

Assessing the Quality of Antiretroviral Therapy Services with Community Led Monitoring: A Case of Musoma and Tarime Districts in Mara Region



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LIST OF ACRONYMS

ANC	Antenatal Care
ART	Anti-Retroviral Treatment
ARV	Anti-Retroviral Drug
BMC	Bugando Medical Centre
CLM	Community Led Monitoring
CTC	Care and Treatment Centre
DACC	District AIDS Control Coordinator
DC	District Council
DHIMS	District Health Information Management System
HTS	HIV Testing Service
LVI	Lake Victoria Islands
M&E	Monitoring and Evaluation
PLHIV	People Living with HIV/AIDS
PEPFAR	President's Emergency Plan for AIDS Relief
PMTCT	Prevention of Mother to Child Transmission
PrEP	Pre-Exposure Prophylaxis
RACC	Regional AIDS Control Coordinator
R/CHMTs	Regional/Council Health Management Teams
RMNCAH	Reproductive, Maternal, Newborn, Child and Adolescent Health
SNU	Sub-National Units
SOPs	Standard Operating Procedures
UNAIDS	Joint United Nations Programme on HIV/AIDS
VLD	Viral Load
WHO	World Health Organizations

EXECUTIVE SUMMARY

BACKGROUND

A decade after its large-scale introduction, countries with poor resources in Sub-Saharan Africa (SSA), including Tanzania has made considerable progress towards achieving the UNAIDS 95–95–95 targets, however, challenges remain on expanding utilization of HIV testing services (HTS), poor adherence and retention of clients initiated on treatment, unsatisfactory early infant diagnosis, viral load testing services, overall stigma around HIV services and the emergency of COVID-19 pandemic. *Afya Plus* with funding from PEPFAR is supporting implementation of “IMARISHA Project” - an innovative community led monitoring (CLM) activity in Musoma and Tarime DCs in Mara Region.

METHODOLOGY

Community led monitoring was conducted February 2022 at Muriba, Masanga, Nyamwaga and Kiongera in Tarime district council as well as Bukima, Nyegina, Tegeruka and Murangi in Musoma district council. *Afya Plus* team conducted one-on-one preparatory meetings with regional and council leadership and community stakeholders prior. Community monitors attended a one-day training session covering the concept of CLM, data collection methods (observation and interviews), data collection tools and how to administer the questionnaire, data quality elements and daily reporting. Community monitors were also trained on ethics and confidentiality of data collected for CLM, including ensuring informed consent for all clients. Convenient snowball sampling technique to identify and enrol 359 participants for the ART clients' interviews. Analysis was performed using STATA (Version 15.1, College station, Texas) and excel whenever needed.

FINDINGS

Although HIV testing services are freely available, accessibility remain a challenge especially in rural areas and islands. Only 1.3% were served with mobile HTS in councils where health facilities are still spaced with the highest HIV positivity being 7.6%. Only 32% of the clients being very satisfied with the quality of HTS services. Client feedback mechanism were reportedly available in only half of the CLM facilities and is known by only 32% of the clients. Only 74.6% received pre-test counseling and 96.8% post-test counseling. Timeliness of ART initiation remains slightly low (83.9%) resulting in delayed initiation of ART to 44% of the clients. Refilling rates for ART remained below 90% in all health facilities. The bigger proportion of clients i.e., 70.5% reside within 5 km radius from the ART clinic and the remaining remains beyond that. Some of the clients (76%) are required to undergo other payable tests. Long waiting times (34%), shortage of providers (23%), and use of unpleasant languages by providers (14.6%) were reported as the main stamping blocks to client's satisfaction for ART services. Immediately following diagnosis remained slightly low at (88%) among this group. Information on PMTCT should be widely disseminated into the community to all women categories especially before pregnancy to encourage those who are HIV positive on possibilities of delivering uninfected neonates. Adolescent and young women should also be targeted with information on PMTCT services to ensure they make right decisions to start ANC visits within the first 12 weeks. This CLM found that 32.2% of its participants were discordant couples and only 12.5% of them were using PrEP. Almost half of them is not informed about availability and how PrEP works.

BACKGROUND

Globally, approximately 37.7 million people were living with HIV in 2020 of these 1.5 million people became newly infected with HIV in the same year. The introduction of antiretroviral therapy (ART) and other HIV services has substantially improved quality of life and reduced mortality for many HIV-infected people, averting 16.6 million AIDS-related deaths by the end of 2021. Therefore, the world Health organization (WHO) and the Joint United Nations Program on HIV/AIDS (UNAIDS) are actively promoting the scale-up of HIV programs to diagnose 95% of all HIV-positive individuals, provide ART for 95% of those diagnosed and achieve viral suppression for 95% of those treated by 2030. According to UNAIDS and WHO reports, 21.7 million HIV-infected patients are currently accessing ART worldwide, with about 1.2 million of them residing in Tanzania.

A decade after its large-scale introduction, countries with poor resources in Sub-Saharan Africa (SSA), including Tanzania has made considerable progress towards achieving the UNAIDS 95–95–95 targets for adults including scale up of HIV/AIDS care and treatment clinics - reaching 82.1% of all health facilities, increased human resources, medical supplies and commodities for ART services, and increased engagement of community ART advocates to support care and treatment services. However, challenges remain on expanding utilization of HIV testing services (HTS), poor adherence and retention of clients initiated on treatment, unsatisfactory early infant diagnosis, viral load testing services, overall stigma around HIV services and the emergency of COVID-19 pandemic. While feedbacks on these barriers have been enumerated in several studies in Tanzania and elsewhere since the early days of the HIV epidemic, gathering, collating, and using this information, has not necessarily been systematic and has been attempted only by few middle and low-income countries. In Tanzania, the CLM initiative is supported by PEPFAR and its implementing partner in 18 district councils in 2021. As such, there has been a need to enumerate and pivot solutions to specific geo-social localities to offer HIV services to more people and to retain them into care for better outcome.

To increase utilization of HIV services and improve retention of clients receiving ART, *Afya Plus* with funding from PEPFAR is supporting implementation of “IMARISHA Project” - an innovative community led monitoring (CLM) activity in Musoma and Tarime DCs in Mara Region. With the overall goal of improving the quality of services, health and well-being of people living with HIV/AIDS (PLHIV), IMARISHA project employs evidence-based-continuous quality improvement strategies across two PEPFAR supported SNUs. The project involves data collection in systematic manner using both quantitative and qualitative methods, analysis and use of generated evidence-based information to inform health facilities, council health management teams, care and treatment partners, community of PLHIV and other HIV stakeholders prevailing access and quality gaps pertaining to HIV services which represent the true reflections of PLHIV specific needs and experienced barriers. The generated information will be incorporated into quality improvement activities; and provide a room to design and implement client-centered quality improvement strategies with systematic tracking mechanism to address PLHIV specific needs and barriers. This is paramount for improving treatment continuity for better client level outcome and eventually contributing towards achieving the epidemic control.

