Government of Malawi Ministry of Health

Integrated HIV Program Report July-September 2021

- ***Integrated HIV Program Supervision***
- ***HIV Testing Services / Early Infant Diagnosis***
- ***Blood Safety***
- ***Post Exposure Prophylaxis***
- ***HIV Exposed Child Follow-Up***
- ***Prevention of Mother to Child Transmission / Antiretroviral Therapy***
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1 Executive Summary (July-September 2021)

COVID-19 Disruptions to the HIV Program

*The first cases of **COVID-19** in Malawi were confirmed on 2nd April 2020 and early epidemiological models predicted rapid spread and severe impact of COVID-19 in Malawi.*

The DHA issued 5 editions of a circular to all HIV service delivery sites (on 3rd, 17th April, 15th June, 17th August and 14th January) with specific infection prevention guidance for COVID-19, and policy recommendations aimed at decongesting facilities, and reducing travel and contact exposure for patients and health workers. This included a temporary suspension of non-essential services: routine scheduled viral load monitoring for stable adult patients; VMMC; active index partner tracing; new initiation of IPT and PrEP; Teen clubs and other ART support groups involving social gatherings. The DHA also recommended an enhanced implementation of 6-month ARV dispensing for almost all patient groups. As the COVID-19 impact remained much lower than initially feared, the suspended services were successively reintroduced.

However, modified service recommendations were re-instated with the 5th edition of the DHA circular in response to the 2nd wave of COVID-19 that emerged from late December 2020 / early January 2021. This included the temporary suspension of community activities that involve travel or gatherings and most training activities. All facility-based HIV services were recommended to continue as normal provided adequate personal protective equipment (PPE) was available for health workers. In case of PPE shortages, the circular specified a list of non-essential activities that should be deprioritized (community-based HIV testing; recency surveillance; demand creation for VMMC and PrEP; VMMC campaigns; new initiation of PrEP; community condom distribution; initiation of TB preventive therapy for stable ART patients; ART teen clubs).

During 2021 Q3, the number of cases had dropped as the second wave had ended beginning April 2021. Anecdotal observations suggest that many people resumed accessing health services during the quarter and there was a noticeable improvement in some HIV service outputs in Q3 2021 compared with Q2 2021:

- *HIVST kits distribution increased by 16%*
- *The number of blood units collected increased by 2%*
- *The number of routine viral load samples collected increased by 33%*
- *The number of clients accessing PEP increased by 51%*
- *The number of clients treated for STIs increased by 5%*

Reassuringly, program reports showed no significant increase in loss to follow-up from ART.

Program performance highlights by the end of September 2021 include:

- Scale-up of integrated HIV services had reached the following number of sites:
  - **760** static and **160** outreach HIV testing sites.
  - **767** (static) ART sites; **612** of these started at least one pregnant or breastfeeding woman**.**
  - **706** sites with HIV-exposed children in follow-up.

- **642,325** persons were tested for HIV by a trained provider and received their results; **115,831 (18%)** accessed HIV testing for the first time; **526,492 (82%)** were repeat testers and **20,665 (4%)** of these received confirmatory testing (after having tested positive in the past). **18,568 (3.0%)** clients received a positive result for the first time[1].
- A total of **142,158** people received **235,133** self-test kits**; 110,183 (45%)** of these were for use by the recipient and **124,950 (55%)** for onward distribution to sex partners or other people.
- **22,397 (98%)** of **22,902** blood units collected were screened for (at least) HIV, hepatitis B and syphilis.
- A cumulative total of **5,905** clients were referred for PrEP eligibility screening and **5,579 (94%)** were found eligible. **4,750 (85%)** were enrolled to on PrEP and **3,839 (81%)** clients were retained on PrEP at the end of the September 2021.
- **156,552 (96%)** of 163,446 women at ANC had their HIV status ascertained; **8,885 (6%)** of these were HIV positive. **137,258 (95%)** of 145,024 at maternity had their HIV status ascertained **8,713 (6%)** of these were HIV positive.
- **18,792** patients started ART this quarter; **87%** were classified as asymptomatic / in WHO stage 1 and started under the "Test & Treat" policy.
- **887,338** patients were alive and on ART by end of September 2021.[2] This means that **90%** of the estimated 986,654 HIV positive population was on ART. [3] ART coverage was **79%** (45,504/ 54,686) for children[4] and **89%** (844,834 / 931,968) for adults.
- **95,002 (93%)** of viral load results from routine monitoring were <1000 copies/ml. Viral suppression rates for routine samples among children (0-14 years) and adults (15+ years) were **73%** and **93%**, respectively.
- **79%** of adults and **81%** of children were retained alive on ART at 12 months after initiation.[5]
- Out of **874,993** patients on first line adult ART **840,657 (97%)** had transitioned to TDF/3TC/DTG and only **2,450 (<1%)** were on TDF/3TC/EFV.
- **9,385** [6] **(99%)** of an estimated 9,551[3] HIV infected pregnant women in Malawi were on ART this quarter. **6,751 (71%)** of these were already on ART when getting pregnant and **2,634 (29%)** started ART during pregnancy/delivery.
- An additional **722** breastfeeding women (re-)started ART in WHO stage 1 or 2.

[1] The crude number of new diagnoses is based on the self-reported previous testing history documented in the HTS registers. Model-based estimates of the "1st 90" suggest that undisclosed repeat positives account for about half of these. This implies the true yield of new diagnoses may be only around **1.5%**.

[2] 878,338 patients were reported as alive on ART at their registered site. In contrast to previous reports, no adjustment for patients in transit can be made this quarter. Tens of thousands of patients who were previously marked as lost to follow-up have been re-classified as transferred out in the context of active tracing undertaken by implementing partners. This precludes the calculation of new transfers out from cumulative cohort data.

[3] 2021 Spectrum Model estimates for the HIV population in September 2021.

[4] Number of children (0-14 years) on ART extrapolated from age-disaggregated cohort reports from sites with electronic medical record systems (see section 11.3 on page 25).

[5] Actual retention rates are thought to be about **10%** higher due to misclassification of 'silent transfers' as defaulters in clinic-based survival/retention analysis. (see section 11.4)

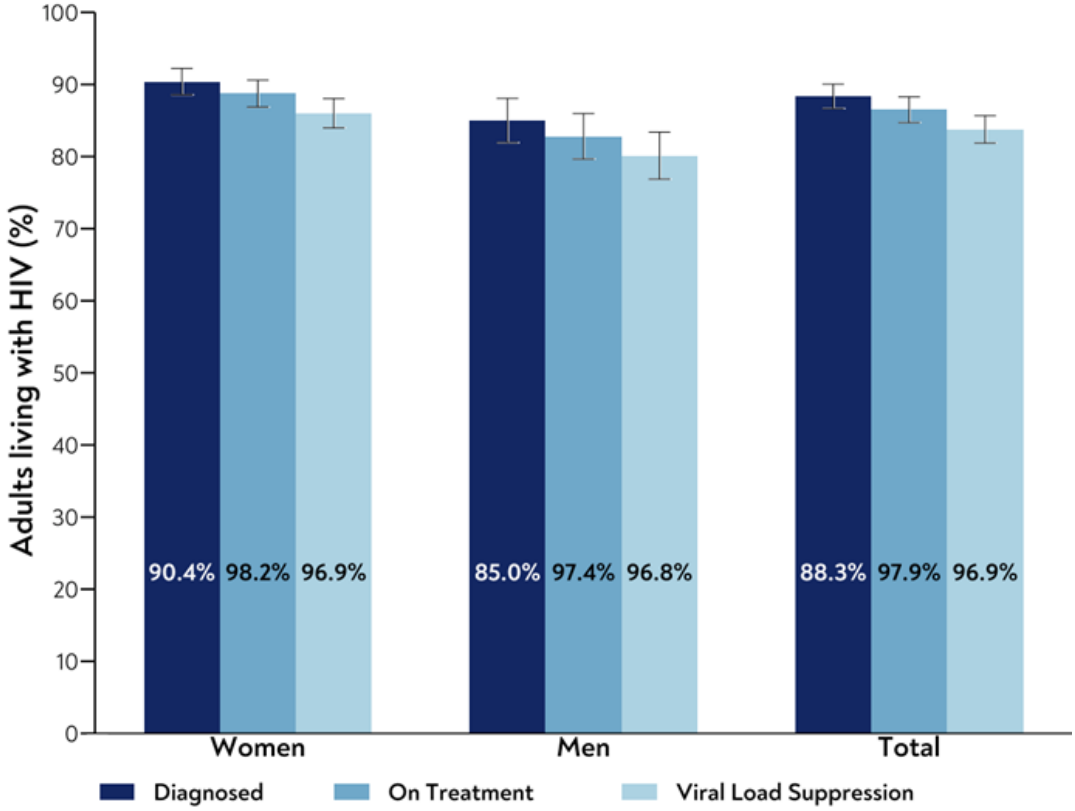
[6] Adjusted for double counting due to patient transfers / 'failed ART initiations' among women lost to follow-up within 6 months of ART registration.

- **86%** and **79%** of women started while pregnant or breastfeeding were retained on ART at **6 and 12 months** after initiation, respectively.
- **8,939 (7%)** of infants discharged alive from maternity were known to be HIV exposed, **7,905 (88)** of these received ARV prophylaxis (nevirapine).
- A total of **10,653 HIV** exposed children were newly enrolled for follow-up this quarter; **10,198 (81%)** of these were enrolled before age 2 months.

- According to the MPHIA 2020/21[7] results:
- An estimated **98.3%** of PLHIV knew their status (diagnosed)
- **97.9%** of whom were on ART
- **96.9%** of whom were virally suppressed.

- Malawi has already surpassed all of the 90-90-90 targets which were set for December 2020. In line with the new National Strategic Plan 2020-25, the current report used the MPHIA 2020/21 results as this reporting period coincided with the time the results were released. See **Figure** 1 below:

Figure 1



[7] The Malawi Population-based HIV Impact Assessment (MPHIA 2020-2021) was a household-based national survey among adults (defined as those aged 15 years and older) to measure the impact of the national HIV response. Conducted from January 2020 through April 2021 (with a pause from June 2020 until March 2021 due to the COVID-19 pandemic), MPHIA 2020-2021 offered HIV counselling and testing with return of results and collected information about uptake of HIV care and treatment services. This was the second survey in Malawi to estimate national HIV incidence and national and subnational viral load suppression (VLS), defined as HIV RNA <1,000 copies per milliliter (mL). See the factsheet via this link

2 Integrated HIV Program Overview

Malawi's National HIV Program has undergone several important policy changes since its inception in 2004. The **4th** Edition of the ***Malawi Integrated Clinical HIV Guidelines*** was published in **July 2018** and some policies /components were revised. Training for nationwide implementation is underway and refresher training for the revised components have been planned. The following are the policies/components of policy that were revised and endorsed for implementation and scale up in Malawi by the Ministry of Health and Population beginning in April 2019:

- Introduction of **dolutegravir- (DTG) based first line ART** regimens for all: Transition of new and existing eligible patient groups weighing 20kg +.
- Phasing out of **NNRTI-Based (NVP)** regimens: Transitioning of clients on NVP to DTG or PI Based regimen.
- **Differentiated Service Delivery** (DSD) Model: Introduction of Six-Monthly ART dispensing.
- **Viral Load Monitoring**: transition from 2-yearly to annual scheduled monitoring.
- Pre-exposure prophylaxis (**PrEP**): Oral PrEP as additional preventative method for HIV-negative clients at substantial risk of HIV infection.
- TB Preventive Therapy (TPT): Dispense **IPT or 3HP** to all eligible adult PLHIV newly initiated on ART who have not previously completed a course of TPT.

The **decentralization of ART services** continues as new health facilities are established and existing facilities attain minimum staffing and infrastructure requirements for ART.

3 Supportive Site Supervision

3.1 Methods

The Department for HIV and AIDS has coordinated quarterly supportive supervision visits to all health facilities with ART services since the start of the national treatment program in 2004. Supervision teams are composed of: experienced HIV clinicians; nurses and M&E staff from health facilities in the public and private sector; district and zonal PMTCT and ART coordinators; program officers and technical staff from the Department for HIV and AIDS; technical staff from implementing partners. The TB and HIV programs have fully integrated their respective site supervision exercises since April 2015.

Each quarter, a one-day pre-supervision meeting is organised for all supervisors participating in the upcoming round to share program updates, discuss observations from the previous round, distribute materials and organise logistics, transport and accommodation.

Standard supervision forms are used to guide implementation of the supervision protocol, to update site information and collect M&E reports. Custom forms with previous data for each site are printed from the Department of HIV and AIDS Management Information System (DHA-MIS). Supervision forms include:

- Contact details of HIV service providers at each site
- Quality of service checklist
- Follow up on action points noted during the previous visit
- Next visit date
- M&E reports from HIV testing, ANC, maternity, exposed child and pre-ART follow-up, ART and TB
- Physical drug stock-level assessment
- Identification of sites in urgent need of clinical mentoring
- Semi-structured feedback and performance rating for the supervision teams by facility staff

One copy of the supervision form is returned to the Department for HIV and AIDS, where data are entered in a custom SQL Server / MS Access database (Department of HIV and AIDS Management Information System; DHA-MIS) to produce national reports and to manage program logistics and the commodity supply chain. A second copy of the supervision form is left at the sites.

The supervision protocol includes a systematic review and verification of primary records (patient cards and registers) at all sites. This effectively provides a quarterly quality audit for M&E records, which has resulted in exceptional accuracy and completeness of HIV Program data in Malawi. At the same time, the systematic chart review helps to identify complex cases or deviations from clinical protocol, allowing the supervision team to provide targeted mentoring and clinical advice. The quarterly supervision exercise also aims to boost staff morale and motivation through *Certificates of Excellence* that are awarded by MOH to sites with an excellent score on the quality of service checklist. A growing number of health workers from sites all over the country participate as supervisors in this quarterly exercise and this has strengthened the national HIV Program identity and has greatly facilitated communication between program staff at the national, zonal, district and facility level.

The HIV testing program usually conducts a separate supportive site supervision exercise each quarter, targeting a sample of HTC sites both within and outside of health facilities. Supervision teams consist of district, zonal and national level HTC coordinators, supported by implementing partners.

3.2 Supervision Outcomes

763 public and private sector facilities were visited for **biomedical HIV program supervision** between 18th and 29th of October 2021.

The large number of sites was covered by **245** supervisors working in **32** teams that spent **2,080 working hours** at the sites. Each site visit lasted on average 2.5 hours, but up to 2 days were spent at the busiest sites. **563 (72%)** sites were awarded a *certificate* for **excellent performance.** This exceed results from the previous quarter (530). **82 (10%)** sites had significant weaknesses and were rated to require **intensive mentoring**. Mentoring capacity will need to be further expanded.

Table 1

Table 1: Outcomes of integrated HIV services supervision for 2021 Q3

Zone	Total facil. visited*	Supervision hours spent at facilities		Performance (# and % of sites)	
		Total	Average per site	Excellent perform.	Mentoring needed
NZ	144	351	2.4	107 74%	24 17%
CEZ	109	273	2.5	78 72%	12 11%
CWZ	175	451	2.6	130 74%	22 13%
SEZ	180	503	2.8	145 81%	12 7%
SWZ	178	502	2.8	103 58%	12 7%
Malawi	786	2,080	2.6	563 72%	82 10%

* includes facilities that were visited for assessment of readiness, but that may have not (yet) been designated to provide integrated HIV services.

Table 1 summarizes the supervision outcomes by zone. Most facilities were using the standard national M&E tools. **255** sites had cumulatively registered more than 2,000 ART patient and **92** of these had registered more than 5,000. **210** (81%) of these high burden sites were using point-of-care electronic medical records (EMR) systems. **207** low- and medium-burden sites were using a back-data entry solution of laptops to capture patient visits recorded on the paper patient cards. Some NGO-supported sites were using custom tools compatible with the national standard reporting requirements.

4 Inventory of Sites and Services

4.1 Sites and Services

There were **760** static and **160 outreach** HIV testing sites in Q3 2021.

Table 2

Facilities with integrated HIV services in the 5 Zones. Availability of services defined by performance (at least 1 patient enrolled) during 2021 Q3

Zone	Total fac.(1)	Facilities providing HIV services						CD4 count machines (2)								urine-LAM			serum CrAg		
		Exp. child		PMTCT B+		ART		Installed		Functional		Tot.Results	Results <200			Total	Res. Pos		Total	Res. Pos	
SEZ	180	165	92%	156	87%	174	97%	21	12%	20	95%	1,679	394	23%		1,319	174	13%	1,053	59	6%
SWZ	183	160	87%	140	77%	174	95%	32	17%	31	97%	2,309	574	25%		1,237	173	14%	872	66	8%
CWZ	177	147	83%	133	75%	170	96%	28	16%	23	82%	2,153	587	27%		1,287	169	13%	1,119	51	5%
CEZ	111	105	95%	83	75%	109	98%	18	16%	17	94%	461	96	21%		293	36	12%	190	8	4%
NZ	149	129	87%	100	67%	140	94%	25	17%	23	92%	795	236	30%		386	53	14%	318	27	8%
Malawi	800	706	88%	612	77%	767	96%	124	16%	114	92%	7,397	1,887	26%		4,522	605	13%	3,552	211	6%

(1) Total facilities in the public / private sector designated to provide integrated HIV services in this quarter. Individual site selection is reviewed and may change each quarter.

