Centre for Health Solutions - Kenya

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End of Project Report

Implementation and Expansion of High Quality, Sustainable and Comprehensive HIV Care, Prevention & Treatment Services in the Lower Eastern Region of Kenya – NAISHI Project

December, 2021

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List of Acronyms

Acronym	Meaning	Acronym	Meaning
ACF	Active Case Finding	CMLC	County Medical Laboratory Coordinator
ADR	Adverse Drug Reactions	CQI	Continuous Quality Improvement
APOC	Adolescence Package of Care	CRAG	Cryptococcal Antigen
aPNS	Assisted partner notification services	CSM	Clinical Systems Mentorship
ARV	Antiretroviral	DBS	Dried Blood Spot
AYA	Adolescents and young adults	DHIS	District Health Information System
BMI	Body Mass Index	DICEs	Drop-in Centers
CASCO	County Aids and STI Control Officer	DQA	Data Quality Assurance
CBO	Community-Based Organization	DR TB	Drug-Resistant Tuberculosis
CCC	Comprehensive Care Centers	DTG	Dolutegravir
CDC	Centers for Disease Control and Prevention	DSD	Differentiated service delivery
CHEW	Community Health Extension Worker	eHTS	Electronic HIV testing services
CHMT	County Health Management Team	EID	Early Infant Diagnosis
CHS	Centre for Health Solutions	EMR	Electronic Medical Records
CHV	Community Health Volunteer	eMTCT	Elimination of Mother to Mother-Child Transmission
CHW	Community Health Worker	EQA	External Quality Assurance
CSO	Civil society organization	FSW	Female sex worker
FDC	Fixed-dose combination	IPD	In-Patient Department
FP	Family Planning	IPT	Isoniazid Preventive Therapy
GBV	Gender-based Violence	IQC	Internal Quality Control
HC	Health Centers	KEMSA	Kenya Medical Supply Agency
HCW	Health Care Worker	KHQIF	Kenya HIV Quality Improvement Framework
HEI	HIV-Exposed Infant	KP	Key populations
HIS	Health Information system	LAM	Lipoarabinomannan TB Kit
HIV	Human Immunodeficiency Virus	LMIS	Logistics Management Information Systems

HIVDR	HIV Drug Resistance	M&E	Monitoring and Evaluation
HMIS	Health Management Information System	MCH	Maternal and Child Health
HMT	Health Management Team	MOH	Ministries of Health
HRIO	Health Records and Information Officers	MSM	Men who have sex with men
HTS	HIV Testing Services	NASCOP	National Aids and STI Control Program
ICF	Intensified Case Finding	NNT	Number needed to test
iHRIS	Integrated Human Resources Information System	NGO	Non-Governmental Organization

NHIF	National Hospital Insurance Fund	PrEP	Pre-Exposure Prophylaxis
NHRL	National HIV Reference Laboratory	POC	Point of care
OI	Opportunistic Infection	PT	Proficiency Testing
OJT	On-The-Job Training	PY	Program Year
OTZ	Operation triple zero	QA	Quality Assurance
OVC	Orphans and Vulnerable Children	QA/QI	Quality Assurance/Quality Improvement
PAMA	Papa and Mama clinic	QI	Quality Improvement
PCR	Polymerase Chain Reaction	QIT	Quality Improvement Team
PEP	Post Exposure Prophylaxis	RRI	Rapid results initiative
PHDP	Positive Health, Dignity & Prevention	SCH	Sub-County Hospital
PLHIV	People Living With HIV	SCHRIO	Sub-County Health Records Information Officer
PMTCT	Prevention of Mother-To-Child Transmission	SCMLC	Sub-County Medical Laboratory Coordinator
aPNS	Assisted Partner Notification Services	SDP	Service Delivery Point
PPB	Pharmacy and Poisons Board	SIMS	Site Improvement Through Monitoring System
SLMTA	strengthening laboratory management towards accreditation	TL	Treatment Literacy
SOP	Standard Operating Procedures	TOT	Training of Trainers

EXECUTIVE SUMMARY

Centre for Health Solutions – Kenya (CHS) is a local (Kenyan), not-for-profit organization that utilizes 100% local expertise and strategic partnerships to implement evidence-informed solutions and interventions to existing and emerging public health concerns. CHS is a close and trusted partner of the Government of Kenya and works closely with the national and county governments, donors and other stakeholders to deliver quality and sustainable health services.

CHS started direct support for HIV in the Lower Eastern region in October 2016 through a five-year U.S President's Emergency Plan for AIDS Relief (PEPFAR) project named **Naishi**' (Swahili word for '***I live***')as it sort to innovate and implement sustainable strategies to provide comprehensive HIV prevention, care and treatment services for better health outcomes.

The program areas supported were:

- HIV prevention services including key population, Pre Exposure Prophylaxis , Post Exposure Prophylaxis, prevention of gender-based violence and post violent care and Positive, Healthy, Dignity Prevention services
- Care and treatment services such as; comprehensive ART therapy for adults adolescents and children, TB HIV care, opportunistic infections management, cervical cancer screening, comprehensive reproductive health and PMTCT
- Laboratory and pharmacy services and monitoring and evaluation

Additional support was extended to the counties through supportive functions, such as mentorship and quarterly reviews/progress updates to the county and sub-county health management teams towards improving and strengthening health service delivery.

CHS further supported continuous and structured transition processes towards county led programming with initiatives such as the Sub-County Aids and STI Control Officer SCASCO mentorship model targeted at preparing counties for direct government to government funding.

BACKGROUND

With support from PEPFAR through Centers for Disease Control and Prevention (CDC), CHS received a grant to implement and expand high quality HIV prevention, treatment and care services in the Lower Eastern Region of Kenya (Makueni, Machakos and Kitui counties)

At project inception, CHS was supporting 245 facilities in the Lower Eastern region. However, from October 2017, all faith based facilities (18)were transitioned to CHAK (Christian Health Association of Kenya), reducing the number of supported health facilities to 227 (70 Machakos County, 68 Makueni County and 89 Kitui County) which affected trajectory of the cumulative numbers on treatment in the second year of programming.

The Naishi project began key population services programming in October 2018 in Machakos and Kitui Counties and was scaled up to include Makueni County in October 2019 and began support for the provision of cervical cancer screening and management services from October 2020.

PROJECT PURPOSE

Naishi project had the following objectives:

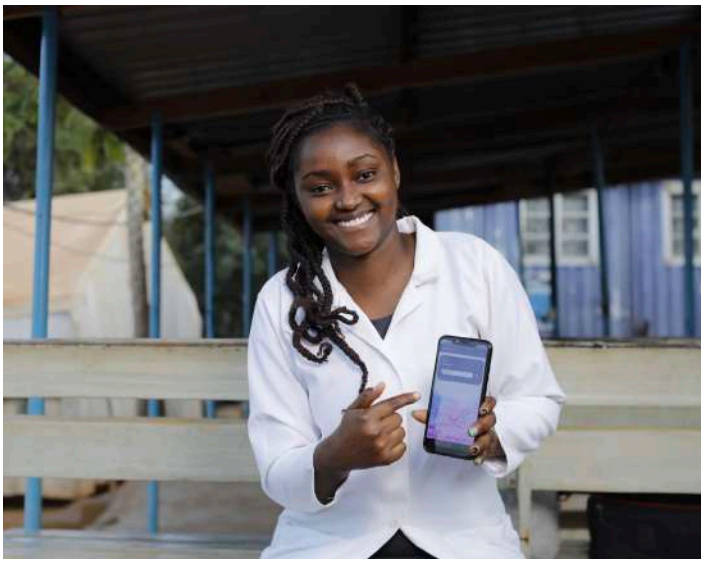
- Support the provision of comprehensive HIV testing services and linkage to care
- Support the provision of comprehensive HIV care and treatment services for all populations
- Support provision of comprehensive key population services
- Support provision of PEP and PrEP HIV prevention services
- Support implementation of gender-based violence services, including prevention and post violence care
- Support comprehensive PMTCT services
- Support management of TB/HIV co-infected persons
- Support HIV related laboratory services
- Support logistics for HIV related commodity management
- Cervical cancer screening for women PLHIV

ACHIEVEMENTS HIGHLIGHTS

NAME	DESCRIPTION
HIV TESTING SERVICES	**2,316,996** HIV tests done **36,940** identified as HIV infected Linkage rate improved from **81%** in FY18 to **92%** in FY21
CARE AND TREATMENT	TX new **30,959** TX curr growth from **55,554** to **65,915** Overall viral suppression increased from **86%** to **95%**
PREVENTION OF MOTHER TO CHILD TRANSMISSION OF HIV	PMTCT POS **8,934**, HEI **9,279**, Potential MTCT rate declined from **5%** in 2017 to **3%** in 2021 with **8,906** averted MTCT
TB/HIV	IPT provided to a total of **64,620** clients
KEY POPULATION SERVICES	KP Prev increased from **1,077** MSM,**4,541** FSW in FY 2019 to **3,501** MSM,**11,693** FSW and **5,404** MSM,**10,661** FSW in FY 2020 and Fy 2021 respectively with an ever enrolled of **17,860** FSW and **6,950** MSM.
M&E	EMR &POC established were **106** out of **227** facilities and capturing **80%** of Tx Curr

The notable achievements include:

1. ***Partner Notification Services (PNS):*** Naishi project was the first IP to pilot partner notification services within a general population set up, which revolutionized the approach to HIV testing by using index clients to test the sexual partners. This strategy led to an improvement in HIV testing efficiency. Highlights of this achievement were shared through a paper "Exploring high yield approach to HIV testing in Kenya" and presented during the 12th INTEREST international workshop on HIV treatment, pathogenesis, and prevention research in resource-limited settings in Kigali, Rwanda.
2. ***Rapid roll-out of Operation Triple Zero*** (OTZ) is an approach that recognizes adolescents PLWH as assets in their services' programming rather than a problem and upon enrollment they commit to zero missed drugs, zero missed appointments and zero viral loads and which has greatly improved their viral load suppression and retention into care. As at September 29th, 2021, 96% (4,777) adolescents were enrolled in operation triple zero clubs.
3. ***Roll out of Novel Video Directly Observed Therapy (VDOTs) Application:*** Naishi project developed a mobile phone application dubbed "*NimeCONFIRM"* targeted at ensuring non-adherent Children and Adolescents Living with HIV (CALHIV) **CONFIRM** that they have taken their medication through a recorded video.

   Health care worker during a NimeCONFIRM application use training

   This approach enhanced the clinical review of children with suspected treatment failure as the clinicians were able to confirm drug adherence during the period of enhanced adherence which informed evidence-based decision making.
4. ***Roll out of the Sub-County AIDS & STI Control Officers (SCASCO) Mentorship Model***. Naishi project developed this model to support the sub-county and county MOH managers with the requisite technical skills to provide direct technical assistance to

MOH facilities. This ensured sustainable government-led HIV programming across the supported counties.

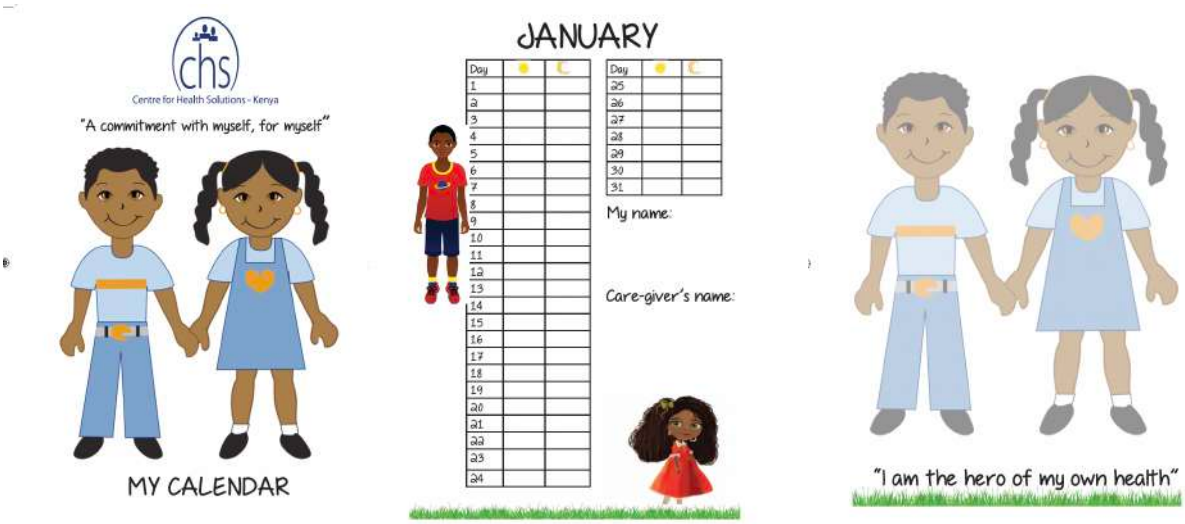
5. ***Scale-up of Electronic Medical Records and Point of Care Systems***:106 of 227 Naishi project supported health facilities transitioned to electronic medical records systems, with 87 facilities providing point of care services. 80% of all clients on treatment (Tx current) clients were captured; this ensured access to timely, accurate data to improve the quality of care provided.
6. ***Key Populations Program Integration***: Naishi project supported the integration of KP programming into two MOH facilities, Makueni County Referral Hospital and Athi River Health Centre. The integration was aligned with the sustainability concept and prepared the MOH system to implement a cost-efficient KP programming model.

   Naishi project further supported the provision of KP friendly services in the other general population clinics by sensitizing CHMTs, SCHMTs and facility staff on KP friendly services packages to increase awareness and reduce stigma. Besides this intervention, Naishi project engaged KP CSO's that helped accelerate the identification of MSMs within the catchment zones.
7. ***Mashariki Regional Clinical HIV TWG in 2017***: The Naishi project established the Mashariki TWG, bringing together senior consultants and cross-cadre specialists to shape quality management of complex adult and pediatric HIV and TB cases through regular consultations and clinical review forums.

   The TWG served as a platform for case reviews, virtual training and capacity building of all cadres of staff at facility and sub-county levels. This, coupled with the implementation of enhanced adherence counselling (EAC), resulted in a steady improvement of viral re-suppression rates from 49% to 91% for those suspected to have treatment failure in the program.
8. ***HTS Scaling through the HTS booths***

   To expand HIV testing capacity , the Naishi project supported placement of HIV testing booths in nine strategic facilities across Kitui, Makueni and Machakos Counties. These enhanced the respective facilities testing spaces thereby improving access to HIV testing services
9. ***Implementation of Children and Adolescents Drug Adherence calendar***

Naishi project developed a Children and Adolescent Adherence calendar to support children and adolescents in Operation Triple Zero (OTZ) clubs adhere to ART Medication.



A sample of the children's adherence calendar

The calendars helped children monitor their drugs timing as a form of personal assessment therapy. Children would tick the calendar whenever they took medication to allow the health care workers assess children's adherence to medication during the next clinical appointment. Children were supported with children friendly assessment calendars and colored pencils.

Children with good adherence (>95%) were issued with "Heroes" stickers among other rewards as a form of motivation. These rewards helped children strive for better adherence scores. This innovation realized the improvement of viral load suppression from 76% to 90% for children 10-14 years and from 80-88% for adolescents 15-19 years.

HIV TESTING AND COUNSELING SERVICES

HIV testing is a critical component in HIV programming as it provides an entry into HIV prevention, care and treatment services. In the first two years of the Naishi project, the focus was on providing testing services to increase knowledge of HIV status in the served population.

Indicator	Target	Achievement	Yield	% Achievement
Number tested, received results	2,332,517	2,316,996	N/A	99%
Number positive	47,823	36,940	2%	77%

As testing coverage improved, in line with UNAIDS 95-95-95 targets, focus shifted to identifying PLHIV through targeted and efficient strategies. Naishi project developed the HTS eligibility screening register and standard operating procedure to optimize testing efficiency. It streamlined OPD patient flow to ensure all clients presenting at the OPD pass through the HTS eligibility screener for HIV risk assessment.

HTS, is an opt-out approach, was offered to those at significant risk of HIV infection. Naishi project allocated individual counsellors and facilities targets and tracked progress daily and weekly progress across all the supported facilities. The project implemented an active weekly review of optimization data (OPD workload against the number of clients screened) and monitoring numbers needed to test to identify one positive to track and improve HTS efficiency.

In FY04, Naishi project introduced HTS eligibility screeners in select high volume sites. This initiative reduced the number needed to test (NNT) from 73 in years one, two and three to 45 in years four and five.

		FY 17 (Oct 16-Sep 17)			FY 18 (Oct 17-Sep 18)			FY 19 (Oct 18-Sep 19)			FY 20 (Oct 19-Sep 20)			FY 21 (Oct 20-Sep 21)		
Indicators	Category	Target	Performance	% Achievement	Target	Performance	% Achievement	Target	Performance	% Achievement	Target	Performance	% Achievement	Target	Performance	% Achievement
HTS TST	**Total**	**601,345**	**473,711**	**79%**	**846,357**	**661,588**	**78%**	**397,689**	**566,099**	**142%**	**244,457**	**364,228**	**149%**	**242,669**	**251,370**	**104%**
	Adult	279,841	391,075	140%	774,413	608,596	79%	379,916	519,032	137%	221,656	341,609	154%	222,070	241,005	109%
	Children	321,503	82,636	26%	71,944	52,992	74%	17,773	47,067	265%	22,801	22,619	99%	20,599	10,365	50%
HTS TST Pos	**Total**	**8,696**	**6,463**	**74%**	**14,264**	**8,813**	**62%**	**8,915**	**8,052**	**90%**	**6,997**	**7,431**	**106%**	**8,951**	**6,181**	**69%**
	Adult	5,807	6,026	104%	13,659	8,589	63%	8,774	7,725	88%	6,423	7,150	111%	8,512	5,948	70%
	Children	2,889	437	15%	605	224	37%	141	327	232%	574	281	49%	439	233	53%
Linkage	**Total**			95%			81%			90%			89%			92%
	Adult			94%			77%			89%			88%			91%
	Children			103%			235%			118%			114%			102%
NNT			73			75			70			49			41	

HTS COVERAGE AND QUALITY OPTIMIZATION

Naishi project supported the counties in the recruitment and deployment of HTS counsellors across Naishi project supported health facilities. Further, Naishi project participated in the

development of the national HTS refresher training guidelines. These were utilized to offer annual refresher courses for the HTS providers to improve their counselling and testing skills. The project provided structured and routine mentorship support and facility-based continuous medical education.

Index Testing Services

Over five years; the Naishi project elicited 21,479 sexual partners, 19,140 (89%) were eligible for testing, 14,107 (74%) were tested, 4,414 were identified representing a yield of 31%.

To further support the effective implementation of index testing services in line with the safe and ethical index testing requirements, Naishi project trained HTS counsellors and clinical teams on minimum standards and conducted baseline assessments in all 220 supported facilities offering HTS services.

Naishi project optimized index testing services by testing elicited sexual partners and children of HIV infected clients implemented using an expanded scope to include contacts of newly identified patients, patients with high viral load, adolescents and young people and pregnant mothers.

Linkage

Naishi project implemented the same day, same facility linkage approach to optimize ART initiation for the newly identified HIV positive clients. Focus was to ensure complete documentation of referral and linkage of identified clients through utilization of standardized referral and linkage tools and physical escort by the HTS counsellors for the intra-facility linkage. To further enhance linkage, all newly enrolled clients were longitudinally followed up by individual HTS counsellors for a period of at least twelve months. Through these strategies, linkage improved from 81% in FY18 to 92% in FY21

External Quality Assurance

In the first year, Naishi project focused on the massive enrolment of the HTS providers in proficiency testing (PT). In the subsequent years, all the HTS providers participated in the PT panels, and those with unsatisfactory results supported through corrective action and preventive action (CAPA). To further enhance the quality of HTS, lot to lot quality control and quarterly supportive supervision were implemented in addition to regular mentorship and individual counsellor observed practice.

eHTS Support

Naishi project supported the implementation of the eHTS across all the 106 EMR sites (48% of HTS sites) and 57% of HTS _TST data is captured in eHTS to enhance easy data capture, real-time analysis and timely interventions. The transition from manual to electronic records reduced data errors and enabled faster analysis, enhancing data-driven mentorship.

Innovations

- Developed an eligibility screening register which improved testing efficiency by helping in the identification of clients most at risk of being HIV infected
- Adopted use of mobile phones for daily performance monitoring, which enabled real-time feedback to facilities and programs and helped improve targets achievements through enhanced accountability
- Implemented social network services (SNS) testing as a high yield strategy that improved identification of the key population clients
- Implemented eHTS across all EMR sites, which enhanced data capture for timely analysis and real-time feedback.

Challenges

In PY5, Naishi project experienced low identification of 69% compared to the previous years where identification targets were met. This was attributed to industrial strikes in quarter one, which resulted in a reduction in OPD workload. In the same year, there was the emergence of COVID-19, quarantining and isolation of infected and affected staff which affected the workload. Further disruption in the supply of HIV rapid test kits led to stock-outs; leading to service interruptions.

PRE-EXPOSURE PROPHYLAXIS (PrEP)

Prep Uptake and Continuation

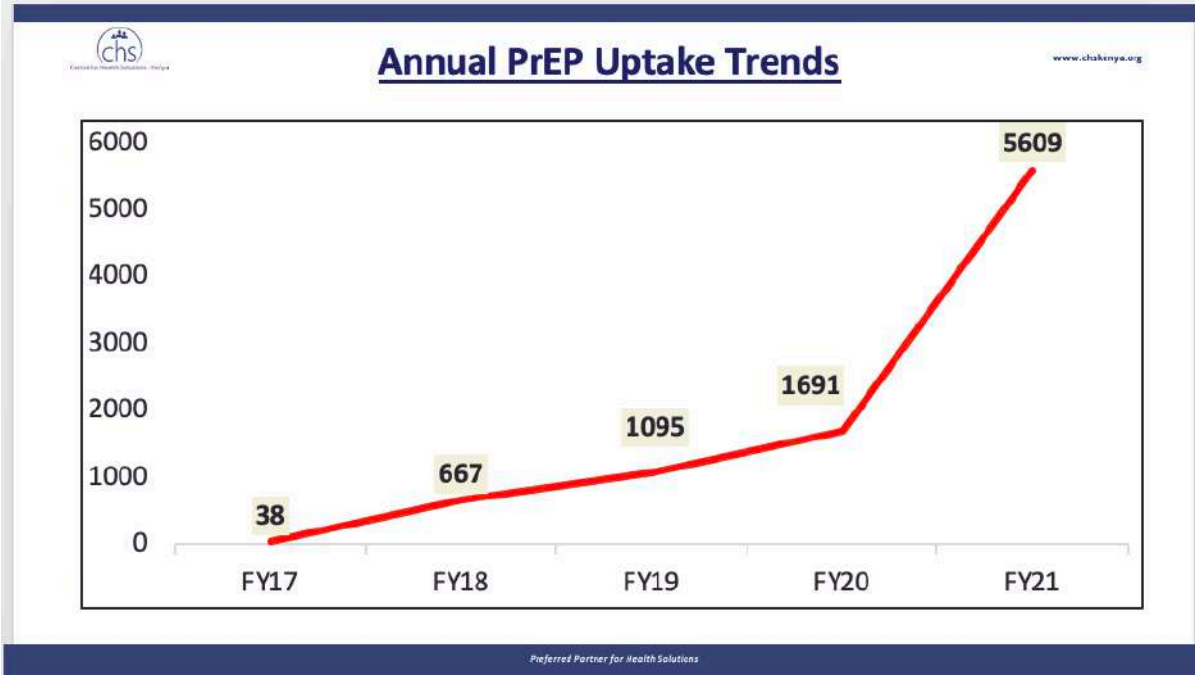
Over the five years, Naishi project had a PrEP New target of 9,600 for both the key population and the general population. At the end of the project, 9,100 (95%) clients were initiated on PrEP.

PrEP services were integrated within key departments like HTS, OPD, MCH, community and CCC to optimize PrEP uptake. This integration resulted in a positive trajectory over the years

from FY18 to FY21. Naishi project appointed PrEP focal persons across all the supported health facilities and sensitized HTS counsellors and clinical teams on proper messaging to enhance the uptake further.

PrEP services were extended to the community level to increase service uptake for the key populations (MSM and FSW). This was supported by PrEP champions and through structured community PrEP clusters. To increase the pool of contacts, Naishi project utilized the aPNS and SNS approach, and those who tested HIV negative and were at risk were initiated on PrEP. To optimize continuation for the clients initiated on PrEP, Naishi project streamlined the appointment system and ensured call reminders were done a day before the appointment date. After the emergence of the COVID-19 pandemic in March 2020, the project adopted ministry of health guidelines for differentiated service delivery (DSD) services where clients were issued with drugs for a longer period of up to three months. This model enabled clients to be on uninterrupted prophylaxis thus improving the continuation

Annual PrEP Uptake Trend



ADULT HIV CARE SERVICES

The Naishi project provided HIV treatment services to 65,915 clients by the end of its fifth year, having begun with a cohort of 47,850 PLHIV in care. Adaptive identification modalities

coupled with client-centred retention and return to care strategies enabled the program to achieve a net cohort growth of 64% and remarkably did not post any negative growth across the years.

The Naishi project provided a standard package of care geared towards linking all newly identified clients to care, retaining those already in care with minimal attrition, and returning to care those who had interrupted treatment within the shortest time possible.