METHODOLOGY

Community led monitoring was conducted February 2022 in Musoma and Tarime DCs to assess the quality of HIV services and gather recommendations for improvement from both the clients and service providers point of view. This assessment provides a baseline for initiation of CLM activities in Mara Region that will be followed by other similar activities further harmer the results and follow up on implementation of the recommended actions. Results from this activity will be disseminated to the respective regional, council and facility health management team members, representatives from community of PLHIV and care and treatment partners where findings and recommendations will be agreed and put into action plans. Subsequent CLM activity is scheduled at three and six months after dissemination to determine the impact of CLM on increasing quality of HIV services including HIV testing, uptake of ART, client's retention in treatment and other treatment outcomes for the ART clients and ART clinics in the region. Findings that yield positive outcomes from the selected health facilities will be replicated to other facilities in similar settings.

i) Geographical location of CLM sites

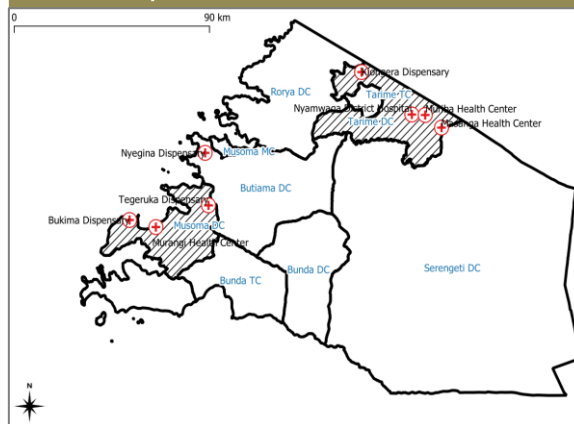
This assessment was conducted in eight health facilities in Mara Region including Muriba, Masanga, Nyamwaga and Kiongera in Tarime district council as well as Bukima, Nyegina, Tegeruka and Murangi in Musoma district council. These facilities were spread across eight (8) wards, one in each of the wards namely, Bukima, Gorong'a, Mugango, Murangi, Muriba, Nyamwaga, Susuni and Tegeruka. These facilities were purposefully selected to participate in this CLM activity because they are in one of Lake Western zone region where PEPFAR is supporting HTS and have well established ART clinics and with many PLHIV who are on ART to offer a large sample size enough to meet the need. This design was appropriate to first gain knowledge on the context and events encountered by PLHIV and service providers in their respective ART centers and second to describe the experiences influencing/affecting further enrollment, adherence, and retention in treatment within their context.

ii) CLM preparatory activities

Community entry meeting

Afya Plus team conducted one-on-one consultative meetings with regional and council leadership to present the objectives, expected outcomes and planned tasks. Afterwards the R/CHMTs were mandated to organize meetings with the relevant community level gatekeepers, facility in-charges and selected PLHIV who were on ART from the selected ART centres also as part of early stakeholders' engagement process. The CLM implementation plan was presented to them and their role in each of the stipulated activities was collectively established and agreed. Guidance related to the planned CLM activity was also agreed upon, including selection of ART centres, identification, selection and training of community monitors and interview dates for CLM participants. Agreements were also reached on how progress and daily updates will be communicated among key implementors insure smooth and timely implementation.

Figure 1: Map of Mara Region in Tanzania, East Africa showing locations of the CLM sites – Musoma DC and Tarime DC



Afya *Plus* in collaboration with the R/CHMTs conducted another meeting with community stakeholders in Musoma and Tarime DCs on 7th and 8th February 2022 respectively. To enhance ownership and support smooth implementation of the IMARISHA project, Afya *Plus* conducted introductory meetings in each of the supported councils bringing together the RACC, DACC, DHIMS, facility in-charges from the eight selected ART clinics and two PLHIV representatives from each council. Main objectives for these meetings were:

- To increase awareness on the concept and strengths of the CLM approach for enhancing quality of ART services.
- To provide information on the expected outcome coverage, workplans, timelines and roles for each of the stakeholders in the CLM project.

Training of Community Monitors

From the community entry meetings, the R/CHMTs were mandated with the role of identifying community monitors for the CLM activity. A total of eleven (11) community monitors (4 from Tarime DC & 7 from Musoma DC) were selected after screening out of more than 30 recommended unemployed health personnel familiar with HTS, PMTCT and ART services and ability to employ interpersonal communication skills.

These community monitors attended a one-day training session covering the concept of CLM, data collection methods (observation and interviews), data collection tools and how to administer the questionnaire, data quality elements and daily reporting. Additionally, the community monitors were also trained on ethics and confidentiality of data collected for CLM, including ensuring informed consent for all clients and how to implement a snowball sampling method.

iii) Sampling and Recruitment of participants for the CLM assessment

The CLM team used a convenient snowball sampling technique to identify and enrol 359 participants for the ART clients' interviews. The community monitors with support from the ART clinic in-charges used the routine ART sessions to provide information on CLM to the clients attending at the ART clinic for various reasons. Those who were ready to participate were invited on the planned dates, afterwards, they were requested to provide referral for their friends, neighbours, relatives or acquaintances who would also be interested to participate in the CLM exercise.

To increase representativeness of the CLM participants to the general population of PLHIV including adolescents, and young women, as key and vulnerable populations who are on ART clients the data collectors also worked with the centres to arbitrarily chose other ART clients from the clients' records maintained at the clinic and reached out to them through mobile phones or using the community health workers and expert clients. Those who were interested to participate in the CLM assessment were invited for the interview and some were visited in their homes for those who preferred.

iv) Data management

Data collection

The data collection tools for this assessment were extracted from the UNAIDS M&E framework for evaluation of care and treatment services and WHO standards for quality of HIV services. To ensure the CLM tools are relevant to the country and regional context, Afya *Plus* worked in close consultation with the PERFAR CLM team and from consultative meetings with other CLM implementors in Tanzania to

revise and update the tools before their use in the field. The tools were field tested by involving representative from the regional and council health management teams to ensure they are clearly understood and provides intended responses prior to the training of community monitors and actual data collection exercise. Data collection was done for five days i.e., from 10th to 16th February 2022 covering all the eight selected ART clinics. A total of 367 questionnaires were administered including 359 for ART clients and 8 health facility in-charges.

Limitation

- Most of the ART clinics does not provide CTC services daily, rather they have dedicated one-two days per week. Therefore, community monitors conducted home visits and interviewed PLHIV who were ready to participate in the CLM to accomplish required sample size within data collection period.
- Out 359 ART client participants that were recruited for this CLM activity, only 315 responded to more than 50% of the questions, therefore 44 clients were not included in the analysis.
- There had been varying numbers/proportion of clients' responses per questionnaire section, therefore denominators vary across different themes.

