s periodic patient satisfaction surveys

The most common reason given by patients for HIV treatment interruption was lack of transportation fare (2,587; 29.8%), and featured prominent across all states, except Oyo where relocation was the most common reason given. Other leading reasons for HIV treatment interruptions from the combined data for the states included travelling out of usual locations (1,244; 14.3%), a sense of feeling well and healthy (767; 8.8%), and security challenges (462; 5.3%).

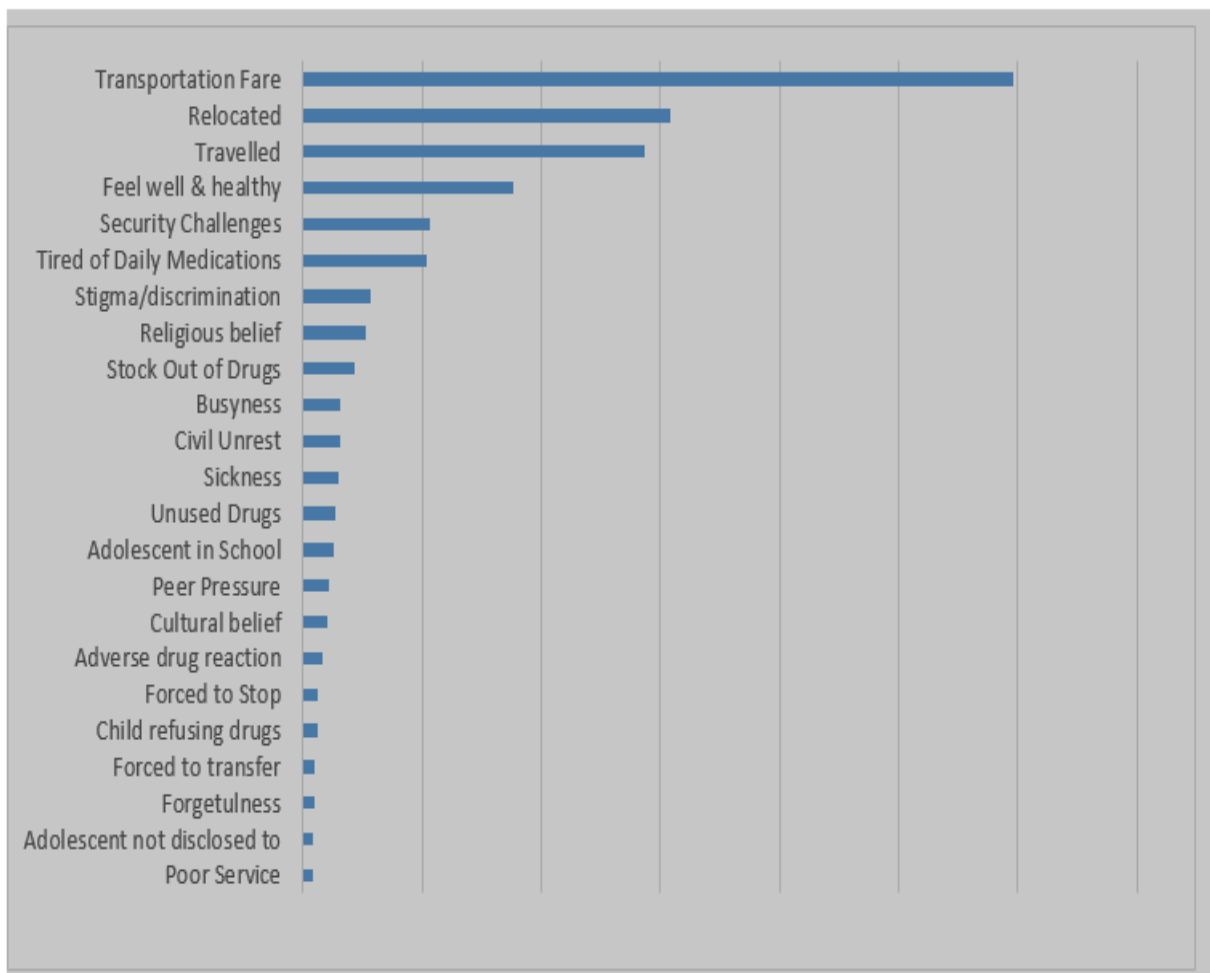


Figure 2. 2: Clients’ self-reported reasons for HIV treatment interruption

Respondents were asked to assess satisfaction with service delivery in three quality domains; access to care, waiting time, and patient-provider communication. Satisfaction scores ranges from 4.1 in Benue to 4.5 in Osun State (out of a maximum of 5.0) (Figure 2.3). The results show that patients were satisfied with the quality of services provided across all states.

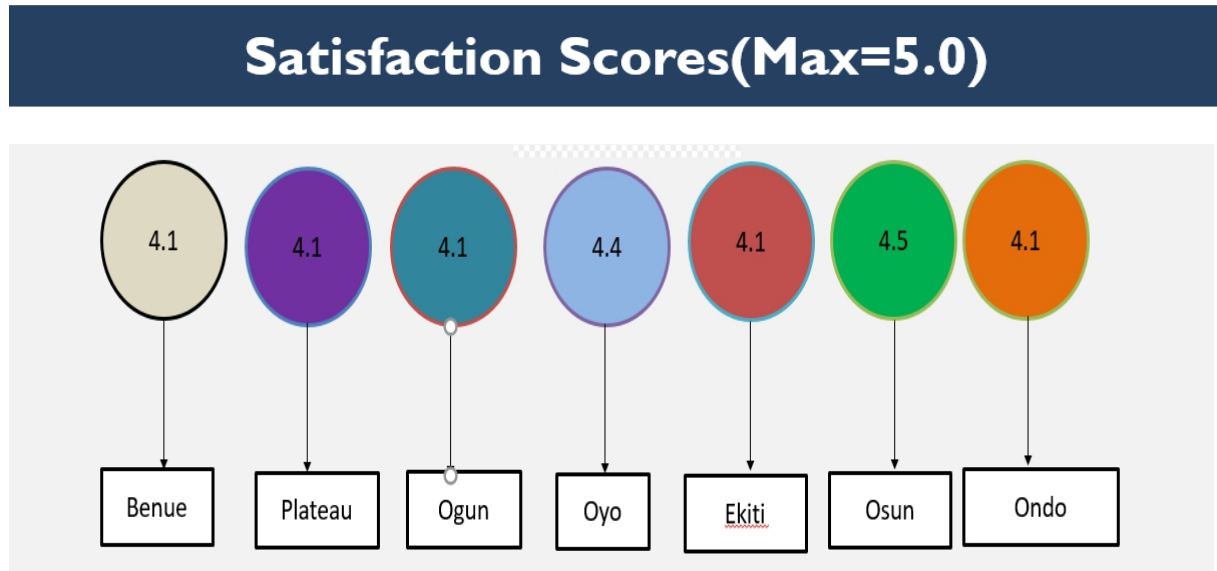


Figure 2. 3: Mean patient satisfaction with service quality by state

2.4: INTERVENTIONS

The three most common reasons why patients interrupted treatment (Figure 2) all pointed towards the need to limit number of visits to the facilities. Our intervention was to emphasize the already prioritized multi-monthly dispensing of antiretrovirals (ARVs) for patients who are stable on antiretroviral therapy (ART), have been on treatment for at least 12 months, and are virally suppressed. The CQI-MDTs working with the pharmacy and clinical teams have ensured that over 86% of patients who are eligible are dispensed with six months ARVs (MMD6). This significantly limits the necessity to visit the facilities and thus alleviate transportation and other logistics-related costs. Similarly, results from this survey have buttressed the need for the scale-up of the Vitira Health project. This is an intervention that enables patients to access care at facilities other than where they are enrolled, especially when constrained or hindered by circumstances beyond their control.

Taking a clue from the analysis of the survey data, APIN also conducted focus group discussions with caregivers of pediatric and adolescent patients, with the aim to understand their challenges, especially for those who are away in schools and have difficulty with adherence to ARVs. Interruption in treatment among these age-bands have led to documented low viral load suppression. It is hoped that the FGDs would lead to interventions that will improve the situation. APIN also plans to conduct patient journey maps, with the view to identifying bottlenecks in service provision and then institute interventions for improvement.