To enhance cohort growth:

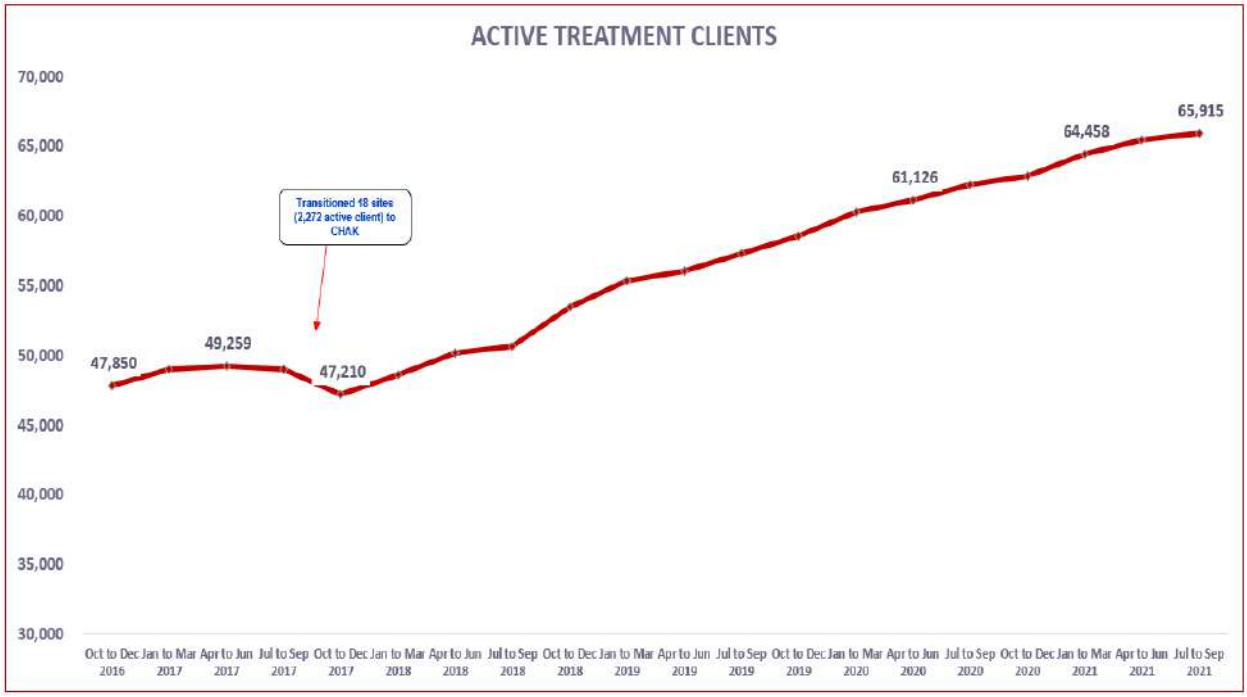
- Service delivery was differentiated beginning from client-specific linkage pathways to community ART initiation for clients identified during targeted community testing,
- Clients were enrolled into special peer-led psychosocial support groups called 'Treatment Literacy Classes' (TLC), to promote retention among the newly enrolled.
- Additional interventions were introduced at enrollment, including: screening for TB, nutritional assessment, counselling and support, pregnancy status check, pregnancy intention assessment, STI and Hepatitis B screening, and immune status determination using WHO staging and CD4 testing.

Following enrollment, the package of care offered to clients included:

- Appointment management
- Prevention and treatment of opportunistic infections using co-trimoxazole and Tuberculosis preventive treatment (TPT)
- Viral load and adverse drug event monitoring
- Identification and management of treatment failure,
- Adherence support and linkage to community PHDP services.

More recently, Naishi project offered routine BMI and blood pressure screening for early detection and referral for non-communicable diseases. Other prevention services include support for regular cervical cancer screening for women of reproductive age (WRA) beginning with capacity building, provision of minor medical supplies and tools, referral to treatment sites and support for monthly reporting of services in project and national data platforms.

TX_CURR Trends



Note the effect of transitioning 18 facilities to CHAK in October 2017

Key Approaches in Care and Treatment

Dissemination of ART guidelines 2016 and 2018

The new guidelines in 2016 saw the introduction of the 'Test and Treat' approach whereby clients were initiated on ART upon confirmation of HIV status, irrespective of WHO clinical stage, CD4 count, age, gender, pregnancy status or co-infection status.

Clients found to have TB would be initiated on TB treatment first, those without TB initiated on TB preventive therapy (TPT), while those with a baseline CD4 count of less than 100 cells/mm³ received reflex serum CrAG screening to determine the immediate course of treatment. The advent of the ART guidelines saw an increase in the frequency of viral load monitoring for clients below 25 years, routine mental health and substance abuse monitoring and the introduction of dolutegravir (DTG) as a recommended first-line ARV drug

ARV Optimization

Under the guidance of the MOH guideline, Naishi project spearheaded the ARV optimization process in lower eastern through; guideline dissemination, county, sub-county and facility level trainings and CMEs, development and printing of desktop job aids and SOPs, mentorship, virtual CMEs during clinical TWGs and support for commodity management practices to

support ordering and reporting for the new regimens. Optimization support also entailed enhanced pharmacovigilance for new side effects and viral load monitoring to document viral suppression outcomes

Adoption of Differentiated Care, MMD and Community ART Models

Innovations implemented to improve retention included the adoption of differentiated service delivery models including community ART initiation and differentiated care (DC) models such as facility fast track, facility ART groups and community ART groups as well as extension of community ART group distribution to neighboring counties such as Kajiado county to mitigate the effects of COVID travel restrictions on missed appointments.

Multi-Month Dispensing (MMD) was done among new populations such as stable adolescents and PMTCT mothers in a bid to curb the occurrence of missed doses. By the end of the Naishi project period, 92% of all stable clients were on a DC model, while 74% were on MMD.

Continuity of treatment – MMD	**Oct 2020 to Sep 2021**		
	TX_Curr	**MMD**	**%**
Naishi project	65,915	48,494	74%
Children 0-14 yrs.	3,779	1,893	50%
Adults > 15 yrs.	62,136	46,601	75%

IPT Implementation

The Naishi project documented 64,620 PLHIV on IPT, with a completion rate of 95.7%, having begun with 40,679 clients on IPT in its first quarter of implementation. Having demonstrated efficient implementation of high-quality TB preventive activities- identification of eligible clients, provision of IPT and tracking their outcomes, Naishi hosted the TPT South to South

mentorship visit by teams from NTLP-Kenya, CDC Atlanta, CDC Kenya, Uganda, Zambia and Zimbabwe in May 2019.

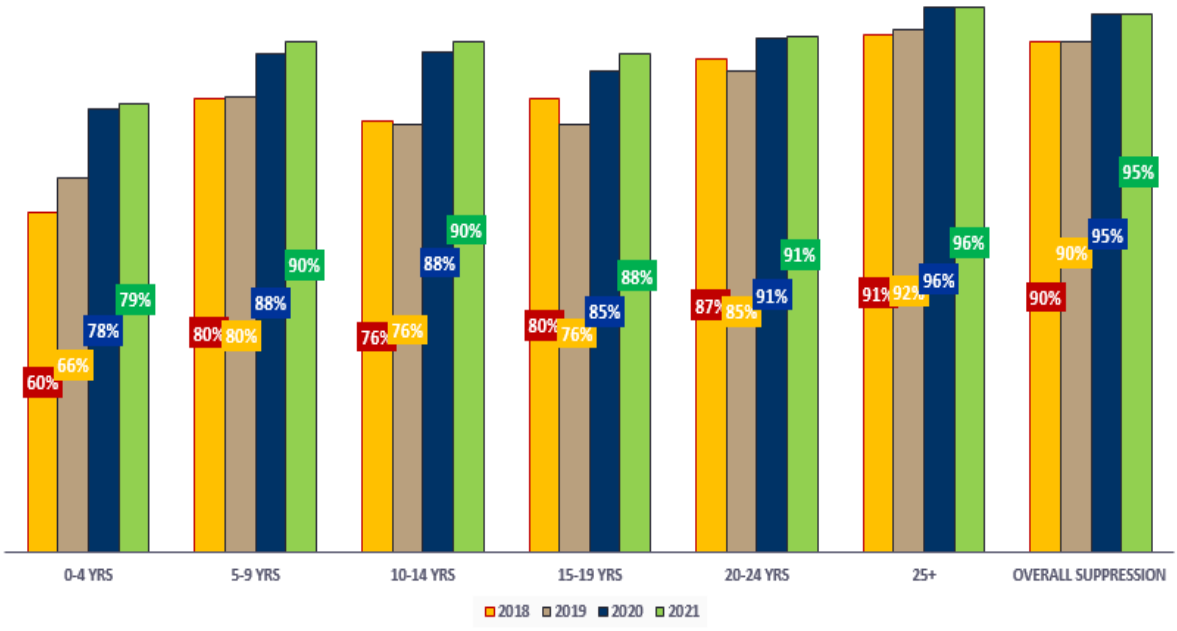
Patient Monitoring

The Naishi project supported viral load sample collection (DBS, plasma), sample networking and transportation to national testing labs using the hub and spoke model, and an integrated results relay to requesting facility in combination with GeneXpert results.

Naishi developed a viral load testing and results management SOP to support the recommended monitoring schedule of viral load testing at months 6 and 12 after ART initiation, and annually thereafter, later adapting to the biannual viral load testing for 0-24 years following the 2018 guidelines. Viral load uptake for the Naishi project was initially 95% later adversely affected by lack of commodities for sample collection and testing. There was demonstrable improvement in age specific as well as overall viral suppression from 86% to 95%; Naishi project successfully transitioned from DBS to plasma viral load testing, with additional innovations such as offsite viral load testing and documentation during the COVID-19 travel restriction era.

In 2018, the Naishi project adapted from the use of IQ Care to Kenya EMR system, which created opportunities for expansion of HIV care medical records to be accessible beyond the CCC to other departments, including the general OPD, MCH, wards, maternity, pharmacy and laboratories. This has seen a marked improvement in the lab-, pharmacy and health records-clinical interphase with improved patient management in appointment keeping, attrition tracking, ARV optimization, index case testing and patient viral load monitoring.

VL Trends



Naishi project further supported the provision of PEP to the general population and GBV survivors from both general and key populations. This was done through capacity building, provision of job aids and SOPs, support for initial and follow up HIV testing of clients, reporting in the KHIS and commodity support for ordering and reporting PEP drugs.

Innovations/ Best practices

- Established Mashariki clinical TWG which provided a mechanism for clinicians to get support in management of the complex cases
- Supported facility staff to attend and present abstracts in the national best practices forum for Regional HIV TWGs in Nakuru where presentations included FP pharmacovigilance in HIV care, oral PrEP and aPNS.
- Coordinated and supported sub-county managers and facility staff to participate in the international 2018 HIV Prevention, Care and Treatment Scientific Conference, where the Mashariki TWG officials participated as moderators.
- Invested in health care worker capacity building through various models such as didactic training, physical and virtual CME sessions, NHITC placement training, University of Washington online training and the county mentor model reaching more than 400 HCWs with training, including TOT training, in adult and pediatric HIV and TB training, HMIS, PrEP and PEP, commodity management, GBV, key population, project management, policy and advocacy and global mental health trainings.

- Collaborated with NACC as a key stakeholder and resource engine in the development of the county specific County AIDS Strategic Plan 2015/16 – 2018/19 and 2020/21 – 2024/25 County AIDS Implementation Plans for Kitui, Machakos and Makueni counties

Challenges

Beginning FY4 year of implementation, the Naishi project experienced an erratic supply of HIV and TB prevention and treatment drugs leading to challenges in MMD

COVID 19 further resulted in patient retention challenges were mitigated by expanding differentiated care models such as community DC and reporting and documentation support for offsite refills for clients experiencing travel restrictions.

An additional challenge was stock out of viral load reagents at the national level that affected viral load assays in project year 5.

PAEDIATRIC AND ADOLESCENT CARE

Over the five years of implementation, Naishi project identified 1,502 children aged 0-14. Lifelong Antiretroviral therapy was initiated to 1,922 children who included 373 diagnosed through EID.

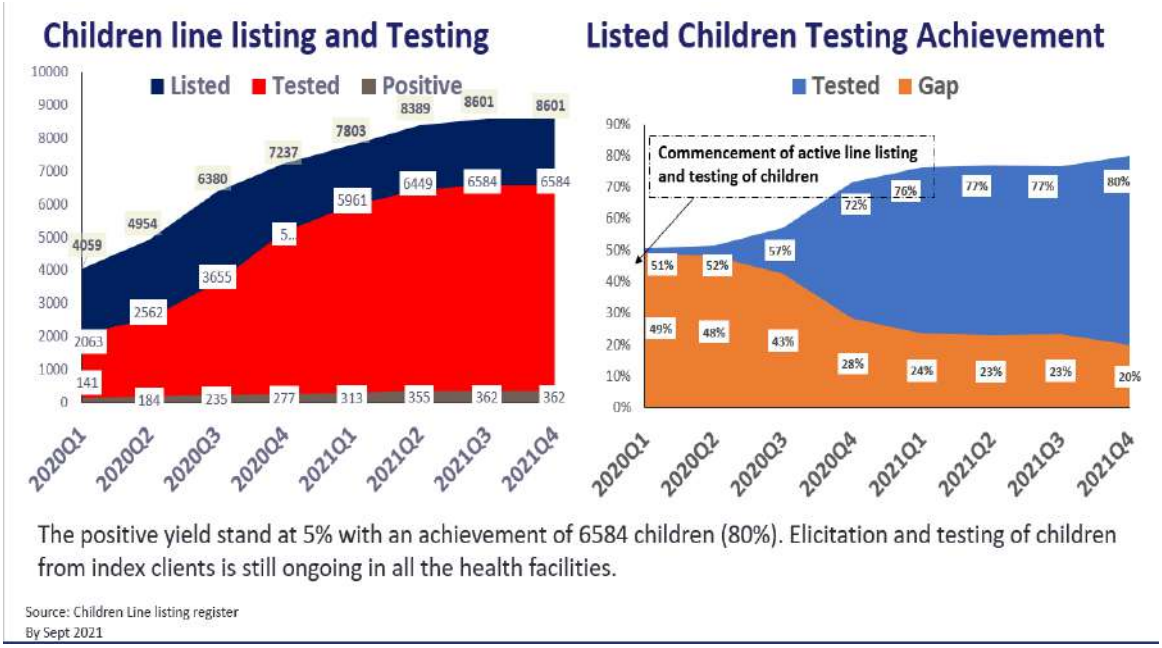
1,502 children identified as HIV+

1,922 children initiated on ART

The Naishi project developed a tool for screening children who were eligible for HIV testing. This was utilized across the pediatrics and adolescents service delivery points at the facilities to identify and test those eligible for testing. Naishi project also focused on index case testing and family testing modality whereby children born to HIV positive index clients were line listed and followed up for HIV testing either through facility based or home-based testing.

In 2020, Naishi developed a CQI project to accelerate HIV testing for the children and adolescents who were line listed from index clients from 2018 This led to achievement of > 80% testing of children who were line listed. Children from index adult clients were line listed for testing and sexual contacts of the sexually active adolescents were also tested.

Children Line Listing and Testing Achievements



The positive yield stand at 5% with an achievement of 6584 children (80%). Elicitation and testing of children from index clients is still ongoing in all the health facilities.

Source: Children Line listing register
By Sept 2021

Minimum Package of Care for Children and Adolescents

To achieve better treatment outcomes for children and adolescents living with HIV (CALHIV) the facilities provided a minimum package of care for CALHIV.This package of care for HIV positive children included: provision of optimal ART regimen, screening and treatment of opportunistic infections (OIs), preventive therapy for OIs which included cotrimoxazole, TB preventive therapy, growth monitoring, nutritional support, follow up on immunization, adherence support to both children and caregivers, disclosure counselling and support, baseline CD4 count and 6 monthly viral load monitoring for children and adolescents on ART.

The Naishi project implemented customized packages of care to address the unique challenges faced by adolescents and young adults. These Interventions were customized to suit special sub-groups including: emancipated adolescents, adolescents heading families and adolescents and young adults in school. This package was standardized across the supported facilities and included a comprehensive menu of services such as; reproductive health services, enhanced psychosocial support for disclosure, mental health assessment and substance use screening by caregivers to promote retention and improve treatment outcomes. Health care workers at 166 facilities supported by Naishi project were trained on the package of care for adolescents. This

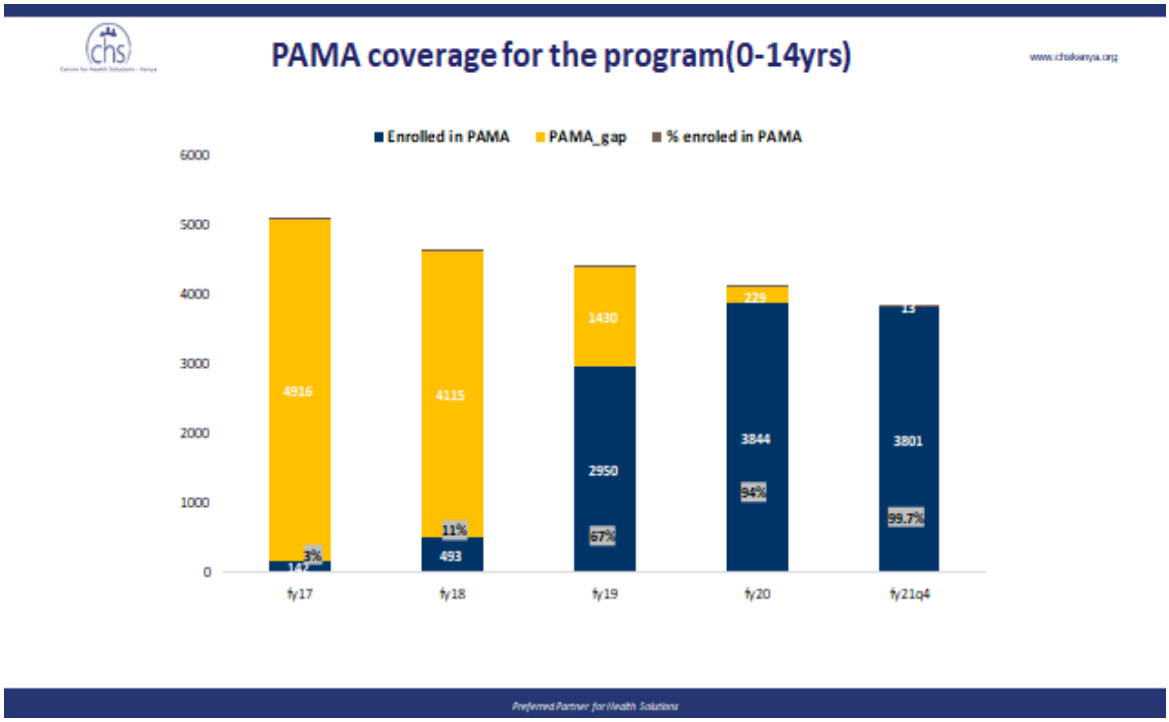
empowered them with skills to provide comprehensive HIV prevention and care to adolescents and young people

To ensure effective linkage and retention treatment the Naishi project engaged peer educators who provided peer education to caregivers of children living with HIV. This included monthly treatment literacy for the newly enrolled for 6 months. The literacy classes focused on the importance of ART, adherence and importance of disclosure of HIV to children and adolescents

Differentiated Care Model

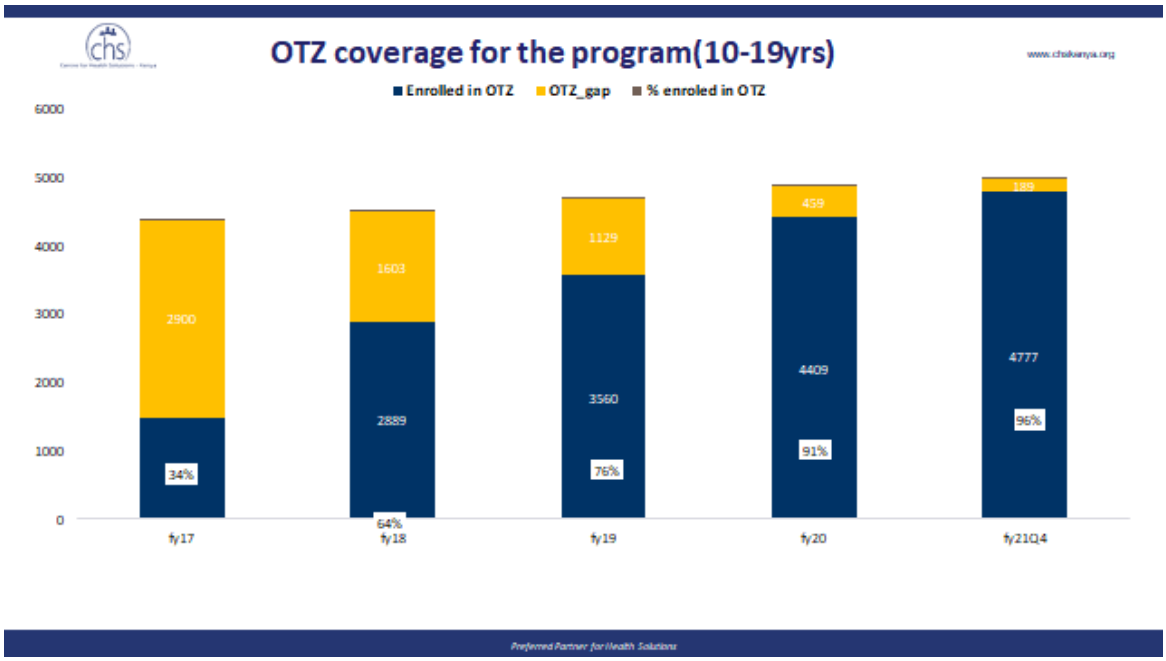
The Naishi Project further implemented a differentiated family-centred model "PAMA "initiative for children below 15 years and their caregivers, focusing on providing enhanced adherence support to ensure achievement of 95% viral load suppression and retention to care. The children were paired with their caregivers and categorization for stability status was conducted. Naishi project engaged PAMA champions who offered intense adherence support and close follow up for the unstable PAMA members. By the end of PY05, 3,801 (99.7 % of the treatment current) CALHIV below 15 years were enrolled in PAMA

Children enrolment into PAMA care



The Naishi project supported the scale up of operation triple zero (OTZ) initiative which was a differentiated care model for adolescents aged 10 to 19 geared towards motivating them to

take responsibility of their own health committing to zero missed appointment, zero missed drugs and zero viral load. The Naishi project supported enrollment of adolescents into OTZ that led to establishment of OTZ clubs in 165 facilities and enrollment of 4,777 (96% of 10-19 treatment cohort by the end of PY05.)

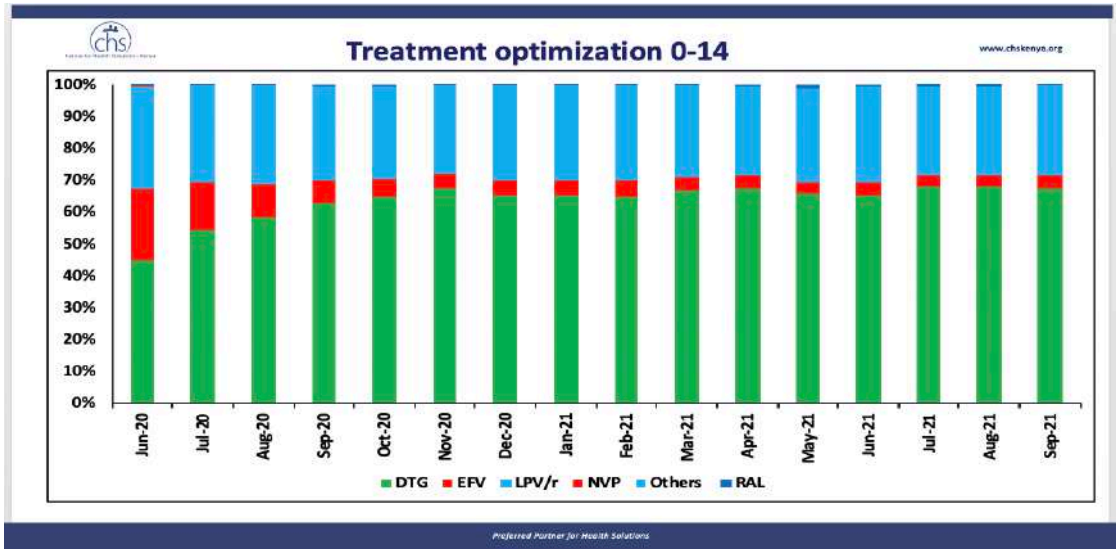


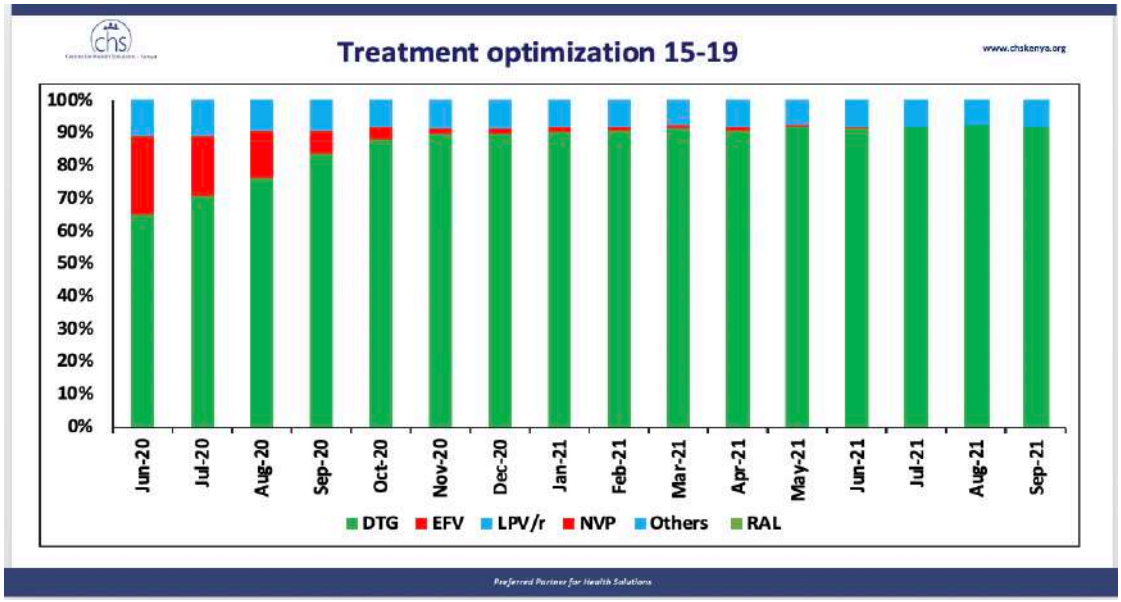
Treatment Optimization

At the end of year five of implementation, > 95% of children and adolescents had been transitioned to optimal ART regimen. There was series of optimization phases for children and adolescents .

Phase one in 2019 focused on phasing out Nevirapine, phase two in 2020 focused on transition to DTG for children with weight >20kg while phase three focused on transitioning children below 20kg to pediatric DTG. Machakos county was one of the selected counties for tier one of this optimization that began in September 2021. The Naishi project actively trained and mentored health care workers on ART optimization and actively monitored the transition

process.