Lesson learnt

1. Engagement of ART clinic in-charges were paramount on ensuring access contact information for clients who had a nearer date set into their clinic schedules. This also helped the team to identify a mix of clients' demographic characteristics from whom to initiate the snowball sampling.
2. Lay counsellors are also a very important population segment for the PLHIV group as they are well informed about their fellow ART clients and are trusted. The CLM activity should consider setting aside a budget to support the lay counsellors with some funds to compensate them with transport costs while assisting with tracing of clients in their communities.

v) Data entry, data cleaning and rigor of quality

Immediately following the interviews, the dedicated CLM team including project manager and continuous quality improvement officer reviewed all the questionnaires to ensure they are completed in full. In cases gaps or inconsistencies were observed, the respective community monitors were contacted to provide the missing information. Following review and cleaning of the completed questionnaires, a competent data clerk was identified, oriented on the CLM data collection tools and the customized data entry google forms ready for data entry. A total of 12 days were spent on data entry into the google forms. Throughout the data entry period, the dedicated project team continuously reviewed the quality of data entered in the web based google forms. On completion of data entry these data were exported to excel spread sheets where the projects research team lead conducted another review to ensure completeness and coherence of data. Where gaps were identified, the original questionnaires were retrieved, and necessary revisions, and cleaning was done into the google forms. The final cleaned excel spread sheets were afterwards exported to STATA for analysis.

vi) Data analysis

All analysis was performed using STATA (Version 15.1, College station, Texas) and Microsoft Excel. Descriptive data such as participants' demographic characteristics, including age, gender, service utilization and client's satisfaction.

vii) Ethical Consideration

This assessment was not a research study, rather a project performance review to inform quality initiatives for HIV services. Informed written consent forms for both clients aged 18 years and above and health facility in-charges were administered by trained community monitors prior to engagement into the exercise. For clients below 18 years, informed consent was obtained from care takers upon client's assent. Both clients and community monitors were met at their ART clinics, however some of the clients opted to be interviewed at their homes or workplaces. Privacy of this exercise and confidentiality of the data collected was maintained at the highest level possible. No client identifiers such as names are placed on the survey questionnaires and are completely muted on data analysis.

FINDINGS

A. FINDINGS FROM FACILITY INCHARGE

This CLM activity gathered information from ART clinic in-charges from eight (8) health facilities that are serving a catchment area of 23 wards, with a total population of 58,335 people. Of this population 2,939 (5%) constitute a proportion of PLHIV including 652 (22%) pediatrics and 2, 287 (78%) adults, of these 1,461 (49.8%) males and 1,898 (50.2%) females as per facility reports (Table: 1).

Table 1: Catchment areas and population of clients served in the CLM facilities

Facility Name	# Wards in Catchment area	Population served	# Children on ART		# Adults on ART	
			Males	Females	Males	Females
BUKIMA	2	600	11	10	254	466
TEGERUKA	1	13,552	3	4	51	96
MASANGA	4	426	8	12	107	299
MURANGI	3	572	188	359	11	14
KIONGERA	3	10,580	10	13	60	150
NYEGINA	4	530	10	13	180	337
NYAMWAGA	1	18,769	1	4	90	115
MURIBA	5	13,306	2	5	55	1

Adherence to COVID-19 protocols

Five (63%) of the engaged health facilities i.e., Bukima, Tegeruka, Kiongera, Masanga and Nyamwaga adhered fully to the COVID-19 prevention protocols including wearing face masks, social distancing and using of soap and flowing water before and after visiting the health facility. In addition to this, ART clients with other known chronic diseases were given priority during service provision – they were served and allowed to leave the ART clinic before others. However, the remaining three facilities did not fully comply to these protocols. In Murangi health facility, none of the service providers in the ART clinic was wearing a face mask, social distance was not adhered to at Nyegina dispensary and there was neither water nor soap for handwashing at Muriba dispensary.

Capacity to provide HTS services and facility level targets

All the supported facilities were well equipped with ART service provision supplies and equipment, with the capacity of serving a minimum of 25 clients or more per day. With the exception of Bukima, the remaining seven ART clinics had a set target for recruitment of new clients in ART ranging from 4-5 new clients per month in Masanga Health center, 50-80 in Kiongera, 92 in Nyamwaga, 136 in Tegeruka and 148 in Muriba. Target setting for ART services was based on different factors as follows: Tegeruka set their target based on the population of PLHIV as per the national population census/survey statistics; Murangi and Nyegina estimated ART target based on their previous performance whereas Masanga

received targets from the current care and treatment partner (Amref Health Africa) and Kiongera received targets from the CHMT. Whilst Muriba and Bukima did not state how their facilities arrived onto the current monthly ART targets.

Overall, a total of 1,114 clients were tested and received their HIV test results, with 1,040 (93%) adults and 74 (7%) children. Of these, 30 (2.6%) were newly identified to be HIV positive and were all enrolled and initiated in ART clinic including 29 adults (97%) and 1(3%) child. Positivity variations were observed across facilities with Bukima recording the highest (7.6%), followed by Nyamwaga 4.2% as per (Table 2 below).

Table 2: Number of clients tested for HIV by facility

Facility Name	#Adult HTS clients		#Children HTS clients		#Identified HIV+ adults		#Identified HIV+ children		Total tested	Total Positive	Positivity
	Men	Women	Men	Women	Men	Women	Men	Women			
TEGERUKA	44	95	2	1	2	2	0	0	142	4	2.8
MASANGA	66	91	0	3	0	3	0	1	160	4	2.5
MURANGI	100	170	10	15	4	6	0	0	295	10	3.4
KIONGERA	32	30	6	9	0	0	0	0	77	0	0.0
BUKIMA	29	62	0	1	3	4	0	0	92	7	7.6
NYEGINA	5	27	0	0	0	0	0	0	32	0	0.0
NYAMWAGA	38	56	9	16	1	4	0	0	119	5	4.2
MURIBA	75	120	1	1	0	0	0	0	197	0	0.0
Total	389	651	28	46	10	19	0	1	1,114	30	2.7

All health facilities that were engaged in CLM activity were offering optimized HTS, however in order to further improve quality of services, the ART clinic in-charges recommended for an increment in allowances to support ART providers to cover ART outreach transport costs (Bukima); optimized targeted testing should further be institutionalized to ensure only the right people are tested (Tegeruka); the trained ART providers should be motivated to conduct home visits for their clients especially those missing ART visits (Masanga); numbers of service providers for HIV services is still low, therefore providers should be supported with transport re-imburement to enable home visits (Murangi); numbers of HTS clients is going down in Kiongera due to minimized sensitization activities while Nyegina is observing and increase both HTS at the facility and in the community and Nyamwaga is experiencing a serious shortage of HIV test kits.