2.5: CONCLUSION

The survey conducted show that patients were satisfied with the quality of HIV services provided across all APIN-supported states. The use of evidence to understand gaps in programming and design appropriate interventions is important towards improving the quality of HIV care, and ensuring that every patient gets quality care, every time.

3.ADOPTION OF INNOVATIVE APPROACHES TO ENSURE CONTINUITY OF QUALITY TB SERVICES DURING COVID-19 PANDEMIC IN BENUE AND PLATEAU STATES

3.1: BACKGROUND

In order to ensure continuity of tuberculosis (TB) services, APIN put in place testing systems at selected sites to operationalize bi-directional screening and testing for COVID-19 and TB. The existing GeneXpert network of machines that had been in place for TB diagnosis was optimally used for COVID-19 testing while ensuring that TB diagnostic testing was not negatively impacted. Three groups of patients that had undergone bidirectional screening and testing for TB and COVID-19 (patients with TB only, patients with COVID-19 only, and patients with both TB and COVID-19) were followed up to evaluate their clinical outcomes and associations between outcomes and sociodemographic qualities, co-morbidities, and TB history. This project aimed at piloting differentiated service delivery (DSD) models for TB treatment and tuberculosis preventive treatment (TPT) while closely monitoring efforts through standard indicators. To complement DSD models, innovative approaches like digital support and monitoring of adherence and adverse events were also adopted.

3.2: PROJECT DESIGN AND SCOPE

The project was intended to implement and evaluate innovative approaches and patient care models to improve access to TB/COVID-19 testing, screening and healthcare services, support social distancing, and decrease transmission of COVID-19 and TB among PLHIV and TB patients through DSD models.

The objectives were:

- To operationalize bi-directional screening for COVID-19/TB and ensure testing systems are in place at selected sites
- To explore the potential utility of clinics as COVID-19 testing sites
- To utilize the existing TB GeneXpert network for COVID-19 by provision of biosafety/infrastructural upgrades to facilitate expanded, decentralized COVID-19 testing
- To undertake systematic implementation and evaluation of TPT multi-monthly dispensing (MMD) and remote/digital monitoring of adherence and adverse events in a cohort of PLHIV
- To undertake systematic implementation and evaluation of TB care using DSD models including multi-month dispensing or community dispensing, community-based or digital support, and monitoring of adherence and adverse events in a cohort of TB patient

3.3: METHODOLOGY/APPROACH

The project implementation commenced in 2021 in Benue and Plateau States at 30 selected sites supported by PEPFAR. Individuals included in this program were PLHIV receiving ART at these sites, non-PLHIV receiving TB care, symptomatic individuals being tested for TB or COVID-19 and individuals coming

to health facilities and screened and tested for TB and COVID-19 at these sites. Individuals who are presumptive cases for TB, COVID-19, or TB and COVID-19 were assessed for risk factors for COVID-19 and TB. Key activities included facility assessment, infrastructural upgrade of laboratories, provision of relevant tools and personal protective equipment, capacity building of healthcare workers, setting up waiting areas and COVID-19 collection points, bi-directional TB and COVID-19 screening, GeneXpert utilization for COVID testing, TPT MMD, TB DSD and COVID-19 risk factor assessment.

Monitoring and evaluation structures were embedded across the supported facilities to improve data quality in the supported service delivery points, facilitate tracking of project performance, and enhance the reporting of the project indicators to funder. To ensure quality data, real-time client-level surveillance data collection at each stage of the outlined process was employed. This was done through real-time entries into the mHealth app and validation of forms and registers by source comparison, while collation for entries into summary forms was carried out every month for aggregate data reporting. Real-time data for mHealth solutions was aggregated onto a secured central server which was viewed using a web-based dashboard.

3.4: PROJECT MILESTONES AND ACHIEVEMENTS

All patients seeking health services were triaged and screened for TB and COVID-19 at different service delivery points, using an adapted standard TB/COVID-19 screening checklist developed from the national COVID-19 and TB algorithm. Presumptive patients were referred to the DOTs clinic where they produce sputum and then escorted to COVID-19 sample collection sites established within the facility. After the necessary documentations, samples were moved to GeneXpert laboratory for TB and COVID-19 test. TB-positive patients were linked to treatment at the DOTs facility and placed on DSD model, which is a patient-centred care. Patients on this model were given TB drugs of an intensive phase of 2 months, continuation phase of 3 months and one month. At each phase, remote monitoring for treatment adherence and adverse drugs event were carried out at different intervals and then documented appropriately. Patients who were positive for COVID-19 were referred to disease surveillance and notification officers for appropriate care and treatment.

A total of 78,186 patients were screened for both TB and COVID-19 from September 2021 to February 2022 in Benue and Plateau States, out of which 15,708 (20.1%) were presumptive for either TB and or COVID-19. Of the 15,708 presumptive cases, 11,950(76.1%) were tested for TB and COVID-19, out of which 1,052 (8.8%) tested positive for TB, 1,076 (9%) tested positive for COVID-19 while 109 (0.9%) tested positive for both TB and COVID-19 and were linked to TB and COVID-19 care. During the project period, TB presumptive yield increased by 7.5% in Benue and 8% in Plateau State. Patients evaluated for TB increased by 54.9% in Benue and 345% in Plateau State. TB detection rate increased by 129% in Benue and 166% in Plateau State.

3.4.1: PROJECT IMPACT AND QUOTES

An acceptability assessment of the bi-directional screening approach revealed that more than 80% of clients accept bidirectional screening. Though there was initial resistance by few facilities and declining

by some clients to test for COVID-19, with persistent advocacy and enlightenment, acceptability increased month by month.

3.5: PROJECT CHALLENGES

Few GeneXpert sites were not activated for COVID-19 testing due to insecurity. However, APIN employed an off-site testing approach via sample shipment to testing sites using the indigenes. The initial resistant by some facilities was mitigated by consistent engagement and advocacy.

Lessons Learnt and Recommendations

- The integrated delivery of COVID-19 and TB diagnosis coordinated through the DOTS clinic is feasible and efficient
- The expansion of symptoms screening for TB and COVID-19 to service delivery points (SDP) like outpatient department (OPD), antenatal care (ANC), wards and the DOTs clinics resulted in reduced missed opportunities and increased TB and COVID-19 case finding.
- The “multi-pathogen testing” of TB and COVID-19 on GeneXpert equipment by trained laboratory scientists created opportunities for increased access to TB and COVID-19 testing and the optimized utilization of GeneXpert facilities in Nigeria.
- APIN leveraged COVID-19 funding to optimize GeneXpert utilization, increased TB case finding, and strengthened referral/linkage system for TB and COVID-19 across implementing facilities in target states.

3.6: CONCLUSION

All the key approaches were implemented, resulting in successful operationalization of bi-directional TB and COVID screening. This showed that integrated service is possible as COVID-19 service was fused into HIV and TB services. Using GeneXpert for COVID-19 testing implies that we can leverage existing multi-disease testing technology and resources to increase access to testing and save cost. Some of the findings have been used to provide evidence on integrated HIV/TB/COVID services

4. IMPLEMENTATION OF TB/COVID-19 SERVICE INTEGRATION USING MHEALTH APPLICATION FOR TB/COVID 19 DATA MANAGEMENT

4.1: PROJECT BACKGROUND

The advent of COVID-19 pandemic had the potential to impact negatively on TB case finding in Nigeria, resulting in missed opportunities and undiagnosed TB cases.^{1,2} There was a likelihood of misdiagnosis of TB and COVID cases since both diseases shares similar symptoms, a shift to COVID-19 response over TB services, and poor health-seeking behavior during the COVID pandemic [1]. With the aim to sustain the gain in TB case finding in Nigeria, APIN integrated COVID-19 services into the established TB program, by operationalizing bi-directional screening and testing for patients who were presumptive for either TB or COVID-19 or both.

4.2: PROJECT DESIGN AND SCOPE

The project focused on improving access to TB and COVID-19 services through integrated screening, testing and linkage to care service during the COVID-19 pandemic. The project also implemented infection prevention and control (IPC) measures to decrease the transmission of COVID-19 and TB among clients visiting the health facilities through DSD models.