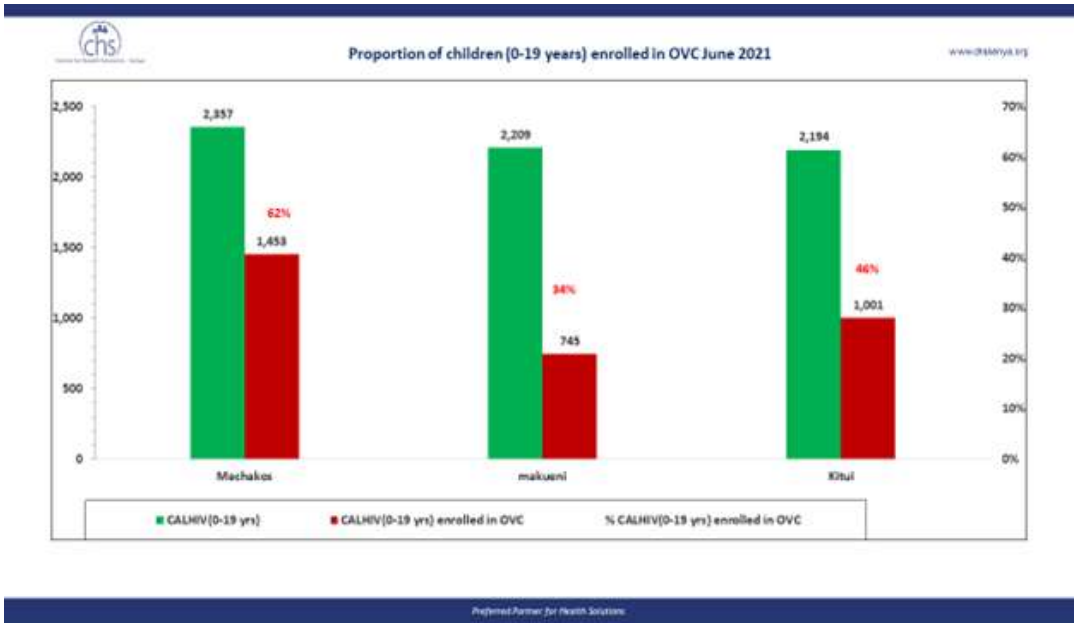


OVC Collaborative Activities

To enhance support for children and adolescents living with HIV at community level, Naishi project initiated collaborative activities with OVC partners. By end of FY21, 3,199 (47%) of children were enrolled in OVC program. This aimed to improve viral load suppression and retention.

The Naishi project developed a Memorandum of understanding (MOU) with two OVC partners in Machakos, Kitui and Makueni counties who provided psychosocial and household socio-economic support for CALHIV, who were on follow up in the supported regions while the project provided clinical care at the facility level.

Naishi project strengthened the linkage and enrollment of children aged between 0-17 years in the OVC program through proactive referral and close monitoring of their progress and access to OVC services at the community level.



Training Gatekeepers to Support Learners Living With HIV

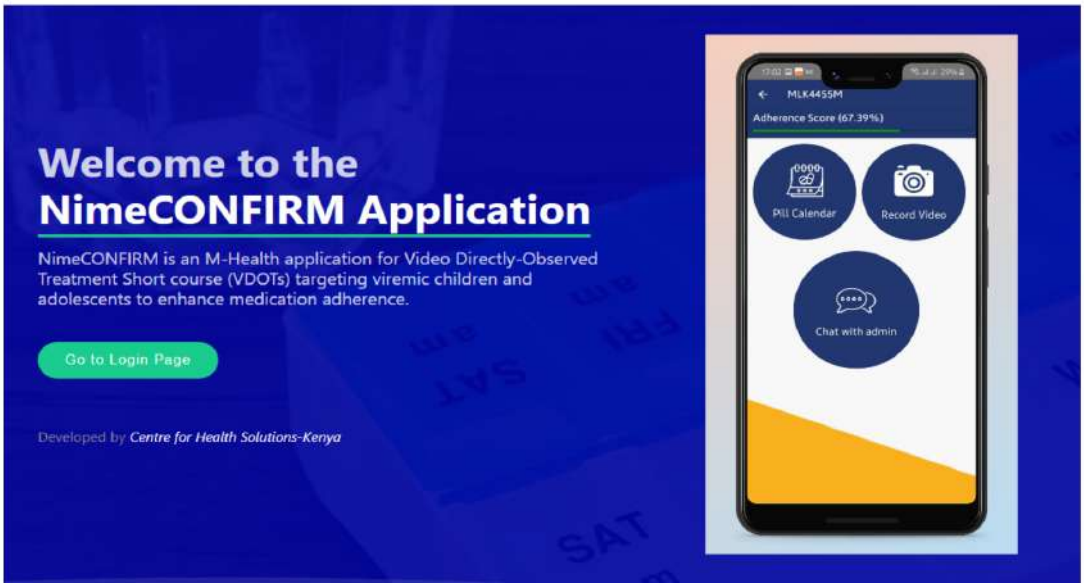
Adolescents and young people lack adherence support systems in learning institutions which may contribute to poor viral load suppression.

To address this, Naishi project collaborated with the Ministry of Health and Ministry of Education to conduct a three-day training for teachers and school nurses on adherence skills to support learners living with HIV. The training package included basic information about HIV, adherence and psychosocial support, nutrition and healthy living communication and counselling of learners.

By the fifth year of the project; viral load suppression has improved from: 60% in 2018 to 79% by September 2021 (0-4 years), 80 % to 90% (5-9 years) 76% to 90% 10-14 years and 80% to 88% (15-19 years.

Innovations : To further improve viral load suppression for CALHIV, Naishi project developed a Video DOTs mobiles application dubbed "NimeCONFIRM" to ensure non-adherent patients **CONFIRM** that they have taken their medication through a recorded video.

The Naishi project provided smartphones and supported the utilization of this VDOT application to enhance adherence support for CALHIV. By the end of PY05, suppression for 5-9 improved from 80 % to 90%, while 10-14 improved from 76% to 90%.



Children enrolled in the NimeCONFIRM VDOT app

County	Total CALHIV with a High Last VL	Total Enrolled using NimeCONFIRM APP	% Enrolled	Self care Mode
Kitui	178	86	48%	17
Machakos	374	142	38%	18
Makueni	139	105	76%	31
CHS Naishi	691	**333**	**48%**	66

Challenges

From the 4th year of implementation, there was a nationwide stock-out of DBS filter papers; this significantly affected early infant diagnosis (EID), leading to delay in ascertaining HIV outcomes for HIV exposed children and contributing to missed opportunities for HIV case identification in children.

There was a nationwide stock out of viral load reagents in year five that affected routine viral load monitoring as per the treatment guidelines leading to a drop in viral load uptake from 90% in PY04 to 75 % in PY05.

POSITIVE HEALTH AND DIGNITY PREVENTION

The Naishi project provided all 227 supported health facilities with the minimum adherence package, psychosocial support and community linkages per national guidelines to improve patient retention to HIV care and treatment and ensure overall improved clinical outcomes.

This was achieved through the implementation of the revised Package of Care for newly identified clients that included:

- Fast-tracking client's during enrolment
- Enrolment in treatment literacy classes
- Case management for close follow-up and provision of short message reminders.

Overall, the care package ensured priority for newly identified patients, leading to improved linkage, retention, and viral suppression outcomes at six months of treatment.

Naishi project ensured meaningful involvement of PHDP through the engagement of 311 peer educators and mentor mothers tasked with providing peer to peer counselling, supporting patient tracing activities, case management and VDOTs (NimeCONFIRM) for 186 CALHIVs with high viremia.

Naishi project held an introductory meeting with the new OVC partner USAID for Better Health to strengthen community linkages and networks, enhance collaboration and data sharing on the number of CALHIVs in the project to support their enrolment in the OVC program. By the end of the Naishi project period, 3,199 CAHIVs aged 0-19 had been enrolled in the OVC program.

To support children and adolescents improve adherence to ARVs in both day and boarding schools, Naishi project collaborated with the Ministry of Health, Ministry of Education, NASCOP, Teacher Services Commission and EGPAH to facilitate a 5-day training for 45 teachers in Machakos county on supporting CALHIVs in schools.

Naishi project supported OTZ clubs in the region with 4,605 (95%) of the total adolescents and young people benefiting from peer-to-peer support, treatment literacy, NimeCONFIRM VDOT interventions. OTZ club members received motivational items such as watches, adherence

calendars, water bottles, OTZ passports to enhance their adherence to ARVs leading to viral suppression.

OTZ members during a benchmarking activity in a CHS supported facility in Kitui County

Naishi supported patient adherence and retention activities through patient appointment monitoring, defaulter identification and tracking. During the reporting period, Naishi project achieved a TX current of 66,060, which was 90% of the program target. Through intensified patient retention activities, Naishi project achieved a treatment cohort growth of 71%.

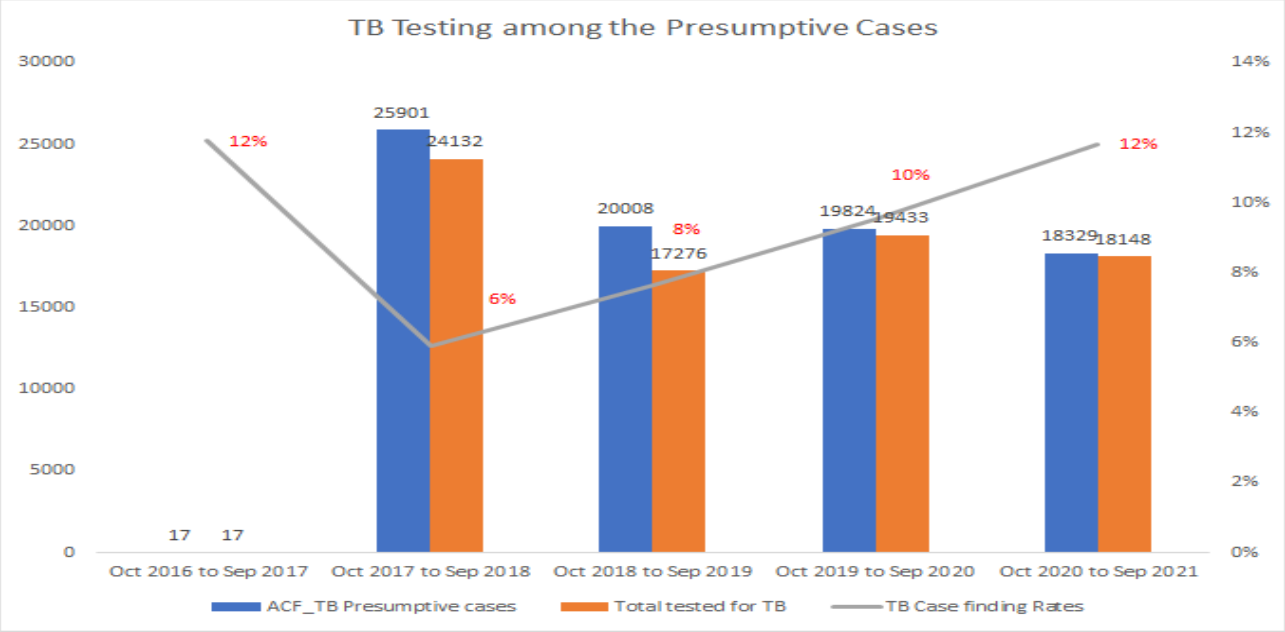
TB/HIV COLLABORATIVE ACTIVITIES

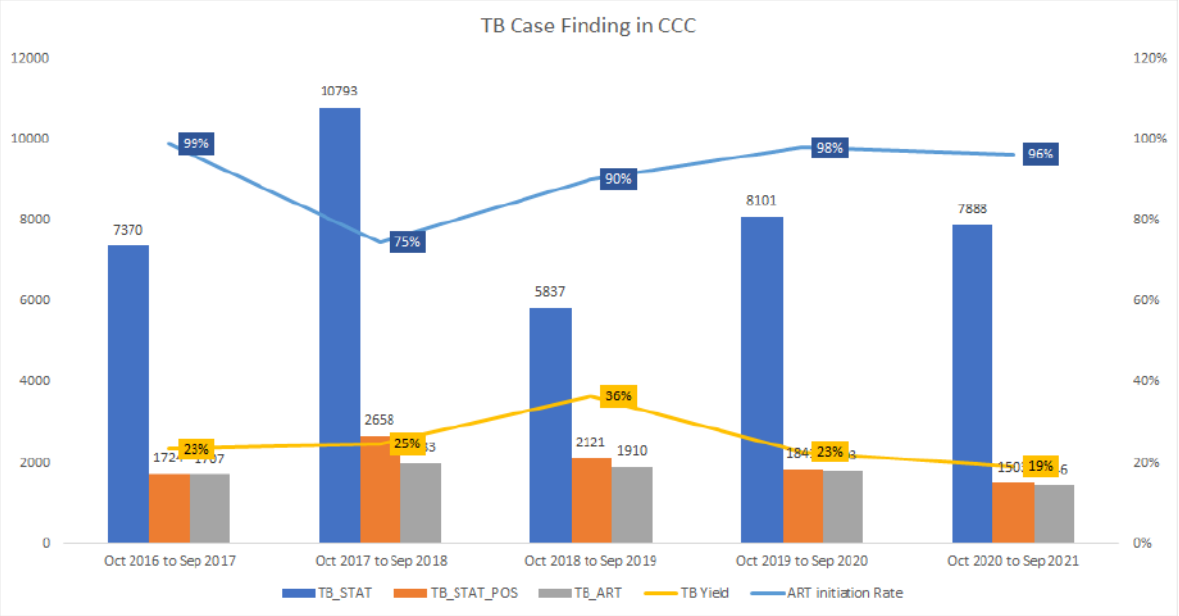
Naishi project provided quality TB/HIV collaborative services in 177 Care and Treatment (C&T) facilities. To increase the identification of TB patients and address gaps in case notification, priority was given to implementing TB Active case finding (ACF) at all entry points in the facilities. This included integration of TB ACF in HIV eligibility screening desks and training of screeners and facility staff on presumptive TB screening leading to an increase of presumptive case identification from 6% in 2017/2018 to 12% in 2021.

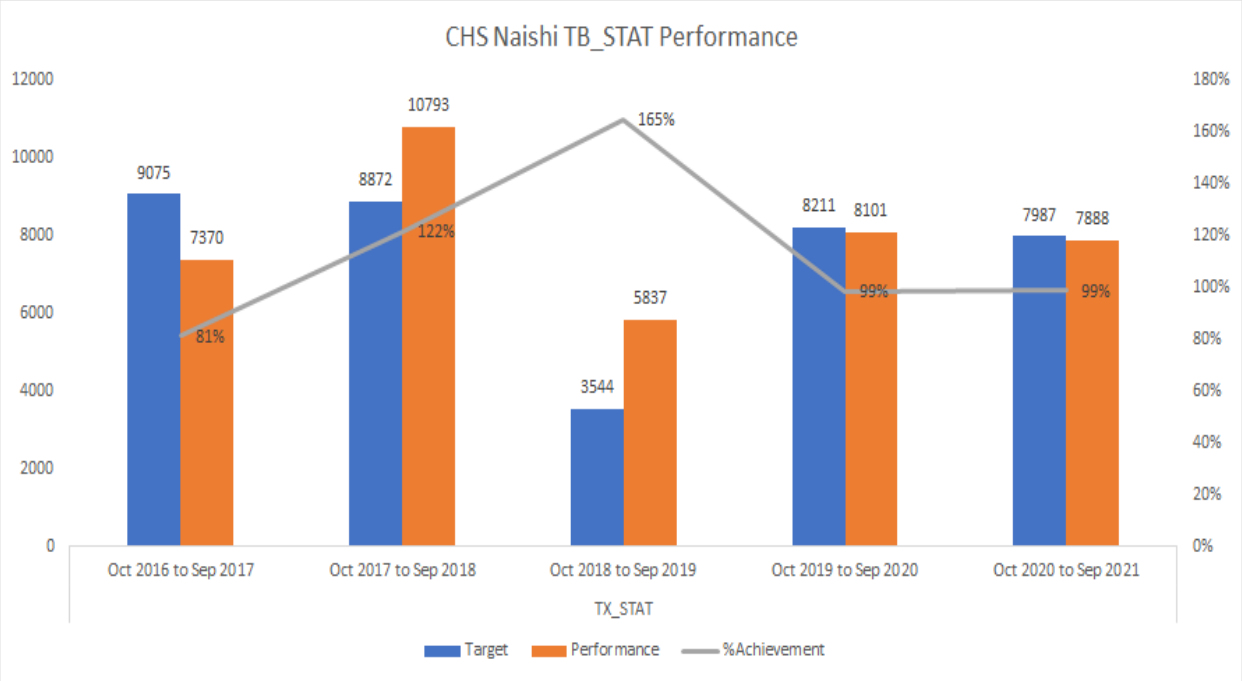
In 2018, through a sister project, TB-REACH, skill-based pediatric TB training was conducted in the facilities to train health care workers on sputum sample collection for children using

Nasopharyngeal aspirates (NPA) and gastric aspirates and other diagnostic methods to enhance TB identification in children. This increased the proportion of pediatric TB case finding from 3% to 5%.

With the aim of improving TB diagnosis and drug-resistant TB (DRTB) surveillance, the Naishi project supported GeneXpert sample transport networking for prompt relay of samples and results using the Hub and spoke model. This model was able to increase sample networking through the inclusion of non-DSD facilities along the rider route at no extra cost. Intra facility sample networking and patient escort to the lab was employed for all patients with a presumptive TB diagnosis, resulting in an increase in TB diagnostic testing for presumptive cases from 93% to 99%, as well as HIV testing among the same group from 80 to 98%.




TB Case Finding in CCC
12000
10000
8000
6000
4000
2000
0
120%
100%
80%
60%
40%
20%
0%
7370
10793
5837
8101
7888
99%
75%
90%
98%
96%
23%
25%
36%
23%
19%
2658
2121
1910
Oct 2016 to Sep 2017
Oct 2017 to Sep 2018
Oct 2018 to Sep 2019
Oct 2019 to Sep 2020
Oct 2020 to Sep 2021
TB_STAT
TB_STAT_POS
TB_ART
TB Yield
ART initiation Rate


CHS Naishi TB_STAT Performance
12000
10000
8000
6000
4000
2000
0
180%
160%
140%
120%
100%
80%
60%
40%
20%
0%
9075
7370
8872
10793
3544
5837
8211
8101
7987
7888
81%
122%
165%
99%
99%
Oct 2016 to Sep 2017
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Oct 2019 to Sep 2020
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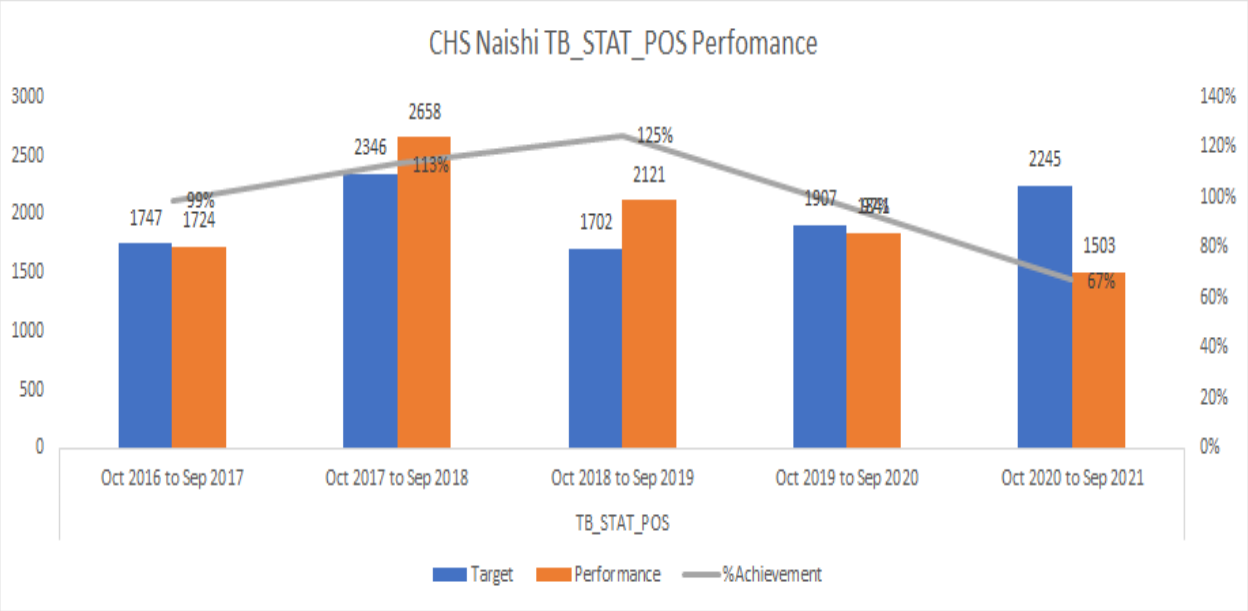
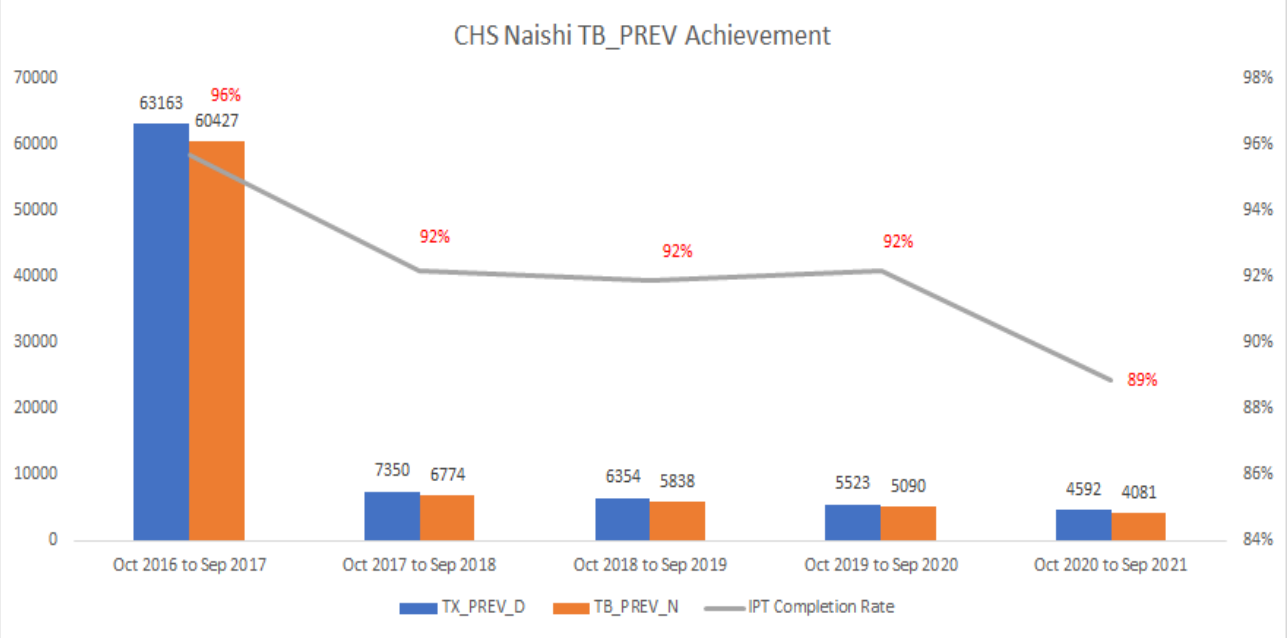
TX_STAT
Target
Performance
%Achievement



IPT implementation

Naishi project made tremendous progress in implementing isoniazid preventive therapy (IPT) for PLHIV, having initiated more than 86,982 patients on isoniazid by the end of its project implementation. Further support for IPT included monitoring and documentation of IPT outcomes and pharmacovigilance and accurate reporting in KHIS with program and KHIS data concordance reported at 89% for IPT.

TB prevalence achievement



Programmatic Management of Drug-resistant TB (PMDT)

To ensure quality care for patients with DR TB and successful treatment outcomes, Naishi project facilitated monthly DRTB clinical review meetings in every county. All patients diagnosed or suspected to have DRTB were discussed in a multi-disciplinary team of health care workers. Through CMEs, mentorship and virtual training through the clinical and commodity TWGs, HCWs were also trained on the use of new and emerging regimens for the management of DRTB and the identification and management of adverse drug reactions (ADRs) associated with these drugs.

TB/HIV Management

Naishi recorded a TB/HIV co-infection rate of 23% in its first year of implementation, coming down to 19% by the fifth year. In managing TB/HIV co-infected patients, emphasis was laid on prompt initiation of treatment and optimization of ARV regimens with appropriate formulations and dosage adjustments for ARVs like Dolutegravir (DTG) Lopinavir/ritonavir (LPV/r) with known drug-drug interaction with anti-TB drugs. Naishi project sought to improve TB treatment outcomes by intensifying clinical and sputum follow-ups and the implementation of integrated, proactive defaulter tracing and return to care packages for TB and HIV patients. Further, by facilitating site-level monthly mortality audits for TB/HIV patients, Naishi project identfied preventable patient and health system factors associated with high mortality and institute specific remedial interventions.

Infection Prevention and Control (IPC)

In line with the National Infection Prevention and Control (IPC) guideline, Naishi project supported the counties in implementing effective IPC measures through OJT, continuous assessment, job aids and SOPs, and the supply of minor non-medical supplies to support effective support waste management.

Capacity Building and TWG Support

Continuous learning and updates on emerging issues in TB management were implemented through e-Learning forums, OJT, and clinical TWGs. The Naishi project was also a frontrunner supporting counties to provide leadership in managing quality TB services through quarterly TB/HIV TWGs, joint supportive supervision, and coordination and support for quarterly data reviews. The TWGs were tasked with addressing the quality of TB services such as TB

diagnostics, TB ACF, IPT, DRTB, ART for TB/HIV co-infected patients, infection prevention and control (IPC), and quality of data.

Challenges

In years four and five, Naishi project experienced challenges in the availability of TB preventive commodities and commodities such as Rifabutin and ritonavir used in the management of TB/HIV co-infected patients.

PREVENTION OF MOTHER TO CHILD TRANSMISSION OF HIV (PMTCT)

The major focus of PMTCT was to provide comprehensive HIV prevention and treatment services to pregnant and breastfeeding mothers to reduce the rates of mother to child transmission of HIV. This was anchored on the four prongs of PMTCT that focus on primary HIV prevention for pregnant and breastfeeding women, which entailed:

- HIV testing, counselling on HIV prevention,
- PrEP provision to those at risk of contracting HIV
- Provision of antiretroviral therapy for the mothers diagnosed with HIV
- Prevention of unwanted pregnancies through the integration of family planning in HIV clinics setting and care to the women and their family members.
- Follow up and care for HIV exposed infants, including: ARVs prophylaxis, Early infant diagnosis (EID), immunization, counselling on infant feeding, growth monitoring and nutritional support.