HIV care and treatment service

During the second week of February 2022 as the team was conducting this CLM activity, a total of 655 (76.4%) of the expected 857 clients for that month had already returned for ART re-fill (Table 3). At that time, Masanga had recorded a 96.2% re-fill rate, being the highest followed by Nyamwaga 87.9%,

Table 3: Number of clients returned for ARV refill by facility (Feb 2022)

Facility Name	#Adult ART expected Re-fill		#Children expected Re-fill		#Adult ART Re-filled		#Identified ART Re-filled	
	Men	Women	Men	Women	Men	Women	Men	Women
BUKIMA	72	127	4	6	52	59	1	2
TEGERUKA	18	34	1	1	5	7	1	0
MASANGA	44	103	4	7	42	99	4	7
MURANGI	60	103	8	7	45	83	6	6
KIONGERA	10	15	5	6	1	2	2	0
NYEGINA	23	79	3	4	18	69	3	5
NYAMWAGA	19	78	1	1	17	68	1	1
MURIBA	1	10	2	1	15	33	0	1
Total	247	549	28	33	195	420	18	22

Nyegina 87.2% and Murangi at 78.7%. Kiongera and Tegeruka recorded the lowest follow up rate.

During this time frame, refill rate was slightly higher among men (78.9%) compared to women (76.5%) and higher among adults (77%) compared to children (65.6%).

Variations were however, observed across facilities where more men than women returned for a refill during this period in Bukima, Tegeruka, Nyamwaga and Muriba and more kids than adults had already returned for a refill in all except Muriba and Bukima facilities – with Masanga and Nyamwaga recording 100% pediatric ART refill rates.

Table 4: Number of clients returned for ARV refill by facility (January 2022)

Facility Name	#Adult ART expected Re-fil		#Children expected Re-fil		#Adult ART Re-filled		#Identified ART Re-filled	
	Men	Women	Men	Women	Men	Women	Men	Women
BUKIMA	55	75	6	9	43	63	6	9
TEGERUKA	14	21	1	1	12	20	1	1
MASANGA	53	153	6	6	49	150	5	5
MURANGI	40	66	1	3	35	56	1	3
KIONGERA	25	54	4	3	0	2	0	0
NYEGINA	61	121	4	3	56	118	4	3
NYAMWAGA	26	82	1	3	23	75	3	0
MURIBA	3	7	0	0	11	30	0	1
Total	277	579	23	28	229	514	20	22

A month prior to the CLM exercise, the supported facilities recorded a slightly high rate of clients returning for expected ART refill, where 785(86.5%) returned out of the expected 907 (Table 3). Like the previous month, variations across facilities were also noted except for Kiongera, the remaining facilities recorded more

than 80% refill rates, the highest being Masanga (95.9%), followed by Nyegina (95.8%) and Tegeruka 91%. On average, refill rates were slightly higher among women (88.8%) than in men (82.7%) and remained higher in adults (86.8%) compared to children (82.4%). However, Bukima, Tegeruka, Murangi and Nyegina recorded 100% pediatric refill rate.

Table 5: Number of clients returned for ARV refill by facility (November 2021)

Facility Name	#Adult ART expected Re-fil		#Children expected Re-fil		#Adult ART Re-filled		#Identified ART Re-filled	
	Men	Women	Men	Women	Men	Women	Men	Women
BUKIMA	300	331	22	27				
TEGERUKA	52	73	3	4	48	70	2	3
MASANGA	106	281			95	269	10	10
MURANGI	150	188	4	8	169	111	4	8
KIONGERA	60	150	2	2	57	150	2	2
NYEGINA	160	288	10	10	234	275	17	18
NYAMWAGA	48	160	1	4	48	160	1	4
MURIBA	41	90	2	2				
Total	917	1561	44	57	651	1035	36	45

Note:

Data amiss was noted at Muriba (table 4) where a larger number of clients were recorded on refill compared to the expected. This could be associated with transfer in and resurfacing of previous interruption in treatment clients.

Three months before the CLM activity, these facilities recorded the lowest average for ART refill rates only at 68.5% compared to 86.5% a month ago and 76.4% during the study time. This could be attributed to completely missing refill records in Bukima and Muriba (Table 4). Overall, a larger proportion of men (71%) and children (80.2%) returned for a refill compared to women (66.3%) and adults (68%).

In this period, ART refill rate was generally higher at Nyamwaga (100%), Tegeruka (95.9%) and Kiongera (95.2%). Health education sessions are offered in all health facilities engaged in this CLM activity, focusing on proper utilization and adherence to ART, avoiding new infections including condom use, possible side effects and nutrition counseling conducted by any trained ART nurse. There are variations across facilities as to how often health education sessions are delivered to ART clients congruent to the set ART clinic days, ranging from daily session at Bukima, thrice in a week at Masanga, twice per week at Tegeruka, once in a week at Kiongera, bi-monthly at Muriba, Nyamwaga, Nyegina and not clearly depicted at Murangi.

A total of 64 health workers are directly assigned to ART facilities, ranging from five at Kiongera to 16 at Masanga (see chart 1). Of these providers, 20 are clinical and the remaining 44 non-clinical staff. Most of them i.e., 37(57.8%) are females and the remaining 27 (42.2%) are males. Compounded with other health service requirements in these health facilities, only three (Bukima, Masanga and Murangi) reported that they have enough staff capacity to provide the expected ART services. The remaining facilities require additional clinical staffs trained to support all range of ART services including PMTCT and viral load testing to increase efficiency and minimize waiting times for clients on CTC visits.

To further bolster compliance and adherence to ART, five of these sites namely Bukima, Masanga, Murangi, Nyegina and Muriba allows refilling of ARV drugs through group members. This approach reduces inconveniences to the clients especially when they are sick or attending another urgent matter. In these cases, the respective clients must make a call to the ART clinic and inform them ahead of re-fill time. They are only allowed to delegate this role to another person whom they have already introduced the clinic or the group leader for the PLHIV that had been formed in most of the health facilities. At Tegeruka, HBC providers are also allowed to deliver ARV drugs to the respective clients following prior communications.

Availability of ARV drugs

Generally, availability of ARV drugs was reported to good across all the eight health facilities. Only Muriba and Nyegina reported to ever experience shortage of ARV drugs due to a delayed delivery from the council pharmacist for two to seven days. This shortage happened once since the initiation of ART clinic in those facilities, and it was resolved by borrowing drugs from nearby clinics that were well stocked.

Pre-exposure prophylaxis (PrEP)

Four out of the eight health facilities were providing PrEP drugs especially for couples and those identified at risk of getting new HIV infections. The remaining three facilities i.e., Tegeruka, Masanga, Nyamwaga and Muriba did not have trained health providers to offer PrEP.

Viral load testing

All the supported health facilities collect blood samples and submit to Bugando Medical Centre (BMC) in Mwanza for viral load (VLD) testing at least once every month as per the clients' requirements. Depending on the number of clients, it takes at least one month to get VLD test results back to the respective clinic. In some cases, for example at Nyegina, Murangi and Masanga, sometimes it takes two to three months to get the VLD results. The CTC in-charges are not firmly informed on the reasons for delays in returning VLD, their assumptions are tied to the distance from their respective facilities and pressing large number of clients from other regions that all depend on BMC VLD testing machine. Clients are provided with post counselling services upon receiving VLD test results.