4.3: METHODOLOGY/APPROACH

All patients seeking health services are triaged and screened for TB and COVID-19 at different service delivery points, using an adapted standard TB/COVID-19 screening checklist developed from the national COVID -19 and TB algorithm. Presumptive patients are referred to the DOTS clinic where they produce sputum and then escorted to COVID-19 sample collection sites established within the facility. After the necessary documentations, samples are moved to GeneXpert laboratory for TB and COVID-19 test. TB positive patients are linked to treatment at the DOTS facility and placed on DSD model. Patients on this model are given TB drugs of an intensive phase of 2 months, continuation phase of 3 month and one month. At each phase, remote monitoring for treatment adherence and adverse drugs event are carried out at different intervals then documented appropriately. Patients that were positive for COVID-19 were referred to the Disease Surveillance and Notification Officer for appropriate care and treatment.

mHealth is a mobile application that uses an API (Application Programming Interface) to send and retrieve data from a database hosted on the server. Data are transmitted through a secure layer to an API, which is a set programming code that enables data transmission between one software product and another. TB/COVID data are captured through the mHealth app and the data is synchronized to the server via an app then different reports are generated from the stored data through a web application hosted on a cloud server. M-health operates both online and offline but synchronized to the server once connected to any available network. The M-Health app is customized for use by the data entrance staff at the health level enter TB/COVID screening, laboratory results and the monitoring of patients on TB treatment.

APIN deployed mHealth application for real-time TB/COVID data entries at each stage of the outlined processes to collect information on variables for TB and TPT screening that mirrored the paper-based tools. Also, the mHealth app supports data collection for TB and TPT DSD and MMD models with a special focus on the Community dispensing and the home delivery service models. Overall, mHealth applications complement clients monitoring to allow more frequent and/or automated check-ins with adherence reminders, appointment reminders, and adverse event screening questionnaires for TB and TPT care and Treatment. Data collected from the application were aggregated onto a secured central server, which can be viewed using a web-based dashboard. The mHealth application also supported automatic data extraction and upload from the m-Health platform to the TB/DOTS interphase of the NMRS platform.

4.4: PROJECT MILESTONES AND ACHIEVEMENTS

APIN completed the client’s enrolment phase across 30 APIN-Hupported health facilities with 74,000 patients enrolled into the implementation research study using the mHealth application. APIN also evaluated 14,301 presumptive clients for tuberculosis and COVID-19 infection across the 30 sites and completely linked 1,389 TB positive patients out of the 1,464 TB positive clients to TB care and treatment.

Figure 4. 1:TB/COVID-19 screening among clients in 30 health facilities in Benue and Plateau States.

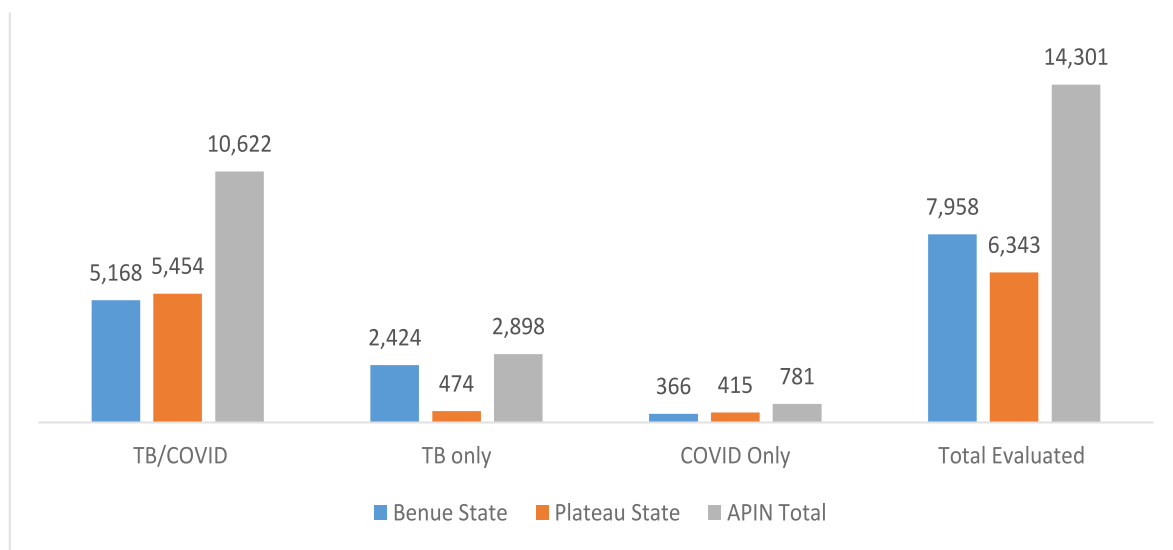


Figure 4. 2:Presumptive clients evaluated for TB/COVID-19, TB, or COVID-19 in Benue and Plateau States.

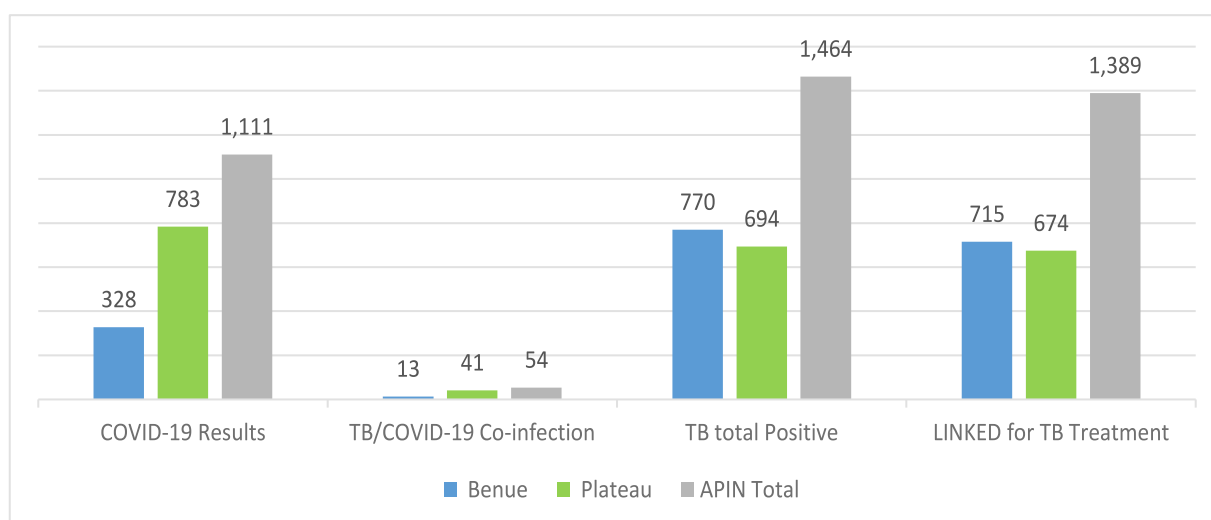


Figure 4. 3:TB and COVID-19 results among clients evaluated for either TB or COVID-19 or both infections in Benue and Plateau States.

4.5: PROJECT IMPACT

Among PLHIV patients, TB presumptive yield increased by 7.5% in Benue and 8% in Plateau State. Patients evaluated for TB increased by 54.9% in Benue and 345% in Plateau State. TB detection rate increased by 129% in Benue and 166% in Plateau State. Through the innovative project, APIN was able to strengthen COVID-19 case finding across the 30 sites and 1,111 COVID-19 cases were identified and linked to care. APIN also built the capacity of the facility staff on COVID-19 detection, leveraging on the existing GeneXpert facilities in selected sites in Benue and Plateau States.

4.5: PROJECT CHALLENGES

The project experienced challenges of TB-COVID service integration across the selected health facilities, which was overcome through continued engagement, sensitization and collaboration.

4.6: LESSONS LEARNED AND RECOMMENDATIONS

The COVID-19 and TB integrated services at the DOTS clinic has offered easy access for TB and COVID 19 screening and management of clients. The expansion of symptoms screening for TB and COVID-19 to other SDPs like OPD, ANC, wards and ART clinics resulted in reduced missed opportunities and increased TB and COVID-19 case finding.

The “multi-pathogen testing” of TB and SAR-CoV-2 on GeneXpert equipment by trained laboratory scientists has created opportunities for increased access to TB and COVID-19 testing, and the optimized utilization of GeneXpert facilities in Nigeria. APIN leveraged COVID-19 funding to optimize GeneXpert utilization, increased TB case finding, and strengthened referral/ linkage system for TB and COVID-19 across implementing facilities in target states.