(2) CD4 machines that have produced at least 1 result during the reporting period are defined as functional.

Table 2 shows the distribution of the **800** sites designated to provide clinical HIV services in Q3 2021, by zone. At the national level, there were **767** (static) sites with at least one patient on ART; **612** sites had enrolled women under PMTCT Option B+; **706** had enrolled HIV exposed children for follow-up. ART services were now available at almost all designated sites in the 5 zones.

CD4 count machines (including 'point of care' machines) were installed at 124 sites, and **114 (92%)** of these had produced at least 1 result during Q3 2021. The total number of CD4 results produced **(7,397)** was lower than the previous quarte's (9,637). **1,887 (26%)** of the 7,397 CD4 results were 200 cells/ml or less and these patients were therefore eligible for routine urine LAM and serum CrAg. With the introduction of the 'Test & Treat' policy, routine CD4 count testing to determine when to start ART has been deprioritized. However, the 2018 Malawi HIV guidelines introduced routine baseline CD4 counts at ART initiation where available and outputs are expected to increase further.

4,522 clients were screened for urine LAM and 605 (13%) of these were positive and were eligible to be treated for TB. A total of 3,522 patients were screened using serum CrAG and out of these 211 (6%) had a positive result and according to the 2018 ART guidelines, they were eligible for active meningitis assessment with the intention of either treating or giving pre-emptive antifungal therapy

4.2 Staffing of HIV Services

4.2.1 HIV Testing Services

The Department for HIV and AIDS has maintained a dedicated system for professional registration and performance tracking for HIV testing providers since 2011. This separate registration system is needed because HIV testing providers include lay persons with HIV testing training who are not registered with any other professional body. All testing providers are issued with a unique ID and a professional logbook for documentation of duty stations, trainings, sit-in observation and proficiency testing results. Logbook holders are requested to record the total number of tests done at the end of each month. Logbook holders are requested to record the total number of tests done at the end of each month. Logbooks were

not routinely reviewed during the 2021 Q3 supervision and key performance data for each provider were not summarized on the site supervision form. [8]

4.2.2 ART/PMTCT

Integrated HIV program supervision has included a staffing census for ART clinics since Q3 2014. This census is undertaken during the site visits, indicating all staff members who actually worked at the ART clinic on the most recent clinic day. The census is designed to provide an accurate snapshot of the actual staffing of ART services each quarter. The numbers collected may be slightly lower than longer term averages, because around 200 service delivery staff are themselves participating in the supervision exercise and will not be counted as having worked in their ART clinic during the supervision period. The table below shows that overall staffing levels have slightly declined over the last 2 quarters. However, the number of ART clinicians increased by 33 from 822 to 855 from the previous quarter.

Among the other cadres, **1,521** were nurses and **874** were auxiliary staff (health surveillance assistants, clerks, etc.)

Table 3

	2020 Q4		2021 Q1		2021 Q2		2021 Q3	
Clinicians	918	*28%*	904	*27%*	1,003	*27%*	1,030	*27%*
Nurses	1,318	*40%*	1,319	*39%*	1,440	*39%*	1,521	*40%*
Pharmacy staff	261	*8%*	293	*9%*	337	*9%*	348	*9%*
Auxiliary Staff	829	*25%*	872	*26%*	898	*24%*	874	*23%*
Total	**3,326**		**3,388**		**3,678**		**3,773**	

An estimated 4.0 million ART patient visits are currently managed at the 763 ART sites per annum, based on 887,338 patients alive on ART and an average dispensing interval of 2.5 months. With 260 working days per year, an average of 16,381 patient visits is therefore managed by the ART sites per working day. At current staffing levels, this translates into an average of **16** ART patient visits per clinician and **11** per nurse per day. This approximate HRH capacity assessment does not take account of site-specific differences in patient burden and staffing levels and there are several medium and high burden sites with sub-optimal staffing. However, the national treatment program is fully decentralized to the health centre level and the program continues to devolve the growing patient burden to peripheral facilities. Since 2011, the steepest increase in ART patient numbers has been recorded at the 300 small peripheral sites that have the largest collective staffing capacity (see **Figure** on **page 36**).

5 HTS Program Outputs

HIV testing protocols were revised in 2016. A new HIV testing register was implemented in the course of a national re-training campaign for all HTC providers between May and November 2013. Protocol revisions include:

[8] The logbook review was temporarily suspended to minimize the workload for the supervision teams

- Clear recommendations for re-testing based on the client's test result and risk assessment
- Proper documentation of confirmatory testing for clients with a prior positive result (usually performed at enrolment into care).

The HIV testing program observed a number of challenges. First, although quality control (QC) samples were available at most sites, some sites had not carried out any QC testing. Space constraints are common and remain a challenge. Providers have to share the testing rooms at most facilities. Some mentors supported by partners are not adequately trained and the mentorship provided is therefore not comprehensive. 'Conveyor-belt' (batched) HIV testing is still being practised in some facilities despite ongoing attempts to reinforce the one-client-in-session testing policy. Finally, some implementing partners have introduced modified M&E tools at facilities they are supporting that are adding considerable work load and distraction.

5.1 Quality Control (QC) Testing

The national HIV testing protocol requires all sites to perform QC testing at least once per week. Additional QC is required when a new consignment of test kits is received; when starting a new lot; when a new provider joins the facility, when test kits have been exposed to temperatures above manufacturer recommendations. The QC procedure involves testing each of the 2 rapid test kits used in the national algorithm with a known negative and a known positive serum to confirm that the tests show the expected results. This means that 2 positive and 2 negative results are expected for each complete QC set. QC results have been documented in a dedicated section in the standard HIV testing register since 2013. From Q3 2016, QC results have been systematically reviewed during the integrated HIV program supervision.

669 (95%) of the 735 active testing sites had documented at least 1 QC set this quarter and **600 (90%)** had recorded the minimum of 12 sets (one for each week). At **661 (99%)** of sites, all samples produced the expected result.

5.2 HIV Testing and Counselling Outputs

642,325 people [9] were tested and counselled for HIV between July and September 2021. This is a 2% decrease from the previous quarter (655,092). Many of the dedicated testing staff (HIV Diagnostic Assistants, HDAs) hired by PEPFAR implementing partner organizations have been re-purposed to other tasks following PEPFAR guidance to reduce "over-testing".

605,401 (94%) of all tests were performed at health facilities, **4,333 (1%)** were done in stand-alone HTC sites, **30,456 (5%)** were done outside of facilities / in the community and **2,135 (<1%)** were from self-test returning clients tested at the facility. **18,568** people were reported as newly diagnosed with HIV this quarter. Out of these, **17,538 (94%)** were diagnosed at health facilities; **108 (1%)** at stand-alone HTC sites; **865 (5%)** through community-based testing and **57 (<1%)** were from self-test returning clients tested at the facility. The reported

[9] Reports from the HTC register are based on client encounters. It is not possible to de-duplicate people who access HTC multiple times in the reporting period. However, very few individuals come for repeat testing in less than 3 months and the number of HTC encounters in one quarter is therefore assumed to represent individuals.

'yield' for new diagnoses was **3.0%** (excluding clients who disclosed a previous positive result from the denominator).

However, based on UNAIDS "Shiny90" model triangulation of population survey results and program data, **at least 53%** of all clients classified as "new positive" in HTS registers are assumed to be undisclosed repeat testers. Discounting 53% from the 18,568 reported "new positives" results in an estimated **8,727** genuine new diagnoses this quarter. This reduces the true 'yield' of new diagnoses in the HTS program to **1.4%**.

5.3 HIV testing access type

503,466 (78%) of people tested were patients receiving provider-initiated testing and counselling (PITC); **110,690 (17%)** accessed voluntary testing and counselling, door-to-door, community-based testing and **28,169 (4%)** came for testing with a *Family HTC Referral Slip* (FRS) that was issued to a family member at a prior HTS encounter. **28,169** family members or contacts presented with an FRS for testing to the facilities and this represents successful referral rate of 110% based on the total number of FRS issued this quarter (25,720). The over 100% rate can be attributed to challenges in documentation in the HTS registers.

5.4 Age and sex distribution among HIV testing clients

Out of **655,092** people tested and counselled, **33%** were males and **67%** were females. **41%** of females were pregnant. The ratio of males **(45%)** to non-pregnant females **(55%)** has remained constant. Testing among pregnant women is almost entirely provider-initiated and there is no comparable access route targeting males.

147,598 (23%) of all people tested accessed HTC with their partners (as a couple).

50% of all people tested and counselled were 25 years and above, **43%** were adolescents or young adults (15-24 years) and **7%** were children (<15 years). **845 (<1%)** of rapid tests done were among infants.

Figure 2 and **Figure 3** show that the absolute increase in testing output since introduction of the HDA cadre in 2016 was mainly driven by non-pregnant females, males and the age groups 15-24 and 25 years and above. From 2021 Q2 to Q3 2021, the number of males, pregnant women and non-pregnant females tested changed by -3%, -2% and 0.4% respectively.

Figure 2: Distribution of sex and pregnancy status among clients tested by quarter

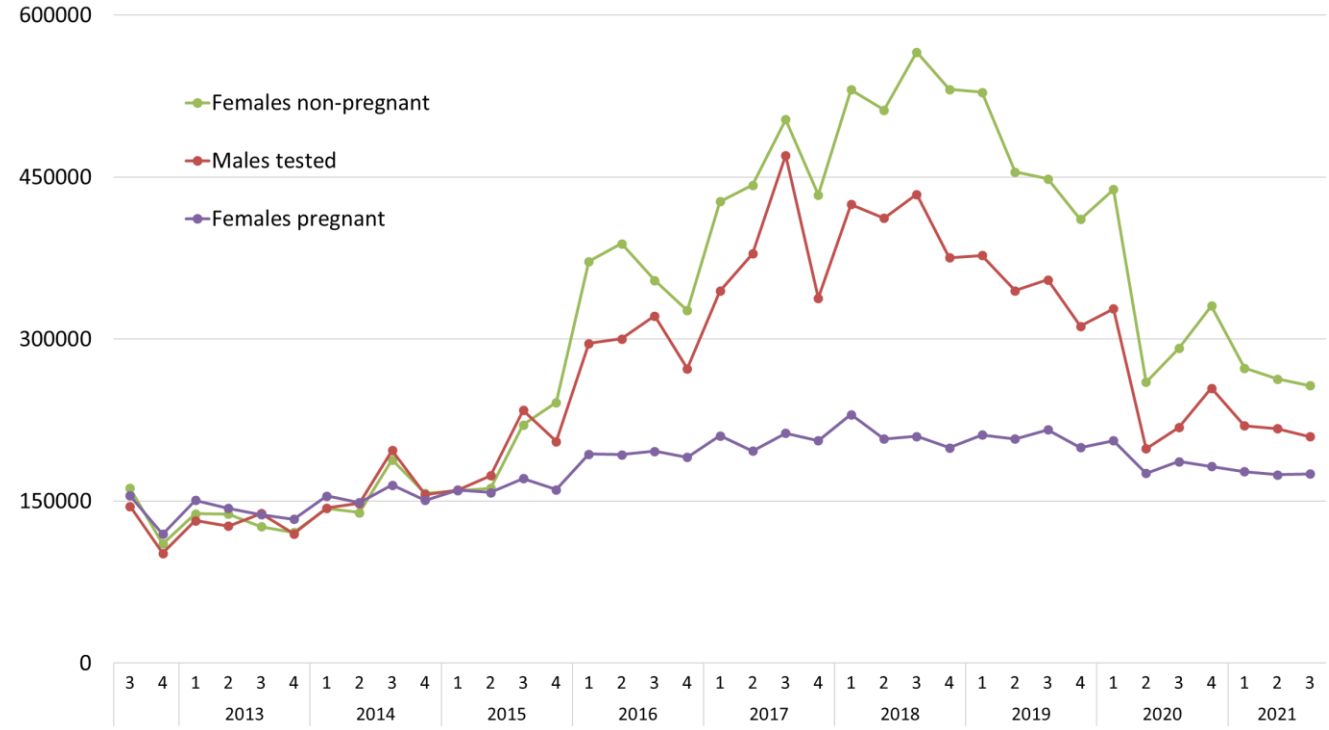
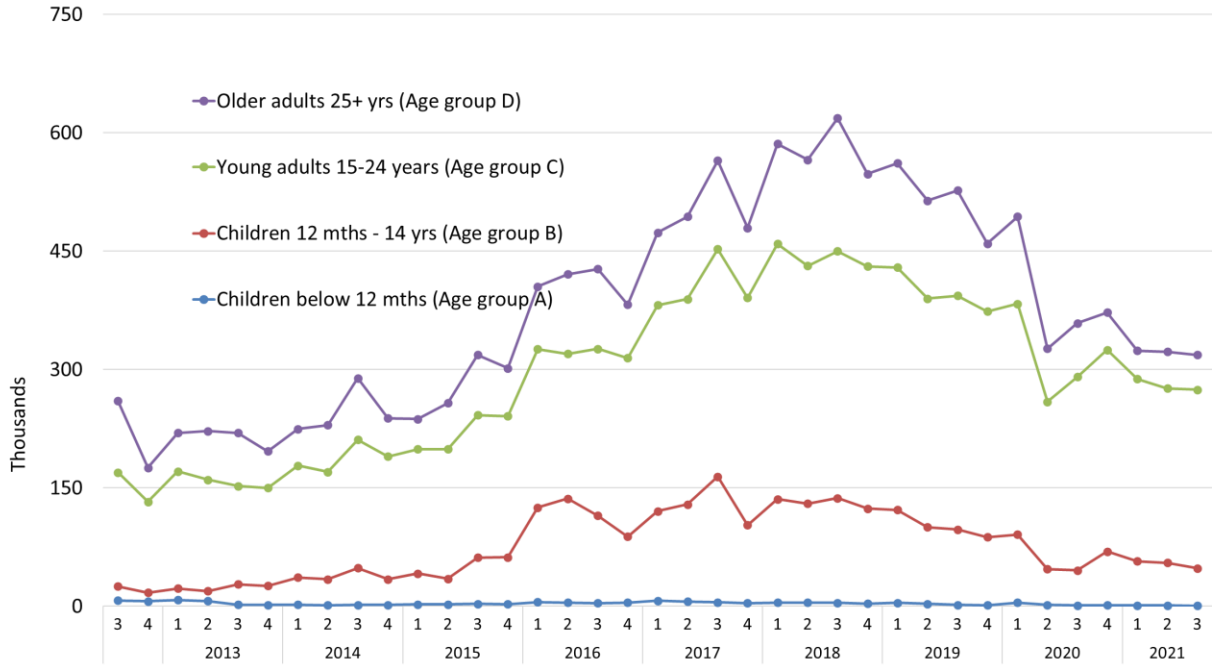


Figure 3: Distribution of age among clients tested by quarter



5.5 First-time, repeat and confirmatory test results

All HIV positive patients enrolled in care need a confirmatory HIV test to rule out any possibility of mix-up of test results or fraudulent access to ART. Confirmatory testing is done when starting ART. National guidelines require a confirmatory DNA-PCR at the time of starting ART for all children under 24 months, regardless if the initial diagnosis was based on a positive DNA-PCR or a rapid antibody test. Follow-up rapid antibody testing for children is no longer recommended.

115,831 (18%) of all clients tested accessed testing for the first time and **526,494 (82%)** were repeat testers. Based on the cumulative number of people who accessed HTC for the first time, a total of **12,453,313** people have been tested since introduction of the *first time HTC access* indicator in July 2007. The classification of first-time and repeat testers is likely to be affected by misreporting and non-disclosure of previous diagnoses.

18,568 (3.0%) out of all clients were recorded as receiving a positive result for the first time, but it is assumed that about half of these may be undisclosed repeat diagnoses (see above). Positive rapid test results among infants (**57**) and inconclusive test results (**1,063)** both accounted for **<1 %** of new results given to clients.