Challenges and recommendations

As part of the CLM activity with CTC personnel's, the main challenge reported was delayed return of feedback on VLD test results. Sometimes blood samples are contaminated or get lost along the way. As a result, sometimes blood samples are taken from clients more than twice for resubmission and demoralize client's uptake of ART drugs. To sustainably address this challenge, service providers from hospitals and health centers should be trained and provided with VLD test machines to ensure these tests are done and results are provided to the clients in a timely manner.

B. FINDINGS FROM ART CLIENTS

Participant Characteristics

A total of 315 clients participated in this assessment, of these 208 (66%) were females and the remaining 107 (34%) were males. The average age of these participants was 39.3 years (standard deviation [SD] = 14.7). More than three quarters (95.6%) of the participants were adults aged 18 years and above, the remaining 4.4% were younger than 18 years therefore responses to the questionnaires were done by their care takers.

Availability and utilization of HIV counselling and testing services (HTS)

More than half, i.e., 64% of the clients were tested for HIV more than two years ago, 14.6% were tested more than a year ago and the remaining 21.3% tested in the past eleven months or sooner than that time (See table: X). More than a half of the clients who participated in the assessment i.e., 60.3% received HIV testing services at the facility where this assessment was conducted; 18.4% were tested in another facility within the same district, 14% tested in other health facilities within Mara region, 6% were tested outside the region, and only 1.3% were served with mobile HTS. The bigger proportion of clients i.e., 70.5% reside within 5 km radius from the ART clinic, 18% between 5-7.5 km and the remaining 15.5% reside beyond 10 km away.

When asked if they have ever paid for HIV testing services, 98% of them responded that they never paid for HTS services and the remaining two percent paid for testing and post-test counseling services at Kiongera (n=1), Nyamwaga (n=3), Nyegina (n=1) and Tegeruka (n=1). Almost 80% of the participants reported that it took them less than one hour to get their HTS results, 15% in one to two hours, and 4% took three hours to more than one day. Four clients waited for three to four hours in Masanga (n=1) and Murangi (n=3) and more than one day in Bukima (n=2), Masanga (n=3), Murangi (n=1), Nyegina (n=1) and Tegeruka (n=1). Most of the clients who received their HTS results (75%) in more than one day were tested two years ago or beyond and resides beyond 2.5km radius from the facility.

Of the 315 clients, a total of 236 (74.6%) received pre-test counseling and 305(96.8%) received post-test counseling. Of those who did not receive pre-testing counseling, fourteen provided reasons for missing pre-testing counseling including being seriously sick admitted at the hospital at that time they were tested (n=6), others were in a hurry and not ready for a pre-test session, long queues and others could not recall the reason for not receiving pre-test counseling services. For those who did not receive a post-test mentioned reasons such as being seriously sick at the time they were tested, born HIV positive and long queues at the HTS site on the day they tested HIV positive.

Client satisfaction was assessed on quality of seven elements including good language, proximity to the facility, time spent at the facility, privacy, Pre-test and post-test counseling, and presentation of HTS results. On average, satisfaction rate on the quality of HTS services was 32% ranging between 4.8% and 61.7%. Clients' satisfaction scores were highest on the language of the service providers at 62%, followed by privacy 53%, post-testing 48% and Pre-testing counseling 32%. The remaining elements scored below 15%.

Responses on awareness about the availability and use of HTS feedback mechanisms varied across facilities. Overall, 118 (32%) of the 312 respondents said these mechanisms are available in their respective health facilities while the remaining 194 (62%) are not aware. The highest scores were recorded in Tegeruka 90%, Nyamwaga 89%, Masanga 55%, and Kiongera 52%; the remaining scored below 50%.

The reported feedback mechanism reported are suggestion box 51(43.2%), Exit interviews 50(42.4%) and a mix of suggestion boxes and exit interviews 17(14.4%). Of these 312 clients who responded on this question, only 40% have ever used the available feedback mechanisms. The remaining 60% did not use the available feedback mechanisms because 85 (49.4%) of them did not know it existed, 66 (38.4%) were not instructed and 21(12.2%) did not have enough time to provide feedback.

Client's experience on confidentiality for HTS was highly scored by more than three quarters (94.2%) of the respondents, of which 44% of reported that confidentiality on their HTS result was maintained, 26% were given HTS results in the absence of other people in the room and 30% reported that they were served in private.

For respondents who were not satisfied with confidentiality (5.8%), 6 (33.3%) reported that there was another person in the room when their results were presented, their results were not maintained with privacy and confidentiality. Variations across health facilities was recorded where all clients were satisfied in Kiongera, and Tegeruka. The largest proportion of clients were dissatisfied with quality of confidentiality in Murangi (43.5%), Nyegina 26.1%, Bukima, Masanga and Nyamwaga 8.7% and Muriba 4.3%.

To further improve quality of HTS, the clients recommended for intensification of community testing including home visits extend HTS service delivery time to accommodate those who cannot make it during the normal working hours; ensure un-interrupted supply of HTS test kits and services; Targeted Mobile HTS for underserved remote areas and lake Victoria Islands (LVIs); targeted HTS for pediatrics, adolescents, and schooling youths; ensure dedicated rooms to increase privacy; ensure confidentiality amongst service providers; ensure availability of sufficient number of HTS providers; sustain awareness raising activities for HIV related services; shorten time for HTS to allow clients leave early to attend other commitments " *they should attend us fast as we need to return home early to cook for our children*" (Female HTS client at Nyegina); ensure-test counseling and consent is properly obtained; food and other additional services such as condoms, self-testing, viral load testing; improve client feedback mechanism to include in-person feedback to the facility incharge " *they should allow us to talk directly to facility in-charge to speak out our challenges*" (Male HTS client at Bukima) and strengthen couple counseling and testing. Table 6 below summaries client's recommendations for improvement