4.7: CONCLUSION

Bi-directional TB/COVID-19 screening and testing enhanced diagnostic efficiency and case detection of both diseases. We recommend further exploration of this strategy to ensure accurate and efficient TB diagnosis while utilizing the functionality of GeneXpert diagnostic networks to diagnose multiple diseases.

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5. TB CLICQI: A NEW CQI MODEL THAT IMPROVED TB CASE FINDING & TREATMENT IN TB DIAGNOSTIC CASCADE

5.1: PROJECT BACKGROUND

Nigeria ranks 6th on global list for high TB burden countries and missing cases¹. Missed opportunities have been linked to poor identification of undiagnosed TB patients, weak clinic-laboratory interface, poor linkage and retention. TB care, when assessed according to the ideals of high-quality health systems, has many shortfalls including long turnaround time, (TAT) of patients' test results and delay in starting patients on treatment. As such, there is a critical need to embed quality improvement (QI) concepts and methods in TB programs to achieve epidemic control targets². The interface between TB clinics and laboratory services needs to be strengthened to improve case identification, linkage and retention. To achieve this, evaluation of the TB diagnostic cascade of care, and identification of the gaps that exists regarding the interface between clinics and laboratories are needed. Also, continuous quality improvement (CQI) initiatives to close identified gaps and optimize TB patient detection and treatment are needed.

TB Clinic-laboratory interface-Continuous Quality Improvement Initiative (TB CLICQI) project was an initiative of PEPFAR that is being implemented in Nigeria through the US Centers for Disease Control, and with APIN Public Health Initiatives as an implementing partner. The project aimed at Improving TB case finding and initiation of TB treatment among eligible persons and improving time-to-TB diagnosis and time-to-TB treatment initiation

5.2 PROJECT DESIGN AND SCOPE

TB CLICQI project has three major objectives:

1. *TB Laboratory Testing Services*
Increase the number and proportion of HIV-positive and HIV-negative persons with presumptive TB who receive TB laboratory testing services and/or accurate test results in a timely manner.
2. *Initiate Appropriate TB Treatment*
Increase the number and proportion of HIV-positive and HIV-negative TB patients that initiate appropriate (drug-sensitive or drug-resistant) TB treatment.
3. *Diagnostic Cascade Turnaround Times*
Reduce turnaround times associated with TB laboratory receipt of specimens for testing, lab-confirmation of TB disease, return of TB laboratory test results and/ or initiation of appropriate TB treatment.

5.3 METHODOLOGY/APPROACH

The project was implemented in a single high HIV prevalence and TB burden state (Benue) in Nigeria and at five health facilities in 2019 for three months. Field testing of the data collection tools (DCT) was carried out at Federal Medical Centre (FMC), Makurdi by the CLICQI stakeholders (including Federal and State

Ministry of Health) and the feedback used in refining the tools. The project implementation included Diagnostic Cascade Evaluation (DiCE) Toolkit Field Test, CLICQ! Program Review and Finalization Meeting, and DiCE Entry Assessment of CLICQ! Sites. The implementation phase also included hosting of training workshops, on-site mentorship and technical assistance; and DiCE Exit Assessment of CLICQ! sites. A baseline assessment of 3-months retrospective data was conducted to identify data and process gaps from the point of entry of HIV/TB patient to the exit. Processes for sample collection, documentation and linkage for diagnostic evaluation at the laboratory were evaluated, gaps identified, and specific interventions developed to address the gaps.

Improvement projects were selected at the first workshop, followed by two workshops, held monthly to build the capacity of relevant government officials and program and facility staff on CQI methodologies using the Define, Measure, Analyse, Improve & Control (DMAIC) framework. Technical assistance (TA) visits with the stakeholders were held in between each workshop to ensure the project was being implemented accurately. Achievements throughout project life were documented using tables and charts placed strategically on a learning board, and the final activity was an exit assessment using the DiCE toolkit

5.4: PROJECT MILESTONES AND ACHIEVEMENTS

Over the course of the three-month implementation period, all enrolled sites demonstrated increased patient retention through the TB diagnostic cascade, as measured by the DiCE toolkit. The total number of documented individuals with presumptive TB across all five sites increased from 887 at the time of entry assessment to 1,129 at the time of follow-up, representing a 27% increase overall (Figure 5,1). Among all pooled patients, more patients had a specimen collected and tested with GeneXpert technology. Additionally, a higher number of individuals who received a TB GeneXpert test had the result of the test reported back to TB clinics. An increase in the number of diagnoses and in the number of individuals initiated on TB treatment was also observed.

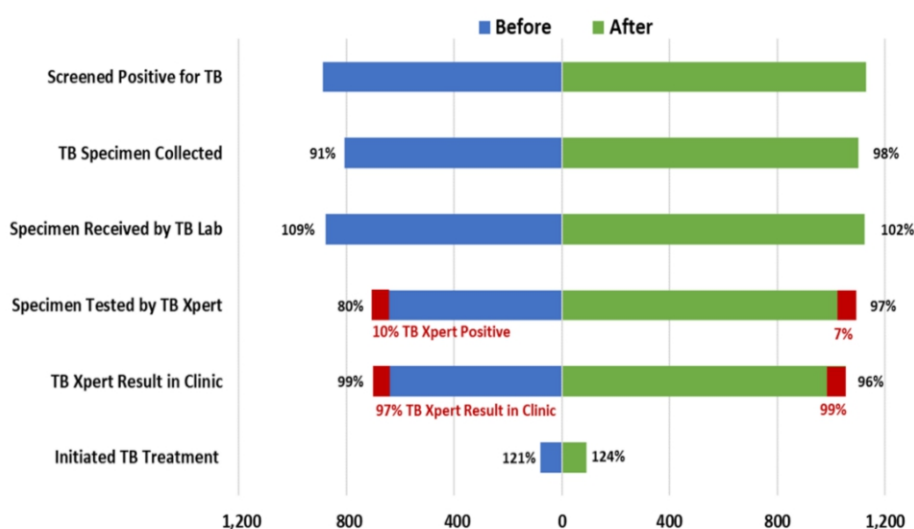


Figure 5. 1: Diagnostic Cascade Retention Pooled Across CLICQ! Sites in Benue State

5.5: PROJECT IMPACT

The impact of the project was measured by comparing the baseline and exit assessment data. At the end of the implementation period, the enrolled health facilities demonstrated increased patient retention throughout the TB diagnostic cascade as measured by the DiCE toolkit.

“TB CLICQI is a welcome development in the diagnosis of all TB cases, it is currently the best approach to TB diagnosis in Benue state. This is possible as the DOT providers, clinic and laboratory staff now work together to ensure that samples are collected, tested and results reach the DOTS/Clinic in a timely manner to facilitate quick commencement of patient care/treatment”

Mr. A. M (Senior official, Laboratory Services, Ministry of Health, Benue State)

TB CLICQI was a mini-project implemented to improve patient retention at each step of TB diagnostic cascade. It was an innovative project that employed a new CQI model in bridging the quality issues identified. Training curriculum and tools were developed by APIN. This curriculum and tools are being used by other Nigerian Implementing Partners and in two other African countries currently implementing the TB CLICQI project. The TB CLICQI intervention has been integrated into the National TB/HIV control program and TB CLICQI website is available for easy access of materials.

‘TB CLICQI is unique at pointing out shortcomings. 27% of our patients were not submitting sputum samples for TB testing, with attendant implications to morbidity, mortality and transmission. With appropriate intervention we were able to reach 99% sample collection! Case detection, treatment and prevention are ensured. We hope to do even better with health worker participation and ownership’.

Dr. K. (ART Clinician and Facility Team lead)

5.6: PROJECT CHALLENGES

Staff attrition affected the project implementation in one facility as three key members of the facility TB CLICQI team were posted out from the facility. However, APIN was able to work with volunteers and ad hoc staff who earlier received step-down training to continue the project implementation.