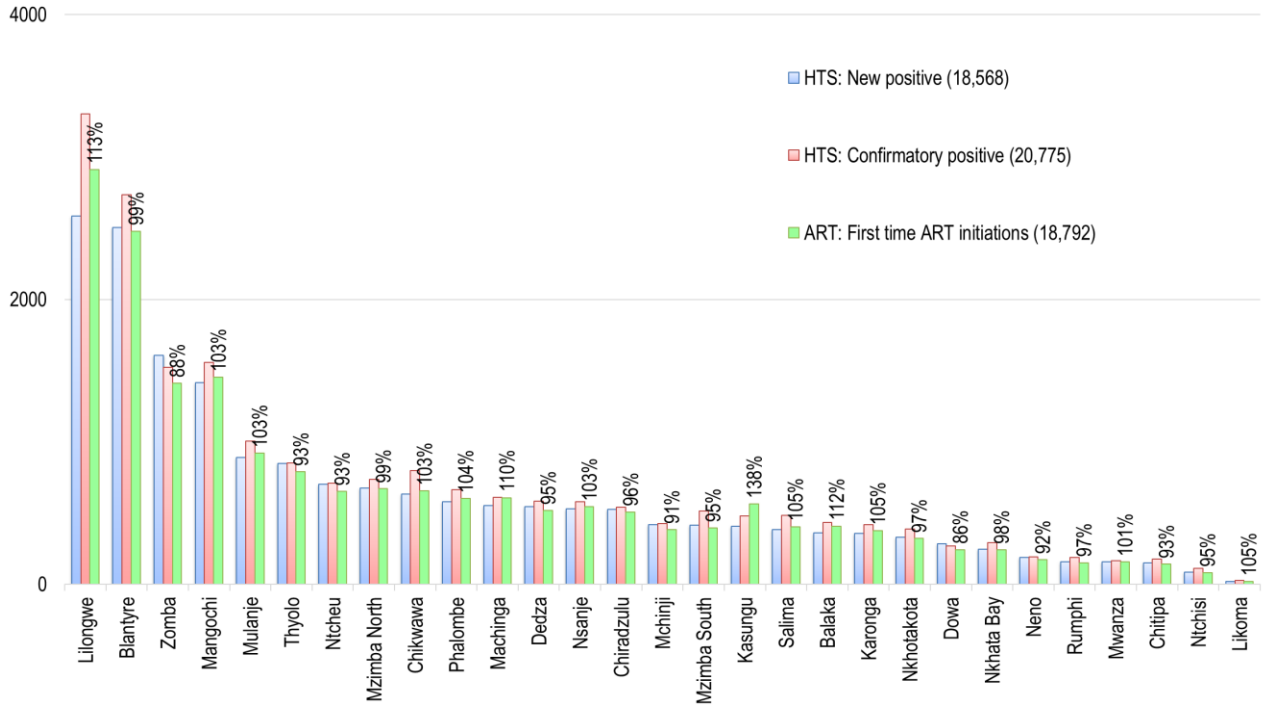
505,204 (96%) of 529,472 repeat testers reported a *last negative* result. **20,665 (4%)** were reported as *previous positives* and all of these should have been classified as receiving a confirmatory test. For most of these previous *positives*, testing was probably initiated by a health worker before ART initiation. As expected, the number of *confirmatory test results* **(20,878)** was very close to the number of previous positive clients. **20,775 (99%)** of 20,878 confirmatory test results were concordant positive and **103 (<1%)** were classified as *confirmatory inconclusive*. This category includes parallel concordant negative and discordant test outcomes (Determine HIV1/2 and Uni-Gold HIV1/2 are used in parallel for confirmatory testing). Clients who did not have a concordant positive confirmation may be explained by selective confirmatory testing among clients with doubts about their previous positive status, but it also underscores the importance of routine confirmatory testing before ART initiation and the need to strengthen quality assurance.

5.6 Linkage from HIV diagnosis to ART

Figure 4 shows a triangulation of HIV testing and ART program data by district. At the national level, the **18,792** patients who initiated ART this quarter represent **>99%** of the **18,568** clients tested positive for the first time. Proxy linkage rates ranged from 86% in Dowa to 138% in Kasungu. Lilongwe had the highest number of new diagnoses (**2,586**) and ART initiations were at 2,912 implying a district-level linkage of **113%**. Very high or low linkage rates suggest that cross-border access to testing and ART was seen in several districts (e.g. Likoma, Dowa, Zomba, Salima, Sanje etc.).

The number of confirmatory positives exceeded the number of new positives by 2,207 at the national level. This means a large number of clients who disclosed their previous positive status were getting tested again. Lilongwe recorded the greatest excess (717) of confirmatory positives compared with the number of new positives. Lilongwe, Blantyre, Mangochi, Phalombe, Nkhotakota, Mzimba South and Chikwawa accounted for **1,854** (80%) out of the 2,207 excess confirmatory positives in the whole country this quarter. At the national level, the number of confirmatory positives exceeded the number of ART initiations by 1,983 (10%).

Figure 4: Number of new positives, confirmatory positives and new ART initiations in Q3 2021 by district (percentages represent ART initiations over new positives for each district)



5.7 HIV Self-Testing (HIVST)

The implementation of the National HIVST program started in December 2018 with an aim of facilitating access to HIV testing for hard-to-reach populations. Distribution of HIVST kits to index clients for secondary distribution to sexual partners is one important modality for index testing.

After a practical demonstration by a trained HIVST distributor, oral fluid self-tests are given to the end-user for self-testing or for onward distribution to a sexual partner, or any other person considered in need of HIV testing. HIVST may be done under supervision by an HTS provider but is most commonly done in private. Counselling includes information about the interpretation of test results and a reminder to seek confirmation of any positive HIVST result by a professional provider using the standard blood based rapid testing algorithm. The HIVST program does not attempt to capture results of self-testing, but returning self-testing clients are recorded in a dedicated professional HIV testing register and a separate report is available for these (see below). Routine HST reports are limited to the attributes of the direct recipients and age and sex of the intended end-user.

5.7.1 HIV-Self Test Kits Recipients Details

Between July and September 2021, **142,158** people were counselled and given a total of **235,133** oral fluid self-test kits, either for self-use or for secondary distribution to sexual partners or others. This is equivalent to an average of 2.1 kits given to each recipient. **45%** of the 121,505 recipients were males and **55%** were females. **16%** of the females were pregnant.

Out of all recipients, **16,207 (11%)** had never been tested for HIV before and **125,951 (89%**) reported a previous test result. **123,450 (98%)** of previously tested recipients were negative and **2,477 (2%)** were positive. **2,123 (86%)** of the positives were on ART and **14%** were not

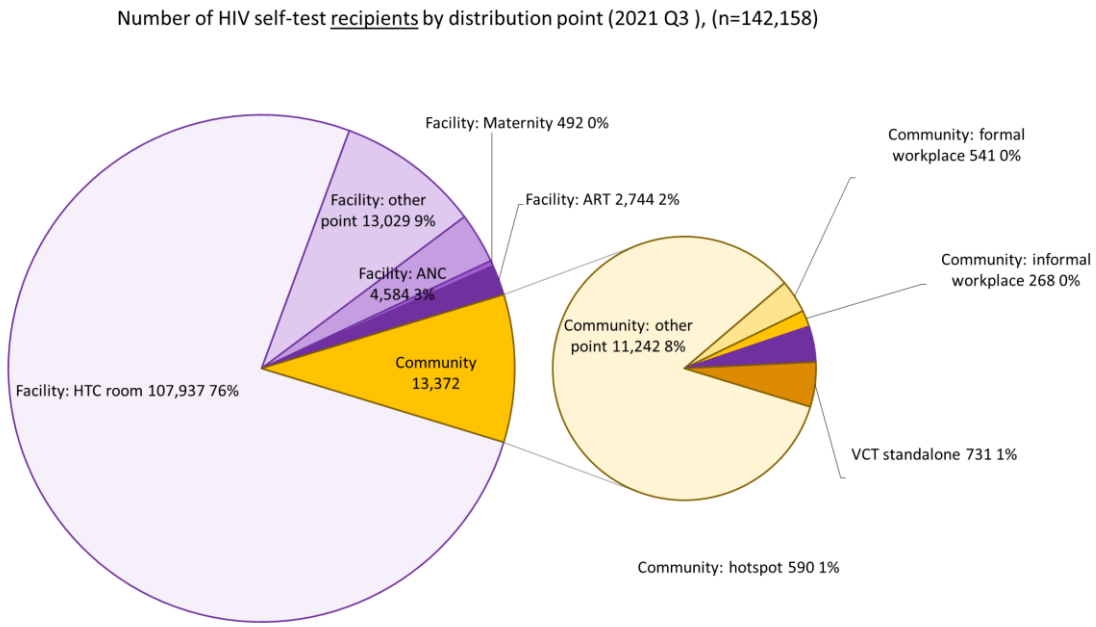
(yet) on ART. The **354** HIV positive recipients who were not yet on ART most likely received ST kits for their sexual partners in the context of index testing. **24 (<1%)** recipients reported an inconclusive previous test result.

5.7.2 Distribution Points of HIVST Kits

The national program recognizes 10 categories for HIVST distribution points. These are grouped under the three locations of **health facility** (ANC, maternity, ART clinic, HTC room, other), **stand-alone HTS site** (VCT) and **community** (formal workplace, informal workplace, hotspot, other). A dedicated distribution register is used for each type of distribution point and captures the details of recipients and the intended end users.

Figure 5 shows the number of recipients by distribution points in 2021 Q3. **128,786 (91%)** of all **142,158** recipients were seen at health facilities and **13,372 (9%)** in community settings. HTC rooms were the most common distribution point in facilities with **107,927 (76%)** recipients, followed by other facility points **(13,029)**, ANC clinics **(4,584),** ART clinics **(2,744)** and Maternity **(492)**. **11,242 (11%)** of clients received HIVST at unspecified community distribution points, **731 (1%)** were at VCT standalone while formal and informal workplace setting and community hotspot accounted for <1% of recipients.

Figure 5



5.7.3 HIVST Distributed Kits: Intended User Attributes

Out of the **235,133** HIVST kits distributed in Q3 2021, **110,183 (45%)** were intended for self-use by the recipients and **124,950 (53%)** were for onward distribution. **95,932 (77%)** of the kits intended for secondary distribution were for sexual partners and **29,018 (23%)** were for others, such as friends or relatives of the recipients. **Table 4** below summarizes the HIVST kits distributed by distribution point and the end-user type. This shows the majority of HIVST kits distributed at health facilities were for self-use which is a deviation from the intended goal of

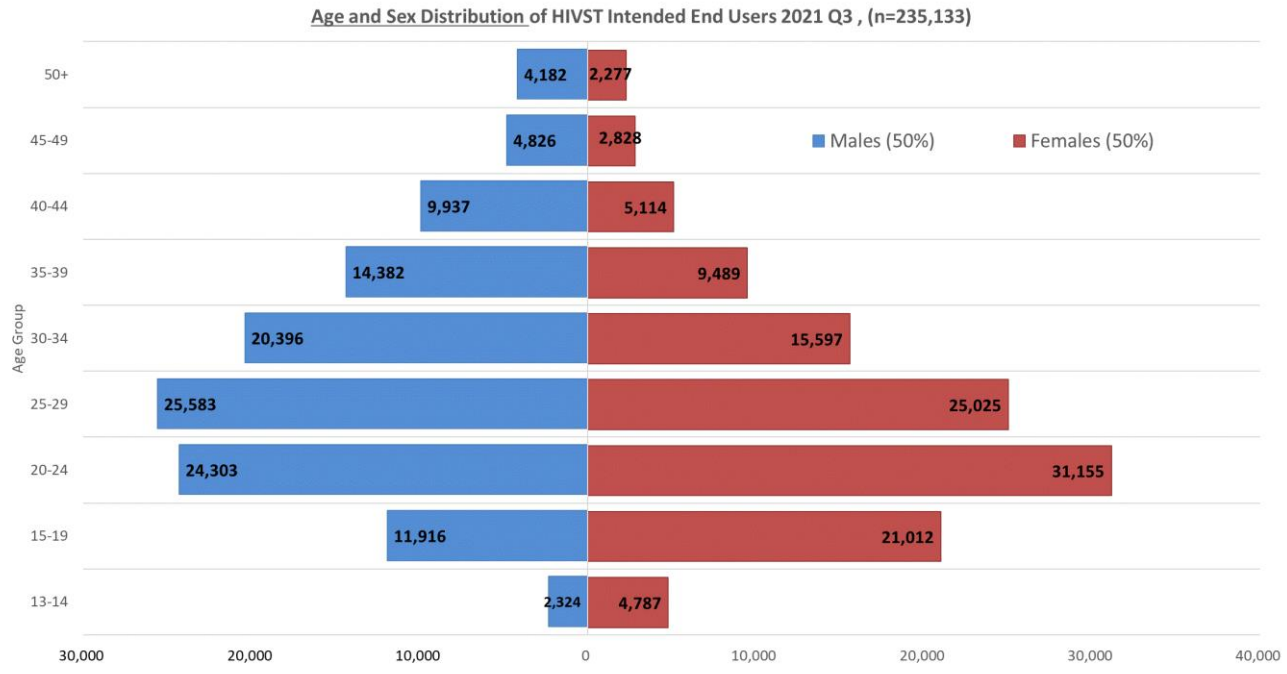
the HIVST programme in terms of targeting hard to reach populations who are not seen at health facilities.

Table 4

		End User Type						
		Self		Sexual Partner		Other		Total
Facility	HTC room	82,517	47%	72,884	41%	21,087	12%	176,488
	Other Point	10,610	42%	10,421	42%	3,943	16%	24,974
	ANC	2,392	32%	3,900	52%	1,221	16%	7,513
	Maternity	375	31%	674	56%	165	14%	1,214
	ART	2,181	40%	2,242	41%	1,066	19%	5,489
Community	Other Point	10,458	62%	5,059	30%	1,404	8%	16,921
	Formal workplace	460	60%	250	33%	52	7%	762
	Informal workplace	142	37%	193	50%	51	13%	386
	Hotspot	466	76%	125	20%	23	4%	614
	VCT standalone	582	75%	184	24%	6	1%	772
		110,183	**47%**	**95,932**	**41%**	**29,018**	**12%**	**235,133**

Figure 6 below shows the intended end user age and sex category for all the test kits that were distributed during 2021 Q3. Out of 235,133 test kits distributed, 117.849 (50%) were for males and 117,849 (50%) for females. 72% of the male end users were 20-39 years and 66% of females were 15-29 years

Figure 6



6 DNA-PCR testing for Early Diagnosis of HIV in Infants (EID)

DNA-PCR testing is performed at 10 labs (Mzuzu Central Hospital, Mzimba District Hospital, Kamuzu Central Hospital, Queen Elizabeth Central Hospital, DREAM Blantyre, DREAM Balaka, Tholo District Hospital, Zomba Central Hospital, Nsanje District Hospital and Partners in Hope, Lilongwe). HIV Diagnostic Assistants and EID counsellors collect infant blood samples as dried blood spots on filter paper. Health facilities are requested to fill a standard EID DNA-PCR logbook to document EID samples and to track results. The logbook includes the dates of collection, dispatch, receipt of result from the lab and communication of the result to the mother. Supervision teams were asked to collect basic data from these logbooks.

9,696 DNA PCR samples were drawn in the reporting period and documented in the facility DNA-PCR sample registers. **9,316 (96%)** of these were for the initial DNA-PCR test for exposed infant; **260 (3%)** were for the confirmatory testing of exposed children under 24 months when starting ART; **72 (1%)** were for repeat DNA-PCR for patients whose previous collected samples did not produce a valid result, and **48 (<1%)** were tie-breaker samples after repeat-inconclusive rapid antibody testing.

9,215 (95%) of 9,689 samples were collected using Dried Blood Spot (DBS); **472 (5%)** were collected directly in the device cartridge for Point of Care Machines (POCs) and **9 (<1%)** were collected using other methods, e.g. plasma.

Results were received at the facility for **8,653 (89%)** of the 9,696 samples collected; for **1,028 (10%)** of all samples the result missing or still pending 12 weeks after the samples were collected. **25 (<1%)** samples were rejected at the lab due to poor quality or analysis failure. **39%** of patients were notified of their result within 4 weeks of sample collection, **14%** were notified within 5-8 weeks and **3%** within 9-12 weeks. **4,269 (44%)** patients were either notified after 12 weeks or the notification was still pending. **8,589 (99%)** of **8,653** samples with results were conclusive and **64 (1%)** were inconclusive. Out of the conclusive test results, **8,243 (96%)** were negative and **346 (4%)** were positive.

The analysis for the **10 central PCR laboratories** was not possible for this report due to an error in the Lab Information Management System (LIMS) which led to many critical data gaps and misclassification of results.

7 Blood Safety

The Malawi Blood Transfusion Service (MBTS) is striving to provide safe blood products for the entire country using voluntary non-remunerated donors and quality assured screening for transfusion transmissible infections (TTIs). For the last years, MBTS has not been able to meet the national demand and several hospitals continue to supplement or rely entirely on blood units collected from replacement donors. Complete reports from MBTS have been available throughout, but blood safety reports from health facilities have not been consistently available and it has been challenging to compile national reports relying on the data passively submitted by the sites. Therefore, the HIV program supervision teams were tasked with active collection of blood donor and cross-matching data from all visited health facilities. Some of the visited laboratories were not using the standard MOH registers and the aggregation of data for reporting may have been affected by incomplete documentation at some sites.

A total of **22,902** blood units were collected in Malawi during Q3 2021. MBTS collected **21,108** (**92%)** of these, **100%** of which were screened comprehensively for the relevant TTIs (HIV, Hepatitis B, Hepatitis C, syphilis, malaria). In addition, **50** hospitals in Malawi collected a total of **1,794** units from replacement donors. **1,271 (71%)** of these units were screened for at least the 3 key TTIs (HIV, HepB and syphilis) and **1,178 (71%)** of these were also screened for HepC and malaria. This means that a total of **22,379 (98%)** of all units collected this quarter were screened at least for HIV, HepB and syphilis. Based on the blood donor registers at the sites that collected blood from replacement donors, **523** were screened with any other combination of tests for TTIs.