Table 6: Clients proposed areas for improving HIV services

Program Implications	Age range	Sex		Facility name (number of respondents)	Proposed areas for improvement
		Male	Female		
Intensify Community Outreaches and Home visits	0-14y	2	1	Masanga (10) Bukima (6), Murangi (3) Tegeruka (1)	Community outreaches and home testing should be conducted to bring service close to the users
	15-24	1	1		
	25-34	1	5		
	35+	4	5		
Extended working hour	0-14y	0	2	Bukima (4)	Provision of HTS services after working hours should be considered to serve those who does not want to be seen by their relatives, acquaintances or neighbors
	25-34	0	1		
	35+	0	1		
Ensure Un-interrupted supply of HTS test kits and services	0-14y	1	1	Nyamwaga (15), Muriba (5), Bukima (3), Masanga (1), Murangi (1),	HTS should be provided throughout without interruptions, Provision of HTS had been inconsistent due to unavailability of test kits
	25-34	1	2		
	35+	5	15		
Targeted Mobile HTS for underserved remote areas and LVIs	25-34	3	5	Bukima (6), Nyamwaga (4), Masanga (2), Murangi (1)	Outreach services targeting the most remote areas and Islands should be intensified as they do not have reliable testing points
	35+	0	4		
Targeted HTS for pediatrics, adolescents, and schooling youths	0-14y	1	1	Bukima (3) Murangi (1)	Youths are not targeted by HTS projects, they have unique needs therefore needs unique approaches
	15-24	1	1		
Dedicated rooms to increase privacy	15-24	0	2	Murangi (14), Bukima (10), Muriba (1), Tegeruka (1), Nyegina (2)	Client requested a dedicated room for HTS, and rooms should be closed during service delivery There should be no other people in the room while one client is being served
	25-34	3	10		
	35+	7	6		
Confidentiality	15-24	2	3	Murangi (5), Tegeruka (5), Bukima (4), Masanga (1), Muriba (1)	Service provider should not share client's information without prior consent of the client, other people are discouraged by this behavior
	25-34	1	4		
	35+	3	3		
Dedicate HTS providers	25-34	0	2	Kiongera (6), Nyegina (4), Masanga (2)	Facilities should have one full time staff to attend HTS when needed
	35+	5	5		
Sustain HIV and HTS awareness raising activities	0-14y	1	2	Muriba (8), Nyamwaga (2)	Awareness raising activities for HTS have gone down, service providers does not talk much about HTS
	35+	1	6		
Shorten time for HTS	25-34	1	4	Bukima (6), Murangi (1), Tegeruka (1)	HIV services should be provided within the shortest possible to allow clients continue with other personal engagements, including preparing food for kids left at home
	35+	0	3		
Pre-test counseling	25-34	0	3	Nyegina (7), Tegeruka (3), Kiongera (1), Bukima(1)	HTS clients' needs to be provided with enough information and confirm that they are ready to be tested and receive results. If they are not ready, wait for a day or two
	35+	5	4		
Additional Services	15-24	0	2	Bukima (6), Nyegina (1), Tegeruka (1)	Re-testing should be done annually, self-testing should be introduced, use non-injectable approaches, CD4 count should be done on site to shorten waiting time, Condoms should be made available at HTS point, immediately initiate treatment for those identified to be HIV positive
	25-34	0	3		
	35+	1	3		
Provide food	25-34	2	0	Bukima (4)	Facilities should consider offering food to clients on CTC clinic days or at least bring cafeteria closer to the facility
	35+	0	2		
Improve feedback mechanism	25-34	1	0	Tegeruka (2), Bukima (1)	Suggestion boxes should be opened and worked upon, and clients should be allowed a chance to talk with the facility in charges to air-out their opinions
	35+	2	0		
Strengthen couple testing	25-34	0	2	Tegeruka (5)	Couples should be tested together, and treatment should be initiated to both partners
	35+	0	3		

Experience of stigma and discrimination for HTS clients

Table 7: CLM clients experienced stigma and discrimination in HTS

Facility	No	Yes	Total
Bukima	77	2	79
Kiongera	21	2	23
Masanga	39	2	41
Murangi	64	0	64
Muriba	16	1	17
Nyamwaga	12	6	18
Nyegina	48	1	49
Tegeruka	20	0	20
Total	297	14	311

Among the ART clients who participated in this CLM activity, only 311 provided responses on stigma related information, of these 14 (4.5%) reported to ever experiences stigma related to HTS. Almost half of these were recorded at Nyamwaga health facility (See table: 7).

The largest proportion of these i.e., 12 (85.7%) were females, while 9 (64%) of them happened in the community, the remaining five happened at the health facility. Three commonly mentioned forms of stigma included being labelled, physically attacked, and excluded from community events. At the health facility level, use of harsh words, segregating seats and negative comments were all considered as stigma for the PLHIV.

Only 6 (42.9%) of those who experienced stigma were able to take actions including reporting to the police station for those who were physically attacked by partners (3), for those abused in the community reported to the clan leaders (2) and one reported to the village authorities while the remaining eight remained silent as they did not know what the proper action would be and others avoided to further spread the rumor about their HIV status.

Care and treatment services

Timelines for initiation of ART services

The largest proportion of clients i.e., 261(83.9%) were initiated on ART within two weeks after being diagnosed HIV positive, 27(8.6%) within three weeks to a month while the remaining 23(7.5%) were initiated two months or beyond. Among the CLM facilities, Murangi constituted the largest proportion of those who were initiated beyond two weeks i.e., 21 (42%), followed by Tegeruka and Masanga (Table 8). In relation to the denominator of clients participated in CLM per facility, Tegeruka (40%) had the largest proportion of clients enrolled in care beyond two weeks, followed by Murangi (32.8%), Muriba (17.6%), Masanga (17.1%) and Kiongera 13%.

Table 8: Timing for initiation of ART by facility

Facility	Within 2wk	3-4 Wks	2-3 Months	>3 Months	Total
Bukima	74	3	1	1	79
Kiongera	20	3	0	0	23
Masanga	34	4	2	1	41
Murangi	43	10	0	11	64
Muriba	14	1	1	1	17
Nyamwaga	17	1	0	0	18
Nyegina	47	1	0	1	49
Tegeruka	12	4	3	1	20
Total	261	27	7	16	311

The main reasons for delayed initiation included fear of stigma 22(44%) and others (n=12) were instructed to start using Cotrimoxazole until when their health is stabilized. Other reasons included stress (n=2), distance from the facility (n=6), some were shy and were trying to hide (n=3), did not believe that ARV can be helpful at the point they were diagnosed with HIV(n=3) and others were not sick at all, so they did not see any need to initiate early ART.

Table 9: Additional Clinical investigation prior to ART initiation by facility

Facility	X-ray for TB	Vaginal swab	CD4 count	Liver function	Sputum for TB	STIs	Malaria & Typhoid	Kidney function	Total
Bukima	1	0	3	1	5	0	0	1	11
Kiongera	0	0	0	0	1	0	0	0	1
Masanga	1	0	4	3	2	0	0	0	10
Murangi	1	1	1	0	9	0	0	0	12
Muriba	0	0	1	2	1	0	0	0	4
Nyamwaga	4	0	0	1	1	0	1	0	7
Nyegina	2	0	14	0	4	3	0	0	23
Tegeruka	0	0	6	0	2	0	0	0	8
Total	9	1	29	7	27	3	1	1	76

Of all CLM participants, 309 could recall whether they went for additional tests or not before ART initiation. Of these 233 did not require any additional test while the remaining 76 (24.5%) were requested to undergo Sputum and x-ray for TB (n=36), CD4 count (n=29), and other tests (Table: 9). Some of the clients experienced several challenges to get results from these additional tests such as delayed release of results beyond three months, incurring additional cost for X-rays, sputum test, Malaria and Typhoid test at Nyamwaga and Bukima. Some reported that they never received any results from the tests undergone.

Side effects associated with use of ARV drugs

Of the 309 CLM participants who responded on this question, only 21(6.8%) reported to have ever experienced minor side effects related to the use of ARV drugs especially during the first month of treatment initiation. Some of these minor side effects include general body weakness (n=7), dizziness (n=4), skin problems (n=3), breathing difficulties (n=2), difficulties on swallowing ARV drugs due to its big size (n=2), anemia, blurred vision and generally feeling sleepy were also reported. These side effects disappeared after a while.