5.7: LESSONS LEARNED AND RECOMMENDATIONS

- Site staff found the workshops helpful in building their skills and contributing to improved processes at their facilities
- Process mapping of activities to be implemented helped to clearly define roles and responsibilities during project implementation.
- Effective team work and communication ensured that all team members were able to contribute ideas and knowledge to the seamless implementation of the project.
- Knowledge obtained from TB CLICQI project can be applied to other aspects of facility programs (HIV, malaria, immunization etc.) to facilitate good results
- TB CLICQI Improved knowledge on real time documentation of relevant patient-level information into the data collection tools

- Adequate resources are necessary to avoid disruption of TB CLICQI project activities
- Facility ownership of the TB CLICQI Project is essential to ensure sustainability of gains achieved

The TB CLICQI project should sustain the strengthened communication between the clinics and the laboratories

5.8: CONCLUSION

The implementation of CQI principles and methodologies led to a significant improvement in the earlier identified gaps, which had a far-reaching effect on general TB diagnostic cascade. The prospect of sustainability was also improved by the involvement of state stakeholders, who were instrumental to the level of success achieved by the project.

5.9: REFERENCE

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6. SUSTAINED CARE SEEKING FOR ANTENATAL AND FEVER-RELATED SERVICES IN NIGERIAN HEALTH FACILITIES IN THE CONTEXT OF COVID-19 PANDEMIC

6.1: PROJECT BACKGROUND

The “Sustained Care Seeking for Antenatal and Fever-Related Services in Nigerian Health Facilities” project is a CDC-funded grant under the cooperative agreement of the International Task Force and the Coronavirus Aid, Relief and Economic Security Act (CARES Act). The project was an initiative of PEPFAR and implemented in Nigeria through CDC, and with APIN Public Health Initiatives as the implementing partner. Broadly, the project aimed at improving and maintaining community attendance for antenatal and fever-related services in Nigerian health facilities within the context of the COVID-19 pandemic, with an approved project implementation duration of 2 years (October 2020 to September 2022). The specific objectives of the project were to:

- measure the effect of COVID-19 pandemic on the clients’ attendance for routine antenatal care (ANC) and fever services in selected facilities in Benue, Plateau, Oyo and Ogun States
- explore the demand-side and supply-side factors responsible for the changes in ANC and fever services attendance in the 90 selected facilities in the states during COVID-19 era
- design and implement facility and community intervention packages for maintenance of ANC and fever services attendance in selected facilities
- measure the effect of the intervention packages on maintenance or improvement of ANC and fever services attendance in selected facilities despite COVID-19 pandemic

The project implementation commenced in February 2021 in Benue and Plateau States and June 2021 in Oyo and Ogun States. The project involved state-level stakeholders’ engagement and discovery phase using desk review, stakeholders’ deliberation, historical data abstraction, facility and community survey approaches with the aim of understanding the impact of COVID-19 on the targeted essential services. The project also entailed exploring the demand and supply factors impacting the targeted essential services in the context of COVID-19 pandemic. Thereafter, interventions targeting essential care quality improvement, facility safety and essential care demand in the context of COVID-19 pandemic were implemented across selected sites and catchment communities in Benue and Plateau States for 18 months, and in Oyo and Ogun States for 13 months. Importantly, the interventions implemented were tailored to the gaps identified during the discovery phase. The target setting and population for the project included healthcare workers, infection prevention and control (IPC) infrastructure, health commodities in outpatient and antenatal departments in selected facilities, and community and household structures in selected wards and catchment settlements in the four project states.

As a measure of quality assurance and control, the project instituted a monthly integrated supportive supervision across the states, and conducted midline assessment in February 2022 to enable mid-course corrections. Monitoring and evaluation structures were embedded across the supported facilities to improve data quality in the supported service delivery points, facilitate tracking of project performance,

and enhance the reporting of the project International Task Force (ITF) indicators to funders. As a means of assessing the effect of the intervention, the project conducted project end-line surveys in interventional facilities and communities in July-August 2022. Sustainability agenda was pursued in terms of integration of project coordination into the state level reproductive and malaria program across supported states, leveraging on the US President's Malaria Initiative technical support in the areas of drugs and community supply. Also, capacity building of health care workers in IPC, and integration of project IPC program into overall National Center for Disease Control (NCDC) Orange Network IPC program were built to ensure sustainability beyond project timeline.

6.2 PROJECT DESIGN AND SCOPE

One group interventional project aimed at improving facility antenatal and fever services attendance. It has both facility and community interventions that hope to ensure facility safety in the context of COVID-19 pandemic, improve quality of health care and improve community demand for antenatal and fever services in the context of COVID-19 pandemic.

6.3 METHODOLOGY/APPROACH

A one-group intervention design was used and involved three phases:

Phase 1: Baseline facility and community assessment - Desk review of historical facility data, Health facility survey (administrative, infrastructure, quality of care and IPC Modules), health care worker survey, patient exit interview, and community assessment modules.

Phase 2: Facility and community-based intervention phase - HCW training on IPC and provider service communication, facility modification and supervision packages, SBC packages, monitoring and evaluation.

Phase 3: Evaluation - Midline assessment (facility administrative, infrastructure and service delivery module, patient exit interview and community-level household and market survey); collection of facility attendance data, and post-implementation data evaluation.

6.4: PROJECT MILESTONES AND ACHIEVEMENTS

The project utilized a two-pronged approach – facility and community interventions – targeted at sustaining the demand and supply dynamics of fever and antenatal service provision in the context of COVID-19 pandemic in Benue, Plateau, Oyo and Ogun States, Nigeria. Although the intervention package was pre-determined based on global best practices, the project design permitted some flexibility to tailor implementation in line with the findings of the baseline assessment and implementation within state context. The project implementation has three phases: (1) discovery phase (2) interventional phase and (3) effect assessment phase. In understanding the state context with regards to fever and antenatal services during the discovery phase, the project conducted; (1) Document synthesis across relevant desk offices and interviews for relevant desk officers and health managers to understand policy translation and transmission for fever and antenatal services and the state context with regards to the building blocks for the fever and antenatal service delivery (2) Review of 18 months historical service delivery and commodities consumption data for malaria and antenatal services prior to project implementation in the supported states to measure the effect of COVID-19 pandemic on antenatal and fever service delivery (3)

Baseline facility and community survey to assess the demand and supply factors affecting antenatal and fever service delivery across supported states. Key findings from the baseline assessment were: (1) Low facility readiness to uphold COVID-19 IPC measures with regards to necessary infrastructures, managerial and administrative IPC structures (2) Low facility readiness to provide fever and antenatal services regarding human resource, guideline availability and awareness, and drugs and commodities tracer categories (3) Low adherence and practice of antenatal and fever protocol, (4) Negative community behavioral ideation impacting on facility attendance.

In improving facility infection prevention and control measures and ensuring facility safety, the project deployed IPC infrastructure and commodities such as canopies to support space availability for physical distancing, infrared thermometer to promote screening at entry points, hand wash stations and supplies, alcohol-based sanitizers, floor markings and signage, plastic chairs, consulting chairs and tables, and posters for information, education and communication. The project also supported IPC administrative process by supporting facilities to set up IPC committee, draft IPC policy and plan, draft IPC algorithms and job aids to guide patient and health care worker screening, and assign IPC focal persons and designated persons to lead facility screening and triaging processes. These activities contributed to significant improvement in reported International Task Force (ITF) indicators across the implementation states; especially those that focus on IPC infrastructure, administrative and managerial domains (Refer to Figure 1 below)