A total of **2,528** potential replacement donors were documented in the blood donor registers at the facilities and **1,794 (71%)** of these ended up donating. Facilities may have used different screening algorithms and potential donors may have been excluded on the basis of different criteria, including TTIs, blood group, haemoglobin concentration and/or clinical conditions. Testing for less prevalent TTIs may have only been carried out for donors who passed the screening for more common conditions. In total, 83% of potential donors were tested for HIV, 83% for HepB, 83% for syphilis, 84% for malaria and 57% for HepC. Detailed data on outcomes of individual tests among all potential blood donors are presented in the Appendix

8 Preventive Services

8.1 Pre-Exposure Prophylaxis (PrEP)

PrEP roll-out has started at several implementing partner supported facilities in Q4 2020, and the supervision team included a review of PrEP client cards and registers for the first time this quarter. The reporting was affected by some gaps in the primary records and the data abstraction process. **98** sites had registered at least one client during 2021 Q2 reporting period.

8.1.1 Assessment of potential PrEP clients during Q3 2021

A total of **3,201** individuals were assessed for PrEP provision after a negative HIV test result in Q3 2021. **3,151 (98%)** were assessed for Acute HIV Infection (AHI) and **41 (1%)** of the 3,151 clients were suspected with AHI.

3,023 (94%) of 3,151 potential PrEP clients had their samples collected for creatinine clearance at the nearest lab. **465 (15%)** of the 3,023 clients had their results available by the end of Sepetember 2021. **68 (15%)** of 465 had a <60 ml/min clearance and were not eligible to be initiated on PrEP.

819 (26%) of 3,201 potential clients were tested for Hepatitis B and **18 (2%)** of the 819 clients had a positive Hep B test result, and these were supposed to be referred to Hepatitis B program for assessment before initiating PrEP.

181 (6%) of 3,201 assessed potential clients were not eligible and were excluded from proceeding to start PrEP. **36 (20%)** of the 181 clients were excluded based on the initial HIV positive result, **26 (14%)** had AHI suspicion,**113 (63%)** were assessed to have low HIV risk and **6 (3%)** had suspected kidney failure.

3,020 (94%) were eligible to start PrEP after the assessment and **2,666 (88%)** out of 3,020 agreed to start PrEP. 354 (12%) refused to start PrEP due to various reasons.

8.1.2 PrEP Registrations during Q3 2021

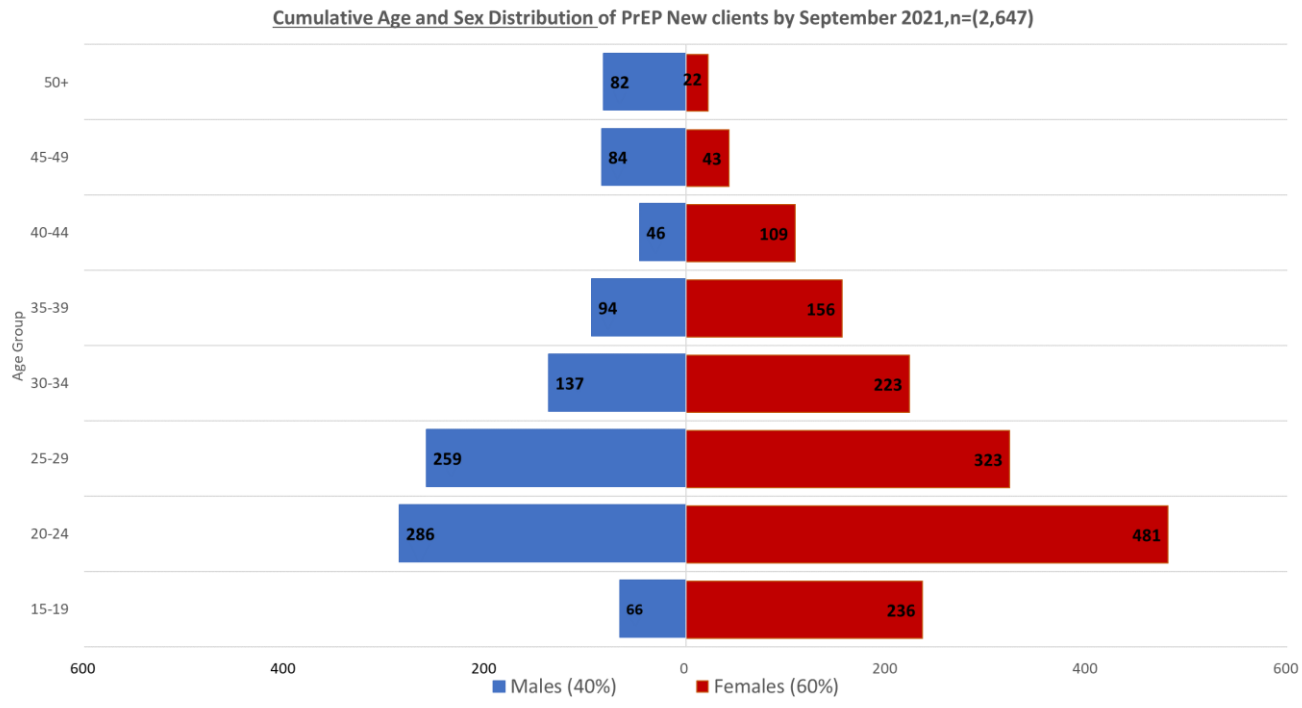
Out of 2,666 people enrolled to start PrEP, **39%** were males and **61%** were females. **54%** of males were circumcised and **13 %** of the females were pregnant and breastfeeding. The 2,666 PrEP registrations include the **2,654 (99%)** clients newly initiating PrEP, but also **17 (<1%)** clients previously started on PrEP who transferred between sites and **2 (<1%)** clients who re-initiated PrEP after dose interruption.

8.1.3 Cumulative PrEP Registrations up to September 2021

By the end of September 2021, there were a cumulative total of **5,904** PrEP clinic registrations, **4,695 (99%)** of whom were patients newly initiated on PrEP; **44 (1%)** were patients who transferred between clinics; **11 (<1%)** re-initiated PrEP after dose interruption. Out of all registrations, **33%** were males and **67%** were females.

Figure 7 below shows the distribution of all the cumulative PrEP new initiations by end of September 2021. Out of **2,647** cumulative new PrEP clients, **1,054 (40%)** were for males and **1,593 (60%)** for females**. 33%** of the males were adolescent boys and young men 15-24 years and 67% were adults 25 + years. **717 (45%)** of 1,593 of the females were adolescent girls and young women 15-24 years and **55%** were adults 25+

Figure 7

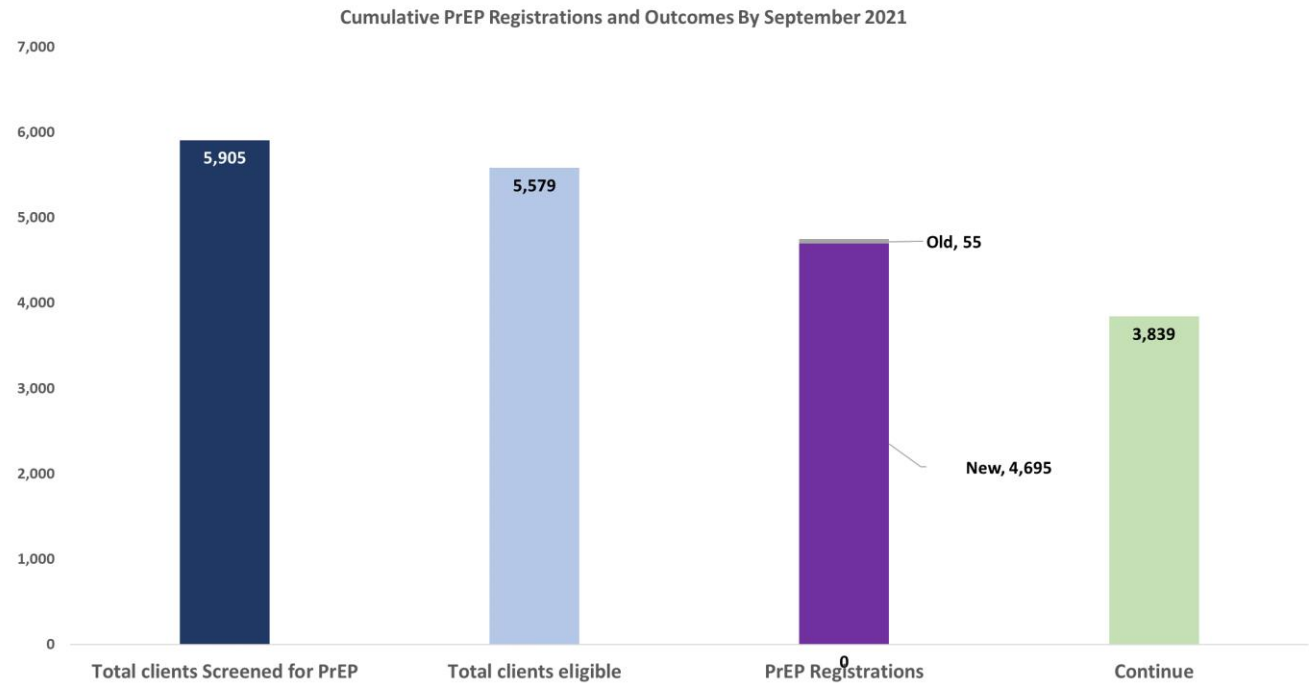


8.1.4 PrEP Cascade by end of September 2021

Figure 8 below shows the PrEP cascade with the cumulative registrations and outcomes. Out of the **5,905** clients who were cumulatively assessed for PrEP, **5,579 (94%)** were eligible to

start PrEP. **326 (7%)** clients were not eligible and were excluded from receiving PrEP[10]. Out of the 5,579 eligible clients, 4,750 (85%) were enrolled on PrEP out of which **4,695 (99%)** were newly initiated and **55 (<1%)** were re-initiations and transfer-ins on PrEP. **3,839 (81%)** clients were retained on PrEP by the end of September 2021

Figure 8



8.1.5 PrEP primary follow -up outcomes

Out of the 4,750 individuals ever initiated on PrEP, **3,839 (81%)** were retained on PrEP, **911 (19%)** were lost to follow-up and **12 (<1%)** were known to seroconverted ,**63 (2%)** were advised to stop by the provider due to low HIV risk after follow-up visit assessment, **153 (3%)** had quit PrEP. None of the clients initiated on PrEP were known to have died.

8.1.6 PrEP Current during 2021 Q3

3,338 individuals, inclusive of those newly enrolled received PrEP in Q3 2021. **1,219 (37%)** of these were males and **2,119 (63%)** were females. **782 (41%)** out of 1,885 had the HIV testing result received when they presented for their three-month follow-up PrEP visit and 77 **(10%)** had a positive result.

8.2 Post Exposure Prophylaxis (PEP)

A total of **4,869** persons received PEP during Q3 2021. This is a 3% increase from the previous quarter (3,946).

[10] The 157 excluded non eligible clients include 82 (52%) with low HIV risk, 60 (38%) with initial HIV positive result, 12 (8%) with suspected acute HIV infection and 3 (2%) with suspected kidney failure

8.3 Provider-Initiated Family Planning (PIFP)

The Integrated Clinical HIV Guidelines encourage health workers to routinely provide condoms to all adults in ART clinics. Women should also be offered at least the standard injectable contraceptive (Depo-Provera) at any ART visit. This policy aims to address the significant unmet need for family 2 planning that had been observed among HIV patients in Malawi and to reduce the number of unwanted pregnancies among HIV-infected women (***PMTCT Prong 2***). HIV program reporting on PIFP is limited to women who received an injection of Depo-Provera in ART clinics during the last quarter. The report does not account for family planning need, nor does it include women who accessed family planning services outside of HIV clinics.

Table 5 shows that **73,484 (16%)** of 460,528 women received Depo-Provera from ART clinics in Q3 2021. The south-west zone had achieved the highest coverage. Patient coverage has decreased from last quarter's 15%. **416 (54%)** of 767 ART/PMTCT sites had stocks of Depo-Provera in July 2021. This is an increase from the 518 sites with stocks in January 2021.[11] The HIV Program is no longer supplementing FP supplies through procurement and distribution of additional Depo-Provera to sites.

8.4 Cotrimoxazole Preventive Therapy (CPT) and hypertension screening

All patients in HIV care are universally eligible for CPT in order to reduce the frequency and severity of several HIV-related diseases. Patients with confirmed HIV infection are provided lifelong CPT in ART clinics. CPT is also given to HIV exposed children until exposure to breast milk has stopped and HIV infection has been ruled out (usually around age 24 months). Fewer than 5% of patients are expected to require stopping of CPT due to toxicity, so the targeted CPT coverage is around 93%.

Table 5 shows that **666,765 (75%)** of 887,338 patients on ART were on CPT. Coverage was highest in Central East zone at **83%.**

684,143 (77%) of 878,232 patients on ART were estimated to be 30 years or older. National guidelines require screening for hypertension for all adults (30 years +) at the time of ART initiation and annually thereafter. **148,022 (22%)** of 684,143 were screened for hypertension at least once in 2021.

8.5 TB Preventive Therapy (TPT)

Following on from the 2016 policy of providing continuous isoniazid preventive therapy (IPT in the 5 districts with the highest TB burden (Lilongwe, Blantyre, Chiradzulu, Thyolo, Zomba) the national roll-out of a limited course of TPT for patients in all districts was started from 2019. The 2019 guideline addendum provides TPT for all new and existing patients on ART who have not previously completed at least 6 months of IPT. Implementation was planned in two phases to utilize remaining stocks of isoniazid and bridge the period until sufficient stocks of rifapentine were available in country to transition to the short course 3HP regimen (12 weekly doses of isoniazid and rifapentine).

[11] Many Mission hospitals do not provide family planning.

In line with this policy change, the programme is now also collecting data on number of ART patients newly started on IPT in each quarter. A total of **16,926** were newly started on TPT during Q2 2021. **13,161 (78%)** of these received a single 6-month course of isoniazid and pyridoxine (6H) and **3,766 (22%)** were given 12 weekly doses of isoniazid and rifapentine (3HP). Data on TPT completion will be available from the next quarters.

Table 5

Zone District	Patients on ART (all)			Women (18-49) on ART			Adults (30+) on ART		
	Total	On CPT		**Total**	Given FP*		**Total**	BP screened**	
Malawi (National)	**887,338**	666,765	*75%*	**460,528**	73,484	*16%*	**691,236**	132,320	*19%*
Northern Zone	**86,510**	69,715	*81%*	**44,899**	6,871	*15%*	**67,391**	20,560	*31%*
Chitipa	**5,646**	4,386	*78%*	**2,930**	421	*14%*	**4,398**	1,284	*29%*
Karonga	**15,262**	12,897	*85%*	**7,921**	1,169	*15%*	**11,889**	4,512	*38%*
Nkhata Bay	**11,482**	9,261	*81%*	**5,959**	948	*16%*	**8,944**	2,578	*29%*
Rumphi	**8,725**	7,328	*84%*	**4,528**	559	*12%*	**6,797**	1,314	*19%*
Mzimba North	**27,546**	22,790	*83%*	**14,296**	2,382	*17%*	**21,458**	6,367	*30%*
Mzimba South	**16,978**	12,197	*72%*	**8,812**	1,165	*13%*	**13,226**	3,970	*30%*
Likoma	**871**	856	*98%*	**452**	226	*50%*	**679**	535	*79%*
Central East Zone	**69,008**	57,310	*83%*	**35,815**	3,056	*9%*	**53,757**	8,275	*15%*
Nkhotakota	**13,644**	10,298	*75%*	**7,081**	725	*10%*	**10,629**	1,126	*11%*
Kasungu	**18,844**	15,575	*83%*	**9,780**	978	*10%*	**14,679**	3,121	*21%*
Ntchisi	**4,989**	4,276	*86%*	**2,589**	15	*1%*	**3,886**	1,180	*30%*
Dowa	**13,565**	11,775	*87%*	**7,040**	692	*10%*	**10,567**	2,084	*20%*
Salima	**17,966**	15,386	*86%*	**9,324**	646	*7%*	**13,996**	764	*5%*
Central West Zone	**183,634**	147,449	*80%*	**95,306**	13,050	*14%*	**143,051**	32,783	*23%*
Lilongwe	**114,078**	90,424	*79%*	**59,206**	7,776	*13%*	**88,867**	22,708	*26%*
Mchinji	**18,934**	14,571	*77%*	**9,827**	2,256	*23%*	**14,750**	3,797	*26%*
Dedza	**21,056**	18,138	*86%*	**10,928**	2,067	*19%*	**16,403**	4,162	*25%*
Ntcheu	**29,566**	24,316	*82%*	**15,345**	952	*6%*	**23,032**	2,117	*9%*
South West Zone	**280,411**	197,254	*70%*	**145,533**	28,349	*19%*	**218,440**	36,191	*17%*
Chiradzulu	**43,034**	26,572	*62%*	**22,335**	4,970	*22%*	**33,523**	1,976	*6%*
Blantyre	**108,333**	71,572	*66%*	**56,225**	10,014	*18%*	**84,391**	19,129	*23%*
Mwanza	**7,067**	5,197	*74%*	**3,668**	801	*22%*	**5,505**	841	*15%*
Thyolo	**58,391**	39,541	*68%*	**30,305**	6,338	*21%*	**45,487**	1,644	*4%*
Chikwawa	**31,201**	26,024	*83%*	**16,193**	2,723	*17%*	**24,306**	2,599	*11%*
Nsanje	**23,535**	19,681	*84%*	**12,215**	2,099	*17%*	**18,334**	3,402	*19%*
Neno	**8,850**	8,668	*98%*	**4,593**	1,405	*31%*	**6,894**	6,600	*96%*
South East Zone	**267,775**	195,036	*73%*	**138,975**	22,158	*16%*	**208,597**	34,510	*17%*
Mangochi	**56,642**	42,358	*75%*	**29,397**	3,431	*12%*	**44,124**	4,608	*10%*
Machinga	**32,287**	25,672	*80%*	**16,757**	1,885	*11%*	**25,152**	3,188	*13%*
Zomba	**62,173**	40,800	*66%*	**32,268**	6,577	*20%*	**48,433**	14,022	*29%*
Mulanje	**58,986**	41,413	*70%*	**30,614**	5,396	*18%*	**45,950**	7,352	*16%*
Phalombe	**34,832**	26,871	*77%*	**18,078**	2,920	*16%*	**27,134**	1,737	*6%*
Balaka	**22,855**	17,923	*78%*	**11,862**	1,948	*16%*	**17,804**	3,605	*20%*

* Given FP: Number of women (18-49 years) on ART who received a modern family planning method from their ART clinic in the reporting period.
** BP screened: Number of adults (30 years +) who had at least one blood pressure reading recorded on their patient card this calendar year.