Table 10: CLM clients' satisfaction with ART services by facility

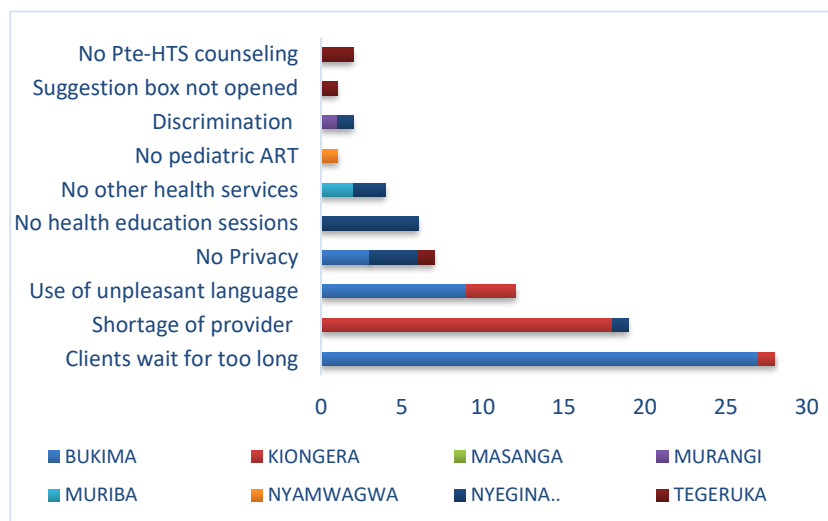
Facility	Very Good	Good	Average	Bad	Very bad	Total
Bukima	31	28	16	3	0	78
Kiongera	1	3	13	5	1	23
Masanga	31	3	3	0	0	37
Murangi	9	53	1	1	0	64
Muriba	11	4	2	0	0	17
Nyamwaga	8	8	1	0	0	17
Nyegina	35	3	5	6	0	49
Tegeruka	14	6	0	0	0	20
Total	140	108	41	15	1	305

Since their initiation on ART, 54 (17.5%) of the CLM participants reported to have missed their clinic attendance at some point. Of these, 14 missed within the last one year, 2 missed last two years and 35 missed more than two years ago. Most of them were reported in Murangi (n=20), Bukima (n=10), Nyamwaga (n=9) and Nyegina (n=9). Reasons for missing included travels away from their routine ART clinic, distance from the facility, bad weather (heavy rains), attending other responsibilities, forgot the ART refill date and others lost their CTC1 card therefore they were not certain on how they present their scenario to the CTC providers.

Clients' satisfaction with ART services

Satisfaction for ART services were highly rated, with 245 (81%) rating good or very good (Table: 10). Tegeruka health facility was applauded by its client for initiating saving and loan group for PLHIV. This

Chart 1: Reasons for dissatisfaction for ART clients by facility



initiative has supported them when they experience life difficulties such as purchasing food and transport to the clinic.

The main reasons for dissatisfaction included too long waiting time (34%), shortage of providers (23%), and use of unfriendly languages by providers (14.6%). Others included lack of privacy, irregular health education sessions and other related HIV services, stock out of paediatric ARVs, lack of client feedback mechanisms and lack of HTS pretesting sessions (Chart: 2).

During the scheduled ART visits, 90.5% of the clients are attended as per their required services. However, variations were however reported across facilities with most of the delays happening at Bukima health facility where clients could wait up to five hours. Some of the factors associated with delays at ART clinics include shortage of providers such that on the scheduled ART clinic the same HW are required to attend other units:

"...they are too busy with other activities, searching for client files, serving long queues of clients, morning meetings, cleanliness..." (Female ART client at Bukima health facility)

Prevention of Mother to Child transmission

A total of 25 pregnant mothers who participated in CLM activity responded on the PMTCT related topics. Of these, 24 (96%) are aware on the availability of PMTCT services in their respective health facilities except one client from Nyegina and all of them utilized PMTCT services when they were pregnant.

As part of PMTCT services, 21(88%) of the pregnant mothers were initiated on ART immediately following diagnosis and were provided with health education sessions on every ANC clinic visit. They were encouraged to attend to the nearby RCH clinic as soon as they started experiencing labor pain to increase safety of their newborns during labor and delivery as well as early initiation of early infant ART. Nutritional counseling for mothers and babies and use of condom for prevention of new infections was integrated into the routine RMNCAH education sessions for pregnant HIV positive mothers.

The CLM participants highly commended the PMTCT measures that none of their newborns were HIV positive.

"...at the beginning it was unbelievable that a HIV positive woman can give birth to a HIV negative child. I was relieved when my child was born uninfected, thanks to the healthcare workers and I want to encourage all women to adhere with PMTCT, it saves lives..." (A female CLM participant at Masanga health facility)

Of all 24 participants who responded on PMTCT related questions, eight (33.3%) did not experience any challenge with PMTCT services, most were from Masanga health facility. The remaining 16 (66.7%)

reported on challenges such as delayed initiation of ART for three clients, on arrival at the ART clinics – pregnant mothers are not given any special attention as they would recommend,

“...personally, I live very far from the facility but at the CTC they do not consider that pregnant mothers are already tired, they treat us just like other ART clients even in the labor ward they treat us just like other women.” (A female CLM participant at Nyegina health facility)

Other challenges reported on PMTCT included delayed results for dry blood slides, shortage of ARV drugs during their RCH visits and most of the women are not well informed prior to pregnancy on how PMTCT can be a lifesaving service for infants.

The CLM clients who have also received PMTCT services highly recommended that PMTCT knowledge should be disseminated into the community to all women categories especially before pregnancy to encourage those who are HIV positive on possibilities of delivering uninfected babies. Adolescent and young women should also be targeted with information on PMTCT services to ensure they make right decisions to start ANC visits within the first 12 weeks. Customer care should be improved at PMTCT clinics as pregnant positive women have special needs. In cases of missed ART clinic visit, pregnant mothers should be traced to ensure they have enough drugs, and they comply to treatment. The health facilities should make sure they have enough number of trained ART providers so that they can be switched to other units after a certain period to maintain respect for PLHIV.

“...when they stay at one clinic for a long time, they get used to us, they start ignoring and sometimes mistreat us, it will be good to switch them to other units after a certain period so that they do not get used to us...” (A female CLM participant at Masanga health facility)

HIV services for discordant couples

A total of 273 CLM participants responded to questions related to couple's HIV status including 180 women and 93 men. Of these, 189(67.8%) were informed and 88 (32.2%) were not informed of their partners HIV status. More male clients 72% were informed of their partner's HIV status compared to their female counterparts (65.6%) across all age groups. Only 174 participants of 237 respondents on this question were ready to reveal their partner's HIV status. A slightly larger proportion of male participants (98.5%) were ready to reveal their partners HIV status compared to the female participants (94%).