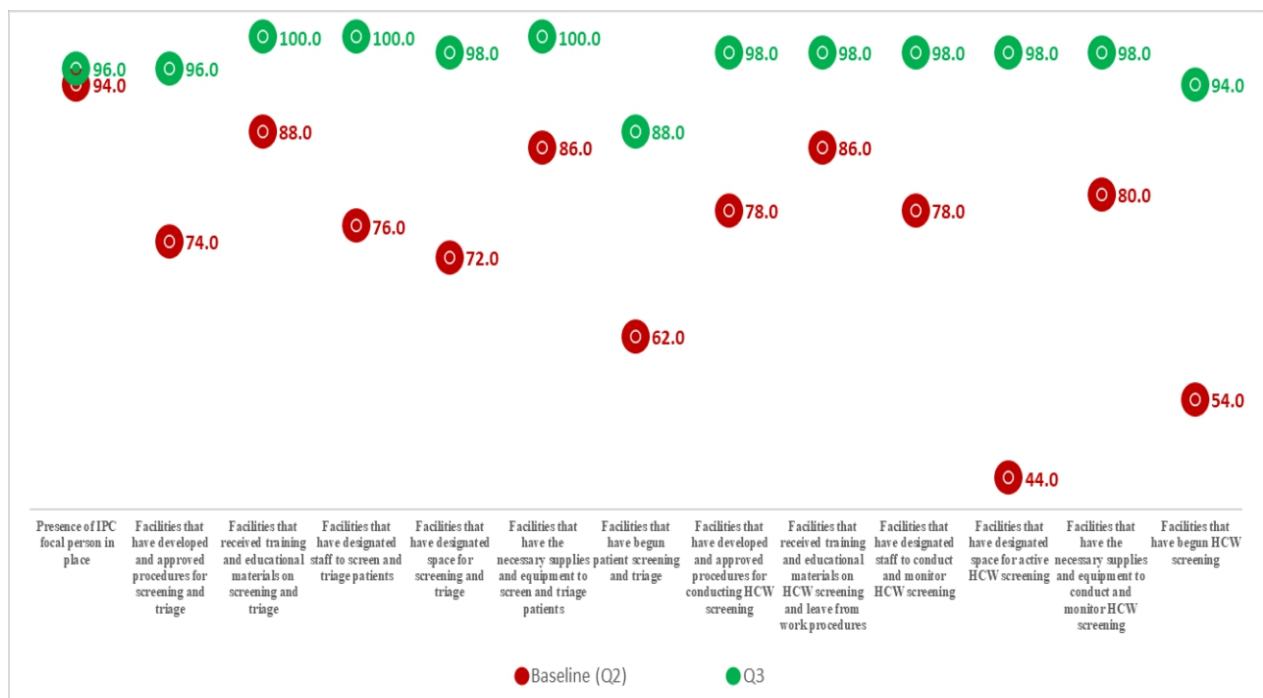


Figure 6. 1: Improved Performance in ITF Infection Prevention and Control Indicators Performance

The issue of IPC practice was critical to the project implementation across all APIN sites. While there was early improvement in IPC practice across at the sites especially at the peak of COVID-19 pandemic, the IPC practice performance, especially the use of facemask and hand wash facilities, declined following the drop in COVID-19 incidence in Nigeria and the removal of the restriction earlier imposed by the national

presidential task force for COVID-19 pandemic control. In addressing this drop in performance, the project implemented continuous quality improvement activities across five facilities with the lowest aggregate ITF indicator performance in each of the supported states. A performance incentives program was also deployed to create healthy rivalry among the states (See Figure 6.2). These were supported with provider behavioral program using behavioral economics approaches such as fish bowl discussion between service users and providers to foster behavioral change for improved IPC practice, malaria protocol adherence and patient-provider communication among health care workers.



Figure 6. 2: Sample of the Plaque Awarded as an Incentive for Improved IPC Performance

Beyond the measures to ensure facility safety, the quality of antenatal and fever care provision was also improved during the project through the training of 300 health care workers across the APIN-supported states on the new World Health Organization (WHO) antenatal care model, case management and treatment of malaria, patient-provider communication approaches and the NCDC IPC guideline. National guidelines were also supplied to the facilities following the training, while APIN state teams were deployed for periodic technical assistance to supported facilities to provide site mentoring for implementation of the protocols. Data entry clerks were also deployed to the facilities to improve the reporting of the project indicators. The project also worked closely with US President’s Malaria Initiative (PMI) partners across the APIN-supported states to extend the supply of malaria

Beneficiary’s Testimony

“This time we brought in a patient and we were attended to well. Usually, they don’t attend to patients with care but this time when we came, they rushed to him because it was a case of emergency. We brought the patient in unconscious but he was treated immediately and he was feeling a bit better. They would normally not treat patients well neglecting them until they die but now, we can see some changes with patient treatment and we are thankful for that.”

commodities and service registers to the facilities as a way of mainstreaming APIN-supported facilities to the national malaria program.

In addition, to improve the demand-side factors for the antenatal and fever service provision, the project implemented social behavior communication change (SBCC) activities at the community and facility levels. The project used various communication approaches to ensure that individual, social, structural, and environmental factors that influence care-seeking among the target populations were addressed. These approaches included advocacy, community engagement, and social mobilization. The SBCC package provided a broad framework for community target-driven activities to encourage care-seeking, as well as behavior change interventions targeted to health care providers to ensure safe and high-quality patient-provider interactions.

To guide the implementation of SBCC activities, the project developed creative briefs using available evidence to clearly define communication objectives, target audience, behaviors of interest and key messages to change behavior among community members. The project engaged with stakeholders and gatekeepers across the intervention states to receive input on the SBCC approaches and the messages to be adapted or developed for the community and facility interventions based on the findings from the baseline survey. The strategic approaches and channel of communication used included: Mass media messages (Radio jingles), Interpersonal communication through house-to-house visit by IPC conductors and community dialogue, provider-behavior change at the facility and production/distribution of SBCC print materials (posters, songs and job aids) to be pasted in health facilities to reinforce messages given to the clients. The project was able to reach 104,987 persons, referred 11,442 persons for services (2,906 for fever, 534 for ANC and 8,002 for COVID-19 vaccine) and tracked 8,028 completed referrals (1,504 for fever, 300 for ANC and 6,224 for COVID-19 vaccine) across APIN-supported states

All these activities culminated in improved confidence by the fever and antenatal service users as evidenced by the improvement in antenatal service attendance across the states (Figure 6.3) and testimonies from the community members (Case study: Box 6.1)

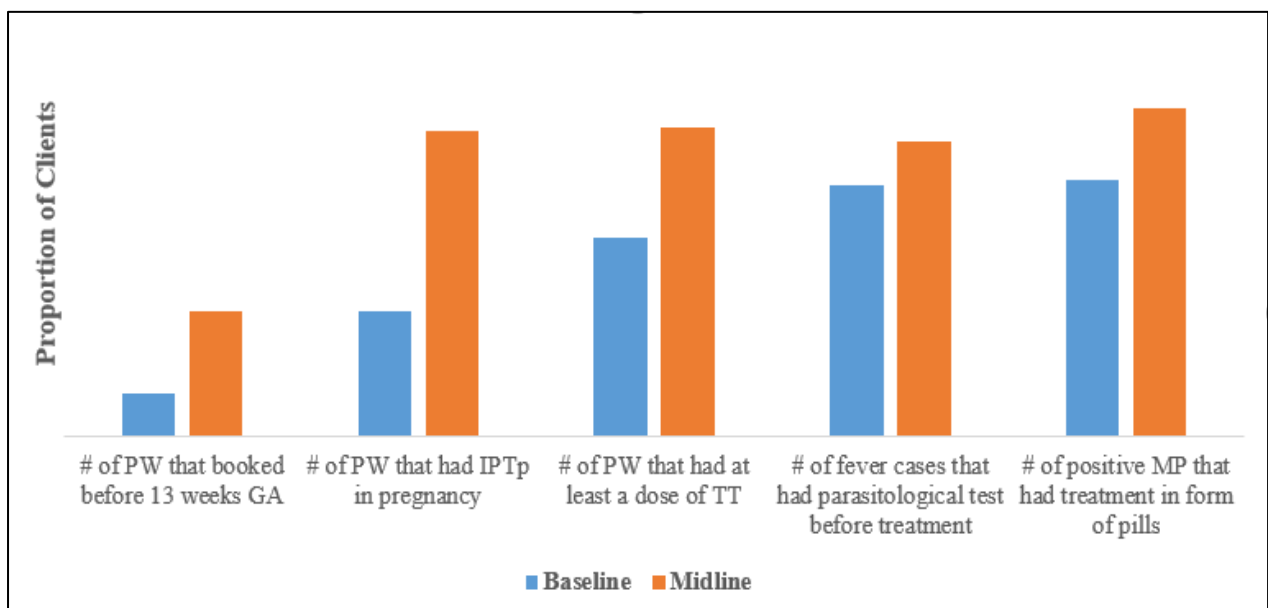


Figure 6. 3: Comparison of key antenatal and fever quality indicators between baseline and midline assessment

6.6: PROJECT CHALLENGES, LESSON LEARNED AND RECOMMENDATIONS

The major challenge in the project implementation was that of slow rate of behavior modification among both the health care workers and the patients. to address the challenge, APIN work collaboratively with a demand creation USG Implementing Partner, Breakthrough Action, to design social and behavioral change communication participatory approaches that could resonate better with health care workers and patients in Nigeria for change in behaviors. These included fish bowl discussions and dialogue meetings. This led to a significant change in service providers' attitude and behaviors, with resultant improvement in facility attendance for fever and antenatal care in project supported facilities.