8.6 Intensified TB Case Finding (ICF)

TB is one of the most important HIV-related diseases in Malawi and a considerable proportion of (mainly early) deaths on ART are attributed to undiagnosed TB. ICF is carried out using a standard symptom checklist at every HIV patient visit. ICF outcomes are documented on HIV exposed child, ART patient cards, but routine M&E reporting is currently limited to ART patients in order to reduce the burden of reporting secondary cohort outcomes. It is assumed that implementation of ICF is similar in exposed child follow-up.

881,384 (99%) of all patients retained on ART were screened for TB at their last visit before end of September 2021. Out of these, **3,555 (<1%)** patients were classified as new TB suspects. **3,006 (<1%)** patients were confirmed to have TB (clinical or lab based) and **2,983 (99%)** of these were on TB treatment; the remaining 41 had either not yet started or interrupted TB treatment. An excerpt from the data in the **Annex** (*Cumulative ART outcomes*) is shown below.

Current TB status among ART patients (ICF)

ICF not done (Current TB status unknown/ not circ)	5,954	1%
ICF done	881,384	99%
TB not suspected	874,823	99%
TB suspected	3,555	0%
TB confirmed	3,006	0%
TB confirmed, not on treatment	23	1%
TB confirmed, on TB treatment	2,983	99%

8.7 HIV-Related Diseases

Table 6 shows the number of patients treated for key HIV-related indicator diseases. **3,470** patients were started on TB treatment this quarter and HIV status was ascertained for **3,462(>99%)**; **1,498 (43%)** of these were HIV positive and **1,434 (96%)** of all HIV positives were already on ART when starting TB treatment. 70 patients with Kaposi sarcoma were registered for ART in this quarter.

Table 6

Number new cases of key HIV-related diseases registered per quarter (KS = Kaposi Sarcoma).

	TB				KS *
	Tot. cases	HIV status asc.	HIV positive	Already on ART	Tot. cases
2020 Q4	3,945	3,924 *99%*	1,795 *46%*	1,666 *93%*	61
2021 Q1	3,334	3,331 *100%*	1,427 *43%*	1,410 *99%*	70
2021 Q2	3,760	3,724 *99%*	1,701 *46%*	1,567 *92%*	70
2021 Q3	3,470	3,462 *100%*	1,498 *43%*	1,434 *96%*	74

9 HIV-Exposed Child Follow-Up

9.1 Methods and Definition of Indicators

There are multiple entry points into HIV exposed child follow up: children of HIV infected mothers may be enrolled at birth at maternity / postnatal ward; they may be found at Under 1 or Under 5 Clinics through active screening for HIV exposure; they may be identified when presenting sick to OPD; or they may be seen with their mothers in ART follow-up. Although the targeted enrolment age is below 2 months, children may theoretically be enrolled up to 23 months of age (when HIV infection can be ruled out by rapid antibody test and breast milk exposure is likely to have stopped).

Initial registration data and details for every visit are recorded on an *Exposed Child Patient Card* and a subset of the registration data is copied in the *HIV Care Clinic (HCC) register* (one record per patient). Registration data are reported from the HCC register on a quarterly basis. Follow-up outcomes are reported monthly, selecting children who were **2, 12 and 24 months** old in the respective reporting month. Outcomes are determined from the latest visit details recorded on each card. HIV infection status is evaluated as ***known negative*** if a negative DNA-PCR or rapid test result was available at the last visit; HIV infection status is evaluated as ***known positive*** if a positive DNA-PCR result was available at any age or a positive rapid antibody test was available from age 12 months; HIV infection status is counted as ***unknown*** if HIV infection has not been confirmed and/or a negative test result pre-dated the last visit (assuming on-going HIV exposure through breast milk). All children under 24 months with confirmed HIV infection and those under 12 months with confirmed HIV infection through DNA-PCR or HIV antibody and symptoms of *presumed severe HIV disease* are ***eligible for ART***.

The main outcome indicator for the HIV exposed child follow-up program is ***HIV-free survival at 24 months of age***. This is defined as the proportion of children who were discharged as confirmed HIV uninfected by the age of 24 months.

9.2 HIV Exposed Child Registration Data

10,653 HIV exposed children were newly enrolled into follow-up during Q3 2021; **10,198 (81%)** of these were under the age of 2 months. The total number of new enrolments (10,653) exceeds by 1,714 (16%) the total number of known HIV exposed children discharged from maternity (8,939). This apparent discrepancy may be explained by delayed enrolment of infants born in previous quarters; by double-counting of infants who transferred between sites; or by identification and enrolment of additional HIV exposed infants after birth. Overall, enrolment into follow-up for known HIV exposed infants appears to be almost complete.

The documentation of follow-up outcomes, particularly the updating of DNA-PCR results on patient cards, remained incomplete at several sites. This has led to an underreporting of ascertainment of HIV status among the 2-month-old cohort.

9.3 Birth Cohort Outcomes

There were **9,592** infants in the **2-month age cohort**. **7,412 (77%)** had received a DNA-PCR result. **89 (1%)** of these were confirmed HIV infected. An additional **21** infants were diagnosed with *presumed severe HIV disease,* which means that a total of **110** infants were eligible for

ART. **78 (91%)** of these had started ART. Out of the entire 2-month age cohort, **8,015 (93%)** were retained in exposed child follow-up, **78 (1%)** had started ART and **88 (1%)** were discharged confirmed uninfected [12]. **53 (1%)** were known to have died and **344 (4%)** had been lost to follow-up.

There were **11,255** children in the **12-month age cohort**. Current HIV infection status was known for **8,765 (78%)** children (DNA-PCR or rapid antibody test) and **178 (2%)** of these were confirmed HIV infected. **5 (<1%)** additional children had been diagnosed with *presumed severe HIV disease,* which means that a total of **183** children were eligible for ART. **173 (2%)** had started ART. Out of the entire age cohort, **8,746 (87%)** were retained in exposed child follow-up, **173 (2%)** had started ART and **75 (1%)** were discharged confirmed uninfected.[12] **990 (10%)** were lost to follow-up and **97 (1%)** were known to have died.

There were **11,870** children in the **24-month age cohort**. Current HIV infection status was known for **8,145 (69%)** children (DNA-PCR or rapid antibody test) and **256 (3%)** of these were confirmed HIV infected. **2** additional children had been diagnosed with *presumed severe HIV disease,* which means that a total of **258** children were eligible for ART. **236 (91%)** of these had started ART. Out of the entire age cohort, **302 (3%)** were retained in exposed child follow-up, **236 (2%)** had started ART and **7,534 (74%)** were discharged confirmed uninfected. **2,032 (20%)** were lost to follow-up and **142 (1%)** were known to have died.

Confirmed HIV-free survival at age 24 months in this quarter was **74%.** This was related to the fact that only **69%** in this cohort had a known HIV status. **3,725 (31%)** children were classified as '*current HIV infection status unknown'* and many of these may be among the **2,032** children lost to follow-up and the **142** children who had died. Only **302 (3%)** were retained in follow-up beyond age 24 months and a final rapid test was not available for these children, possibly due to continued breast feeding. Much progress has been made with scheduled HIV testing (and documentation of test results) at 6 weeks, 12 and 24 months of age.

10 PMTCT / ART

The implementation of ***PMTCT Option B+*** effectively integrated PMTCT and ART services already in 2011. ART may be started and continued at ANC, labour and delivery, and at ART clinics. All infants born to HIV-infected women are supposed to start daily nevirapine prophylaxis for the first 6 weeks of life. Nevirapine syrup is given to women at ANC at the earliest opportunity to take home with instructions how to give it to the new-born.

10.1 Data Sources and Reporting Methods

New standard M&E tools for ANC and maternity were implemented in January 2010 and revised in Q2 2012 to reflect the Option B+ policy. ANC and maternity clinic registers and reporting forms include patient management information and all relevant data elements for the maternal and child health and HIV programs. The ANC register was specifically designed to avoid data duplication that previously affected PMTCT reports from ANC due to the

[12] A small number of children may be rightfully discharged as 'confirmed uninfected' by 2 or 12 months of age if HIV exposure through breast milk has definitely stopped (e.g. maternal death) and a negative HIV test was obtained at least 6 weeks thereafter.

inability to account for individual women's outcomes in the course of multiple visits. The cohort reporting system is designed to aggregate women's outcome data after they have completed their ANC visits. The outcome report is completed for women who started ANC 6 months before the reporting period.

From **Q2 2015**, the PMTCT data elements (HIV ascertainment and ART status) were also added to the first section of ANC reporting form that captures women's status at their first (booking) visit. The ANC report now includes the HIV and ART status at the first visit for women starting ANC in the reporting period and the final HIV and ART status of women who had completed ANC by the end of the reporting period. This addition aims to monitor PMTCT service implementation more closely in time, allowing for corrective action in the course of subsequent visits.

Data from ANC and maternity are collated and presented separately because records do not allow identification of individual women and hence are subject to double counting if not separated.

All patients starting ART are recorded using standard program monitoring tools (ART patient treatment cards and ART clinic registers). **ART baseline data** for all patients registered are reported each quarter from ART clinic registers. **ART outcomes** of all patients ever registered are reported after reviewing the cards of all new patients and of those who were on ART at the end of the previous quarter, updating the status of patients who have subsequently died, stopped or been lost to follow-up. Secondary outcomes such as current regimen, CPT status, side effects, adherence and TB status are reported for all patients retained on ART.

ART scale-up has resulted in a growing proportion of HIV-infected women who are already on ART when getting pregnant. Implementation of *Test & Treat* will further increase ART coverage in this group. **Maternal ART coverage** is estimated from the number of pregnant women who were already on ART when getting pregnant (**maternity reports**) ***plus*** those who newly started ART when pregnant (**ART reports**).

Maternity reports capture ART status at the time of delivery (up to the time of discharge from the postnatal ward). The timing of ART initiation is categorized into: (any time) before pregnancy; during 1st / 2nd trimester; during 3rd trimester; during labour. About 97% of pregnant women in Malawi attend ANC, but only 83% of women in the general population deliver at a health facility in Malawi. Maternity reports therefore have the potential for undercounting the number of mothers and infants receiving ARVs. However, there is evidence from ANC and maternity reports that almost all the known HIV infected women deliver at health facilities.

Between 2011 and 2020, ART coverage before pregnancy was based on maternity reports. However, there have been repeated observations during supervision that women who started ART during pregnancy were systematically misclassified as "already on ART when getting pregnant" at maternity, leading to a potential overcount. Due to the very high ART coverage rates achieved in Malawi, this overcount has also become apparent in the previous Spectrum model estimates for maternal PMTCT coverage that exceeded 100%. From 2021, the number of women who had started ART before pregnancy is based on the data element "already on

ART when starting ANC" in the ANC service reports. This new method has also been used in the 2021 Spectrum model estimates for PMTCT coverage.

ART program reports capture pregnancy (and breastfeeding) status at the time of *ART initiation*, providing information on the number of new women starting ART while pregnant (or while breastfeeding). ART reports do not capture women who become pregnant after starting ART. For the estimation of maternal ART coverage, the number of women starting ART in pregnancy is **adjusted for:**

a) Double counting of women starting ART in pregnancy and subsequently transferring to another site. These women are counted multiple times as 'pregnant at the time of starting ART' in the quarterly ART cohort reports because the disaggregation of age, sex and reason for starting ART applies to all patients newly registered in the quarter, including transfers in. Separate *ART 'survival' analyses* are collected each quarter for women started under Option B+. The proportion of women transferred within 12 months of registration is used to adjust the quarterly number of pregnant women starting ART for transfers.

b) *Failed ART initiation* is thought to be the main underlying reason for early loss to follow-up among the Option B+ cohort. Patients are recorded on patient cards and in clinic registers when the first supply of ARVs is dispensed and all new entrants are counted as ART initiations in the quarterly ART cohort report. Recent operational studies indicate that most pregnant women lost to follow-up within the first 6 months never return after this first dispensing visit and many of these may have never actually started taking ART. The proportion of women lost to follow-up in the 6-month survival analysis is therefore used to adjust the number of pregnant women starting ART in the quarterly ART cohort reports for *failed initiations.*

Infant PMTCT coverage is estimated from maternity reports, based on the number of infants born to known HIV-infected women and discharged alive who started nevirapine prophylaxis.

Coverage is calculated by dividing the number of patients served by population denominators. The denominators are derived from expected pregnancies based on population projections and HIV prevalence from epidemiological surveillance (source: Spectrum model for Malawi). There are an estimated 9,551 HIV infected pregnant women in the population per quarter (1/4 of 38,202 in 2021).[13]

10.2 ARV Coverage among Pregnant / Breastfeeding Women and Exposed Infants

9,385 (99%) of the estimated 9,445 HIV infected pregnant women in Malawi this quarter were on ART. This is based on **6,751** women were already on ART when starting ANC and **2,634** [14] women who newly initiated ART in pregnancy. ART coverage was similar in the previous quarter (>99%).

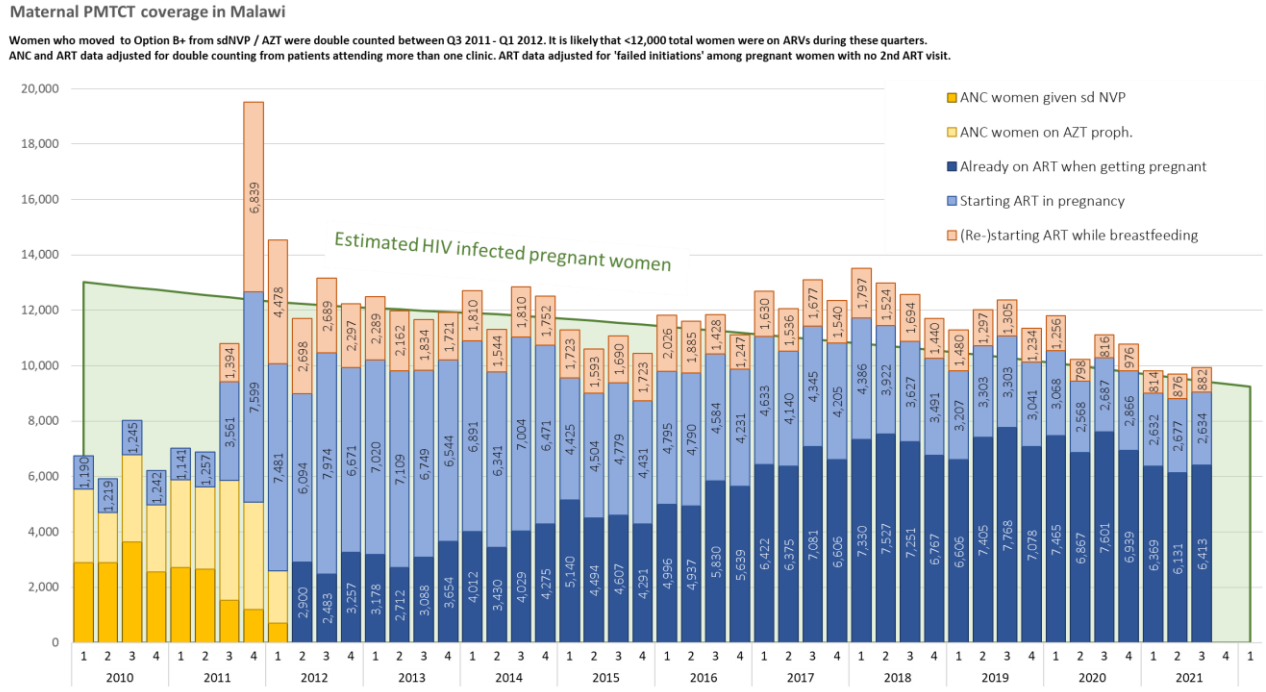
[13] 2021 Spectrum model estimates for HIV infected pregnant women in 2021.