HIV testing in PMTCT

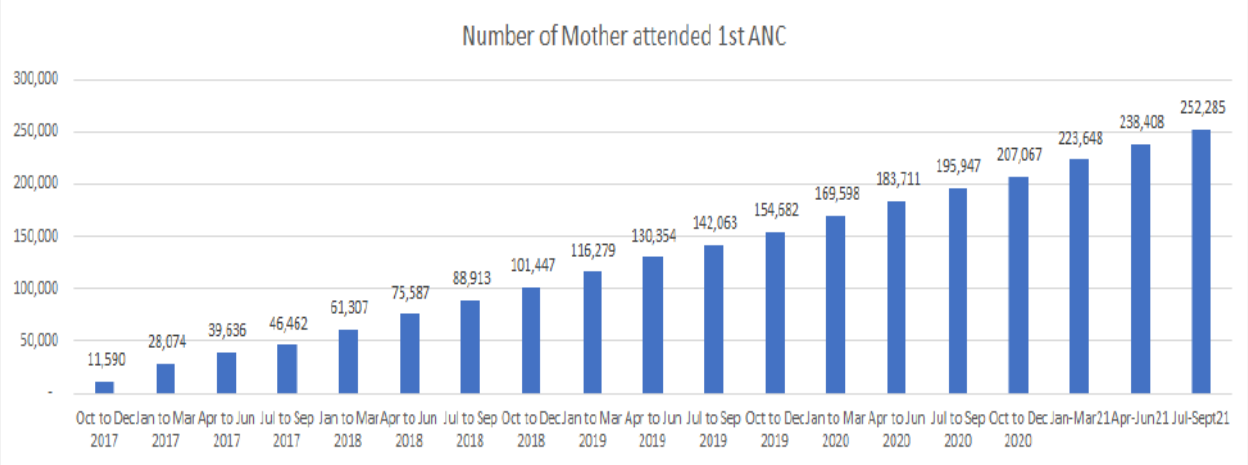
The Naishi project worked closely with the Department of Health in Machakos, Kitui and Makueni counties to carry out community advocacy on ANC services. The Naishi project had a target of providing HIV testing to 334,357 mothers in their first ANC visit. Over the years, Naishi project supported 262,901 to know their HIV status during their initial ANC and achieved 99 % testing for women who attended sought ANC services.

The performance towards target achievement was low in the first two years. In year one, we achieved 55% of targets,and slightly improved to 77 % achievement in year two. To improve ANC coverage, we collaborated with other stakeholders, including OVC partners and faith-

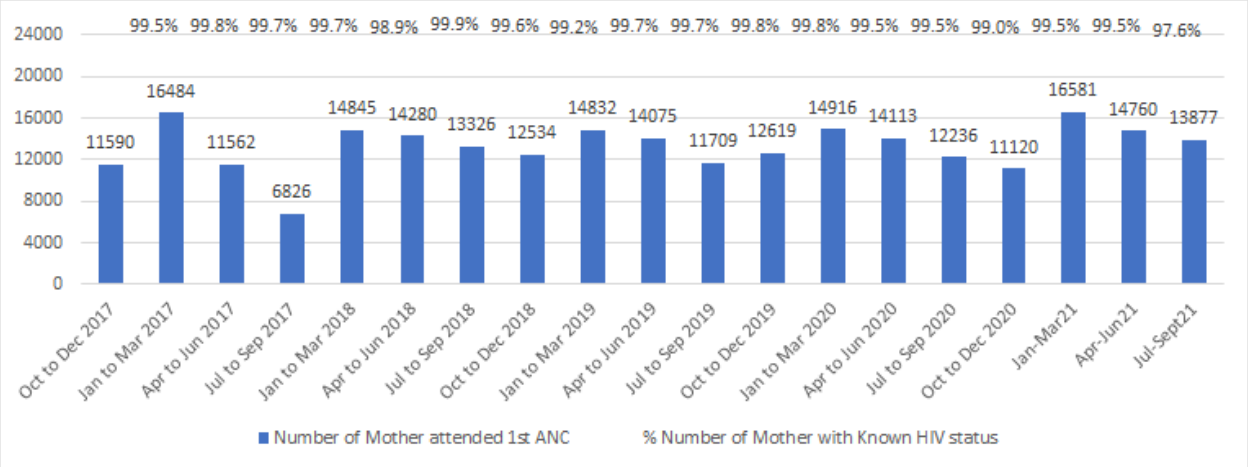
based organizations, to carry out community advocacy about the importance of ANC services and safe delivery.

Community health volunteers and mentor mothers referred pregnant mothers to health facilities to access ANC services. This saw marked improvement in year three, and by end of the fifth year, we achieved 105% of the project targets. Naishi project conducted technical support through training, facility-based CMEs and Mentorship, which focused on HIV testing protocol for pregnant and breastfeeding women. Further, we provided jobs and closely monitored adherence to the testing guidelines. Naishi project supported the utilization of duo test kits to test for both syphilis and HIV during the first ANC services. Follow up HIV testing for women who tested negative was continuously done in the third visit, during labour and delivery, six weeks postnatally and thereafter six months during the breastfeeding period.

First ANC mothers attending the clinic



Mothers attending ANC tested for HIV services



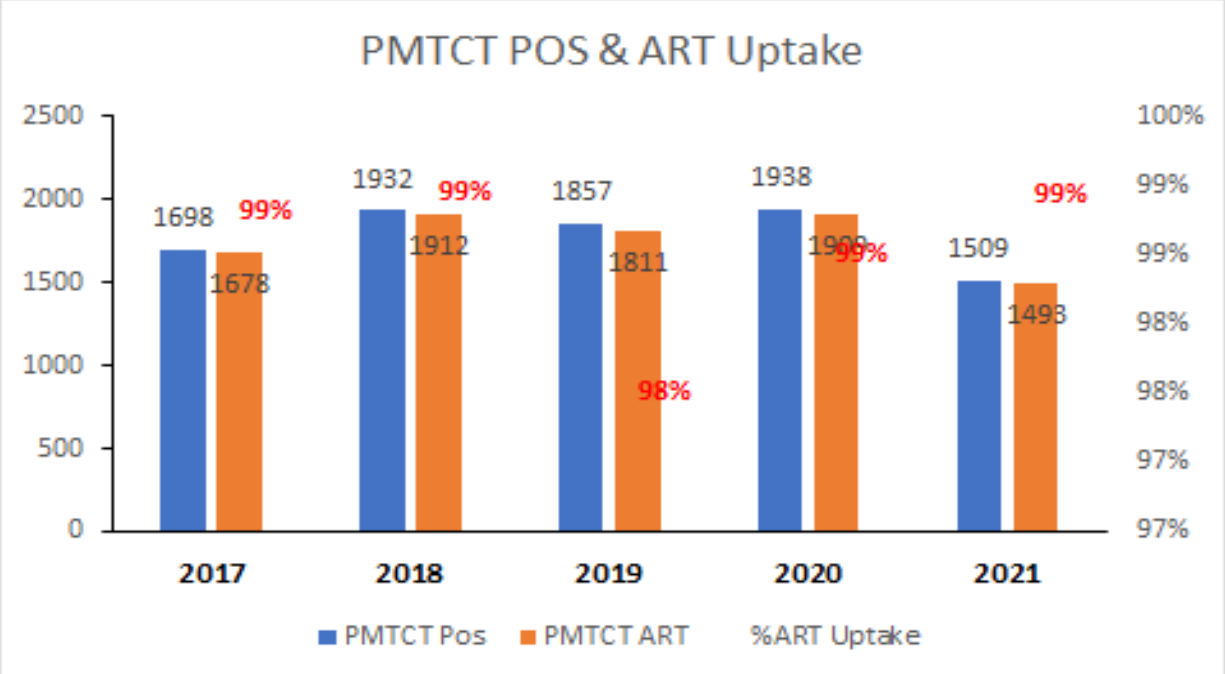
PMTCT Case Identification and Linkage for ART Initiation

From October 2016 to September 2021, Naishi project had a target of identifying 12,915 HIV positive pregnant and breastfeeding women (PMTCT POS). By the end of the fifth year, 8,934 pregnant and breastfeeding women tested positive for HIV. Of the 8,934 women who tested positive, 99% (8803) were initiated on antiretroviral therapy to prevent mother-to-child transmission.

Naishi project strengthened the referral and linkage of the newly diagnosed HIV positive mothers for enrollment in PMTCT and ART initiation. The project engaged peer educators and mentor mothers who were involved in escorting known HIV positive mothers who became pregnant in CCC and those who tested positive during ANC or postnatal visits.

The Naishi project further institutionalized the use of a national referral directory that ensured mothers testing HIV positive in private and non-PMTCT facilities were referred to PMTCT clinic for follow up. The peer educators and mentor mothers provided peer mentorship support to enhance adherence to ART, monitoring of appointment keeping, tracing of mothers who defaulted care, and longitudinally following up of mother and infant pairs. This helped in ensuring that both mothers and infants were retained in PMTCT program. Naishi project supported region sustained > 99 % PMTCT ART uptake across the supported counties from October 2016 to September 2021.

PMTCT POS and ART uptake



In line with the National ART guidelines, Naishi project supported health facilities to ensure that all PMTCT mothers were transitioned to optimal ART regimens. From August 2020, the Ministry of Health released guidance on the use of DTG for virally suppressed pregnant and breastfeeding women. Naishi project provided technical support through facility-based continuous medical education (CMEs) and mentorship and supported the active transition of PMTCT mothers to DTG based ART regimens. Over 95 % of the women were put on optimal DTG based regimen by September 2021.

Viral Load Suppression in PMTCT

PMTCT Suppression	*2017*	*2018*	*2019*	*2020*	*2021*
Suppression	**83**	**1052**	**2718**	**2584**	**2559**
Unsuppressed	**31**	**195**	**331**	**214**	**115**
Total	**114**	**1247**	**3049**	**2798**	**2674**
%Suppressed	**73%**	**84%**	**89%**	**92%**	**96%**

Naishi project saw an improvement of viral load suppression for PBFW from 73% in 2017 to 96 % by the end of the fifth year of implementation. From year one, Naishi project instituted ART adherence support systems for PBFW, which included enhanced case-based management for mothers with high VL and psychosocial support groups.

Naishi project engaged and trained mentor mothers to provide peer support to mothers in PMTCT. All PBFW were paired with mentor mothers and peer educators for intense peer support. Naishi project developed a treatment literacy manual that was utilized by mentor mothers and other health care workers to provide treatment literacy for all newly enrolled mothers in the PMTCT clinic. Further categorization of mothers who were at high risk of treatment failure was conducted in all supported facilities. Intense adherence support was offered to the high-risk category to ensure optimal adherence to ART.

Naishi project supported the establishment of OTZ plus clubs for teenagers in PMTCT in high volume facilities. Naishi project further supported directly observed therapy (DOTs) which included Video DOTs mobile application dubbed NimeCONFIRM to support teenage mothers with high viral load.

In addition, Naishi project provided technical support on ART optimization. By the end of September 2021, over 95% of PBFW have optimized to DTG based regimen. This led to 96% viral load suppression in the Naishi supported region by the end of PY05.

Early Infant Diagnosis and Follow up for HIV Exposed Infants

Naishi project put strategies of providing a continuum of care to HIV exposed infants, which entailed access to PCR test for early infant diagnosis. Naishi project identified 9279 HEIs, of which 100% were initiated on ARVs prophylaxis. Over the years, Naishi project registered a reduction in the number of infants acquiring HIV through vertical transmission from a 5% MTCT rate to 3 % by the end of September 2021.

Naishi project reinforced timely EID follow up for HEIs ensuring that the initial test is done within eight weeks, follow up examination at month 6 and 12 months and final antibody test at 18 months

Naishi project supported HEI screening at service delivery points that offer maternal and health services such as MCH, out-patient, Nutrition and inpatients departments. The HEI package of care includes ARV prophylaxis, growth monitoring, nutritional support, and follow up for immunization. The Naishi project developed a standardized tool that was used to conduct audits for infants who seroconverted to establish the predisposing factors and inform project interventions

Further, Naishi project optimized longitudinal follow up of the mothers and infants to achieve 90 % retention into the PMTCT program.

Retention of HEIs and MTCT rates from 2017 to 2021

FY	*2017*	*2018*	*2019*	*2020*	*2021*	*Total*
HIV Infected HEIs	94	70	65	75	69	373
Total HEIs	2071	1647	1547	2023	1991	9279
%Infected	5%	4%	4%	4%	3%	4%

HEI Testing and infection rates 2017 to 2021

Program Year	*No. HEI Enrolled in the cohort (2yr Cohort)*	*AB Negative at 24 months*	*Active at 24 months but no AB test done*	*Died between 0 and 18 months*	*Identified +ve between 0 and 18 months*	*Lost to Follow-Up between 0-18 months*	*Transferred out between 0-18 months*
Oct 2016 to Sep 2017	2071	1460	0	28	94	244	245
Oct 2017 to Sep 2018	1672	1200	10	40	72	184	166
Oct 2018 to Sep 2019	1570	1149	18	29	65	147	162
Oct 2019 to Sep 2020	2019	1502	7	24	75	160	251

Oct 2020 to Sep 2021	1991	1498	18	24	69	129	253
Total	**9323**	**6809**	**53**	**145**	**375**	**864**	**1077**
HEI Outcome Proportions		**73%**	**1%**	**2%**	**4%**	**9%**	**12%**

Challenges

Industrial action in December 2020 in Machakos, Makueni and Kitui counties led to low ANC attendance, which affected ANC coverage.

COVID pandemic from 2020 led to reduced ANC attendance. There were high rates of missed appointments due to travel restrictions and fears of contracting COVID 19 at the health facilities. Psychosocial support groups in PMTCT were also disrupted due to the pandemic.

From the 4th year of implementation, there was a nationwide stock-outs of DBS filter papers. This significantly affected early infant diagnosis (EID), leading to delay in ascertaining HIV outcomes for HIV exposed children.

In 2021, viral load testing was affected by nationwide stock-outs of testing reagents that disrupted viral load monitoring

LABORATORY SUPPORT

The Naishi project strengthened laboratory sample networking systems to improve quality and prompt diagnosis across supported facilities for HIV and TB related tests. This included HTS inconclusive testing, viral load, GeneXpert, DNA PCR, DRT and CD4. Over the five years of implementation, the project supported the transportation of 104,536 samples for GeneXpert, 22,236 EID, 261631 Viral loads, 26,778 CD4.

The program supported existing laboratory sample transport networks through the Hub and spoke model to ensure smooth samples flow from peripheral sites to lab hubs for testing. The samples were transported from 227 health facilities for HTS inconclusive testing, DNA PCR, CD4, EID, and HIV Viral load (VL), HIV DRT, GeneXpert testing, and sputum for culture and sensitivity (C/S).

Viral Load and EID samples processed

Samples	2017	2018	2019	2020	2021	Total
Viral Load	40877	38265	83530	52473	46486	261631
EID Tests	3576	5353	5786	5204	2317	22236

To strengthen sample transport efficiency, the program collaborated with CHAK to scale up the integrated motor rider model with a total of 89, 70, 68 health facilities being networked in Kitui, Machakos and Makueni Counties, respectively. The rollout of sample remote log-in in the NASCOP EID/VL website coupled with CHS Sample Barcoding System (CHS-SBS) was done to reduce test turnaround time (TAT).

Viral Load Turnaround time (TAT)

Viral Load TAT (in Days)	*Processing-Dispatch (P-D)*	*Receipt to-Processing (R-P)*	*Collection-Receipt (C-R)*	*Collection-Dispatch (C-D)*
2017	2.8	11.6	6.4	20.9
2018	1.9	4.2	7.2	13.7
2019	1.6	7.1	5.1	14.1
2020	2.2	11.7	6.0	20.1
2021	2.3	11.2	5.3	18.9

The median test turnaround time (TAT) for the viral load was 16 days by Q3 of PY5; however, in Q4 of the same year, Naishi project experienced stock-outs of VL reagents which prolonged the TAT to above 30 days.

Early Infant Diagnosis TAT (In days)	***Processing-Dispatch (P-D)***	***Receipt to-Processing (R-P)***	***Collection-Receipt (C-R)***	***Collection-Dispatch (C-D)***
2017	2.36	4.87	6.09	13.17
2018	1.8	4.2	6.8	13.2
2019	1.2	5.1	4.8	11.7
2020	1.7	5.7	7.2	15.2
2021	2.0	17.6	5.6	25.6

Naishi project provided technical support through site-level mentorship, on-the-job training (OJT) and CMEs focusing on Laboratory quality management systems (QMS). Five Laboratories were supported to sustain accreditation status. 138 facilities were supported to monitor the laboratory continuous quality improvement indicators such as Monitoring TAT, sample rejection rates, critical results relay, internal and external quality assurance.

To improve TB Diagnosis, the Naishi project supported 30 laboratories with Biosafety cabinets and TB Hoods' annual certification. The program also collaborated with the county Biomedical engineers to support preventive maintenance of microscopes, fridges, freezers and centrifuges in 144 funded laboratories. The program also facilitated shipment of ancillary equipment, i.e. pipettes, thermometers, and timers for calibration, to the National Public Health Laboratories (NPHLS). Further, the Naishi project collaborated with NLTDP in supporting service level agreements for the 11 GeneXpert platforms in the supported Counties. Five facilities are

utilizing Cepheid Xpert equipment for multiplexing to analyze Sputum, SARS COV 2 and Human Papillomavirus (HPV)

To ensure timely commodity supply, Naishi project supported Machakos, Makueni, and Kitui counties to quantify and allocate HIV RTKs every quarter. In addition, the Naishi project provided data bundles to support the uploading of consumption reports to KHIS2 and the Health Commodity management Platform (HCMP). All supported sites reported on KHIS during this period. Throughout implementation, health facilities utilized the prevailing screening and First Response rapid testing kits to offer HIV testing services (HTS).

Through gradual sustainability, the program supported the training of twenty-three SCMLCs as RTCQI quality champions through the county Mentorship model to support HIV Rapid testing continuous quality improvement (RTCQI) in facilities. A total of 227 HTS sites underwent baseline assessments. By the end of the the Naishi project, 114 HTS sites were at level 4, awaiting certification.

To ensure quality in HTS, Naishi project jointly collaborated with the counties to coordinate enrolment, distribution, and online submission of proficiency testing (PT) panel results in the Kenya Serology HIV Rapid system for (PT) Rounds 19 to 23. 1,084 healthcare workers were enrolled, with 100 % receiving panels. Total feedback submitted was 1,071 (98%). The overall satisfactory results were 1,047 (96%). Corrective action preventive action (CAPA) was initiated for the unsatisfactory scores.

PHARMACEUTICAL COMMODITIES SUPPORT

The Naishi project ensured stable supply of ART drug commodities across supported health facilities; this translated to 65,915 PLHIV accessing their medications consistently.

By the end of the project period, Naishi project had supported 27 ART central pharmacy sites to implement commodity management practices and maintain adequate buffer stocks for their satellite sites; this enhanced timely commodity requisition, accurate reporting, proper forecasting, quantification and rotation of short expiry ART/TB drug commodities resulting in >95% reporting rate in the KHIS.

Through policy dissemination, capacity building, creation of job aids and SOPs and support for commodity ordering and reporting, the Naishi project implemented the National ARV optimization RRI in 213 sites in the period between November 2018 and September 2021. As

a result, 59,368 patients (90%) on 1st line ART regimens were optimized to the new recommended regimen containing dolutegravir (DTG) per the 2018 national guidelines.

Naishi project additionally supported HCW training on the devolved national ARV allocation system dubbed 'the last mile' for staff from the three counties in its fourth year. The system was used to decentralize commodity allocation of drugs from the national to the counties and sub-county levels based on the available national supplies.

In October 2018, the Naishi project conducted HCW training on the new 2018 ART guidelines to clinical and pharmaceutical staff. As a sequel to the rollout of the guidelines, there were unanticipated drug shortages within the facilities as some drugs were phased out from the supply chain and orphaned drugs resulting from the adaptation to new regimens. The Naishi project facilitated rotation of drug commodities and fast-tracked optimization to minimize stock-outs and expiries. The Naishi project also updated the LMIS tools to ensure they reflected the new drug commodities and regimens. Stock outs of some drugs such as Nevirapine Syrup used in eMTCT, TDF/3TC/DTG '30s and 90's Tablets, ABC 300mg Tablets, ABC/3TC 600/300 Tablets, DTG 50mg Tablets, LVP/r 40/10 Pellets and Ritonavir Tablets continued to pose a significant challenge within the region and beyond until the end of the project period.

The Naishi project maintained an adequate supply of current ART commodity management tools in all supported sites; and ensured timely response to computer technical failures in the 27 computerized facilities using ADT, which led to minimal computer downtimes. Routine ADT data backups were created in the computerized sites to minimize data loss.

Drug safety monitoring and reporting of adverse events was conducted in all the Naishi project sites. Pharmacovigilance reports on adverse drug reactions were generated and forwarded to the pharmacy and poisons board within the period of implementation.

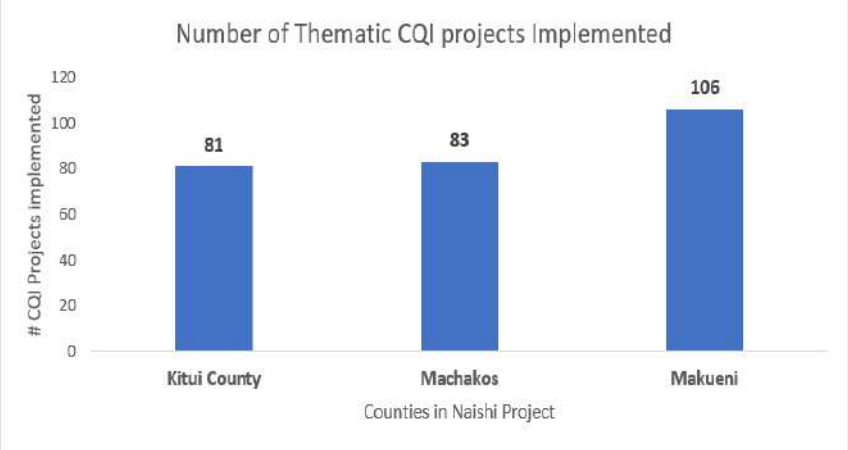
Naishi project coordinated an HIV/TB commodity security meeting to deliberate on issues affecting drug ordering and supplies in the three counties. Issues on reporting and management of commodities were addressed.

Adult and Children Regimen Optimization

Regimen	Female			Male			Total	
	<15	>=15	%n	<15	>=15	%n	n	%n
DTG Based First line	1173	40716	90.7%	1169	16385	88.6%	59,443	90.1%
DTG Based Secondline	25	223	0.5%	42	131	0.9%	421	0.6%
DTG Based	1198	40939	91.2%	1211	16516	89.5%	59,864	90.7%
EFV based	78	111	0.4%	71	20	0.5%	280	0.4%
LPV/r Based First Line	344	44	0.8%	347	11	1.8%	746	1.1%
LPV/r Based second Line	189	381	1.2%	195	249	2.2%	1,014	1.5%
ATV/r Based First Line	2	314	0.7%	0	31	0.2%	347	0.5%
ATV/r Based second Line	3	2504	5.4%	3	1081	5.5%	3,591	5.4%
PI based 1stline	346	358	1.5%	347	42	2.0%	1,093	1.7%
PI based 2ndline	192	2885	6.7%	198	1330	7.7%	4,605	7.0%
Any other 1st line	7	4	0.0%	6	1	0.0%	18	0.0%
Any other second line	56	0	0.1%	64	0	0.3%	120	0.2%
Third line	3	2	0.0%	2	2	0.0%	9	0.0%
PM_EFV based	0	12	0.3%					
PM_DTG based	7	3687	94.9%					
PM_PI based	2	184	4.8%					
Total_regimen	1,880	44,299	100.0%	1,899	17,911	100.0%	65,989	100.0%

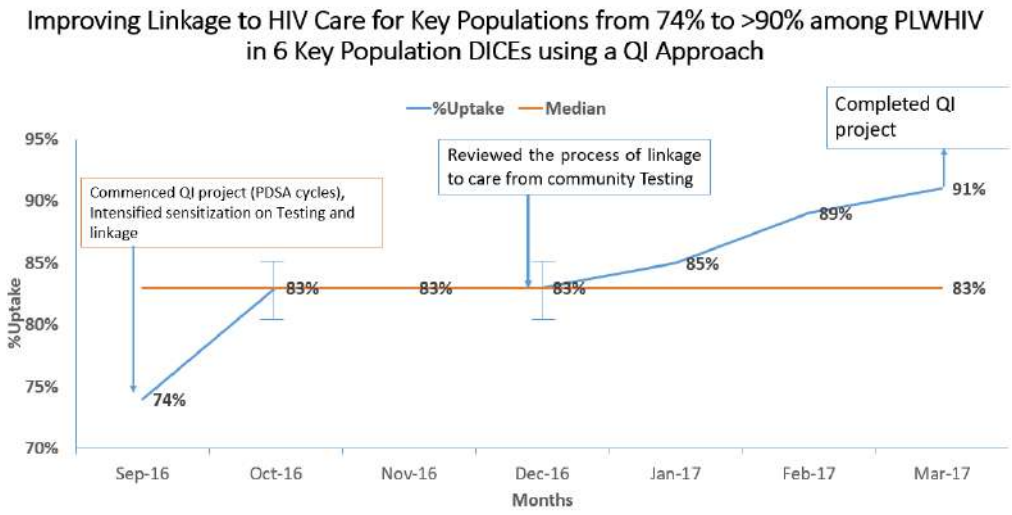
CONTINUOUS QUALITY IMPROVEMENT (CQI)

The Naishi project conducted Continuous Quality Improvement (CQI) in Machakos, Makueni and Kitui Counties across the general and key populations. 270 CQI activities focusing on different program thematic areas of improvement based on specific health facilities challenges were implemented.



Some of the notable CQI activities were:

- Accelerated children testing through family testing models.
- Increased CQI projects implemented by county
- Improved linkage to HIV care and the continuum of care for PLHIV and key populations in Lower Eastern



HEALTH SYSTEMS STRENGTHENING & TRANSITION MANAGEMENT FOR SUSTAINABILITY

The Naishi project worked collaboratively with the county governments of Kitui, Machakos and Makueni to promote program ownership, planning, coordination and monitoring for HIV epidemic control. This collaboration was formalized through the signing of MOU's with the various county governments.