6.7: CONCLUSION

The project intervention was able to bridge the gaps in quality of care and facility safety towards an improvement in overall antenatal and fever care attendance in APIN-supported facilities. Over the period of interventions, findings from the surveys helped to provide evidence for project implementers to make informed decision to continuously improve the quality of service and consolidate gains made after the COVID-19pandemic to sustain care-seeking.

7. KEY POPULATION INVESTMENT FUND (KPIF): “ENSURING COMPREHENSIVE HIV/AIDS RESPONSE AND BUILDING SUSTAINABLE KP-LED AND KP-FRIENDLY COMMUNITY APPROACH” (ENCOMPARS PROJECT)

7.1: BACKGROUND

Despite a low national HIV prevalence of 1.4% among the general population, key populations (KP) disproportionately have a high burden of HIV in Nigeria. Key populations represent only about 3% of the general population, yet they and their sexual partners contribute about 41% of new infections¹. Thus, KPs are more susceptible to, and worst hit by the HIV epidemic in Nigeria. The HIV prevalence among the different KP sub-types differs significantly across KP subtypes and regions with all being higher than both national and regional averages. The HIV prevalence across the KP subgroups is 25% for men who have sex with men (MSM), 15% for female sex workers (FSW), 11% for persons who inject drugs (PWID), 29% for transgendered persons (TG), and 2% for persons in prisons (PI). While various behavioral, biomedical, and structural factors contribute to increasing KP's vulnerability to HIV, stigma and discrimination at various levels including health care and community settings, homophobia and unfriendly policies continue to serve as a barrier to the accessing of healthcare services in Nigeria by KPs. Also, the gaps, including stigma and discrimination within the public health care settings have contributed to the worsening of KPs' health-seeking behavior, thus further limiting their access to HIV prevention, care, and treatment services and threatening the achievement of the global 95:95:95 HIV epidemic control goals.

Nigeria's Key Populations Investment Fund (KPIF EnCOMPARS project) was implemented to significantly increase the access of KPs to HIV testing, care, and treatment (including retention) by providing comprehensive HIV services to KPs across the HIV cascade of care.

7.1.1: OVERVIEW OF PROGRAM APPROACH

The KPIF EnCOMPARS project was implemented in Benue State to build institutional and technical capacity of KP-led and KP-friendly community-based organizations (CBOs) to improve access to evidence-based combination prevention interventions for KPs (including FSW, MSM, PWID, TG and PI) and increase the number of KP who know their HIV status and those that are placed and retained on treatment.

The EnCOMPARS project incorporated 6 core elements and approaches to deliver results leading to the overall improvement in the reach and coverage of services for KPs and improving results along the 95:95:95 cascade of care for key populations as shown in Figure 7.1.

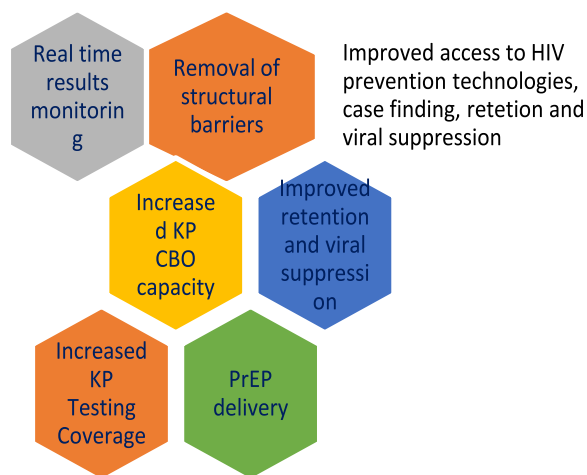


Figure 7. 1:Core elements of the KPIF (EnCOMPARS) Project

7.2: IMPLEMENTATION CYCLE

The EnCOMPARS Project was implemented in two phases with the first cycle commencing on June 1st 2019 and ending on September 30th 2019.

The second phase of implementation commenced from October 1st, 2019 to September 30th, 2020 with four (4) KP-led and two (2) KP Competent CBOs.

Addressing structural barriers to HIV services Stakeholder Engagement in the key populations’ program

KPs experience economic, physical, sexual, and psychological abuse that continues to serve as barriers to HIV testing and care for them. Stigma, which is commonly perpetuated by family members, close relatives, and health care providers ranging from stereotyping, separation, status loss, and discrimination often results in physical violence, rape, and poor health-seeking behaviors.

The criminalization of same-sex practices and other behaviors engaged in by some groups of KPs also constrains HIV prevention and treatment for them. This also increases the lack of human rights protection and violence from community members and the law enforcement agents.

APIN identified and engaged stakeholders at different levels to garner support and create a favorable implementation climate for KPIF program implementation, thereby addressing structural barriers to access to HIV-related services for KPs. Using relevant advocacy strategies, APIN engaged the identified stakeholders through face-to-face meetings, capacity building, joint program implementation, monitoring and evaluation and stakeholders’ forums to improve the understanding of the KP program. These efforts led to increased buy-in and improved support for the KP program.

Leveraging support from the KPIF grant, the project held the first safety and security engagement meeting for security stakeholders in the state. This meeting which was the first of its kind in the state had the highest leadership of the Nigerian Police Force and the Nigerian Correctional Facilities in the state in attendance, along with leaders of KP organizations. Other participants included representatives of the National Drug Law Enforcement Agency, Benue State Vigilante, Department for Citizens' Rights of the National Human Rights Commission, and Federation of Female Lawyers at the Ministry of Justice. The representatives of the Benue State Agency for the Control of AIDS (BenSACA), Ministry of Health, and chairmen of the Benue State House Committee on Health and Security also participated attendance. The stakeholders' engagement led to a reduction in the frequency of raids in brothels and hotspots in Benue State.

To ensure non-discriminatory service provision to key populations, the KPIF grant supported the training of about 65 Health care providers on KP sensitivity, gender, and human rights leading to the strengthened provision of KP-friendly services across health facilities including one-stop shops (OSS). The training of key staff of KP-CBOs, community members and paralegals equipped community members with the requisite knowledge to mediate on behalf of their community members during minor conflicts and refer gender-based violence survivors to appropriate services.

Building the Institutional and technical Capacity of KP-led Community based organizations

In line with the project's mandate to increase the capacity of KP-led local organizations to mobilize resources, plan, implement, monitor and evaluate programs for their community members to address HIV in a more sustainable basis, the project identified, assessed and engaged 7 KP-led and competent CBOs. The selection of the CBOs was undertaken through a process that involved relevant stakeholders, including the National KPs' secretariat and state actors including BenSACA and Benue State Ministry of Health.

CBO assessment using the NHOCAT tool revealed that the KP-led organizations had weak governance systems, limited knowledge and skills to implement HIV programs for their community members, and lacked knowledge and skills for mobilizing resources for the implementation of programs for their community members. In addition to this, KP-CBOs had weak human resources (HR) and financial management systems and inadequate resources to fund HR requirements for the implementation of community interventions for their peers. CBO also had weak M&E and gender management systems.

The program trained CBO staff and community volunteers on program management and proposal writing, financial management, Gender/Safety and Security, paralegal practices, adult and child safeguarding training, and mental health and psychosocial support service delivery. The KPIF grant built the capacity of

KP-competent and KP-led organizations on high-yielding HIV case finding approaches to enable them to provide peer-led HIV testing services, to find and link new cases of HIV to ART. The activities also included training on the implementation of the incentivized social network strategy for HIV case finding, index testing and PrEP service delivery.

7.3: SERVICE DELIVERY: INCREASING KP TESTING COVERAGE AND HIV CASE FINDING

With the support of the key population investment fund, CBOs reached 9903 KPs, provided HIV testing services to 8623 clients, diagnosed 621 KPs living with HIV and linked 551 of them to care, and 438 of them have been retained in care.