[14] 3,622 women registered at ART clinics who were pregnant at the time of starting ART; a) 18.1% are discounted to adjust for double-counting of transfers based on 855 of 4,719 women who transferred within 12 months of registration (12-month Option B+ survival analysis); b) 11.2% are discounted to account for presumed failed ART initiations based on 496 of 4,438 women lost to follow-up within 6 months of registration (6-month Option B+ survival analysis).

An additional **722** [15] breastfeeding women started ART while breastfeeding (in WHO clinical stage 1 or 2), bringing the total number newly started on ART while pregnant or breastfeeding to **3,256**. Most women starting ART while breastfeeding were probably identified late in maternity or early in the postnatal period, but this group may also include some women who re-initiated after interrupting ART in pregnancy. **7,905 infants** were confirmed to have started NVP prophylaxis at maternity.

Figure 9 shows the estimated maternal PMTCT coverage between 2010 and the current quarter. All program data have been adjusted for potential double-counting of women who attended more than one ANC clinic in the course of pregnancy, transfers between ART clinics and misclassification of women who initiated ART in pregnancy but were not retained at 6 months after the initiation visit (presumed "failed ART initiations"). The (less effective) single dose NVP regimen and AZT combination prophylaxis had been phased out by April 2012. The average number of pregnant women registered for ART each quarter **increased almost 6-fold** from **1,221** in the 12-month period before introduction of Option B+ to an average of around **6,500** since Q4 2011.

Figure 9



10.3 HIV Services at ANC

The full national data from ANC are presented in the **Appendix**.

[15] 882 women registered at ART clinics who were breastfeeding at the time of starting ART; reduced by 18.1% to adjust for double-counting of transfers based on 855 of 4,719 women who transferred within 12 months of registration (12-month Option B+ survival analysis). Failed ART initiations are thought to be less common among this group, so no further adjustment is made.

10.3.1 HIV Ascertainment and ART Coverage

Booking cohort:

163,446 women attended ANC for their first visit between July and September 2021. This is slightly lower than the estimated 159,536 pregnant women in the 2021 population during one quarter.[16] **156,552 (96%)** of women in this cohort had their HIV status ascertained at the first visit. Out of these, **7,998 (5%)** presented with a valid previous test result and **148,554 (95%)** received a new test. A total of **8,885 (6%)** of women were found HIV positive: **6,788 (76%)** of these from a documented previous test and **2,097 (24%)** from a new test. **8,909 (99%)** of all positives received ART: **6,751 (77%)** of these were already on ART when starting ANC; **1,862 (21%)** initiated ART at their first ANC visit and **196 (2%)** started late at 28 + weeks during pregnancy.

Outcome cohort:

160,515 women had started ANC between January and March 2021 and their outcomes were reported between July and September 2021.

157,563 (98%) of the outcome cohort had their HIV status ascertained at least once in the course of ANC. HIV ascertainment has remained consistently around 99% over the last quarters. **8,516 (5%)** presented with a valid documented previous HIV test result and **149,047 (95%)** received a new HIV test result at ANC. A total of **9,280 (6%)** women were found HIV positive. This is slightly higher than the latest Spectrum projections (5.9% HIV prevalence among pregnant women in 2021).[13]

9,230 (99%) of (known) HIV infected women were on ART by the end of ANC. This represents **>99%** coverage of the estimated 9,551 HIV positive pregnant women per quarter at the population level. Of the **9,230** ANC women who were known to receive ART **7,005 (76%)** were already on ART when starting ANC, **2,012 (22%)** initiated before 28 weeks of pregnancy and **207 (2%)** initiated during the last trimester of pregnancy. **9,250 (>99%)** of HIV infected women at ANC were on Cotrimoxazole Preventive Therapy. **9,219 (99%)** of known HIV infected women attending ANC received the infant dose of ARVs (nevirapine syrup) to take home.

10.3.2 Syphilis Screening

131,280 (82%) of women in the outcome cohort were tested for syphilis and **2,957 (2%)** were syphilis positive. The syphilis testing rate was lower than last quarter's performance of 85%

10.4 HIV Services at Maternity

The full national data from maternity are presented in the **Appendix**.

Between July and September, **145,024** women were admitted for delivery to maternity; **12,759** of these were referred to another facility before delivery, resulting in **132,265** total admissions to maternity.

[16] Estimated as ¼ of 638,145 births projected for 2021 (Demographic Projection from Spectrum 2021).

A total of **138,188** babies were born, **133,818 (97%)** were singletons and **4,370 (3%)** were twins/multiples. There were **135,537 (98%)** live births and **2,551 (2%)** stillbirths. **134,690 (99%)** of babies born alive were discharged alive and **847 (1%)** died before discharge.

10.4.1 HIV Ascertainment at Maternity

137,258 (95%) women had their HIV status ascertained at maternity. Out of these, **8,566 (6%)** presented with a valid previous HIV test result and **128,962 (94%)** received a new test. A total of **8,713 (6%)** women were HIV positive and **8,470 (97%)** of these had been previously diagnosed while **243 (3%)** received a new positive result at maternity. The **137,258** women whose HIV status was ascertained at maternity represent **86%** of the expected 159,536 women delivering in the population.
HIV exposure status was ascertained for **130,186 (97%)** out of **134,690** babies born and discharged alive. **8,939 (7%)** of these were born to a known HIV positive mother.

10.4.2 ARV Coverage at Maternity

A total of **8,713 (100%)** of known HIV infected women admitted to maternity received ART. Out of these, **8,374 (96%)** had started ART before pregnancy, **158 (2%)** initiated ART during the 1st or 2nd trimester, **59 (1%)** initiated during the 3rd trimester and **122 (1%)** initiated ART at maternity.

A total of **7,905 (88%)** of **8,939** infants who were known HIV exposed and discharged alive started daily NVP prophylaxis at maternity. This represents **83%** coverage of the estimated 9,551 HIV exposed infants born in the population in this quarter.

11 ART Access and Follow-Up Outcomes

The full national data from the ART Program are shown in the **Appendix**.

11.1 New ART Registrations during Q3 2021

By the end of September 2021, there were 767 static ART sites in Malawi. 63% of these sites were managed by government, 19% by CHAM, 5% by NGOs and 13% were private sector clinics that charge a nominal fee of MK500 per monthly prescription of drugs per patient.

Implementation of the Malawi Integrated Clinical HIV Guidelines, which adopted Option B+, started in July 2011, triggering a massive surge in new ART initiations (see Error! Reference source not found.). The new policy for universal ART eligibility ("**Test & Treat**") was introduced in **May 2016**. This policy led to an unprecedented, transient increase in ART initiations in Q3 2016 when almost all remaining pre-ART patients-initiated ART.

A total of **18,792** initiated ART for the first time in Q3 2021. From 2019 Q1, routine reporting during supportive supervision has included a disaggregation of first-time initiations by sex and pregnancy status. In Q3 2021, **18,774 (>99%)** out of 18,792 first time initiations were disaggregated by sex and pregnancy. Among these, **41%** were males and **59%** were females. Total number of pregnant women amongst first time initiating females was **2,617 (23%).**

The total number of patients newly initiated on ART represents **99%** of the 19,509 people recorded as newly diagnosed with HIV during the quarter. Among all new ART clinic

registrations[17] in Q3 2021, **40%** were males and **60%** were females. **3,704 (21%)** of the registered females were pregnant at the time of starting ART.

A total of **25,290 (87%)** of all patients registered started in WHO stage 1 or 2 and **18,516 (79%)** of these started as 'asymptomatic' under universal ART eligibility policy. **2,802 (10%)** of patients registered started in WHO stage 3 and **741 (3%)** started in stage four. **153 (1**) had no documented clinical stage at initiation.

1,891 children were registered at ART sites in Q3 2021. **453 (24%)** of these were children aged 12-59 months in WHO stage 1 or 2. **18 (<1%)** infants started ART with presumed severe HIV disease. **106** infants in WHO stage 1 or 2 started due to confirmed HIV infection through DNA-PCR. Early infant treatment has remained at about half of the estimated infected infants seen at maternity: considering that 8,939 HIV exposed infants were identified at maternity and assuming a 2% transmission rate among the 100% of HIV positive mothers at maternity who received ART (and 20% transmission in the 0% who did not receive ART)[18], only about 178 of these known HIV exposed infants may have been infected perinatally during Q3 2021. However, considering the projected 454 new infant HIV infections in the 2021 population per quarter[19], early infant treatment coverage remains low at an estimated **39%** (178/454). The most significant bottleneck for early infant treatment remains the identification of HIV (probably mostly recently) infected pregnant / breastfeeding women.

589 (2%) out of all ART clinic registrations were patients with TB**: 349 (59%)** had a current and **240 (41%)** recent history of TB**. 74 (<1%)** of patients registered had Kaposi's sarcoma.

11.2 Cumulative ART Registrations up to September 2021

By the end of September 2021, there were a cumulative total of **1,948,873 ART** clinic registrations, **1,539,775 (79%)** of whom were patients newly initiated on ART; **382,344 (20%)** were patients who transferred between clinics; **26,754 (1%)** re-initiated ART after treatment interruption. Out of all registrations, **37**% were males and **63**% were females, **92**% were adults and **8**% were children (<15 years).

11.3 ART Outcomes

887,338 patients were alive on ART by the end of September 2021. This is equivalent to **90% ART coverage** among the estimated 986,654 HIV positive population in Malawi in 2021 and it means that the revised national ART scale-up target[20] for September 2021 (88% coverage) has been achieved.

Unlike in previous quarters, an adjustment for patients who were in transit between sites by the end of the quarter cannot be made due to the large-scale reclassification of registration status and outcomes in the context of active tracing initiatives described below.

[17] These proportions include the 18,792 patients newly initiating ART, but also 9,958 patients previously started on ART who transferred between sites and 254 patients who re-initiated ART after treatment interruption.

[18] UNAIDS Reference Group on Estimates Modelling and Projections (2011). Working paper on mother-to-child-transmission rates for use in Spectrum. Geneva, UNAIDS.

[19] ¼ of the 1,817 estimated new infant infections in the population in 2021 (2021 Malawi Spectrum model)

[20] End of 2019 baseline and subsequent targets from the 2020-2025 National Strategic Plan for HIV.

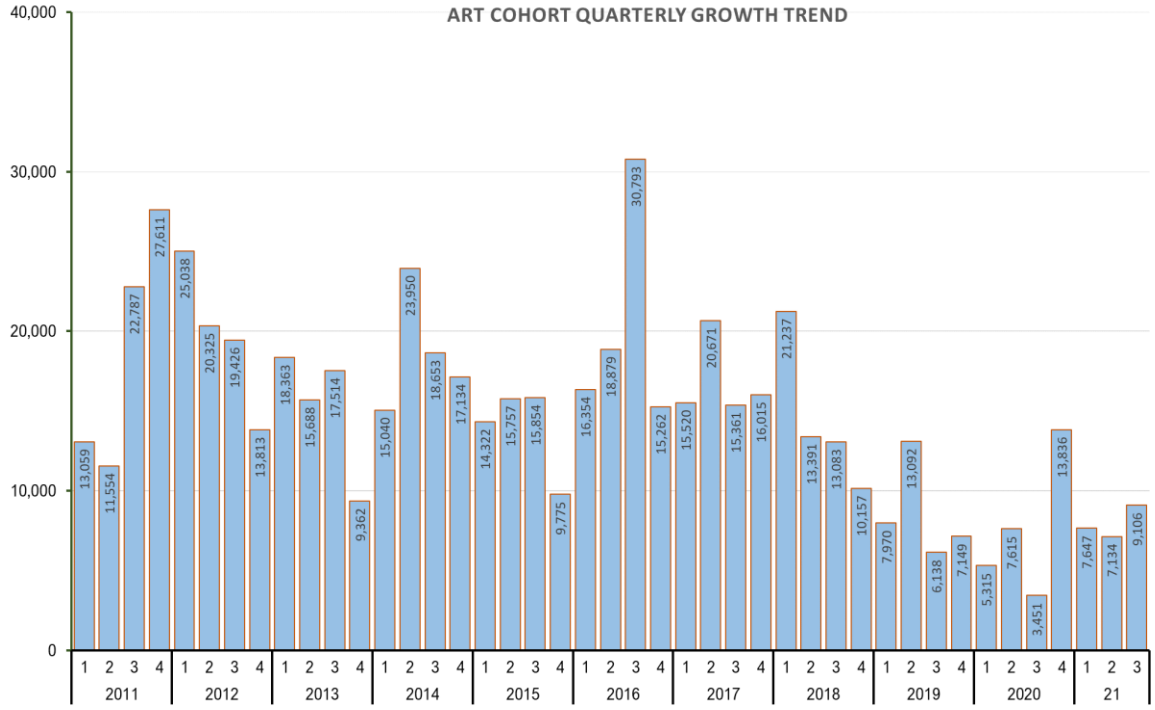
Out of the 1,948,873 patients ever initiated on ART, **887,338 (46%)** were retained alive on ART, **138,732 (7%)** were known to have died, **417,706 (21%)** were lost to follow-up and **14,990 (<1%)** were known to have stopped ART.

An estimated **844,834** adults and **42,504** children (<15 years)[21] were alive on ART by the end of September 2021. This represents **78%** (42,504/ 54,686) and **89 %** (844,834/ 931,968) ART coverage among children and adults, respectively.

11.3.1 ART Outcomes Trend

Figure 10 shows the net increase of patients alive on ART by the end of each quarter. The number of patients retained on ART increased by **9,106** between July and September 2021. This was 21% higher than the net growth in the previous quarter (7,134).

Figure 100



11.3.2 Differentiated Service Delivery (DSD)

Data on ART dispensing and appointment intervals was available for 728 (95%) of 767 ART sites with EMR (both PoC and eMastercard), covering **846,799 (95%)** of 887,338 patients retained alive on ART. Only **12%** of these received ARVs for less than 3 months (presumably as they had recently started ART or were unstable), **46%** for 3-5 months and **372,682 (42%)** received ARVs for ≥6 months. As a social distancing measure during Covid-19, the DHA recommended an enhanced implementation of 6-month ARV dispensing for almost all patient groups as one way of decongesting the facilities. **Figure** below shows the distribution of the 728 ART facilities by proportion of patients who were given 6 months ARVs at their last recent visit during Q3 2021. This shows that implementation of 6-month dispensing was wide-

[21] The total national number of ART patients with current age <15 years is extrapolated from the (4.8%) of all patients at EMR sites who were <15 years at the end of Q3 2021.

spread; **183 (25%)** of the 728 facilities had given ≥6 months of ARVs to more than half of their patients.

Figure 11 Number of ART sites by proportion of patients who received 6 months of ARVs at their last clinic visit

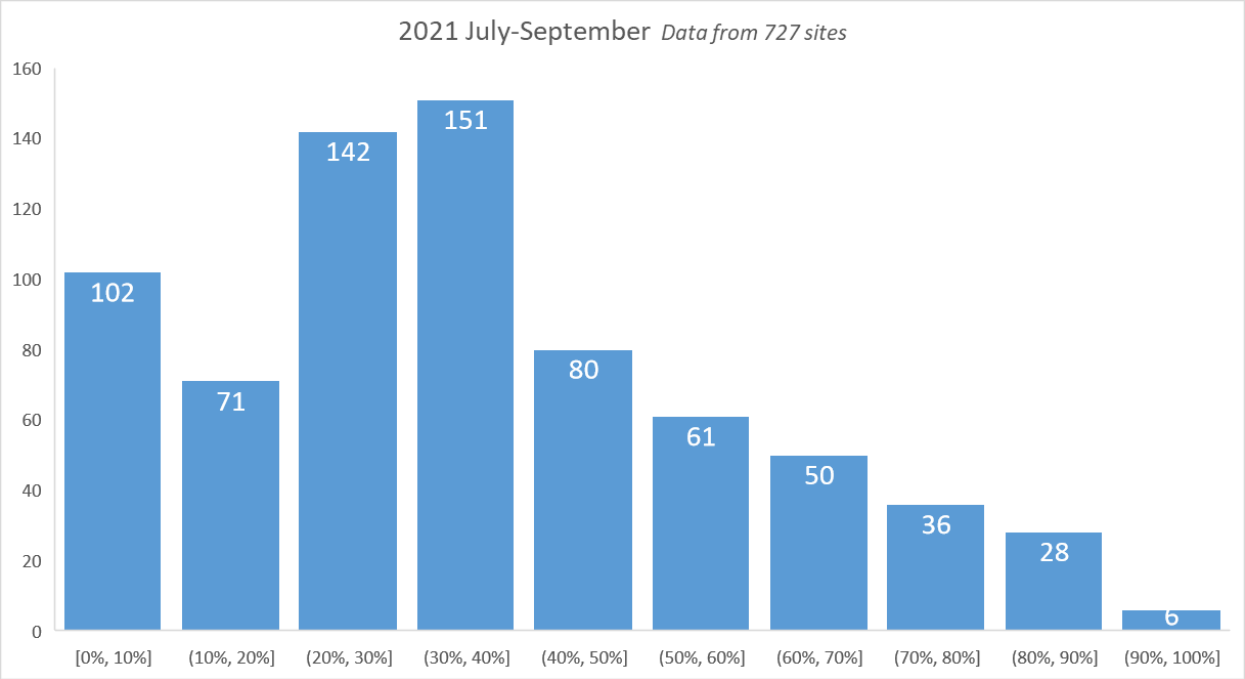


Figure below shows the distribution of the ART dispensing and appointment intervals by district. Chiradzulu,Likoma,Ntcheu,Zomba and Blantyre had given 6-month dispensing appointments to more than half of their patients while 6-month dispensing coverage was only around 20% in Nkhatabay and Nsanje. Uptake of 6-month dispensing was lowest in Neno at 17%.