CHS CEO and the Kitui and Makueni County Governors (respectively) during MOU signing events

Leadership and governance

The Naishi project participated in annual work planning for the supported counties gave technical inputs in developing and reviewing the respective county HIV strategic and investments plans, supported counties to participate in national and regional TWGs, and ensured the implementation of health, gender diversity and advocacy activities by promoting world health days, world TB days, and participation in the 16 days of gender activism.

Transition management and support

Kitui, Machakos and Makueni counties formed tripartite county transition committees to assess and build the capacity of the counties to prepare for a wedged transition of the HIV program from a donor-dependent program to a county led county-owned and county funded HIV program. The Naishi project used existing subgrant structures to support HIV program planning and costing at the county level. The project strengthened coordination of HIV epidemic control through capacity building of the offices of the county directors of health and CASCOs through joint planning and training on donor funding and reporting requirements.

Sub granting

Within the project period, Naishi project sub granted Ksh. 1,893,287,620.63 to the three counties, 81% was allocated to support HRH. Annual audits were conducted for each subgrant and received unqualified audit opinions. Funding was guided by signed MOU's between Naishi project and the county governments of Kitui, Machakos and Makueni.

Funding sub granted to the counties and the allocation to HRH support

	Kitui		Machakos		Makueni	
PERIOD	OVERALL BUDGET (Ksh)	HRH SUPPORT	OVERALL BUDGET (Ksh)	HRH SUPPORT	OVERALL BUDGET (Ksh)	HRH SUPPORT
FYR 2016-2017	109,592,000.00	82,686,915.00	131,420,530.44	106,621,567.28	109,074,344.00	99,735,439.00

FYR 2017-2018	152,109,925.00	122,351,843.00	175,259,939.00	143,996,303.00	165,899,345.00	149,031,270.00
FYR 2018-2019	134,470,081.00	105,118,790.00	161,232,504.00	127,628,600.00	128,606,250.00	110,942,671.00
FYR 2019-2020	95,433,483.00	72,540,888.00	110,004,495.19	85,074,651.87	96,208,090.00	78,813,179.00
FYR 2020-2021	102,678,437.00	73,598,946.00	119,662,810.00	98,446,649.00	101,635,387.00	80,879,407.00
TOTAL	**594,283,926.00**	**456,297,382.00**	**697,580,278.63**	**561,767,771.20**	**601,423,416.00**	**519,401,966.00**

SERVICE DELIVERY

County led model

In FY 03, Naishi project implemented a hybrid two-tiered mentorship model comprising Naishi project mentors embedded in each sub-county and led by the sub-county AIDS & STI control officers (SCASCOs). The hybrid model involved SCASCOs taking increased responsibilities for planning and implementing HIV epidemic control measures in 132 lower volume facilities (55, 38 and 39 in Kitui, Machakos and Makueni counties, respectively), accounting for 10% of the Naishi project current on ART caseload.

The hybrid model ensured continuous capacity building and cross-pollination of strategies, interventions, and best practices among the different Sub-County Health Management Team leads and Naishi project mentors. MOH managed the lower volume facilities supported staff with technical support from the sub-county HMT leads led by the SCASCO.

88 high-volume facilities (32, 29 and 27 in Kitui, Machakos and Makueni counties, respectively) accounting for 90% of the current on ART caseload had direct PEPFAR-HRH investment and technical support provided by Naishi project program mentors.

KP program integration

Naishi project integrated Key population services in two MOH facilities, namely Makueni County referral hospital and Athiriver Health Centre. In addition, Naishi project supported the provision of KP friendly services in the other general population clinics by sensitizing CHMTs, SCHMTs and facilities on the key populations (KP) friendly services package to increase awareness and reduce stigma.

Human resources for Health (HRH)

In collaboration with the county health management teams in the three counties, Naishi project supported staff across different cadres to ensure the delivery of high-quality HIV prevention and treatment services. Naishi project ensured that all engaged staff had been updated in the integrated human resources information system (iHRIS).

Number of staff and volunteers supported per year by county

	Kitui		Machakos		Makueni		Totals	
Period	Contracted	Lay Cadres	Contracted	Lay Cadres	Contracted	Lay Cadres	Contracted	Lay Cadres
FY 2016/2017	148	145	225	153	171	129	**544**	**427**
FY2017/2018	252	146	270	151	297	135	**819**	**432**
FY 2018/2019	188	179	225	115	179	50	**592**	**344**
FY2019/2020	135	103	173	115	131	50	**439**	**268**
FY 2020/2021	137	105	180	119	131	91	**448**	**315**

To ensure rapid dissemination of new information, Naishi project conducted site-based CMEs and webinars using one on one sessions as well as through online platforms like zoom and echo. This further ensured minimal off-site training, therefore, reducin workplace absenteeism and training costs.

STRATEGIC INFORMATION

Through enhanced collaboration with MOH health records and other stakeholders in M&E planning, Naishi project developed robust M&E systems to improve the institutional capacity of the MOH M&E department to achieve a robust health information system. Naishi project further supported M&E work plan development, expansion of the health information system, thereby promoting information use for decision making. These systems efficiently supported and improved the quality of data reported through DHIS.

Digital health transformation

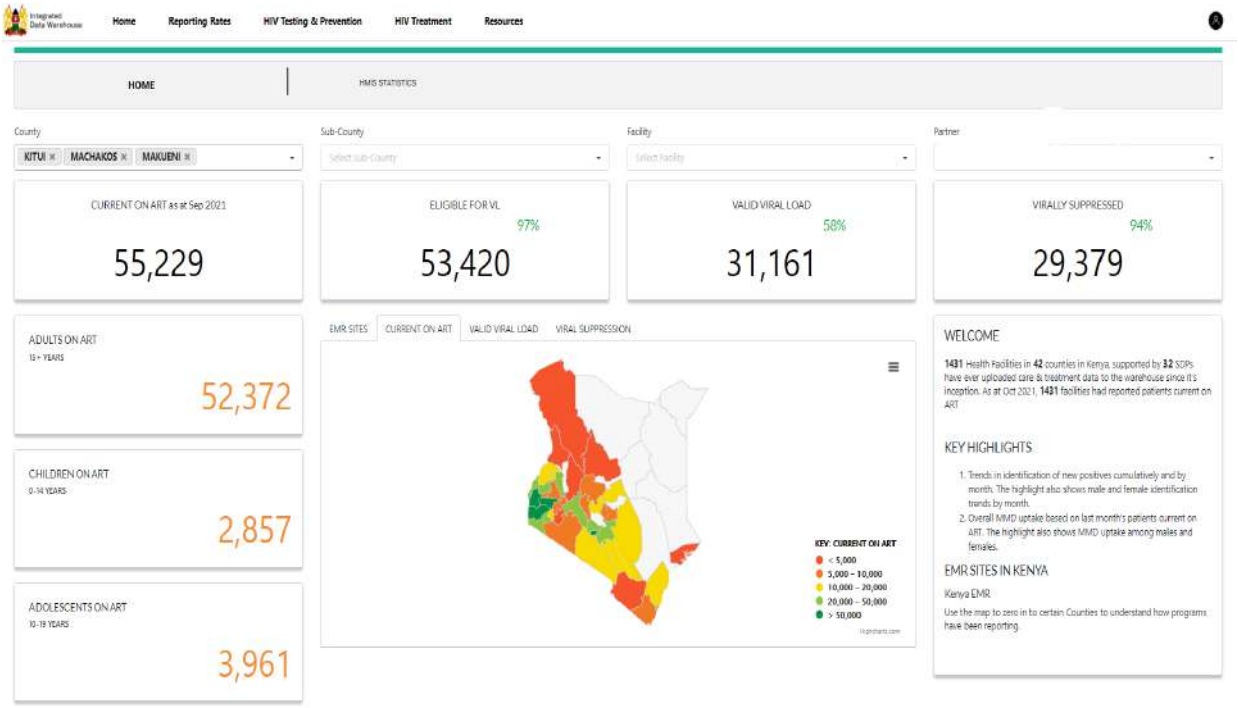
In 2016/17, the Health Management Information system (HMIS) experienced challenges due to reliance on manual patient records, registers, data collection, and reporting tools.

Challenges included gaps in documentation, complexities in generating reports, challenges in data validation and low use of HIV data for decision making. Furthermore, inadequate staffing at MOH facilities contributed to inadequate documentation and suboptimal data capture during service delivery.

By 2021, Naishi project had computerized 106 high volume care and treatment facilities that support 80 % of people living with HIV in the three counties, an increase from 34 in the first year. 95 health facilities implemented EMRs as Point of Care (POC) systems for care and treatment, 90 for e-HTS, and eight DiCEs implemented EMRs.

The program implemented the Interoperability Layer to integrate and interface different EMRs, including the KenyaEMR, ADT, EID website, M-Lab and T4A in health facilities across the three counties

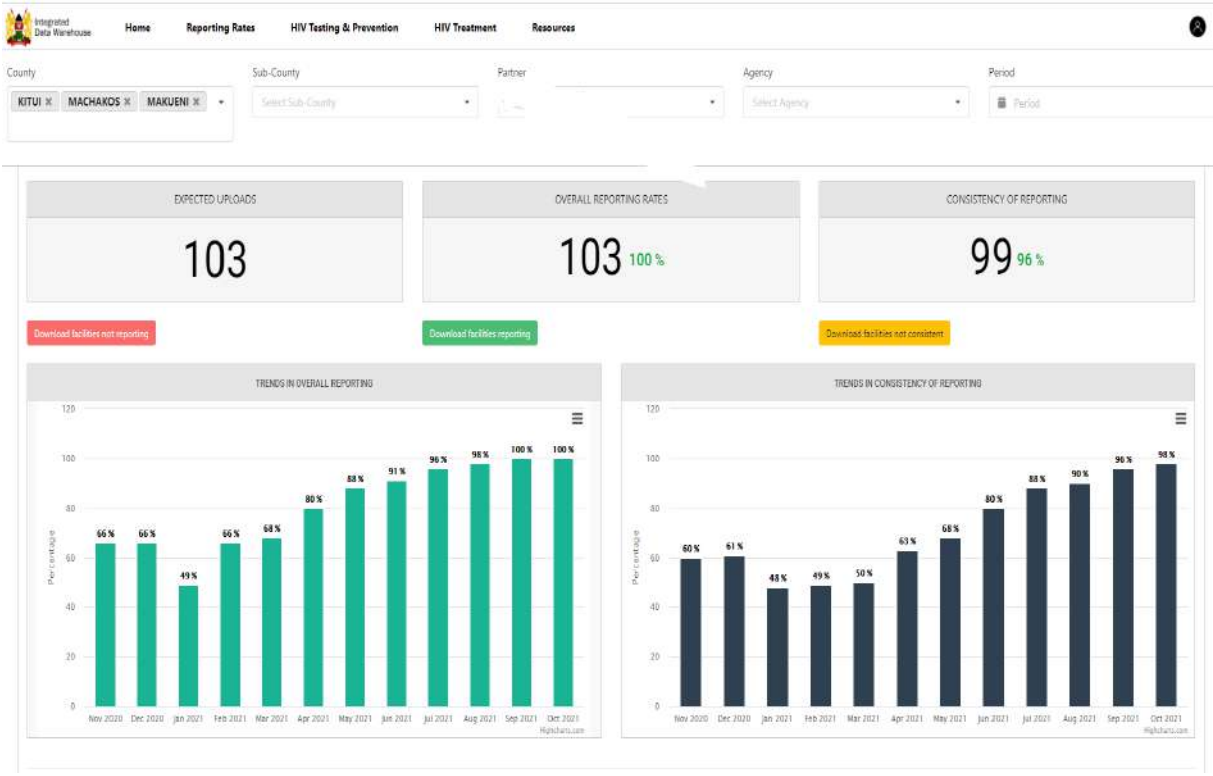
EMR TX_Current reporting in National Data warehouse(NDW)



Naishi project migrated 100% of EMRs from IQcare to KenyaEMR through close collaboration with Palladium to support the system programming and the National AIDs and STI Control Program (NASCOP) to offer guidance on implementation.

Naishi project supported the transition from manual systems to EMRs through cost-effective ICT infrastructures such as; Thin-Client architecture, installations and updates of software, reinforcement of health facilities security features, capacity building of health care workers, and creation of EMR demand within health facilities and the county stakeholders. EMRs has ensured improvements in patient quality of care and service delivery through easing patient-level data access for prompt clinical decision making across departments in a hospital setting and major advances in data quality and reliability of HIV data and health information for reporting and better decision making.

EMR reporting rates in National Data warehouse(NDW)



Naishi project sought to increase county, sub-county leads and health facility staff ownership of the EMRs by building their capacity to offer patient services, enter data, and report with the systems. Naishi project supported EMR sites to report to the national data warehouse with 100% of EMR sites reporting consistently as at the end of September 2021. In preparation for program transition, Naishi project trained CHMT and SCHMTs on the PEPFAR reporting requirements, indicators and reporting systems, including DATIM and 3PM. The Naishi project supported data quality audits and implemented continuous quality improvement (CQI) activities.

Naishi project developed data visualization dashboards using a DHIS2 based Business Intelligence (BI) platform to combine several data streams and analyses across the HIV/TB program areas and utilized Epi-Info Patient Tracker to promote tracking of newly identified HIV positive clients for linkage and initiation to ART.

Design and implementation of monitoring and evaluation systems

To ensure harmonization of M&E activities and information systems within Naishi project supported sites, Naishi project implemented M&E plan as guided by health management and information systems. Through this system, the Naishi project integrated reliable and effective

health information systems in three counties, thus achieving quality data. It further ensured routine reporting, analyses, dissemination, and data utilization at all HIV service delivery levels.

To promote availability of well-functioning data sources, data quality processes, and increased accessibility of data for decision making, Naishi project used M & E systems to monitor interventions towards achieving HIV epidemic control through implementing outcome-based approaches. The program organized M&E technical working groups (TWG), data review meetings, and M&E trainings that facilitated planning and understanding of key strategies, performance indicators, and performance monitoring.

The program strengthened M&E functions within the counties through:

- Regular data reviews meeting at facility, sub-county and county levels
- Involvement in the revision of HIV related registers and reporting tools (Daily activity register, ART Preparation register, ART register, PMTCT registers, HTS registers, ANC)
- Ensuring availability of M&E tools in all health facilities.
- Lobbying county governments to allocate a budget for printing HIV HMIS tools and further facilitate their transportation to the respective facilities.

The program designed and instituted data quality assessment processes (DQA) and standard operating procedures (SOPs) at different levels of data collection and reporting to improve the quality of data. The DQA tools, daily tracking tools, and data validation tools helped the program to improve completeness, accuracy, and timeliness in reporting across various databases and source documents such as the KenyaEMR, patient files, program reporting databases, DATIM, 3PM, KHIS, and the National Data warehouse. Data concordance of key indicators is currently at 98%.

Naishi project supported data processing through DHIS2, contributing to improved adoption of DHIS2 as the main MOH reporting platform.

Performance monitoring towards the achievement of 95-95-95 targets

Naishi project monitored targets attainment enhanced performance monitoring, identified gaps in service delivery and program implementation, and designed corrective actions through:

- Joint MOH monthly and regular data review meetings at the facility, sub-county, county, and project levels.
- Dividing targets across all the supported facilities
- Sensitizing staff to understand their targets and introducing talking walls, analysing data,
- Conducting data-driven multidisciplinary team meetings, data review meetings, and implementing continuous quality improvement challenges.

The program designed and implemented an excel based Performance monitoring plan (PMP) template to help measure and review performance against targets set for every program area.

Innovations/ Successes

The Naishi project developed the CHS Reporting and Information System (CRIS), DHIS2 based platform built to conform to program data and reporting needs. The database increased the efficiency of data organization, reporting, data storage, retrieval and use from facility to program levels.

Challenges

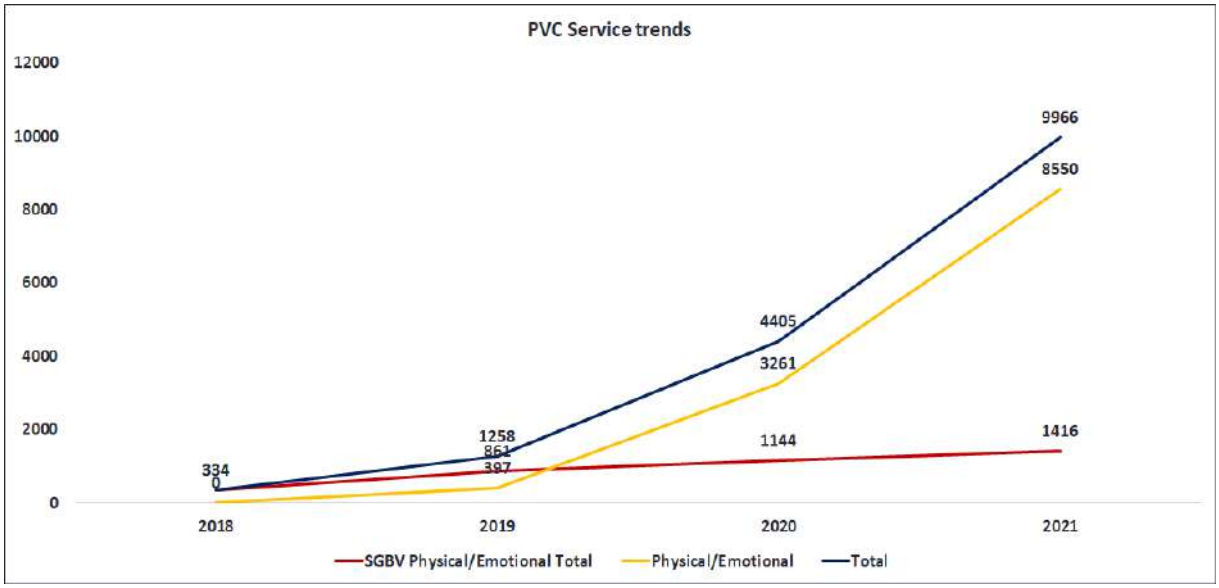
- Due to budget constraints, the program did not provide ICT infrastructure for the implementation of EMRs in all supported sites.
- Electricity cut-offs due to unpaid county bills and power-black outs led to regular stopping of POC EMR implementation.
- The COVID 19 pandemic affected service delivery partly in year 4 and year 5. Staff who contracted the virus or were contacts of infected individuals required quarantine and isolation, respectively.
- Recurrent MOH industrial action during the life of the project hampered various aspects of service delivery.

GBV

As at FY05, the Naishi project reached 3,755 survivors of sexual and gender-based violence and 12,208 of physical violence/emotional violence with the GBV package of services.

To ensure improved and targeted service delivery for GBV survivors Naishi project did the following:

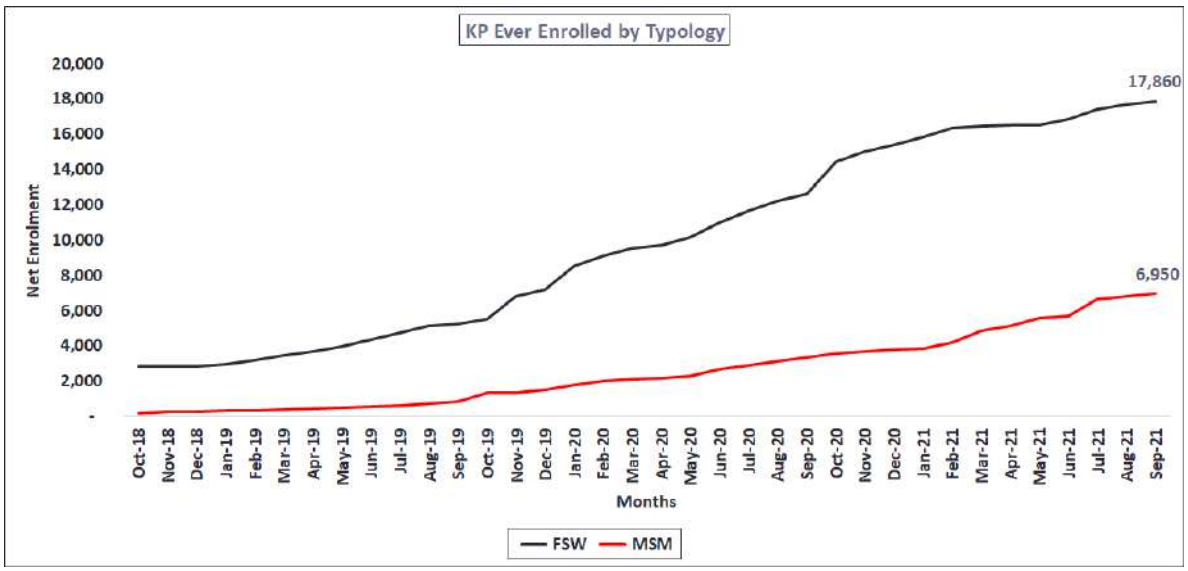
- Provided key basic GBV training to 333 HCWs through CMEs to equip them with the robust ethical skills on GBV case management and
- Revamped GBV committees to oversee the implementation in various facilities.
- Identified and updated new referral agencies and pathways for facilities and partners to expand holistic survivors' management beyond clinical care.
- Implemented a robust framework to measure performance at the facility and program level.
- Provided GBV reporting tools to standardize data capture at the facility level and mentored facility staff on their use.
- Coordinated and meaningfully participated with stakeholders in GBV decision making through supporting the quarterly County GBV Technical Working groups in Kitui, Machakos and Makueni counties.
- Strengthened GBV case management among the key population at the DICEs to safeguard their rights and safety and reduce barriers to access of services.
- Strengthened integration of GBV and HIV services to increase identification and improve the continuum of care for all the survivors within the region.
- Mapped the CSOs responding to GBV in Kitui, Machakos and Makueni counties for ease of linkage and also to ensure better re-integration of survivors back to the community
- Supported the lab to ensure proper handling of samples and precise documentation of the SGBV lab tests conducted for the survivors.

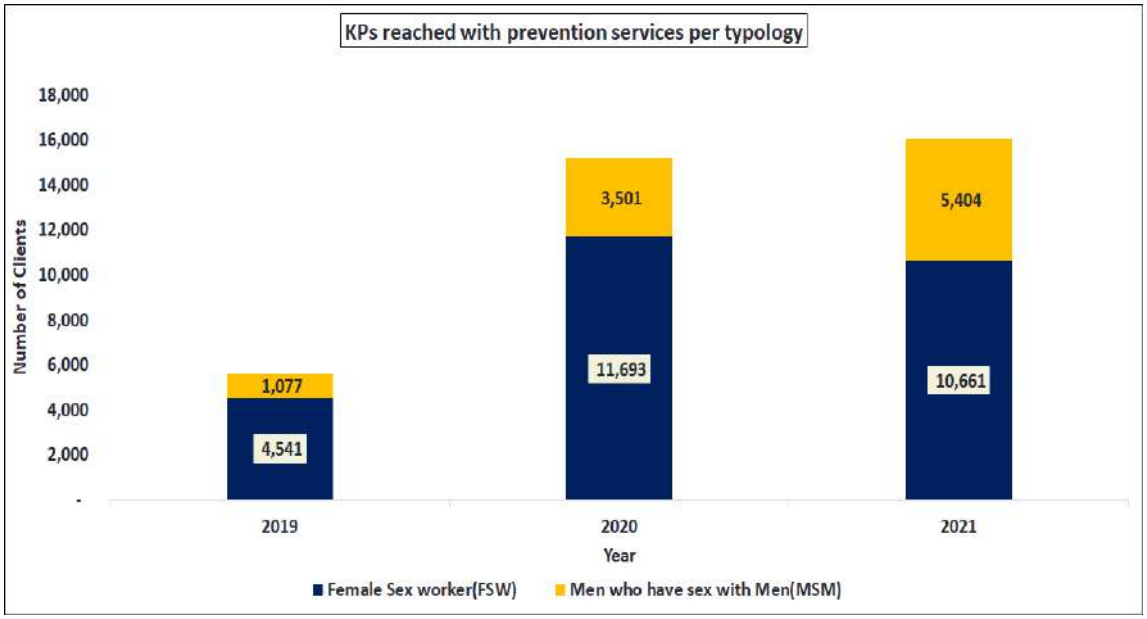


INTEGRATED HIV PREVENTION AND TREATMENT SERVICES FOR THE KEY POPULATIONS

The program began the implementation in FY 2018 in Machakos and Kitui Counties then later scaled up across the three counties in eight Drop-In Centers (DiCEs): 4 in Machakos (1 integrated and 3 standalone), 2 in Kitui (2 co-located) and 2 in Makueni (1 integrated and 1 standalone).

As at PY5, Naishi project had reached 17,860 FSW, 6,950 MSM (KP Prev 4,541 FSW,1,077 MSM). In FY 2019,11693 FSW,3501 MSM and in FY2020 and 10661 Fsw,5404Msm in FY2021) with comprehensive combination HIV Prevention interventions comprising biomedical, behavioural and structural interventions.





Service Delivery Models

The Naishi project increased KP services sites from three in PY3 to eight by PY4 and strengthened integration and improved service uptake through four KP service delivery models;

- Standalone drop-in centers (DiCEs)
- Co-located DiCEs in mainstream public health facilities
- Integration of KP services into mainstream public health facilities
- Structured integrated outreaches.

In addition, the project supported the provision of KP friendly services in the other general population clinics by sensitizing CHMTs, SCHMTs and facility staff.

Water-based lubricants and condom demonstration distribution through peer-led programming was done at the community level. Naishi project integrated and worked with MoH facilities to support KPs in far-reaching areas to access commodities and other applicable services from facilities near them.

In PY5, Machakos implemented virtual mobilization for MSM to increase reach for the unreached, achieving 2,913 (80%) MSM Prev in PY5 compared to 2,542(83%) in PY4 and 909(59%) PY3. To increase the reach and quality of services in the DiCEs, Naishi project increased the key population service delivery cross-cadre staff from 24 in PY3 to 36 staff by PY5.

Peer Education

The program offered behavioral interventions, peer education, risk assessment, risk reduction counselling and skills building, comprehensive condoms and lubricant use programming, drug and substance abuse counselling, mitigation and violence response.