Table 7. 1: Achievements of the KPIF (EnCOMPARS) Project

Indicators	Project Target	Achievement	
		Number of KPs	% of Target Achieved
Key Population Prevention services (KP_PREV)	9259	9903	107%
<i>HIV Testing Services (HTS_TST)</i>	6500	8623	133%
<i>HIV Positive (HTS_TST_POS)</i>	933	621	67%
<i>Positivity yield</i>		7%	7%
<i>Percentage linked</i>		89%	89%
<i>Treatment new (TX_NEW)</i>	889	551	62%
<i>Treatment Current (TX_CURR)</i>		438	438
Pre Exposure Prophylaxis Current (PrEP_CURR)	394	634	161%

7.3.1: IMPROVED HIV TREATMENT RETENTION AND VIRAL LOAD SUPPRESSION AMONG KP APPROACHES

Gaps in the enrollment of KP clients in ART have remained a major challenge regarding the achievement of the UNAIDS 95:95:95 goals as KP-related programs often lose clients' pre-enrolment due to many factors. These factors include long waiting hours at health facilities, stigma and discrimination and lack of proximity of KP friendly health services to clients. In addition, retention in HIV care is vital to the HIV care continuum and is central to the achievement of the ultimate goal of achieving viral suppression and

epidemic control. The KPIF grant systematically strengthened systems for improving client enrolment and retention on ART through multi-prong approaches that address both the demand and supply sides of KP-related services.

The program addressed infrastructural, systemic, and practical barriers to ART enrolment and retention for KPs and supported the implementation of a differentiated model of care for improving retention in treatment to ensure viral load suppression. Through the establishment of a world-class KP Center of Excellence (CoE) OSS for the provision of ART services for KPs and community ART service delivery, the access of KP clients to enrolment, retention and viral load-related services was significantly improved. The CoE has a wide array of recreational and integrated health facilities deliberately put together at the community center to attract and sustain the interest of KPs while addressing salient reproductive health, emotional, psychosocial needs with care provided by well-trained health care professionals. The center also has facilities such as the HTS spot for drop-in clients who desire HIV testing services. Clients also have access to outdoor games at the games arena or lounge area.

The CoE also utilized information technology and social media outlets to support service delivery using the KP call center app. The KP call center utilized IT for in- and outbound calls to enhance appointment schedule reminders and management, online counseling and information-sharing with KP clients, tracking of clients through calls and SMS messaging, and referrals. The KP call center app also has facilities for the dissemination of information on social media platforms such as twitter, Instagram, and Facebook. The app is linked to the electronic medical record (EMR) that host the database of all clients on treatment; it automatically generates dates of next appointment for each client and sends out a reminder message a day before the appointment.

POSITIVE AFFIRMATIVE THROUGH BIRTHDAY CALLS

The KP call center initiated affirmative birthday calls to KPs on ART to celebrate them on the occasion of their birthdays. This left a positive impression in the minds of clients reached. KP Clients were appreciative of the "new approach". Most clients reached noted that no one had ever called to celebrate with them in that manner. In Dooshima's words "I feel happy and encouraged to know that someone still cares about my wellbeing; APIN OSS, you have won my heart"

Operations at the call center is handled by competent, well-trained KP-sensitive call agents who engage clients in local languages through live calls, chats, and social media campaigns on salient.

"The dial that brought Ricky back to life"

Ricky is a middle-aged PWID on treatment at one of the key population one-stop shops in Benue State. Ricky missed his clinical appointment and became interrupted in treatment on the ART program. Through his treatment support partner, the KP call center agents found out in the process of tracking through calls that Ricky was bedridden and unable to keep up with his scheduled clinical appointment as he was also down with symptoms of TB. The KP OSS team was alerted and immediately catered to Ricky's needs in addition to referring him to a TB DOT Center where he received adequate medical attention. Ricky is recuperating, he is happy that the KP Call center agents "found him out when no one else could". Ricky is thankful that the KP call center made that dial that brought him back to life.

Transforming lives through total care!

Fausty, a female PWID, lives in a rural community about 72 kilometres from the Gboko KP OSS. Fausty is unemployed and largely depends on the goodwill of the people around her to survive. Fausty missed her clinical appointment and became interrupted in treatment; she was unable to keep up to her scheduled clinical appointment for ARV refill and viral load bleeding due to lack of funds required to transport herself to the OSS to pick up her pills and get tested. The KP call centre and OSS could not track her because she had mortgaged her phone in exchange for drugs.

However, Fausty was tracked by Jo Man, her buddy. Fausty was invited to the client-supported KP support group meeting convened by the Concerned Youth for Development Initiative, the PWID-led KP CBO. Through that, she was able to access HIV treatment services (drug refill and HIV load testing), connected with other KPs on treatment like her, and got education on treatment adherence from her peers. The transport support provided 'did the magic'.

The KP call center interventions have considerably improved outputs on the treatment cascade. Implementation of pre-appointment reminders has improved appointment compliance. The call center interventions have also improved viral load coverage and facilitated return to treatment for KP clients who missed appointments.

The program improved access to HIV test and treatment services for KPs, through support for human resources for health and support for conduct of community antiretroviral treatment outreaches. Additionally, the program supported retention and viral load optimization through access to other differentiated service delivery (DSD) models like home visits and client tracking meetings. To strengthen differentiated service delivery to key populations, the program also supported functional adherence clubs/KP client treatment support groups which eventually served as an effective platform for service optimization for KP clients. As such, the program catering to the unique needs of KPs on ART, increasing overall enrollment and retention on the program, leading to optimized viral load for KP clients in care.

551 HIV positive KP clients were enrolled on ART at designated OSS and community outreach locations with about 81% still retained in care after several years. Several years afterwards, the KP Center of Excellence remains a model and is still catering to over 1900 clients on ART

7.3.2: ADDRESSING THE DRIVERS OF THE HIV EPIDEMIC; STRENGTHENING KP RESILIENCE AND IMPROVING KP ACCESS TO SERVICES

Poverty is one of the drivers of the HIV epidemic among KPs: it threatens their potential to avoid HIV-risky behaviors and impacts negatively on client retention on ART. Recognizing this, the KP CoE intervention strategically aimed to address the challenge of extreme poverty among KPs through the provision of facilities and platforms for livelihood strengthening. The project supported 80 KPs to acquire skills in beads and ornamentals making, tailoring/ fashion designing, and animal and fish production, thereby improving their employability potential and stimulated the start-up of small businesses to provide alternate sources of income to support behavior change and improve retention on ART. Through the support of KPIF, four skills training booths were established to support the continuous mentor-ship of KPs at the Center of excellence and the Gboko OSS.





Figure 7. 2: Photographs from KPIF-supported vocational training programs

7.3.3: STRENGTHENING ORGANIZATIONAL SYSTEMS FOR REAL-TIME RESULTS MONITORING

The KPIF grant supported the development of KP program dashboards on OSS EMRs and the NDR as well as set up data management systems, including systems for biometric capture using the secugen finger scanner during client enrolment in care across all OSSs, thus strengthening real-time data reporting. In addition to reducing multiple enrolment, KPIF grant interventions strengthened routine data upload on the national data repository.

7.4: LESSONS LEARNED ON THE KPIF

1. Hotspot mapping is effective in identifying and providing services to real KPs.
2. Snowballing and programming for KPs using incentivized coupons on the Social Network Strategy improves KPs to access to HIV testing services
3. The use of peer group members as health educators and community mobilizers is critical to increasing PrEP uptake.
4. PrEP can serve as a channel for optimizing HIV case finding on KP programs most especially for MSM.
5. DSD models and community outreaches have proven to be an effective and efficient way of optimizing results and increasing access to care and treatment services for KPs.
6. LGA CART Outreaches in hard-to-reach LGAs is critical to optimization of results on the triple cascade
7. Real time data upload reduces losses on the program and makes for better retention in care

7.5: SUSTAINABILITY PLANS FOR ENCOMPARS PROJECT

Given the successes achieved on the KPIF-funded **EnCOMPARS** program, it provides a model for the mentoring of KP-associated CBOs to enhance program outputs and progressively improve on key deliverable. Among others, the innovative programming entailed in the client tracking, livelihood strengthening, and establishment of the CoE need to be sustained and expanded for greater impact

7.6: CONCLUSION

Implementing the EnCOMPARS project was both challenging and interesting. APIN will scale up on lessons learnt to enhance program implementation.

7.7: REFERENCES

1. Federal Ministry of Health (FMOH), 2020; Integrated Biological & Behavioural Sentinel Survey (IBSS) among key Populations in Nigeria