Figure 12

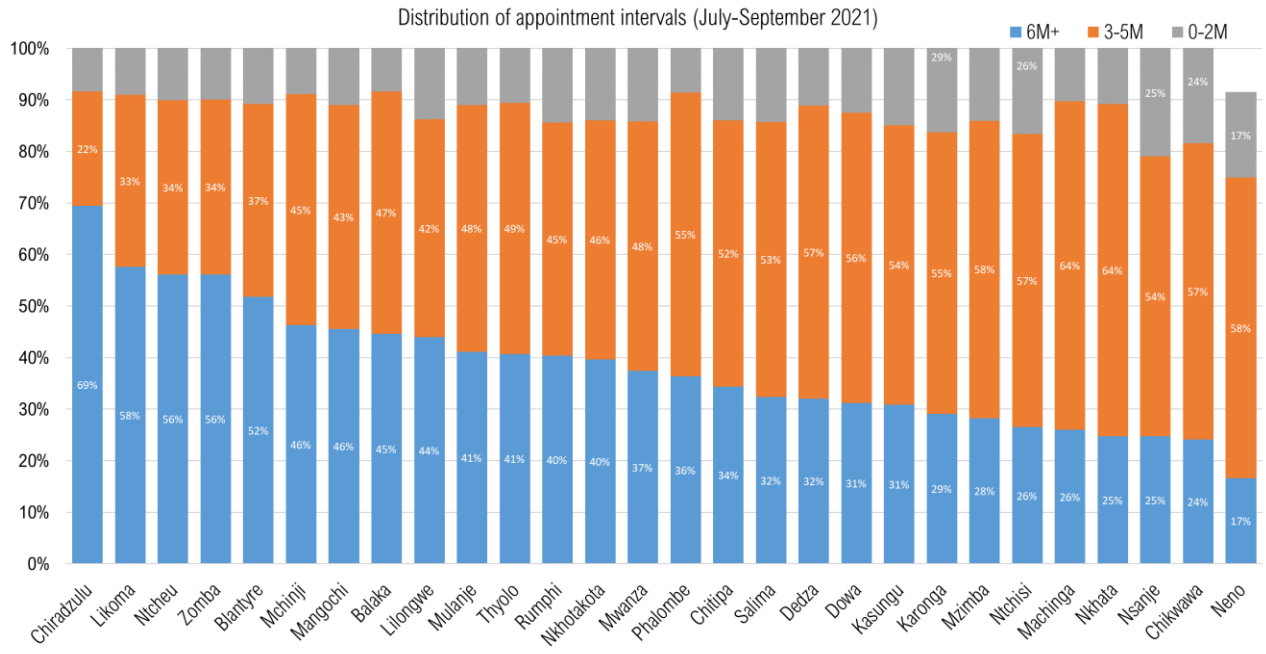


Figure 13: Patients alive on ART at the end of each quarter, stratified by size of facility (number of patients alive on ART)

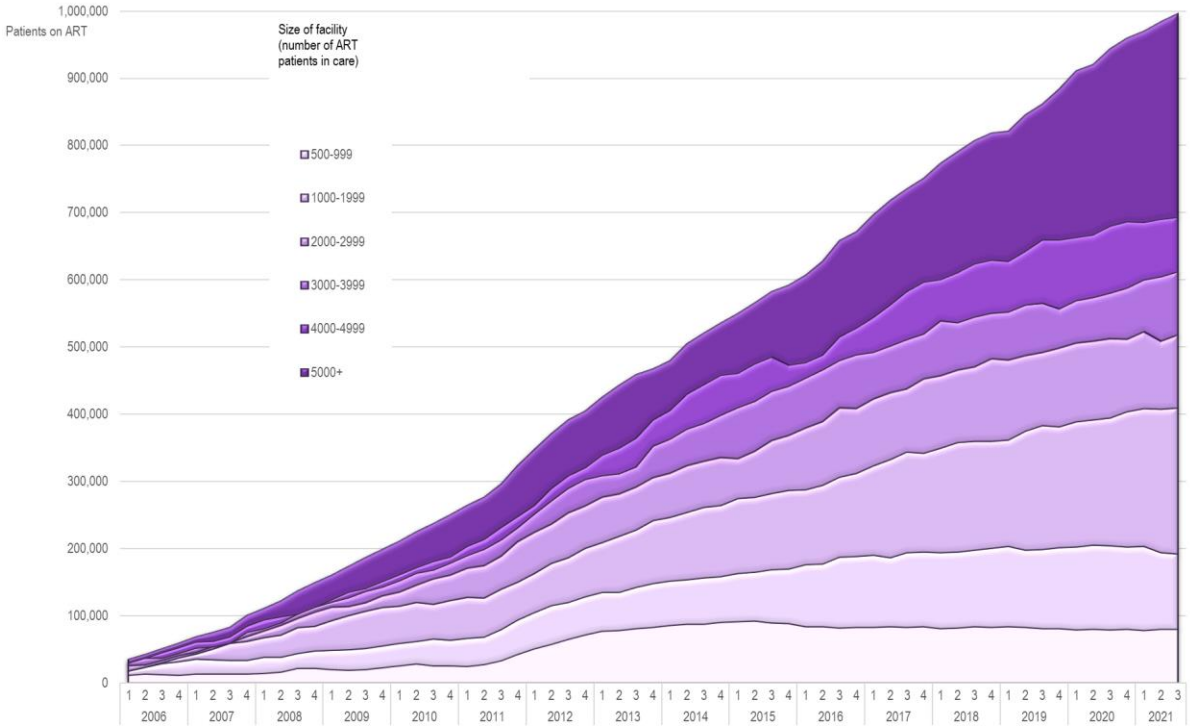


Figure 3 shows the decentralization of Malawi's ART program that followed the opening of over 300 new ART sites with the introduction of Option B+ in Q3 2011. During 2012 and 2013, the greatest increase in ART patient numbers was seen at sites with fewer than 500 patients alive on ART. However, patient numbers at the high and ultra-high burden sites have continued to increase considerably in the more recent quarters. By the end of September

2021, **43%** of the national ART patient cohort was in care at sites with fewer than 2,000 patients.

There have been considerable decrease of ART drop-out rates since the start of the national program, most of which was contributed by reduction in mortality. Quarterly defaulter rates appeared to have stabilized around 1.8% over the last 5 years, but the calculated attrition rates have fluctuated considerably since 2019. These changes are mainly explained by active tracing efforts organized by implementing partners that have resulted in many patients who were previously reported as LTFU being re-classified as "transferred out" or "died". Previous active tracing efforts were usually unable to track down patients who were lost more than a few months ago and it is difficult to confirm the validity of this recent large-scale reclassification of follow-up outcomes at the program level.

However, this quarter there has been a decrease in the calculated defaulter rate (-0.43%) from 0.31% in 2021 Q2. Loss to follow-up ('defaulters') include undocumented 'silent' transfers, undocumented mortality and patients actually stopping treatment. Efforts to harmonize strategies for patient retention are currently ongoing, including national standard operating procedures (SOPs) and tools for linkage and retention aiming to better track patients who miss appointment and document outcomes.

At national level, there were **2,372** net new deaths, **-3,744** net new lost to follow-up and **467** net new confirmed stops in Q3 2021. This translates into a quarterly death rate of **0.27%** and a defaulter rate of **-0.43 %** among the patients alive and on treatment in this quarter.

11.4 ART Cohort Survival Analysis

A 12 month **'cohort outcome survival analyses** was conducted for patients registered in Q3 of 2020, respectively. A separate 12-month cohort outcome analysis was conducted for children who were under 15 years at the time of ART initiation and who registered for ART in Q3 2020. A further subgroup analysis was done for women who started ART while pregnant or breastfeeding (Option B+).

79% of adults and **81% of children** were retained alive on ART after 12 months on treatment. 12-month retention rates were higher for adults (76%) and children (77%) in the previous quarter. These programmatic monitoring results remain below the WHO target of 85%, but actual retention rates are thought to be about **10%** higher due to this misclassification of 'silent transfers' as 'defaulters' in clinic-based survival/retention analysis. A population-based study in Karonga district with individual linkage showed that **92%** of patients started in 2011-2012 were retained after 12 months on ART while routine monitoring data showed **79%** retention rates for the same period.[22]

6-month group cohort survival outcomes were known for **4,438** women registered as having started ART under Option B+ in Q1 2021. This is 19 more than the number of women

[22] Koole, O., Houben, R. M. G. J., Mzembe, T., Van Boeckel, T. P., Kayange, M., Jahn, A., Crampin, A. C. (2014). Improved retention of patients starting antiretroviral treatment in Karonga District, northern Malawi, 2005-2012. Journal of Acquired Immune Deficiency Syndromes (2014), 67(1), e27–33. doi:10.1097/QAI.0000000000000252

registered under Option B+ in the quarterly cohort analysis in Q3 2021. This discrepancy is likely due to errors in data abstraction.[23] The 4,438 women in this cohort survival analysis include 629 (14%) women who transferred between sites. These transfers are double counted and discounted from the denominator (3,809) from the calculation of retention rates.

3,285 (86%) women in this cohort were retained at 6 months after registration. Of those not retained, **496 (95%)** were lost to follow-up, **9 (2%)** were known to have stopped ART and **19 (2%)** were known to have died.

12-month group cohort survival outcomes were known for **4,719** women registered as having started ART under Option B+ in Q3 2021. This is 22 higher than the number of women registered under Option B+ in the quarterly cohort analysis in Q3 2020. This discrepancy is likely due to errors in data abstraction.[24] The **4,719** women in this cohort survival analysis include 855 (18%) women who transferred between sites. These transfers are double counted and discounted from the denominator (**3,864**) for the calculation of retention rates.

3,069 (79%) of women in this cohort were retained at 12 months after registration. **749 (94%)** of those not retained were lost to follow-up, **16 (2%)** were known to have stopped ART and **30 (4%)** were known to have died.

6 month survival OptionB+

Survival and retention in ART program *

ART cohort registration group outcomes

Total ART clinic registrations	5,532	100%
Transfers out (double counted)	680	12%
Total not transferred out (patients in cohort)	4,852	88%
Total alive on ART	3,842	79%
Total not retained	1,010	21%
Defaulted	944	93%
Stopped ART	36	4%
Died	30	3%

12 month survival OptionB+

Survival and retention in ART program *

ART cohort registration group outcomes

Total ART clinic registrations	6,050	100%
Transfers out (double counted)	1,068	18%
Total not transferred out (patients in cohort)	4,982	82%
Total alive on ART	3,723	75%
Total not retained	1,259	25%
Defaulted	1,177	93%
Stopped ART	53	4%
Died	29	2%

[23] Group cohort survival analyses were not available from some sites with electronic data systems. 'Reason for starting' may be reclassified for some patients, leading to minor inconsistencies in patients included in group cohort survival analyses.

[24] Group cohort survival analyses were not available from some sites with electronic data systems. 'Reason for starting' may be reclassified for some patients, leading to minor inconsistencies in patients included in group cohort survival analyses.

11.5 Secondary outcomes of patients retained on ART

878,232 patients who were alive on ART and remained registered at their facilities have documented secondary outcomes.

ART Regimens

874,993 (99%) of patients were on NNRTI- or INSTI-based regimens. Due to the ongoing routine transition of patients from PI-based to DTG-based second line, the number of patients on PI-based 2nd line ART decreased by **1,444** from 4,412 in the previous quarter to **3,269 (<1%)** by the end of Q3 2021. **542 (<1%)** patients were on non-standard regimens. Non-standard regimens are not necessarily substandard regimens and include patients continuing an ART regimen that was started outside Malawi, patients in research programmes and patients in specialist care.

Among patients on NNRT- or INSTI-based regimens, **10,394 (1%)** were on paediatric formulations. Most of these had transitioned from the previous standard first line for children; only **321 (3%)** remained on regimen 2P: AZT/3TC/NVP. A total of **4,277 (41%)** were on regimen 15PP: ABC/3TC+DTG. **840,657 (97%)** patients on adult formulations patients on 1st line ART were on the new standard first/second line regimen **13A (tenofovir / lamivudine /dolutegravir)** and only **2,450 (<1%)** remained on regimen **5A** (tenofovir / lamivudine / efavirenz).

Adherence to ART

Completeness of adherence reporting has remained very high: **869,568 (98%)** of all patients retained in care had the number of missed doses documented at the most recent visit before end of the quarter evaluated. The classification of adherence levels is based on a combination of physical pill counts and self-reported number of doses missed in the last dispensing interval. **643,274 (74%)** of patients with documented adherence were classified as >95% adherent. The implausibly low proportion with good adherence is inconsistent with the high viral suppression rates in the overall cohort. The classification of 95% adherence based on pill counts has been affected by the long dispensing intervals that are now given to most patients. Therefore, manual and EMR-based classification of dose-adherence may be less reliable.

ART Side Effects

869,568 (98%) patients on ART had information on drug side effects documented at their last clinic visit before end of September 2021. **3,536 (<1%)** of patients with information had documented side-effects. The prevalence of side effects had stabilized at low levels following the full transition to regimen 5A (tenofovir / lamivudine / efavirenz) that started in July 2013 and has declined further following the transition to DTG-based regimens.

11.5.1 Viral Load (VL) Monitoring

Routine VL monitoring for patients on ART was introduced in 2012 and the number of patients receiving VL testing has increased considerably over the last few quarters. The programme revised the routine VL monitoring schedules from bi-annual to annual and this means the schedules are at 6 months and 12 months after ART initiation and every year thereafter.

11.5.2 Facility data from VL Sample Logbooks and High VL Registers

Facility VL registers were designed to facilitate tracking of samples and results and to improve appropriate follow-up action on high VL results.

214,546 VL samples were drawn in the reporting period and documented in the facility sample logbook. **187,645 (87%)** of these were for routine/scheduled VL monitoring; **20,619 (10%)** were extra-schedular and **6,282 (3%)** were replacements of lost samples. **14%** of the extra-schedular samples were targeted (suspected treatment failure) and **86%** were follow-up samples after an initial high VL.

Routine reporting of VL results and patient management outcomes is based on a cohort analysis of samples registered 6 months before the reporting period, assuming that all results and follow-up outcomes are complete after this period.

Final Results from Sample Logbooks

161,667 samples were drawn by facilities between January and March 2021 and outcomes were documented for **all** of these samples. **33,601 (21%)** results were received at the facility within 4 weeks of sample collection; **35%** were received between 5-8 weeks and **22%** between 9-12 weeks. The remaining **22%** were received after 12 weeks or were still missing. **9%** of patients were notified of their result within 4 weeks of sample collection, **14%** were notified within 5-8 weeks and **21%** within 9-12 weeks. **90,744 (56%)** of 161,667 were either notified after 12 weeks or the notification was still pending. **96%** of the results were printed in the lab and delivered at the facility and **4%** were electronically transmitted (including point-of-care device results).

141,216 (87%) of samples produced valid VL test results. **2,236 (1%)** samples were rejected, or the results were invalid and **18,216 (11%)** of samples had outstanding or missing results. **131,342 (93%)** results were suppressed below 1000 copies/ml and **9,874 (7%)** were high (≥1000 copies/ml).

Outcomes from High VL Registers

Between July and September, **11,435** high VL results (≥1000 copies/ml) were received at facilities and entered in the High VL Registers. **10,187 (89%)** of these were from routine monitoring samples, **970 (8%)** from targeted samples and **278 (2%)** from repeat samples. **8,270 (72%)** patients had completed intensive adherence support by September 2021 and follow-up samples were drawn for **6,964 (61%).** Valid results were recorded for **5,187 (74%)** of follow-up samples and **71%** of these were re-suppressed (<1000 copies/ml).