The program increased the number of KP peer educators from 48 in PY3 to 158 Community staff categorized as (120 peer educators, 25 outreach workers,13 PHDP champions) by the end of PY5 and worked with 31 PrEP champions for the community PrEP clusters. The peer educators conducted continuous community mobilization and peer education in their respective hotspots.

Naishi project increased coverage of KPs reached with services and retained by recruiting and retaining peer educators of all KP typologies. For better mobilization and retention of KPs in the program, quality interpersonal engagements were enhanced between the peer educators and their peers through training of the peer educators and periodic health education role plays. Naishi project supported peer educators to ensure 100% community-facility linkage of all contacted KPs by offering them integrated services both at Outreach and Static points

The Naishi Project strengthened the capacity of PEs through on Job Training, continuous support supervision and quarterly performance reward systems for Peer educators who demonstrated good cohort retention. In addition, Naishi project strengthened appointment management through appointment reminders, prompt follow up of clients missing appointments and early tracing through the use of peer tracking forms and peer tracking

registers. Further, social media and ICT Platforms were used to communicate with KPs, especially those in far-reaching areas to coordinate linkage to services and enhance their retention in the program. Naishi project also established community ART and PrEP initiation and follow up strategies to improve accessibility and retention of the clients.

Promoting an enabling environment for KPs

The Naishi project implemented the following structural interventions:

- Sensitization of police officers (most were based at police stations), entertainment joints' managers, MOH staff and other stakeholders on key population, stigma and discrimination. sensitization.
- Empowered the community to promote ownership and leadership against GBV, violence prevention and response
- Participated in the quarterly Court Users Committee (CUC) meetings. For better uptake of legal services by the KPs who experienced violence
- Collaborated with the GBV focal persons from the public health facilities to ensure that KPs were adequately supported during filling and submitting P3 forms.

Awareness creation: Naishi project conducted several hotspot dialogues and service demand creation forums; these allowed free engagement with KPs and provided a safe space for them to raise concerns.

Service accessibility: Naishi project partnered with the county government departments of health to advocate for rights-based approaches to providing health care to key populations. Based on the identified needs/gaps, Naishi project conducted KP training/sensitizations for the ministry of health staff on KP guidelines, stigma and discrimination and consistently engaged MOH staff during the structured outreaches on regular basis bringing services closer to the KPs.

Violence mitigation: Naishi project collaborated with KP led CSOs to advocate for human rights and sensitize law enforcement agencies and other key population stakeholders on the relationship between violence and its negative effect on HIV services uptake.

Identification, linkage, retention and viral suppression of key population clients

The Naishi project profiled the various KP sub groups by typology, hotspot type, including those operating on virtual spaces to enable optimized mobilization and testing options and implemented a mix of testing modalities:

- Social and risk network testing,
- Risk-based testing for clients receiving quarterly follow-up
- Self-testing and index client testing (through two main approaches (HIV-ST) kits distribution and follow up among KPs and their clients through peer educators, health service providers). To address the concerns by the KP community on index testing, periodic dialogue meetings were held with the KP community members, health care workers were sensitised on ethical index testing and site assessments conducted regularly to check whether they met the required standards.

To enable over 95% linkage to ART, the Naishi project followed standard linkage and follow up procedures for KPs identified in the DiCE and outreaches. Naishi further implemented the test and treat strategy to ensure same day initiation using innovative strategies like rapid linkage to ART through facilitated referral and linkage, escorted referrals and community ART initiation and refill.

To increase the number of those initiated and retained on ART, and virally suppressed, Naishi project promoted a client-centered approach to KP service delivery by implementing a differentiated service delivery (DSD) model and other modalities which improved suppression from 90% for Msm in 2019 to 97% in 2021 and sustained FSW suppression at 95%.

The DSD models included; community ART distribution, (peer led and health care worker led), Dice fast track (express care). Support groups were strengthened for the key populations living with HIV (KPLHIV) to offer peer-peer psycho-social support for continuation of treatment using positive-living champions. We engaged and trained 13 PHDP champions who received Continuous mentorship by DiCE staff. Systematic defaulter tracking and management system was employed to improve retention on ART by the use of SMS platform and the relevant registers. Dice based Case managers were assigned to viremia and clients newly initiated ART for close follow ups and treatment literacy classes.

The program scaled up optimization by ensuring that all eligible clients are put on the optimal regimen (TLD). For sustained viral suppression, adherence counselling was done and resulted in 97% viral suppression among MSM and FSW.

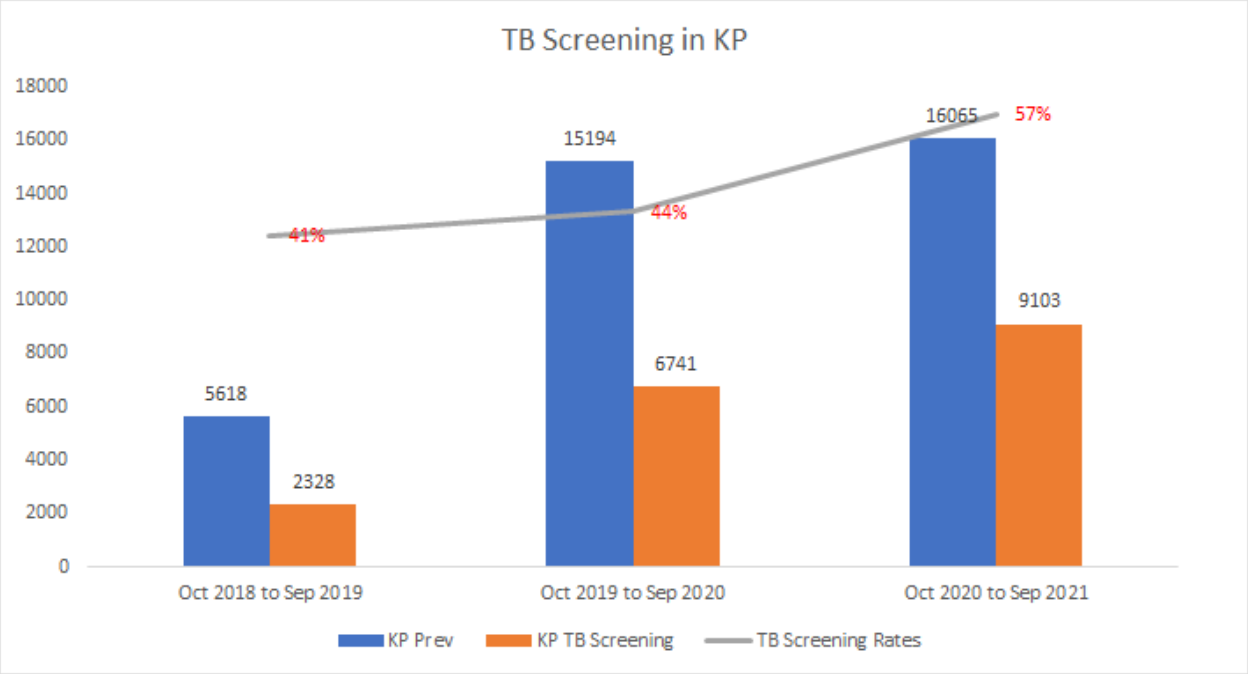
The program strengthened positive health dignity messages and interventions for KPLHIV to improve adherence to treatment in line with the UNAIDs mantra of ‘’Undetectable = Untransmittable’’ (U=U). KP community members were supported to run a campaign to help the MSM and FWS understand that maintaining a low viral load reduces chances of transmitting the virus to their unborn babies as well as their sexual partners thus reducing self-stigma.

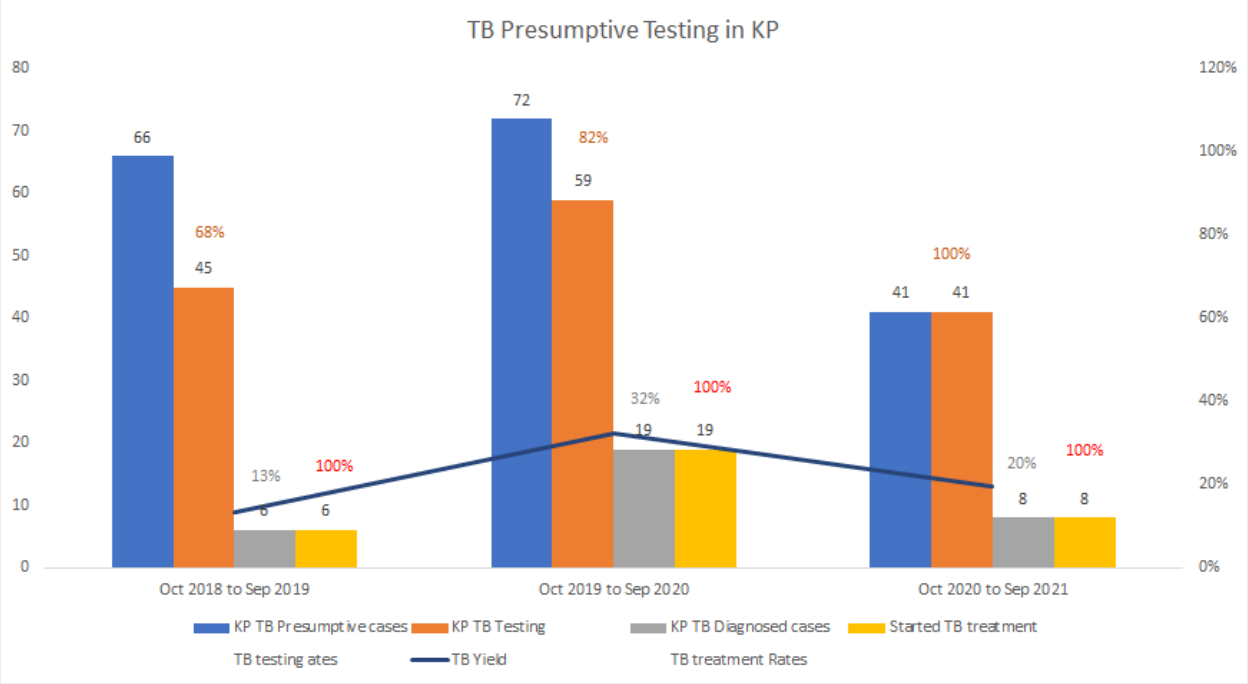
Summary of Identification, linkage and suppression among key population

	Overall			FSW			MSM		
	2019	2020	2021	2019	2020	2021	2019	2020	2021
HTS_POS	119	367	296	99	284	217	20	83	79
TX_New	100	323	294	81	250	206	19	73	88
% Linked	84%	88%	99%	82%	88%	95%	95%	88%	111%
TX_Curr	230	673	829	202	572	679	28	101	150
TX_net_new		443	156		370	107		73	49
Viral suppressio	93%	94%	95%	95%	95%	95%	90%	92%	97%

TB screening

TB screening was routinely done for both HIV negative and positive clients seen in outreaches and at the DiCE. A well-coordinated sample transport system was implemented to ensure all presumptive cases (179) had GeneXpert samples taken and shipped to the laboratory and improved TB testing rates of presumptive cases from 68% in 2019 to 100% 2021. A total of 33 clients were diagnosed with TB and 100% initiated on TB treatment. The Naishi project promoted the uptake of IPT among clients on ART (195 initiated on IPT) by incorporating IPT education during treatment preparation counselling and treatment literacy classes; this was however affected by the supplies stock outs and the wait for the national TB prevention therapy change.





PrEP among key populations

Naishi project applied the following strategies to improve PrEP uptake and continuation;

- Eligibility screening for new and revisit clients,
- PrEP initiation preparation at the HTS counsellors' desk to increase acceptability,

- Formation of additional community PrEP clusters for community initiation and follow-up of 90 (67 FSW, 23 MSM) clients. Through this, Naishi project initiated 2,965 FSW and 1,232 MSM on PrEP.
- PrEP treatment Literacy classes and client centered services to PrEP clients through a form of PrEP DSD model and supported PreP Clubs.

31 PrEP champions and KP peer educators were engaged and trained to create demand and awareness and to support those on PrEP at community level. Naishi project strengthened proper documentation at HTS points to identify PrEP retests.

County Support for Sustainability

To promote ownership and sustainability of the KP program in Kitui, Machakos and Makueni counties Naishi project involved the Ministry of Health (MoH) in the following activities per county; County KP annual planning meetings, Quarterly review meetings, Quarterly county KP TWG meetings, engaged MOH staff during integrated outreaches, Dices supportive supervision, engagement of the peer educators through the county sub grant. Further to Strengthening Partnership with County on KP strategic information Naishi project collaborated with MOH and other HIS partners through the technical working group, DQA, EMR joint supervisions, and EMR data review meetings. The Naishi project trained all the Sub-County Health Records Information Officer (SCHRIOS) SCASCOS and SC pharmacists of KP reporting tools, conducted quarterly meetings with the CHRIOs/SCHRIOs for coordinated data collection and reporting of the KP data into the KHIS.

For monitoring and evaluation Naishi project used the national data collection tools developed by NASCOP and built on the existing monitoring and evaluation systems for timely and accurate reporting to inform KP program implementation. The annual PEPFAR targets were disseminated to the sites through the County Health Management team (CHMT) and disaggregated by month, quarter to allow for tracking of achievement of indicators against targets using the performance monitoring plan (PMP). The Naishi project supported production, supply and use of tools for data capture, collection and reporting. For quality Data Naishi conducted monthly Data validation at DiCE, and quarterly joint RDQA with MoH with focus on checking consistency and accuracy of the reportable data elements from the primary data sources, reporting tools, DHIS, and DATIM.

KP CSO engagement

To enhance the sustainability, ownership and efficiency in KP programming, Naishi project meaningfully involved six KP led organizations (3 FSW, 3MSM) which were mapped from KPIF initiative. The CSOs were involved in the process of planning and implementation of KP services both at the DiCE and at the outreaches. The following activities were implemented for and in partnership with the KP CSOs; organizational capacity assessment for the CSOs, organizational capacity development, demand creation meetings, event driven mobilization, hotspot mapping, MSM safe /CSO office space rent and internet installation at Kitui, and continuous mentorship.

Quarterly dialogue forums were held with the CSOs to document their capacities, area of focus in terms of their special interests and their geographical coverage.

Capacity Building of Health Care Workers and Peer Educators

The Naishi project continuously built the capacity of HCWs to behavioral, biomedical and structural interventions to key populations through mentorship, on-job and formal training. By the end of the project, 922 HCWs had been trained on key population's guidelines. CMEs and sensitizations covering various topics such as KP programming, KP sensitivity, GBV mitigation, identification and response, Social network services, Active TB case finding, Ethical index testing, and Gender Sensitivity and Diversity training were done.

To monitor PEs performance, monthly review of peer calendars was conducted, timely updating of the peer educator's corner in the DiCEs, quarterly PEs supervision, and one on one mentorship.

For Continuous quality improvement and quality assurance we did CQI CMEs, formed CQI projects based on the gaps identified from the joint DQAs and performance reviews. These CQI projects were monitored by use of progress wall charts and regular data feedback given across all the DiCEs.

Naishi project also used on-job training, E-Learning platforms (all KP staff underwent the MSM sensitivity training and GSD course at inception of the program and again in PY5) and mentorship to capacity build the 36 KP program staff. The DiCEs strengthened monthly site level review meetings to address any upcoming data issues or challenges. Quarterly client exits interviews, Quarterly HTS counsellors observed practice and PT panel testing were carried out as other methods of Quality assurance.

Challenges

- Mobile nature of KPs made it difficult for most KPs to adhere to their quarterly appointments as guided by NASCOP.
- Closure of hotspots during COVID period forced most KPs to relocate to their rural homes since they could no longer pay for rent and upkeep for their families.
- High Stigma among the MSM community remained a barrier to access to biomedical services at the respective Drop in centres
- The program was unable to meet the optimum peer educators to client ratios. (Ratios surpassed the required, which is 1:40 for MSM and PWID and 1:60-80 for fsw)

Lessons learnt

- Community ART initiation and refill improved linkage to ART from 84% before the implementation of the strategy in PY3, to 88% and 99% after implementation of the strategy, PY4 and PY5 respectively.
- Engaging relevant stakeholders in every step of KP programming is key to providing an enabling environment for the key population's thus promoting uptake of HIV prevention services.
- Uptake of social services (i.e. National Health Insurance Fund and National social security fund) by the key population is still low and thus require more advocacy.

Recommendations

- Train more peer educators to achieve optimal peer educators to client ratios
- Lobby with the County government to provide friendly loans to key populations for small business startups to help boost their incomes.
- Continue with community PrEP and ART initiation and refills to minimize missed opportunities.
- Continuous sensitization of public health staff on key population sensitivity to improve uptake of HIV prevention in the facilities.

ANNEXES

Asbtracts and manuscripts

Manuscripts under CEO/CDC Review			
Title	**Authors**	**Journal**	**Year Published**
Evaluation Report	Naishi project	Submitted to CDC	Sep 2021
Factors associated with Viral Load Non-suppression in a large cohort of HIV Infected Persons on ART followed over a 51 Months Period in Lower Eastern Kenya.	P. Wekesa[1], P. Rumunyu[1], K. Owuor[1], P. Kyalo[1], V. Karanja[1], R. Ngumo[1] and I. Mutisya[2]	To be identified	
Time to attrition among PLHIV in Lower Eastern Kenya.	Wekesa Paul[1], Rugendo Esther K[1], Kevin Owour[1], Peter Kyalo[1], Peter Rumunyu[1], Reuben Ngumo[1]	To be identified	
Barriers to Antiretroviral Drugs Access for Prevention of Mother-To-Child Transmission of HIV: A Case-Control study	Mutugi J M[1], Rugendo E K[1], Muthoni G M[1], Mutisya I[2], Muthama R[3], Rabut G[4], Wekesa Paul[1], Kyalo P[1], Rumunyu P[1]	To be identified	
Abstracts presented			
Title	**Authors**	**Conference**	**Date Presented**

Exploring high-yield approach to HIV testing in Kenya: contact notification services	Muriithi M[1], Kitheka Kituku G[1], Wekesa P[1], Ngumo R[1], Nyaga D[1], Otieno B[1], Mutinda O[1], Njeri M[1], Kiio Ndolo S[5], Mutuku P[5], Muthama R[4], Vuku F[3], Achwoka D[2], Rumunyu P[1], Owuor K[1]	Oral presentation during the 12th INTEREST International Workshop on HIV Treatment, Pathogenesis, and Prevention Research in Resource-limited Settings, Kigali, Rwanda	29 May – 1 June 2018
Improving Viral Suppression among Children and Adolescents 0-24 Years through Meaningful Client and Caregiver Involvement at Kangundo Level IV Hospital	Elizabeth N. Mateli[6] , Daniel Nzioki[6] , Peter Katsutsu Wanje[1] , Angeline Muia[1], Lillian Musyimi[6], Ann Kasyoki[6], Salome Nzisa[6]	Poster presentation during the 2021 HIV Prevention, Care and Treatment Scientific Conference by the National AIDS & STI Control Program.	28th September to 1st October 2021
Contraceptive Implant Failure Among HIV Positive Women Using Oral Tenofovir, Lamivudine and Efavirenz in Machakos County	Dr Diana Amojong[4], Regina Muthusi[4]	Poster presentation during the National Best Practices Forum for regional HIV Technical Working Groups by the National AIDS &	2nd Aug 2018

		STI Control Program.	
Optimization of HIV Prevention Through Use of Oral PrEP in Machakos County	Francisca Mumo[4]	Poster presentation during the National Best Practices Forum for regional HIV Technical Working Groups by the National AIDS & STI Control Program.	2nd Aug 2018
Implementation of Partner Notification Services to Increase Identification of HIV-Infected People in Eastern Region	Dr Phidelia Mwangangi[5]	Poster presentation during the National Best Practices Forum for regional HIV Technical Working Groups by the National AIDS & STI Control Program.	2nd Aug 2018
Abstracts not presented			
Uptake and outcomes of Isoniazid preventive therapy among people	Muia A.M[1], Karanja V[1], Gacheri E[1], Mukuha J[1], Nyaga D[1], Mutuku PN[5],		

living with HIV in Lower eastern region, Kenya	Muriithi D[1], Mwangi M[1], Ndambuki J[1], Mutugi J.M[1]		
Determinants of mortality among patients with Tuberculosis in Makueni County- Kenya	Muia A.M[1], , Nyaga D[1], Mutuku PN[1], Nyaga D[1], Gitahi M[1], Mutugi J.M[1]		
Improvement of Viral Suppression for Key Population Through a Collaborative Approach at Mwingi Dice	Makau J[7], Nyakundi R[7], Kirimi P[1], Malinda W[7], Kimuyu J[7] , Mutugi M[1], Obwiri W[2], Achwoka D[2]		
Implementation of quality improvement collaborative approach to enhance linkage to HIV treatment for Key Populations in lower Eastern Kenya	Kirimi P M[1], Nyakundi C[2], Mutugi JM[1], Kitheka G[1]		

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Annex 2: Site Census

MFL	Facility_Name	County	Sub-County	Implementation Model	HTS	Care and Treatment	TB and HIV	Revised_ PMTCT
11974	Chuluni Health Centre	Kitui	Kitui_East	TO-LED Sites	YES	YES	YES	YES
12077	Ikanga Sub-District Hospital	Kitui	Kitui_South	TO-LED Sites	YES	YES	YES	YES
12080	Ikutha Tier iv Hospital	Kitui	Kitui_South	TO-LED Sites	YES	YES	YES	YES
12091	Inyuu Dispensary	Kitui	Kitui_East	TO-LED Sites	YES	YES	YES	YES
12169	Kamuwongo Health Centre	Kitui	Mwingi_North	TO-LED Sites	YES	YES	YES	YES
12184	Kanyangi Sub-District Hospital	Kitui	Kitui_Rural	TO-LED Sites	YES	YES	YES	YES
12242	Katse Health Centre	Kitui	Mwingi_North	TO-LED Sites	YES	YES	YES	YES
16991	Katulani Sub District Hospital (Kitui)	Kitui	Kitui_Central	TO-LED Sites	YES	YES	YES	YES
12255	Kauwi Sub-District Hospital	Kitui	Kitui_West	TO-LED Sites	YES	YES	YES	YES
12340	Kisasi Health Centre (Kitui)	Kitui	Kitui_Rural	TO-LED Sites	YES	YES	YES	YES
12366	Kitui District Hospital	Kitui	Kitui_Central	TO-LED Sites	YES	YES	YES	YES
12396	Kwa Vonza Dispensary	Kitui	Kitui_Rural	TO-LED Sites	YES	YES	YES	YES
12420	Kyuso District Hospital	Kitui	Mwingi_North	TO-LED Sites	YES	YES	YES	YES
12483	Mathuki Health Centre	Kitui	Mwingi_Central	TO-LED Sites	YES	YES	YES	YES
12486	Matinyani Health Centre	Kitui	Kitui_West	TO-LED Sites	YES	YES	YES	YES
12521	Mbitini Health Centre	Kitui	Kitui_Rural	TO-LED Sites	YES	YES	YES	YES
12519	Miambani Health Centre	Kitui	Kitui_Central	TO-LED Sites	YES	YES	YES	YES
12523	Migwani Sub-District Hospital	Kitui	Mwingi_West	TO-LED Sites	YES	YES	YES	YES
12586	Mutha Health Centre	Kitui	Kitui_South	TO-LED Sites	YES	YES	YES	YES
12601	Mutitu Sub-District Hospital	Kitui	Kitui_East	TO-LED Sites	YES	YES	YES	YES
12603	Mutomo Health Center	Kitui	Kitui_South	TO-LED Sites	YES	YES	YES	YES
12626	Mwingi District Hospital	Kitui	Mwingi_Central	TO-LED Sites	YES	YES	YES	YES
12654	Ngomeni Health Centre	Kitui	Mwingi_North	TO-LED Sites	YES	YES	YES	YES
12658	Nguni Health Centre	Kitui	Mwingi_Central	TO-LED Sites	YES	YES	YES	YES
12681	Nuu Sub-District Hospital	Kitui	Mwingi_Central	TO-LED Sites	YES	YES	YES	YES
12689	Nzatani Dispensary (Mwingi)	Kitui	Mwingi_West	TO-LED Sites	YES	YES	YES	YES
12803	Tiva Dispensary	Kitui	Kitui_Central	TO-LED Sites	YES	YES	YES	YES
12805	Tseikuru Sub-District Hospital	Kitui	Mwingi_North	TO-LED Sites	YES	YES	YES	YES
12839	Waita Health Centre	Kitui	Mwingi_Central	TO-LED Sites	YES	YES	YES	YES
12853	Yatta Health Centre	Kitui	Kitui_Rural	TO-LED Sites	YES	YES	YES	YES