Overall, 118 (67.8%) of the CLM participants reported that their partners were also HIV+, while the remaining 56 (32.2%) were not infected – therefore 32.2% of the CLM participants were discordant couples. Of the 118 concordant couples, 107 (90.7%) are already on ART while the remaining three of them (males) do not believe in ART, three (males) denied their HIV test results and the remaining five have separated, women were abandoned upon disclosure of HIV status to their male partners.

As for the 56 discordant couples, 35(65.2%) are males and 21(37.5%) are females. Of these only 7 (12.5%) are using PrEP drugs; being 5(14%) males and 2(9.5%) females. Of those who are not using PrEP, 39 (79.5%) are using condoms, 8(16.3%) have suspended sexual intercourse and the remaining two are not using any preventive measures – all women -because they are informed that their partners are virally suppressed. Almost half 23(47%) of these discordant couples are not informed about availability and how PrEP works.

Viral load testing (VLD)

When enquired if they have ever tested for viral load, only 208 (66.9%) of 311 CLM participants have tested last year and this year (Table 11). The remaining 93 have never tested, and 10 (3.3%) are not informed about VLD test.

The largest proportion (almost 50%) of those not tested for VLD were recorded at Bukima (25.2%) and Nyegina (24.2%) followed by Nyamwaga, Murangi and Masanga. Only 27 participants who tested for VLD received their results within two weeks.

Only 247 participants were ready to further discuss about their viral load status, of these 166 reported that their viral load is being suppressed, 8 are not suppressed and 72 are not aware. Those who were not virally suppressed reported that they have had a poor adherence to ART due to poor nutritional status as mentioned by one of these participants:

"...these drugs are very strong, if you have poor nutritional status like myself they cause more harm than not taking...I have been going hungry for some days recently, and when I take these drugs I feel very bad...they told me that my nutrition status is poor but I do not have enough food at home...we will appreciate if they can assist some of us with at least flour for preparing porridge like it used to be on early days" (A male CLM participant at Murangi health facility)

Table 11: Viral Load test by facility

Facility	#Clients	VLD	Difference
Bukima	79	53	26
Kiongera	23	23	0
Masanga	41	30	11
Murangi	64	52	12
Muriba	17	15	2
Nyamwaga	18	0	18
Nyegina	49	24	25
Tegeruka	20	11	9
Total	311	208	103

Utilization of ART services in the era of COVID-19 pandemic

Of the 311 CLM participants who responded to this question only 14(2.8%) reported that they missed ART clinic due to COVID-19 interruptions, the remaining were not affected. The main reason for missing the planned clinic visit was the fear of being infected especially for PLHIV. This however affected only one of their visits since the onset on COVID-19 in 2020. A participant from Masanga health facility, was traced and ARV drugs were delivered at home by the community health worker.

Adherence to COVID-19 protocol was intermittently observed in some of these facilities such as absence of hand sanitizers at Bukima, Masanga, and Tegeruka; absence of running water and soap at Kiongera, no social distancing at Kiongera and at one point there were fewer healthcare workers at Bukima, Kiongera and Nyamwaga CTC while the rest were busy delivering COVID-19 vaccines in the community.

DISCUSSION AND CONCLUSIONS

Although HIV testing services are available and freely offered as reported by 98% of the respondents, accessibility remain a challenge especially in rural areas and Islands. Only 1.3% were served with mobile HTS in councils where health facilities are still spaced with the highest HIV positivity being 7.6%. This calls for more optimized and targeted HTS to increase efficiency. With satisfaction average at 32% on the quality of HTS services, improvements are needed on provider's language and confidentiality. Client feedback mechanism were reportedly available in only half of the CLM facilities and is known by only 32% of the clients. Facilities are therefore missing inputs from their respective clients that could be very useful for aligning client needs with quality of services. Furthermore, as demonstrated from the CLM findings that 74.6% received pre-test counseling and 96.8% post-test counseling, HTS projects still needs to improve provider competency to ensure clients are not coerced to test for HIV and that comprehensive post testing is provided to enhance early initiation and adherence to ART.

Satisfaction for ART services were highly rated, with 245 (81%) rating good or very good featured by satisfactory availability across all the eight health facilities and all are equipped with ART service provision supplies, equipment, and trained personnel to serve a minimum of 25 clients or more per day. However, timeliness of initiation remains slightly low (83.9%), stigma associated with HIV service is also still high resulting into delayed initiation of ART to 44% of the clients. Refilling rates for ART remained below 90% at all health facilities, this is likely to affect adherence and suppression of VLD. The bigger proportion of participants i.e., 70.5% reside within 5 km radius from the ART clinic and the remaining reside beyond that. Efforts are needed to ensure clients are returning for their visit appointments as required. Innovations like group refill allows refilling of ARV drugs through group members and home visits done by CHW could benefit from this evidence-based initiative. Some of the participants (76%) were required to undergo other payable tests such as X-rays for TB, CD4 counts, Malaria and Typhoid, this poses another burden to the PLHIV especially in rural areas calling for integrating these services into routine ART services and nutrition programs to enhance the well-being of PLHIV. As demonstrated at Tegeruka health facility where PLHIV have been supported to initiate saving and borrowing group – mostly to cover food and transport especially in times of unforeseen expenditure. Long waiting times (34%), shortage of providers (23%), and use of unfriendly languages by providers (14.6%) were reported as the main stamping block to participant's satisfaction for ART services. In one instance the participant avoided to return to the facility for a refill just because they lost their CTC cards feared what will be the provider's response. These and other related factors such as lack of privacy, lack of health education sessions, lack of pediatric ARVs, lack of client feedback mechanisms and lack of HTS pretesting sessions needs to be addressed to further attract and retain PLHIV clients in care.

Although PMTCT services were well applauded by the CLM participants for preventing HIV transmission to 100% of their babies, the proportion of pregnant women enrolled and initiated on ART immediately following diagnosis remained slightly low at (88%) among this group. Information on PMTCT should be widely disseminated into the community to all women categories especially before pregnancy to encourage those who are HIV positive on possibilities of delivering uninfected babies. Adolescent and young women should also be targeted with information on PMTCT services to ensure they make right decisions to start ANC visits within the first 12 weeks of pregnancy.

This CLM found that, 32.2% of its participants were discordant couples and only 12.5% of them were using PrEP. Almost half 23(47%) of these discordant couples are not informed about availability and how PrEP works. Some of these clients decided to divorce or abandon their female partners as part of the solution, others rely on condom use and abstinence than PrEP. Active dissemination of information on PrEP should be considered to further reduce transmission to non-infected partners. Provider's skills and competencies should be further enhanced to ensure they are champions for this innovation.

It was found that all facilities depend on Bugando Medical Centre for VLD test, this affects timeliness of results and quality of blood samples. Efforts should be taken to increase availability of VLD testing facilities.

Lastly, CLM monitoring found that to the large extent adherence to COVID 19 protocols (63%) had been a challenge during provision of HIV services especially wearing of face masks, social distancing and using of soap and running water before and after visiting the health facility. Facilities are encouraging to step up COVID-19 prevention measures.