20425	AP Kanyonyoo Dispensary	Kitui	Kitui Rural	SCASCO-LED	YES	YES	YES	YES
12008	Endau Dispensary	Kitui	Kitui_East	SCASCO-LED	YES	YES	YES	YES
12099	Itongolani Dispensary	Kitui	Mwingi_West	SCASCO-LED	YES	NO	NO	YES
12134	Kakeani Health Centre	Kitui	Kitui_West	SCASCO-LED	YES	YES	YES	YES
17602	Kalambani Dispensary	Kitui	Kitui_South	SCASCO-LED	YES	YES	YES	YES
12151	Kaliku Dispensary	Kitui	Kitui_East	SCASCO-LED	YES	YES	YES	YES
12153	Kalimani Disensary	Kitui	Kitui_West	SCASCO-LED	YES	YES	YES	YES
18516	Kalulini Health Centre -L/Yatta	Kitui	Kitui_Rural	SCASCO-LED	YES	YES	YES	YES
12166	Kamutei Health Centre	Kitui	Kitui_South	SCASCO-LED	NO	YES	YES	YES
12178	Kaningo Health Centre	Kitui	Mwingi_North	SCASCO-LED	YES	NO	NO	YES
12186	Kanyunga Health Centre	Kitui	Mwingi_Central	SCASCO-LED	YES	YES	YES	YES
16994	Kanzau Dispensary	Kitui	Kitui_Rural	SCASCO-LED	NO	YES	YES	NO
12210	Kasunguni Dispensary	Kitui	Kitui_East	SCASCO-LED	YES	YES	YES	YES
12211	Kasyala Health Centre	Kitui	Kitui_Central	SCASCO-LED	YES	NO	NO	YES
12249	Katutu Health Centre	Kitui	Kitui_West	SCASCO-LED	YES	YES	YES	YES
12252	Kauma Health Centre (Kitui)	Kitui	Kitui_West	SCASCO-LED	YES	YES	YES	YES
12262	Kavuta Dispensary	Kitui	Kitui_Central	SCASCO-LED	NO	YES	YES	NO
12342	Kisayani Health Centre	Kitui	Kitui_South	SCASCO-LED	YES	NO	NO	YES
12383	Konyu Dispensary	Kitui	Mwingi_North	SCASCO-LED	YES	YES	YES	YES
12393	Kwa Mulungu Dispensary	Kitui	Kitui_West	SCASCO-LED	YES	YES	YES	YES
12394	Kwa Mutonga Health Centre	Kitui	Kitui_West	SCASCO-LED	YES	YES	YES	YES
12403	Kyamatu Dispensary	Kitui	Kitui_East	SCASCO-LED	YES	YES	YES	YES
12406	Kyangunga Health Centre	Kitui	Kitui_Central	SCASCO-LED	YES	YES	YES	YES
12410	Kyatune Health Centre	Kitui	Kitui_South	SCASCO-LED	YES	YES	YES	YES
12414	Kyethani Health Centre	Kitui	Mwingi_West	SCASCO-LED	YES	YES	YES	YES
18681	Makongo Dispensary	Kitui	Kitui_East	SCASCO-LED	YES	YES	YES	YES
12459	Malalani Health Center	Kitui	Kitui_East	SCASCO-LED	NO	YES	YES	NO
12464	Mama Vero Clinic	Kitui	Kitui West	SCASCO-LED	YES	NO	NO	YES
18550	Maseki Dispensary	Kitui	Kitui_West	SCASCO-LED	YES	YES	YES	YES
12479	Masyungwa Health Centre	Kitui	Mwingi_North	SCASCO-LED	YES	YES	YES	YES
16246	Mbondoni Dispensary (Mwingi)	Kitui	Mwingi_West	SCASCO-LED	YES	NO	NO	YES
12539	Mivukoni Health Centre	Kitui	Mwingi_North	SCASCO-LED	YES	YES	YES	YES
12587	Muthale Mission Hospital	Kitui	Kitui West	SCASCO-LED	YES	YES	YES	YES

12611	Mutyangome Dispensary	Kitui	Mwingi_Central	SCASCO-LED	YES	NO	NO	YES
12628	Mwitika Health centre	Kitui	Kitui_East	SCASCO-LED	NO	YES	YES	NO
17817	Ndakani (Syamatani) Dispensary	Kitui	Kitui_South	SCASCO-LED	YES	NO	NO	YES
12638	Ndiuni Health Centre	Kitui	Kitui_West	SCASCO-LED	YES	YES	YES	YES
12641	Neema Nursing Home	Kitui	Kitui_Central	SCASCO-LED	YES	NO	NO	YES
12662	Nguungani Dispensary	Kitui	Mwingi_North	SCASCO-LED	NO	YES	YES	YES
12677	Nthongoni Health Centre (Kitui)	Kitui	Kitui_Rural	SCASCO-LED	YES	YES	YES	YES
16992	Nzangathi Dispensary	Kitui	Kitui_East	SCASCO-LED	YES	YES	YES	YES
12690	Nzawa Health Centre	Kitui	Mwingi_West	SCASCO-LED	YES	YES	YES	YES
12691	Nzeluni Health Centre	Kitui	Mwingi_West	SCASCO-LED	YES	YES	YES	YES
16993	Syathani (Kyathani) Dispensary	Kitui	Kitui_West	SCASCO-LED	YES	YES	YES	YES
12789	Tei Wa Yesu Health Centre	Kitui	Mwingi North	SCASCO-LED	YES	YES	YES	YES
12794	Tharaka Health Centre	Kitui	Mwingi_North	SCASCO-LED	NO	YES	YES	NO
12797	Thitani Health Centre	Kitui	Mwingi_West	SCASCO-LED	YES	YES	YES	YES
12798	Thitha Dispensary	Kitui	Mwingi_Central	SCASCO-LED	YES	NO	NO	YES
12800	Tii Dispensary	Kitui	Mwingi_North	SCASCO-LED	YES	NO	NO	YES
12806	Tulia Health Centre	Kitui	Kitui_West	SCASCO-LED	YES	YES	YES	YES
12819	Tyaa Kamuthale Health Centre	Kitui	Mwingi_North	SCASCO-LED	YES	NO	NO	YES
18090	Ukasi Model Health Centre	Kitui	Mwingi_Central	SCASCO-LED	YES	YES	YES	YES
12836	Voo Health Cetre	Kitui	Kitui_East	SCASCO-LED	YES	YES	YES	YES
12848	Wingemi Health Centre	Kitui	Mwingi_Central	SCASCO-LED	NO	YES	YES	YES
12849	Winzyeei Health Centre	Kitui	Mwingi_West	SCASCO-LED	YES	YES	YES	YES
12852	Yanzuu Health Centre	Kitui	Kitui_East	SCASCO-LED	YES	NO	NO	YES
12856	Yongela Dispensary	Kitui	Kitui_South	SCASCO-LED	YES	NO	NO	YES
20203	CHS Mwingi Central Dice	Kitui	Mwingi_Central	DICE	YES	YES	YES	NO
20448	CHS Kitui Central Dice	Kitui	Kitui_Central	DICE	YES	YES	YES	NO
11936	Athi River Health Centre	Machakos	Athi_River	TO-LED Sites	YES	YES	YES	YES
16432	Donyo Sabuk Dispensary	Machakos	Matungulu	TO-LED Sites	YES	YES	YES	YES
11995	Ekalakala Health Centre	Machakos	Masinga	TO-LED Sites	YES	YES	YES	YES
12078	Ikombe Disp	Machakos	Yatta	TO-LED Sites	YES	YES	YES	YES
16433	Kakuyuni Health Centre	Machakos	Kangundo	TO-LED Sites	YES	YES	YES	YES
12177	Kangundo District Hospital	Machakos	Kangundo	TO-LED Sites	YES	YES	YES	YES
12215	Katangi Health Centre	Machakos	Yatta	TO-LED Sites	YES	YES	YES	YES

12230	Kathiani District Hospital	Machakos	Kathiani	TO-LED Sites	YES	YES	YES	YES
12257	Kaviani Health Centre	Machakos	Kathiani	TO-LED Sites	YES	YES	YES	YES
12347	Kisiiki Dispensary	Machakos	Yatta	TO-LED Sites	YES	YES	YES	YES
12357	Kithimani Dispensary	Machakos	Yatta	TO-LED Sites	YES	YES	YES	YES
12362	Kithyoko Health Centre	Machakos	Masinga	TO-LED Sites	YES	YES	YES	YES
12375	Kivaa Health Centre	Machakos	Masinga	TO-LED Sites	YES	YES	YES	YES
12438	Machakos Level 5 Hospital	Machakos	Machakos	TO-LED Sites	YES	YES	YES	YES
12475	Masii Health Centre	Machakos	Mwala	TO-LED Sites	YES	YES	YES	YES
12476	Masinga Sub County Hospital	Machakos	Masinga	TO-LED Sites	YES	YES	YES	YES
16439	Matungulu Health Centre	Machakos	Matungulu	TO-LED Sites	YES	YES	YES	YES
12488	Matuu District Hospital	Machakos	Yatta	TO-LED Sites	YES	YES	YES	YES
12503	Mbiuni Health Centre	Machakos	Mwala	TO-LED Sites	YES	YES	YES	YES
12530	Mitaboni Health Centre	Machakos	Kathiani	TO-LED Sites	YES	YES	YES	YES
18581	Mlolongo Health Centre	Machakos	Athi_River	TO-LED Sites	YES	YES	YES	YES
12593	Muthetheni Health Centre	Machakos	Mwala	TO-LED Sites	YES	YES	YES	YES
12602	Mutituni Dispensary	Machakos	Machakos	TO-LED Sites	YES	YES	YES	YES
12612	Muumandu Dispensary	Machakos	Machakos	TO-LED Sites	YES	YES	YES	YES
12618	Mwala Subcounty Hospital	Machakos	Mwala	TO-LED Sites	YES	YES	YES	YES
12657	Nguluni Health Centre	Machakos	Matungulu	TO-LED Sites	YES	YES	YES	YES
16440	Sengani Dispensary	Machakos	Matungulu	TO-LED Sites	YES	YES	YES	YES
12730	Shalom Community Hospital (Machakos)	Machakos	Machakos	TO-LED Sites	YES	YES	YES	YES
12841	Wamunyu Health Centre	Machakos	Mwala	TO-LED Sites	YES	YES	YES	YES
11931	Apdk Dispensary (Machakos)	Machakos	Machakos	SCASCO-LED	YES	NO	NO	YES
11932	Approved School Dispensary (Machakos)	Machakos	Machakos	SCASCO-LED	YES	YES	YES	YES
12096	Ithaeni Dispensary	Machakos	Kathiani	SCASCO-LED	YES	NO	NO	YES
12103	Iuuma Dispensary	Machakos	Masinga	SCASCO-LED	YES	NO	NO	YES
12144	Kalama Dispensary	Machakos	Kalama	SCASCO-LED	YES	YES	YES	YES
12146	Kalandini Health Centre	Machakos	Matungulu	SCASCO-LED	YES	YES	YES	YES
12167	Kamuthanga Dispensary	Machakos	Machakos	SCASCO-LED	YES	YES	YES	YES
17106	Kangonde Health Centre	Machakos	Masinga	SCASCO-LED	YES	NO	NO	YES
17105	Kaonyweni Dispensary	Machakos	Masinga	SCASCO-LED	YES	NO	NO	YES
12217	Katani Dispensary	Machakos	Athi_River	SCASCO-LED	YES	NO	NO	YES
12237	Kathukini Dispensary	Machakos	Masinga	SCASCO-LED	YES	NO	NO	YES

12244	Katulani Health Centre	Machakos	Mwala	SCASCO-LED	YES	YES	YES	YES
12304	Kiitini Dispensary	Machakos	Kalama	SCASCO-LED	YES	NO	NO	YES
12305	Kikesa Dispensary	Machakos	Yatta	SCASCO-LED	YES	YES	YES	YES
18689	Kikule Dispensary	Machakos	Masinga	SCASCO-LED	YES	NO	NO	YES
12317	Kimutwa Dispensary	Machakos	Kalama	SCASCO-LED	YES	YES	YES	YES
12321	Kinanie Dispensary	Machakos	Athi_River	SCASCO-LED	YES	YES	YES	YES
17643	Kititu Dispensary	Machakos	Kalama	SCASCO-LED	YES	YES	YES	YES
12376	Kivaani Health Centre	Machakos	Kangundo	SCASCO-LED	YES	YES	YES	YES
12381	Kola Health Centre	Machakos	Kalama	SCASCO-LED	YES	YES	YES	YES
12395	Kwa Nguu Dispensary	Machakos	Matungulu	SCASCO-LED	YES	NO	NO	YES
17161	Kyasioni Dispensary	Machakos	Yatta	SCASCO-LED	YES	NO	NO	YES
12411	Kyawalia Dispensary	Machakos	Kalama	SCASCO-LED	NO	YES	YES	NO
12450	Makadara Health Care	Machakos	Athi_River	SCASCO-LED	YES	NO	NO	YES
12466	Mananja Health Centre	Machakos	Masinga	SCASCO-LED	YES	YES	YES	YES
12537	Miu Sub-Health Centre	Machakos	Mwala	SCASCO-LED	YES	YES	YES	YES
12538	Miumbuni Dispensary	Machakos	Kathiani	SCASCO-LED	YES	NO	NO	YES
12548	Mua Hills Dispensary	Machakos	Machakos	SCASCO-LED	YES	NO	NO	YES
16435	Mukunike Dispensary	Machakos	Kangundo	SCASCO-LED	YES	YES	YES	YES
12562	Mukusu Dispensary	Machakos	Masinga	SCASCO-LED	YES	NO	NO	YES
17162	Musingini Dispensary	Machakos	Masinga	SCASCO-LED	YES	NO	NO	YES
12613	Muusini Dispensary	Machakos	Mwala	SCASCO-LED	YES	NO	NO	YES
16922	Ndunduni Dispensary	Machakos	Kangundo	SCASCO-LED	YES	YES	YES	YES
12686	NYS Dispensary (Mavoloni)	Machakos	Yatta	SCASCO-LED	YES	YES	YES	YES
12750	St Immaculate Clinic	Machakos	Athi_River	SCASCO-LED	YES	NO	NO	YES
12796	Thinu Health Centre	Machakos	Kathiani	SCASCO-LED	YES	YES	YES	YES
12809	Tumaini Rh Clinic	Machakos	Matungulu	SCASCO-LED	YES	NO	NO	YES
12837	Vyulya Dispensary	Machakos	Mwala	SCASCO-LED	YES	YES	YES	YES
21144	CHS Machakos Dice	Machakos	Machakos	DICE	YES	YES	YES	NO
25229	CHS Mlolongo Dice	Machakos	Athi_River	DICE	YES	YES	YES	NO
26816	CHS Kyumbi Dice	Machakos	Athi_River	DICE	YES	YES	YES	NO
12147	Kalawa Model Health Centre	Makueni	Mbooni	TO-LED Sites	YES	YES	YES	YES
12149	Kali Dispensary	Makueni	Mbooni	TO-LED Sites	YES	YES	YES	YES
18596	Kambu Model Health Centre	Makueni	Kibwezi_East	TO-LED Sites	YES	YES	YES	YES

12191	Kanzokea Health Centre	Makueni	Makueni	TO-LED Sites	YES	YES	YES	YES
12208	Kasikeu Dispensary	Makueni	Kilome	TO-LED Sites	YES	YES	YES	YES
12236	Kathonzweni Health Centre	Makueni	Makueni	TO-LED Sites	YES	YES	YES	YES
12291	Kibwezi Sub County Hospital	Makueni	Kibwezi_East	TO-LED Sites	YES	YES	YES	YES
12308	Kikumini Health Centre	Makueni	Kibwezi_West	TO-LED Sites	YES	YES	YES	YES
12309	Kilala Health Centre	Makueni	Kaiti	TO-LED Sites	YES	YES	YES	YES
12314	Kilungu Sub County Hospital	Makueni	Kaiti	TO-LED Sites	YES	YES	YES	YES
12341	Kisau Sub County Hospital	Makueni	Mbooni	TO-LED Sites	YES	YES	YES	YES
12365	Kitise Health Centre	Makueni	Makueni	TO-LED Sites	YES	YES	YES	YES
12455	Makindu Sub County Hospital	Makueni	Kibwezi_West	TO-LED Sites	YES	YES	YES	YES
12457	Makueni County Referral Hospital	Makueni	Makueni	TO-LED Sites	YES	YES	YES	YES
12477	Masongaleni Health Centre	Makueni	Kibwezi_East	TO-LED Sites	YES	YES	YES	YES
12485	Matiliku Sub County Hospital	Makueni	Makueni	TO-LED Sites	YES	YES	YES	YES
12493	Mavindini Health Centre	Makueni	Makueni	TO-LED Sites	YES	YES	YES	YES
12508	Mbooni Sub County Hospital	Makueni	Mbooni	TO-LED Sites	YES	YES	YES	YES
12547	Mtito Andei Sub County Hospital	Makueni	Kibwezi_East	TO-LED Sites	YES	YES	YES	YES
12565	Mukuyuni Health Centre	Makueni	Kaiti	TO-LED Sites	YES	YES	YES	YES
12663	Ngwata Health Centre	Makueni	Kibwezi_East	TO-LED Sites	YES	YES	YES	YES
12676	Nthongoni Health Centre (Kibwezi)	Makueni	Kibwezi_East	TO-LED Sites	YES	YES	YES	YES
12692	Nzeveni Health Centre	Makueni	Kibwezi_East	TO-LED Sites	YES	YES	YES	YES
12693	Nziu Health Centre	Makueni	Makueni	TO-LED Sites	YES	YES	YES	YES
12777	Sultan Hamud Sub District Hospital	Makueni	Kilome	TO-LED Sites	YES	YES	YES	YES
12787	Tawa Sub County Hospial	Makueni	Mbooni	TO-LED Sites	YES	YES	YES	YES
12808	Tulimani Dispensary	Makueni	Mbooni	TO-LED Sites	YES	YES	YES	YES
18171	Administration Police Senior Staff College Dispensary	Makueni	Kibwezi West	SCASCO-LED	YES	YES	YES	YES
11934	Athi Kamunyuni Dispensary	Makueni	Kibwezi_East	SCASCO-LED	YES	NO	NO	YES
11991	Dwa Health Centre	Makueni	Kibwezi_East	SCASCO-LED	YES	NO	NO	YES
12102	Iuani Health Centre	Makueni	Kaiti	SCASCO-LED	YES	YES	YES	YES
12135	Kako Dispensary	Makueni	Mbooni	SCASCO-LED	YES	YES	YES	YES
12150	Kaliani Health Centre	Makueni	Mbooni	SCASCO-LED	NO	YES	YES	YES
12156	Kalulini Health centre	Makueni	Kibwezi_West	SCASCO-LED	NO	YES	YES	YES
16962	Kambimawe Dispensary	Makueni	Makueni	SCASCO-LED	YES	YES	YES	YES
12238	Kathulumbi Dispensary	Makueni	Mbooni	SCASCO-LED	YES	YES	YES	YES

12240	Kathyaka Dispensary	Makueni	Kibwezi_West	SCASCO-LED	YES	YES	YES	YES
17433	Katulye Dispensary-Nzaui	Makueni	Makueni	SCASCO-LED	YES	NO	NO	YES
12256	Kavata Nzou Dispensary	Makueni	Kaiti	SCASCO-LED	NO	YES	YES	NO
12263	Kavuthu Health Centre	Makueni	Makueni	SCASCO-LED	YES	YES	YES	YES
12276	Kiangini Dispensary	Makueni	Makueni	SCASCO-LED	YES	NO	NO	YES
12286	Kiboko Dispensary (Makindu)	Makueni	Kibwezi_West	SCASCO-LED	YES	YES	YES	YES
17147	Kikumini Dispensary (Makueni)	Makueni	Makueni	SCASCO-LED	YES	NO	NO	YES
12312	Kilili Health Centre	Makueni	Makueni	SCASCO-LED	YES	YES	YES	YES
12360	Kithuki Health Centre	Makueni	Makueni	SCASCO-LED	NO	YES	YES	YES
12369	Kitundu (GOK) Dispensary	Makueni	Mbooni	SCASCO-LED	YES	NO	NO	YES
12377	Kivani Dispensary	Makueni	Kaiti	SCASCO-LED	YES	NO	NO	YES
12398	Kwakavisi Dispensary	Makueni	Makueni	SCASCO-LED	YES	NO	NO	YES
12402	Kyaani Dispensary	Makueni	Kibwezi_East	SCASCO-LED	YES	NO	NO	YES
12404	Kyambeke Dispensary	Makueni	Kaiti	SCASCO-LED	YES	YES	YES	YES
16965	Kyau Dispensary	Makueni	Kaiti	SCASCO-LED	YES	NO	NO	YES
16254	Kyuasini Health Centre	Makueni	Kaiti	SCASCO-LED	NO	YES	YES	YES
12468	Mangala Dispensary	Makueni	Kaiti	SCASCO-LED	YES	NO	NO	YES
12499	Mbenuu H Centre	Makueni	Makueni	SCASCO-LED	NO	YES	YES	YES
16968	Mbuini Dispensary	Makueni	Kaiti	SCASCO-LED	YES	YES	YES	YES
12571	Mumbuni Health Centre (Makueni)	Makueni	Makueni	SCASCO-LED	YES	YES	YES	YES
12582	Musalala Dispensary	Makueni	Kaiti	SCASCO-LED	YES	YES	YES	YES
12584	Mutembuku Dispensary	Makueni	Mbooni	SCASCO-LED	YES	NO	NO	YES
12610	Mutyambua Dispensary	Makueni	Makueni	SCASCO-LED	YES	YES	YES	YES
12622	Mwanyani Dispensary	Makueni	Kibwezi_West	SCASCO-LED	YES	NO	NO	YES
12782	Syumile Dispensary	Makueni	Kibwezi_West	SCASCO-LED	YES	YES	YES	YES
17917	Tumaini Maternity and Nursing Home (Kibwezi)	Makueni	Kibwezi West	SCASCO-LED	YES	NO	NO	YES
12822	Ukia Dispensary	Makueni	Kaiti	SCASCO-LED	YES	NO	NO	YES
17838	Utangwa Dispensary	Makueni	Mbooni	SCASCO-LED	YES	NO	NO	YES
17441	Uvete Dispensary	Makueni	Kilome	SCASCO-LED	YES	YES	YES	YES
17845	Uviluni Dispensary	Makueni	Mbooni	SCASCO-LED	YES	NO	NO	YES
19890	CHS Makindu Dice	Makueni	Kibwezi_West	DICE	YES	YES	YES	NO
17511	North Star Alliance Clinic	Makueni	Kibwezi West	DICE	YES	YES	YES	NO

Annex 3: Eligibility screening register

OPD_IPD LINE LIST COMPLETION GUIDE/INSTRUCTIONS		
Column Label	**Column**	**Guide or instruction**
Serial Number	A	Enter the serial number of the OPD/IPD patient as 1,2,3,4 - Start from 1 for every new month
Date of screening	B	Enter the date of OPD clinic visit /IPD screening date
Name of OPD/IPD patient	C	Enter the index clients full names in the order of first name, middle name, surname
OPD/IPD number of patient	D	Enter the OPD/IPD number of the client
Patient type	E	Enter the patient type as HP (Hospital patient) or NP (None Patient)
Type of OPD/IPD visit	F	Enter the type of OPD visit as New visit or Re-visit
		Enter the type of IPD as new admission or re-admission
Age of patient	G	Enter the actual age of patient in years
Sex of OPD/IPD patient	H	Enter the sex of Female, Male
Tested for HIV before	I	Enter Yes if tested before and No if not tested before
Date of HIV testing	J	Enter the month and year of the most recent HIV test as mm/yy if col I is yes
Test result	K	Enter the test results of the most recent HIV test
Eligible for testing	l	Determine eligibility for testing using the Retesting SOP as follows:
		Those who are HIV positive- Enter N-Not eligible.
		Those who are HIV negative within the last three months but have ongoing risk behaviours to include: IDUs, MSMs, Sex workers, Persons with HIV –positive partner, Persons with partners of unknown HIV status or Negative partner in Discordant relationships, Pregnant women, Survivors and perpetrators of sexual and gender based violence,-Enter Y-Yes eligible for testing.
		Those HIV negative persons who have had a specific incident of known HIV exposure within the past three months (condom bursts, unprotected sex, needle stick injuries)Enter Y-Yes eligible for testing.
		Individuals eligible for PEP (Occupational & non-occupational exposure) Y-Yes eligible for testing.
		Persons with disabilities (PWDs) persons with physical, visual, hearing, sensory, and mental impairment Y-Yes eligible for testing.
		Youth and adolescents (15-24 years; including all emancipated minors who may be below 15 years of age.) Enter Y-Yes eligible for testing.
		Patient symptomatic for STI and TB. Enter Y-Yes eligible for testing.
		Patient tested one year ago, with no exposure risk: Enter Y-Yes eligible for testing.
		Vulnerable populations; Widows and widowers, Orphans and vulnerable Children (OVCs),Families and children living in the streets, Young women aged 15-24 years, Service men and women, and their families, Refugees, displaced persons and migrants, People who abuse alcohol,Fisherfolk,Truckers & Motorcycle riders- Enter Y-Yes eligible for testing.
		Children (18months -14years):
		o All children of adults receiving any HIV service (Family testing).
		o All children born of known HIV positive mothers.

		o All children and adolescents attending TB clinics, malnutrition services, o All children admitted to the pediatric ward o All orphans and vulnerable children (OVC) o All sick children with unknown HIV status presenting at health facilities o All children whose mothers died of unknown conditions o All children with a history of exposure to sexual abuse and wet nurse babies Enter Y-Yes eligible for testing NOTE If below 18 months test mother to determine exposure, where biological mother not reached test infant to determine eligibility.
Tested for HIV	m	Enter Y (Yes) or N (No) and if N (No) explain on the comment section
Result	n	If Yes indicate final result P (Positive), N (Negative),for (I) Indeterminate indicate on the comment section if DBS was taken.
Linkage	o	Enter CCC Number for linked clients and give an explaination for those not linked on the comment section
Risk of GBV	p	At risk of GBV- Any person visiting the facility should be assssed for encounter of any form of gender based violence
Type of GBV	q	Type of GBV: 1=Physical-Assess if the clients has any observable/non obserbale injuries 2=Emotional- Assess if the cleint as stress asociated with insult, abuse of beatings 3=sexual- Assess if client has been in unconsenting sex whether married or cohabiting and associated risk(STI, Pregnacy or HIV)
TB Screening	r	Enter the following codes: 1 =Presumed TB (If signs of TB present but not confirmed) 2 = Negative TB screen 3 =Client on TB treatment TB Present 4=TB screening not done Note:
TB Screening	s	No TB symptoms
Comment	t	Comments to clarify specific entry

OPD/IPD HTC COVERAGE LINELIST

Facility Name……Department……

Serial no	Date	Patient Full Name	Patient Number	Patient Type	Type of OPD /IPD Visit N = New R= Revisit	Age (years)	Sex	Tested for HIV before	Date of last HIV testing	Test result	Eligible for testing	Tested for HIV	Result	Linkage	At risk of GBV	Type of GBV 1=Physical 2=Emotional 3=sexual	TB screen Status: 1 =No signs 2=Presumptive 3= TB 4 = Not done	Referred	Comments

	dd/mm/yy			*HP or NP*	*N/R*		*M /F*	*Y/ N*	*mm/ yyyy*	Pos/ Neg/ U	*Y/N*	*Y/ N*	*P/ N/I*	*CCC Number*	*Y/ N*	*1/2/3*	*1/2/3/4*	*Y/N*	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)

Annex 4: Viral Load SOP

STANDARD OPERATIONS PROCEDURES FOR VIRAL LOAD TESTING AMONG HIV-INFECTED PATIENTS

Facility Name: _____ **MFL Code:** _____

County: _____

Sub-County: _____

SOP Title: Standard Operations Procedures for Viral Load Testing Among HIV-Infected Patients	**SOP No.:**
	Version: 2
Effective date:	**Pages:**

Signatures and Dates:

Author: _____

CCC In-Charge Date

QA Review: _____

QA Officer /CCC In-Charge Date

Approving Authority:

_____

Sub-County AIDS & STI Control Officer (S-CASCO) Date

Preamble

HIV viral load testing is one of the routine treatment monitoring tests for HIV-infected persons who are on antiretroviral treatment (ART). The Kenya HIV treatment guidelines recommends routine HIV viral load testing six months after an adult patient is initiated on ART, then a repeat six months later (at 12 months) and thereafter, every 12 months. Routine viral load testing is conducted every 6 months for patients aged 0-24 years.

Special guidance for HIV viral load testing includes:

Suspected treatment failure typified by any detectable viral load copies . In this case, a repeat viral load is recommended after three months of successful/satisfactory adherence counseling and support.

Infants – A baseline viral load test is recommended at the time of drawing blood for confirmatory tests for infants who have had a positive PCR result.

PMTCT setting: Done as part of preconception care for women of reproductive health living with HIV and with an intention to get pregnant. For pregnant and breastfeeding women newly initiated on ART, Viral load testing is done 3 months after initiation, and then every 6 months until complete cessation of breastfeeding

• For HIV positive women already on ART at the time of confirming pregnancy or breastfeeding, viral load testing is done immediately, irrespective of when prior VL was done, and then every 6 months until complete cessation of breastfeeding.

Regimen substitution & Single-drug substitution: A viral load (VL) test is recommended before a single drug substitution is implemented and 3 months after any regimen modification.

This document serves as the standard operating procedures to guide implementation of viral load monitoring for all patients in this facility. The document has been customized and reflects the national guidelines and to address clinic-specific logistical and operational needs to ensure optimal patient care. The following components give a point-by-point description of what needs to be done at every level in a multi-disciplinary approach.

Appointments/ Bookings

All patients due for a viral load test must be booked in the appointment diary and purpose of the visit clearly indicated as **V**. In the 'Purpose of visit' column input **C/V** to explain the reason of attendance as clinical (C) and viral load sample taking (V).

For all patients due for VL, send SMS reminders at least 2 days before the clinic appointment to remind them to honor their appointment.

All clients whose samples have been collected will then be given a one-month appointment to ensure they return to review VL results.

Sample Requisition

Sample requisition and phlebotomy should be done **before** the clinical encounter and/or drug dispensing.

During the Viral sample collection visit, the clinician fills the lab requisition form as follows:

Patient Name: write full names of the patient

Write CCC no as MFL Code/ patients unique number e.g. (1234500001) ensure the CCC number has 10 digits. The first five digits are the facility MFL where facility here means the site in which ART was initiated. For transfer in patients use the same format. **DO NOT write or insert prefixes like TI -486 or 'PMTCT'.** Write it as the MFL code of the facility of origin and client unique number. E.g. 1234500486. Do not add hyphen or slash to separate the MFL component and the clinic serialization. All patients whose unique number is in the older format such as **404012346234** should be changed to the current unique numbering system as described above - MFL code and serialization, immediately.

Date of birth: DD/MM/YYYY e.g. 05/03/2018 meaning 5th day of March in the year 2018

Sex: Male or Female

If female select the following: Pregnant, Breastfeeding, other

Sample type: DBS/Plasma EDTA

Date of Collection: DD/MM/YYYY

Time of collection

Date started ART: DD/MM/YYYY

Current ART regimen: Indicate ART regimen Code

Date initiated on current ART regimen: DD/MM/YYYY

Indicate if 1st line or 2nd line regimen

Justification code:

Code 1: Routine VL (0-24 yrs-done every 6 months, >24 yrs-done at month 6 & 12 for newly enrolled patients and annually thereafter for suppressed patients, PMTCT-first contact with a pregnant or breastfeeding woman already on ART irrespective of when prior VL was done then every six (6) months.

Code 2: Confirmation of treatment failure- Denotes testing for patients with a high VL who have completed at least 3 enhanced adherence session and have had 90 days of satisfactory adherence > 95%.

Code 3: Confirmation of clinical failure- Patients who develop new OIs while on ART and have not completed 1 year since their last suppressed VL.

Code 4: Single drug substitution- Testing for patients for whom you are going to change one molecule for another due to reasons such as adverse drug reactions, drug phase in like DTG, drug-to drug interactions e.g. TB drugs, hypoglycemic agents.

Code 5: Baseline VL done for infants who test PCR positive. This test is done as you collect a sample for their 2nd / confirmatory PCR.

A laboratory request **MOH 227** will be filled in duplicates for VL only (applicable to sites with a laboratory)

The client shall be referred to the Lab for bleeding (facilities without a laboratory, bleeding shall be done by the clinician)

The laboratory officer shall;

Bleed the client and counter sign the duplicate lab request form, remain with a copy and hand back a copy of the lab request form to the client to present to the clinician as proof of bleeding

Document the client details in the VL/EID lab sample tracking log

Sample Collection, documentation, and transport

For facilities with lab staff, phlebotomy should be performed by the lab technician. For facilities with no lab staff, phlebotomy will be done by the clinician.

NB: Phlebotomy may be done in the clinical room, or a bleeding room may be designated in the clinic area or laboratory.

The Viral load tracking log will be filled by the lab technician/ clinician during phlebotomy

The viral load DBS samples once dry should be packed accordingly and sent to the KEMRI lab **no more than two days** after sample collection.

*Plasma samples must be centrifuged within 6 hours of collection, and refrigerated at 2- 8^{0}C for a **maximum of 24 hrs**. Samples **much reach KEMRI not more than 5 days after collection**.*Refer to sample transport SOP for each facility

Sites with riders, packaged samples (CD4, GXT, SCrag, VL,etc) shall be picked by the rider and dispatched at the hub. All the EID and VL samples shall be remotely logged-in/ Barcoded in the EID website before shipment to KEMRI lab.

Sample dispatch form shall be filled detailing samples under shipment, signed by the releasing facility and signature of the receiving officer appended real-time.

PROCEDURE FOR DELIVERY, FILING AND ACTION ON VIRAL LOAD RESULTS:

The facility shall appoint one passionate laboratory officer to be the facility VL/EID focal person. He/she shall ensure;

Daily log-in the EID website and download VL/EID results, print, sort per facility and ensure VL log is updated. He/She shall ensure all sample requisition forms are logged in the EID website on daily basis.

The lab VL focal person or designee shall dispatch the VL results to the sample transporters of the respective facilities upon delivery of new VL/EID samples through their designated pigeon holes in the central lab and document in the sample dispatch log (The sample transporter to counter sign upon receipt).

The viral load focal person at the hub labs (Lab Tech) shall oversee the implementation of remote login at the facility and communicate to Technical officer/ lab advisor any challenges for action.

The sample transporter shall hand over the VL results to the facility lab I/C or facility CCC in-charge for facilities without laboratory services. This should happen on the **same day** the results are delivered from the hub.

Flagging of results that have delayed past the expected pre-determined facility TAT for follow up

Timely and documented hand over of results to the CCC for filing

The CCC VL focal person shall;

Ensure all new results are documented in CCC VL register, handed over to the HRIO to update online records and filed appropriately upon signing with date of receipt.

Update the CCC clinician on monthly basis on the facility VL and EID testing data using the monthly summary tool.

4.5 RESULTS PROCESS FLOW

The facility VL focal person shall be responsible for collecting all VL and EID results from the Laboratory department on a daily basis

Short Message Service (SMS) result (M-lab & 20027)

The Laboratory officer/VL focal person shall be enrolled in the Mlab system for receiving results.

All results shall be received at the Lab and documented in the VL/EID sample tracking log-**within 3 hours** of reception

A notation of **"SMS" (denoting SMS)** shall be written in the comments section (laboratory VL/EID tracking Log) as an indication of the mode of result reception.

All VL/EID results will be documented in the results dispatch form (Annex I below) and handed over to the facility VL focal person who shall sign on the form as proof of reception. A copy of this form shall be filed in the lab.

Hard copy result

All hard copy VL/EID results shall be received by the Laboratory officer/VL focal person, updated/verified with the SMS results and handed over to the CCC VL focal person for documentation/filing

A notation of **"HC" (denoting hard copy)** will be written in the comments section (VL/EID Lab sample tracking Log)

The Laboratory officer shall append a signature and date of reception on the individual client results

The hard copy results shall be collected by the CCC VL focal person

The CCC VL focal person shall append their signature and date of reception on the dispatch form, handover to HRIO who shall update the IQ-care system and ensure results are filled with **24 hours**

2. It is the responsibility of the Technical officer to review progress based on this SOP and to ensure that the system is working for the sites that they oversee

ACTION FOR DELAYED VL/EID RESULTS

In case of a missing VL/EID result beyond the expected TAT;

The laboratory VL focal person (sites with a lab), or the facility CCC VL focal person (sites without a lab) shall,

(SItes without rider system) notify the CCC clinician and communicate with the respective CHS Technical officer for support in following up through the EID website. https://eiddash.nascop.org/login.php

(SItes with rider system) generate a list of pending results, handover to the rider or send via mail to the hub VL focal person for action.

Any further challenge shall be communicated to the TA Lab by mail for support and further guidance from KEMRI.

LDL Result

5.1.1 Call the patients and inform them of their results. Emphasis on continued good adherence to medications.

For new patient on ART for 6 months, repeat at 12 months and there after annual if VL result are LDL.

Pregnant and breastfeeding women repeat every 6 months until complete cessation of breastfeeding.

Detectable and High Viral load results

Detectable and high VL results received should be entered immediately in the High VL register for interventions by the HRIO/ Clinician/Adherence counsellor. The results should be entered in cohorts based on the month VL results were received.

5.3.1 Once the detectable/high VL are received at the facility, the MDT 1 is convened. The MDT includes the clinician, HRIO, adherence counsellor, nurse counsellor and a peer educator. The function of the MDT 1 will be

Review the results

Discuss the cases

Assign a case manager to follow up the patient and conduct home visits as required.

Call the patients for intervention immediately

Document the high VL in the High VL intervention register in the appropriate cohort

Enhanced Adherence Counseling (EAC) sessions will be conducted to assess the patient barriers and support them to come up with realistic solutions that are time-bound. The solutions to barriers will be evaluated during the 2nd and 3rd EAC session

The 3 EAC sessions will be conducted two weekly (within 6 weeks) at a minimum along with support for 90 days of excellent adherence.

MDT 2 is convened to ascertain that excellent adherence is achieved and a repeat VL is recommended to confirm treatment success or failure.

If treatment failure is confirmed by another detectable/high VL result, a switch meeting is convened to discuss an appropriate intervention including second line/ third line regimen.

Consult the Regional HIV clinical TWG for patients with Persistent Low Level Viremia (PLLV) ie the repeat VL is detectable but still < 1,000 copies/ml.

If repeat VL is LDL, continue with ongoing counselling during every clinical visit. The patient is given short TCAs, and VL monitored routinely as provided by the ART guidelines.

NB: Patients who re-suppress after initial High VL will only qualify for fast track DC model after they remain suppressed for one year, with a documented LDL viral load result, and all adherence concerns have been addressed.

LABORATORY VL/EID RESULTS DISPATCH FORM

No	CCC No/EID No	Results

Results received by:

Name……Sign…… Date…….. (Lab)

Results handed over to HRIO:

Name…….Sign……Date……(HRIO)

VL TESTING SAMPLE ADDRESS:

KEMRI P3 LABORATORY

KEMRI: Headquarters, P.O Box Mbagathi RD Nairobi

Tel 0202722541, 0725793260, 07255796842

Email: eid-nairobi@googlegroups.com

PCR TIE BREAKER SAMPLE ADDRESS:

National HIV Reference Laboratory P.O Box

KNH Grounds off Ngong Road, Nairobi

NHPLS Complex

Tel: 0202610963

Annex 5: NimeCONFIRM SOPs

Enrollment CALHIV to NimeCONFIRM VDOT Application SOP

Reviewed by: _____ **Date:** _____

Introduction

NimeCONFIRM is a mobile application for Video Directly-Observed Treatment Short course (VDOTs), targeted at ensuring non adherent patients CONFIRM that they have taken their medication through a recorded video.

Primary objective

To confirm, through a video, that the right medicine was administered to a person with high viremia & suspected non-adherence

Secondary Objectives:

Complement enhanced adherence counselling for viremia Children and Adolescents Living with HIV (CALHIV)

Assess other potential barriers to adherence/treatment failure

VDOTs for any other situation – if customised appropriately

Rationale for development and use of the NimeCONFIRM Application

Non-adherence is the primary reason for ARV treatment failure

Verbal reports of adherence often do not correlate with clinical outcomes

Directly observed treatment (DOT) has been used elsewhere to ascertain adherence

Video DOTS enables Health care workers (HCWs) to independently confirm administration of medicine

A mobile application can be used directly by a patient, or a case manager and the video reviewed/confirmed by health care workers.

Some viremic children investigated for viral resistance to ART using drug sensitivity test did not have mutations to any of the molecules.

Above observation pointed to non-adherence as the cause of TX failure.

Use of NimeCONFIRM can potentially decrease the need for expensive drug sensitivity tests (DST).

Field application of NimeCONFIRM can be expanded to other populations, other chronic diseases or other instances that require adherence monitoring

Who do we enrolled in NimeCONFIRM VDOT Application?

Currently we are only enrolling CALHIVs with a high viral load to benefit from the NimeCONFIRM VDOT application.

Considerations before enrolment of CALHIV to NimeCONFIRM

Mode of NimeCONFIRM implementation that best suits the child's situation.

Self-Care Mode

A Treatment supporters who can be the child's caregiver or a member of the house hold who is aware of the child's HIV status.

An adolescent with a smart phone can take a video of themselves taking their ARV medication daily for 90 days of the intervention.

Case management Mode

Case managers can be peer educators, AYP champions, PAMA champions, community health volunteers living with HIV and any other person identified and confirmed by the multidisplinary team. The case manager should live in close proximity to the child to be able to provide the DOTS. The case manager will follow-up maximum of 5 children at a time.

Proximity of the child to the case manager

Case manager/ treatment supporter has a smart phone to take videos.

Willingness of the Case manager/ treatment supporter to commit to support the intervention for 90s days and take valid videos.

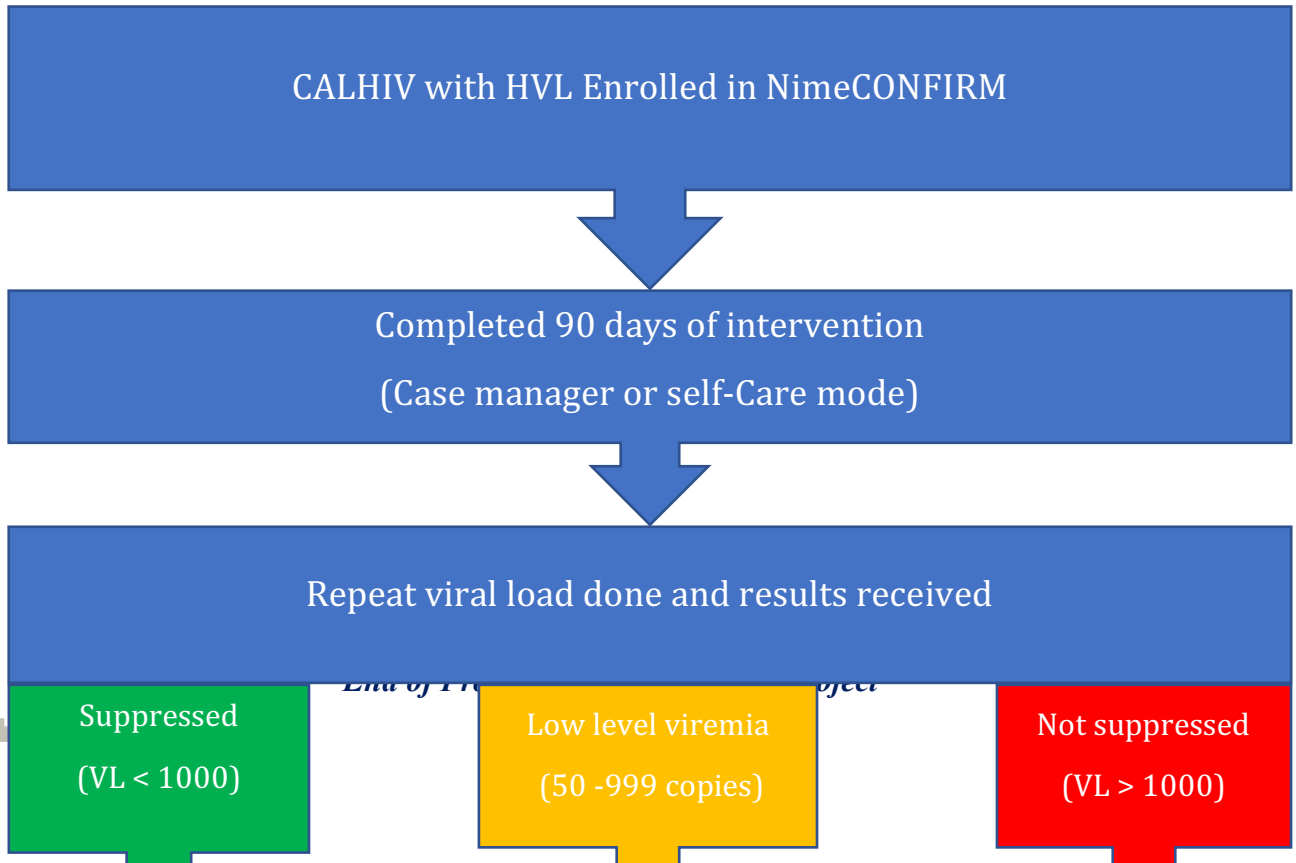
The treatment supporters literacy level and ability to operate a smart phone and willingness to support taking and sending valid videos for the 90 days of the intervention

Disclosure has been done to the child and house hold so as to support implementation of NimeCONFIRM.

Among other considerations as may be determined by the MDT

NB: Where it is not feasible to enroll a child in NimeCONFIRM, ensure the CALHIV continues to receive other adherence interventions such as EACs either virtual or physical, audio DOTs, home visits, through case manager support.

NimeCONFIRM EXIT SOP



Reviewed by: _____ **Date:** _____

What is the Self-Care Mode?

A treatment supporter who can be the child's caregiver or a member of the house hold who is aware of the child's HIV status observes and takes a valid video of a child/ Self taking their ARV medication

An adolescent with a smart phone can take a video of themselves taking their ARV medication daily for 90 days of the intervention.

Enrolment to the Self-Care Mode

This mode is activated when the user is registered in the NimeCONFIRM application as a patient or treatment supporter to monitor their own medication adherence or that of a child under their care

From the login page, the application will go to the one-time baseline questionnaire.

After submitting the one-time baseline questionnaire takes the user straight to the patient homepage.

The user can access the following features:

Individualized pill calendar- automatically populated by the application whenever a video of the patient taking medication is uploaded.

Chat with Admin – For support in case they encounter any issues while using the application.

Record Video Link- Main functionality of the application

Adherence score

Criteria for phone allocation for Self-care mode

The facility MDT will determine which CALHIV will be supported through this modality

A home visit will be conducted by a member of the MDT to determine

The actual location of the home

Identify the primary caregiver of the child who will take the video and willingness to support the intervention for 90 days.

Confirm that disclosure has been done in the home

The social economic situation of the family. (Home struggling with basic necessities may not prioritize the intervention)

Electricity or Solar power to charge the phone.

The Phones will be placed under the custody of the CCC in charge of the facility who will ensure the provide the phone for the intervention and ensure the TS signs the agreement on the security of the phone against theft, loss and any damages

The patient/ treatment supporter will remain with the phone for 3 months of the intervention then surrender the phone to the facility in-charge in good condition after completion on the intervention.

Self- Care Mode allowance

The TS or adolescent will be required to buy a Sim card and register the phone number in their name

The phone number will be topped up with 500 shilling worth of internet bundle each month of the 3 months of the intervention to support recording and sending of videos.

The facility admin for NimeCONFIRM will be responsible to support and review the self-Care videos on a daily basis.

TS who does not upload videos for 7 days will be considered for other forms of adherence support.

Annex 6: PAMA Champion SOP

Reviewed by: Angeline Muia, Mercy Wachira and Annette Kaugi

Date: 11th Nov 2020

Objective: To strengthen PAMA models of care and improve viral suppression and retention of PAMA both paired/ unpaired.

Roles and responsibilities

The PAMA champion will be caregivers selected by the MDT/TOs to follow up and support an unstable pair with the aim to enhance adherence to medication for improved viral suppression. The champion will be selected from members of the PAMA group and they should be virally suppressed, honor clinic appointments, has initiated the disclosure process or completed the process and show good understating of HIV and ARV use. The champion will provide peer counselling and support to a caregiver who is experiencing challenges giving a child medications either syrups, pellets or tablets, support the caregiver initiate the disclosure process in their child and provide support for the caregiver.

A facility should have structured clinics as per children age group and select a PAMA champion from each groups to effectively support caregivers as per their needs. E.g. 0-5yrs, 6-9yrs, 11-14yrs.

Transport Budgets and Advances

The PAMA champion will receive a transport reimbursement of 500 shillings per visit which is a flat rate across all regions, that is: Machakos, Makueni and Kitui counties. The Technical officer/ SCASCO together with the PAMA focal person in the facility will on a monthly basis come up with a budget and advance to request for the PAMA champions transport reimbursement. This should be done by the 5th of each month. During the Peads/ PAMA clinic, the champion will fill out the transport reimbursement forms and time sheet. The reimbursement form should capture the champion's full name, ID number, Phone Number, date reimbursement received and their signature. The SCACO facilities will also benefit from a PAMA champion and the SCASCO will be responsible for requesting and liquidating the advances.

Sample budget

Name of the sub county	xxxxxx						
No of the supported facilities	xxxxxx						
Name of the activity	xxxxxx						
Budget Preparation Date:	xxxxxx						
Budget Item	Activity	Activity Date	Name of the Champion	ID No	Phone no.	Name of the facility	Transport Amount(Kshs)
PAMA Champion Transport Reimbursement	Peads/PAMA clinic					Machakos level 5	500.00
PAMA Champion Transport Reimbursement	Peads/PAMA clinic					Machakos level 5	500.00
PAMA Champion Transport Reimbursement	Peads/PAMA clinic					Machakos level 5	500.00
PAMA Champion Transport Reimbursement	Peads/PAMA clinic					Mutituni HC	500.00
PAMA Champion Transport Reimbursement	Peads/PAMA clinic					Mutituni HC	500.00
PAMA Champion Transport Reimbursement	Peads/PAMA clinic					Kola HC	500.00
TOTAL CASH REQUESTED							3,000.00
Prepared by: SCASCO		Reviewed by: CHS TO			Reviewed by: Finance officer		
Name :		Name :			Name :		
Signature:		Signature:			Signature:		
		Date:			Date:		

Liquidation of Advances

Liquidation of advances should be done immediately after the activity or not later than 3 days after the activity. The signed transport reimbursement form, signed Time sheet for each Champion together with a report (detailing the work done by champion/s , the number of participants , name of the preparer, and reviewed by the PAMA focal person in the facility and bearing the facility official stamp) will be submitted to the Sub grant office in each county. Unspent cash balance should be handed over to the finance office at the time liquidation

Sample Timesheet

PAMA CHAMPION TIMESHEET

FACILITY NAME…….

_____

Name of PAMA Champion

_____

Facility PAMA Focal person

_____

Venue of the Clinic

Date worked	***Activity (Specify)***	***Hours worked***
	TOTAL HRS	

_____ _____

Champion's Signature: *Date*

_____ _____

Confirmed by: Facility PAMA focal Person signature *Date: and stamp*

Annex 6: HTS Eligibility screening SOPs

HTS ELIGIBILITY SCREENING SOP FOR CHILDREN

Children below two years- Including those coming for immunization

Check the HIV status of the mother in the baby mother booklet:

If not indicated, establish HIV status of the mother-if breastfeeding; confirm if she has had a HIV test in the past 6 months, if NO offer HIV testing

Known positive: check if the child is on HEI follow-up then refer to clinician for management

Mother is HIV negative with documentation: Refer the child to clinician for management

Mother deceased/ under care of guardian: If the status of the child is unknown, refer for PCR test

Children above two years Above 2years, and below 15 years

Check the HIV status of the mother in the baby mother booklet or available documentation: Conduct eligibility screening for the mother-if eligible-Offer HIV test

HIV negative mother: conduct risk assessment for the child both behavioural and clinical presentation. Any of the following risk exposure noted, offer HIV test then refer to clinician for management based on results

Sexual exposure

Child with Signs and symptoms of TB or already confirmed with TB

Child with recurrent bacterial infections

Child admitted in the ward with severe conditions like severe pneumonia, meningitis

Child with malnutrition

Child is an orphan

HIV negative mother and no risk exposure to the child: Refer the child to clinician for management

Known HIV positive mother: Child not tested for HIV

Offer HIV test to the child then refer to clinician for management based on the HIV test results

Known HIV positive mother and child HIV status is positive:

Confirm if the child is on ART and which facility

Known HIV positive mother and child HIV status is negative:

Follow the steps for risks assessment and only offer the HIV test if risk exposure is noted.

HIV TESTING ELIGIBILITY SCREENING

1. Has the client ever been tested before? *Yes /No*

Action:

 If No: **Eligible for HIV testing**

 If Yes: Go to question 2

2. Was the test within the last 12 months? *Yes/No*

Action:

 If No: **Eligible for HIV testing**

 If Yes: Go to question 3

3. *Risk assessment*: Has there been any risk of exposure? (I.e. unprotected sex with **Known positive** or person of **unknown HIV** status, condom burst, STI, injectable drug use) *Yes/No*

Action:

 If Yes: **Eligible for HIV testing**

 If No: Go to question 4

4. *Screen for TB*. Is the patient TB presumptive? *Yes/No*

Action:

 If Yes: **Eligible for HIV testing**

 If No: Not Eligible

GUIDE ON RISK ASSESSMENT

Unprotected sex with known positive or persons with unknown HIV status.

Have you experienced condom burst.

Have you experienced any of the following symptoms now or in the past;

WOMEN:

-abnormal vaginal discharge which is foul smelling

-genital ulcer

-pain while having sex

-lower abdominal pain

MEN:

-urethral discharge

-genital ulcer

-painful urination

Have you ever used injectable drugs or shared needles with people who inject drugs?

Have you engaged in sex for favours and or money

Have you ever had unprotected sex under the influence of alcohol

GUIDE ON TB SCREENING

ADOLESCENTS AND ADULTS:

-Cough for any duration

-Fever

-Noticeable weight loss/unintentional weight loss

-Drenching night sweats

CHILDREN:

-Cough for any duration

-Fever

-Failure to thrive or poor weight gain

-Lethargy, less playful than usual

-Contact with a TB case