A final treatment decision was available for **5,109** high VL patients. **4,661 (91%)** were maintained on the current regimen, **395 (8%)** were switched to second line and **53 (1%)** were referred to HIV specialist.

The overall patient-level impact of the VL monitoring program remained sub-optimal this quarter. The HIV program is planning targeted interventions to reduce turn-around times and to improve health worker capacity for appropriate patient management based on VL results. However, following the mass-transition to DTG-based regimens, there are also

implementation challenges with the policy of obtaining a genotype resistance test for all patients with a non-suppressed follow-up VL results on DTG- and PI-based regimens.

11.5.3 VL Data from the Laboratory Information Management System (LIMS)

The number of VL results produced decreased from 137,039 in 2021 Q2 to **134,170 in Q3 2021**. Malawi now has a total of **13** PCR platforms in **10** molecular labs. All labs used the MOH lab information management system (LIMS) for registration of samples and storage of results. The Diagnostics Department is also piloting the use of point-of-care (POC) VL machines at 10 facilities and the validation results are currently being analysed. The POC data are not included in this report. The following results are based on an analysis of exported LIMS data.

134,170 VL results were dispatched from the labs to **646 sites** between July and September 2021. **67 sites** accounted for half of all results released this quarter.

21,411 (16%) of 134,170 samples processed were plasma and **112,759 (84%)** were DBS.

Lab	Samples Processed			Turn-around Time (Days)§
	Plasma	DBS	Total	
DREAM Blantyre	831	12,231	**13,062**	35
DREAM Balaka	330	13,858	**14,188**	24
Kamuzu CH	8,877	16,294	**25,171**	49
Mzimba DH	0	7,980	**7,980**	40
Mzuzu CH	0	6,285	**6,285**	29
Nsanje DH	0	11,511	**11,511**	35
Partners in Hope	1,645	3,933	**5,578**	30
QECH	3,352	7,511	**10,863**	54
Thyolo DH	0	9,900	**9,900**	62
Zomba CH	6,376	23,256	**29,632**	22
Total	**21,411**	**112,759**	**134,170**	**34**
§ Median days between sample collection and printing of results in lab				

Partners in Hope, Zomba CH, Kamuzu CH and DREAM Blantyre produced 58 % of all VL results. The median interval between sample collection and printing of results was **34 days** at the national level, ranging from **22 days** at Zomba CH to **54 days** at QECH. The most significant delays occurred between sample receipt and process run in the lab (median 21 days), while on average only 6 days elapsed between samples draw and sample receipt in the lab. The overall system capacity remains challenged by the high number of samples and competing priorities as the same labs are also handling the Covid-19 samples.

102,253 (76%) of VL results released this quarter were classified as *routine scheduled* [25]. This is **46%** of the estimated 221,835 ART patients passing a VL monitoring milestone this quarter. **27,395 (20%)** of samples were classified as *targeted (suspected treatment failure / repeat)* and for **4,252 (4%)** the reason for the sample was 'other' or not specified. **93% (95,002)** of patients with a routine viral load result this quarter achieved viral suppression <1,000 copies/ml. This mean the target for the "3rd 95" was slightly missed.

[25] In addition to the reason specified on the lab form, samples were re-classified as 'follow-up' if another sample from the same patient was analysed within 1 year before the current one.

Viral suppression rates were significantly lower for routine samples among children (0-9 yrs: **69%**) and adolescents (10-19 yrs: **79%**) compared with adults in the age groups 20-29, 30-39, 40+ years who had viral suppression rates of **91%**, **93%** and **95%**, respectively. 93% of routine VL samples were from adults 20+ years. Patient age was not recorded for 2,275 (2%) of routine samples.

Reason	*Suppressed*		*Low-Level Viraemia*		*Viraemia 1000+*		*Total*
Routine	82,729	**81%**	12,273	**12%**	7,521	**7%**	**102,523**
Targeted	19,144	**70%**	4,591	**17%**	3,661	**13%**	**27,396**
Other/unk	2,971	**70%**	801	**19%**	479	**11%**	**4,251**
Total	104,844	**78%**	17,665	**13%**	11,661	**9%**	**134,170**

17,665 (13%) VL results were classified as low level viraemia (200-999 copies/ml for plasma samples: <839 copies/ml or 840-999 copies/ml for plasma samples). Based on the 2019 national HIV guidelines addendum[26] these results are interpreted as potential treatment failure and therefore in need for enhanced adherence support and a repeat VL sample collection after 3 months. **3,661 (13%) of 27,396** of targeted VL results were ≥1000 which is indicative of treatment failure and a potential indication for switching to 2nd line regimens.

The **27,396** targeted VL results this quarter exceed the 25,390 routine VL results ≥1000 copies/ml from the previous quarter by 3% and this can be attributed to the inclusion of patients with low-level viraemia. Patients with an initial routine VL result ≥1000 copies/ml are supposed to receive a follow-up VL test after 3 months of intensive adherence support (upon confirmation of good adherence). However, only 7,742 samples were marked as *confirmatory (follow-up)* and 765 as *targeted (treatment failure suspected)* on the lab request form. 18,889 were marked as 'routine' and retrospectively classified as *follow-up* due to a previous result collected from the same patient within 1 year before the current sample. This suggests challenges with the classification of reasons for testing, delayed follow-up and/or low utilization of VL results for patient management.

A large proportion of patients with an initial high VL are likely to re-suppress after intensified adherence counselling and the confirmation of treatment failure usually depends on a second VL result of ≥1000 after 3 months. There was a net decrease of 1,144 patients on protease inhibitor-based (PI) 2nd line ART[27] this quarter due to the ongoing routine transition of patients from PI-based to DTG-based 2nd line regimens. Regimen lines are no longer distinguishable as PI and INSTI are both used in 1st and 2nd line ART.

The time on ART was entered for **77,606 (75%)** of 102,253 routine samples registered on the LIMS and only **45,495 (23%)** of these were drawn on schedule (from 1 month before to 3 months after a VL milestone). The proportion of patients with VL <1000 was **89%, 90%, 94%, 94%** and **94%** at 6, 24, 72, 96 and 120 months on ART respectively. Viral suppression rates of samples drawn on schedule were similar to of 'catch-up' (extra-schedular) samples and samples with unknown timing both at 93%.

[26] Addendum to the 4th Edition of the Malawi Integrated Guidelines and SOPS for Clinical HIV services

[27] Regimen 13A (tenofovir / lamivudine /dolutegravir) is being used as both 1st line and 2nd line regimen. Therefore, the classification of first- and second-line patients is no longer clear.

11.6 TB / HIV Management

3,462 (99%) of **3,470** new TB patients had their HIV status ascertained this quarter and **1,498 (43%)** of these were HIV positive. **1,434 (96%)** of HIV positives were already on ART at the time of TB treatment initiation. The number of new ART initiations during TB treatment is tracked by the National TB control program. Total ART coverage among co-infected patients at the end of TB treatment has consistently been >95%.

12 STI Treatment

This quarter, supervision teams collected STI data from 735 out of 962 facilities offering STI management according to the *2018-19 Malawi Harmonized Health Facility Assessment (HHFA)*[28] in Malawi. The site-level reports included here may therefore only represent 75% of all STI services in Malawi. Supervision teams re-emphasized the importance of complete and accurate documentation at the sites and the data quality is expected to improve further with resumption of regular site supervision for the STI program. The complete set of STI program data collected is included in the Appendix.

12.1 Access to STI treatment and coverage

Based on the data collected at the facilities, a total of **97,255** STI cases were treated in Q3 2021. Considering the 75% site-level completeness of reporting, this number is estimated to represent a total of **129,673** STI cases treated. This is equivalent to **46%** of the estimated quarterly 281,075 STI cases in the population (extrapolation from 2015/16 MDHS) [29].

Out of **97,255** documented clients treated, **40,008 (40%)** were male and **49,203 (86%)** were female. **8,044 (14%)** of female STI clients were pregnant. **13,121 (33%)** of male STI clients were circumcised. **65,810 (68%)** clients were 25 years and above, **23,099 (24%)** were 20-24 years and **8,346 (9%)** were under 20 years old.

12.2 Client Type and STI History

87,193 (90%) of clients were symptomatic and **10,062 (10%)** were asymptomatic (treated as partners). Among symptomatic clients, **80,021 (92%)** were index cases and **7,172 (8%)** were partners. A total of **25,149** partner notification slips were issued, equivalent to an average of **0.29** slips per index case. Considering the **25,149** partner notification slips issued, **69% (17,234)** of those notified presented to the clinic. **71,813 (74%)** of clients presented with their first lifetime episode of STI; **19,378 (78%)** clients out of 25,442 with previously treated STIs were reported to have had an STI more than 3 months ago and **6,064 (24%)** of clients reported having had an STI within the last three months. Re-occurrence of an STI after a recent episode may be due to re-infection or treatment failure.

[28] Ministry of Health (2019). Malawi Harmonized Health Facility Assessment 2018-20 Preliminary Report

[29] According to the 2015/16 MDHS, 14.7% of women (15-49 years) and 9.6% of men (15-49 years) reported STI symptoms in the past 12 months. A total of 1,124,303 annual STI cases are estimated by applying these proportions to the 4.3 million men and 4.8 million women in these age groups in the 2018 population (NSO projections) for 2021. Quarterly STI cases are assumed as ¼ of the estimated annual cases in the population.

12.3 HIV Status

HIV status was ascertained for **86,400 (89%)** clients and **15,703 (18%)** of these were HIV positive. **1,844 (12%)** of positives were identified through a new test initiated at the STI clinic, while **13,859 (88%)** presented with a documented previous positive HIV test result. **13,403 (97%)** of clients with a previous positive HIV test result were on ART.

Given the high risk of recent HIV infection among STI clients, all clients with unknown status and those with a new negative test result should be referred for (repeat) HIV testing and counselling. **40,243 (57%)** of the 71,153 STI clients with unknown or new negative test result were referred for repeat HTS. **5,145** patients were reported as "referred for ART". This exceeds the sum of new positives (1,844) and previous positives not on ART (456) and is likely explained by wrong documentation of ART referrals for patients already on ART.

The rate of HIV status ascertainment at STI clinics has improved considerably over time and high rates have been maintained throughout the COVID-19 period. This is due to increased numbers of dedicated testing staff available at the sites (HDAs). Actual HIV ascertainment rates may be even slightly higher due to weaknesses with back-referral from HIV testing rooms at sites where testing is not provided directly in the STI clinic. It is worth noting that a substantial proportion of clients who are aware of their HIV infection present with a new episode of an STI. This may suggest poor translation of positive living strategies promoted during counselling but could also be in small part due to the increased risk of recurrence of HSV-2 and balanitis among HIV-infected clients.

12.4 STI Syndromes and Referrals

The most common syndrome was abnormal vaginal discharge (AVD) with **30,676 (30%)** cases, followed by ureteral discharge (UD, **28,586**) cases, genital ulcers (GUD, **12,410** cases) and lower abdominal pain (LAP: **12,226** cases). Serologically confirmed syphilis accounted for 9% of the cases. Scrotal swelling, bubo and genital warts each accounted for 1% of cases.

13 Supply Chain Management of HIV Program Commodities

Forecasting, Quantification and Procurement Planning

To ensure uninterrupted supply of HIV commodities, PSM with support from M&E and HTS conducted quarterly forecasting and quantification for HIV testing kits (i.e Determine and Unigold test kits) using service data, consumption and physical inventory/stock data obtained during the joint HIV/TB quarterly supervision visits. The Quantification took into consideration pipeline stock data from the Procurement Services Agents (PSA), in-country stocks available at the central warehouse, the average monthly consumption (AMC) to determine the months of stock (MOS) on hand as a guide to the duration the total available stock would last the program and forecast the future needs based on current usage and issuance trends. The final quantification outputs were costed and shared with the Global fund for approval and subsequently, orders initiated for both commodities through the Global Fund online ordering system (wambo online) and PEPFAR through USAID as support to fill the gap that existed in HIV testing commodities.

Various Procurements were initiated during the period in the following categories:- viral load commodities worth $724,623.22, Cervical cancer screening worth $ 853,171.54, HIV test kits worth $ 1,987,773.38 and Blood safety/transfusion worth $906,569.10. Additionally, the Department for HIV and AIDS also received ARVs, OIs medicine and test kits worth **$23,547,154.97** from July to September 2021 through I-PLUS Solutions, PFSCM and UNFPA. (Iplus Solutions- $20,994,349.57 PFSCM- $1,230.620 and UNFPA- $1,322,185.40).

13.1 Quarterly supply chain support during 2021 Q3 activities

Pharmacy personnel including pharmacists, pharmacy technicians, Supply chain & logistics officers from district and central level provided mentorship to pharmacy personnel at 767 health facilities in inventory management – completion of transaction records for commodity movement in/out of the drugs stores including stock cards, issue/requisition vouchers; documentation management for all receipts, consumption, expiries and obsolete commodities; proper organisation of commodities in the drug stores (clean, organised products, well ventilated, stored on shelves and pallets, with no pest/rodent infestations in the stores); stock management during the Q3 2021 integrated ART/TB quarterly supervision.

Physical inventory counting was conducted at all sites and ad-hoc mentoring in stock management at health facilities with poor performance. There was a further overall improvement in site-level stock management for HIV commodities.

Table 7. shows the total stocks found at the sites and in the central warehouse, and the estimated consumption rates for all commodities.

Total stocks of HIV program commodities at all sites visited during the 2021 Q3 supportive site supervision. Stock positions are from the date of the visit (between 1-4 weeks after the end of the quarter). Warehouse stock positions are from 01/12/2021

Inventory unit	Item	Sites with any Stock	Total Physical Stock		Consump-tion/ Month	Months of Stock *	
			At Sites	In Warehouse		At Sites	Wareh.
tins	ABC / 3TC 120 / 60mg tins (30 tabs)	633	130,176	1,003,606	53,077	2.5	18.9
	ABC / 3TC 600 / 300mg tins (30 tabs)	545	30,713	71,028	13,299	2.3	5.3
	ATV / r 300 / 100mg tins (30 tabs)	585	51,891	61,870	2,798	18.5	22.1
	AZT / 3TC / NVP 300 / 150 / 200mg tins (60 tabs)	471	120,548	4,881	144	837.1	33.9
	AZT / 3TC / NVP 60 / 30 / 50mg tins (60 tabs)	594	202,448		803	252.3	
	AZT / 3TC 300 / 150mg tins (60 tabs)	736	62,147	80,447	10,676	5.8	7.5
	AZT / 3TC 60 / 30mg tins (60 tabs)	167	10,169	28,598	17,409	0.6	1.6
	DRV 150mg tins (240 tabs)	2	24	71	0	0.0	0.0
	DRV 600mg tins (60 tabs)	27	844	2,824	80	10.6	35.3
	DRV 75mg tins (480 tabs)	2	33	46	0	0.0	0.0
	DTG 10mg tins (90 tabs)	319	13,990	32,558	10,979	1.3	3.0
	DTG 50mg tins (30 tabs)	576	52,161	118,611	26,794	1.9	4.4
	EFV 200mg tins (90 tabs)	162	1,654	212	11	155.1	19.9
	EFV 600mg tins (30 tabs)	1	20		40	0.5	
	LPV / r 100 / 25mg tins (60 tabs)	612	50,155	36,434	13,718	3.7	2.7
	LPV / r 200 / 50mg tins (120 tabs)	717	15,015	13,199	391	38.4	33.8
	LPV / r 40 / 10mg tins (120 granules)	545	53,176	20,249	4,188	12.7	4.8
	NVP 200mg tins (60 tabs)	423	28,562		113	252.8	
	r 100mg tins (60 tabs)	48	2,814		200	14.1	
	r 25mg tins (30 tabs)	3	17		853	0.0	
	RAL 100mg tins (60 tabs)	6	24	221	174	0.1	1.3
	RAL 25mg tins (60 tabs)	24	647	716	0	0.0	0.0
	RAL 400mg tins (60 tabs)	0	0		0	0.0	0.0
	TDF / 3TC / DTG 300 / 300 / 50mg tins (30 tabs)	759	553,692	1,527,968	168,126	3.3	9.1
	TDF / 3TC / DTG 300 / 300 / 50mg tins (90 tabs)	749	337,626	888,607	224,162	1.5	4.0
	TDF / 3TC / EFV 300 / 300 / 600mg tins (30 tabs)	648	189,000		2,450	77.1	
	TDF / 3TC / EFV 300/300/400mg tins (30 tabs)	11	2,417	399,998	2,450	1.0	163.3
	TDF / 3TC 300 / 300mg tins (30 tabs)	471	43,778	64,220	4,669	9.4	13.8
bottles	Fluconazole (generic) 50mg / 5ml bottles (35 ml)	15	642				
	NVP 50mg/5ml bottles (100 ml)	607	23,706	147,973	5,865	4.0	25.2
vials	Amphotericin B Liposomal 50mg vials (10 each)	36	4,052	3,430	0	0.0	0.0
	Benzathine Penicillin 144g vials (50 each)	618	117,820	323,400	13,454	8.8	24.0
	Bleomycine 15,000IU vials (1 each)	40	11,172	16,561	30	377.4	559.5
	Ceftriaxone 1g vials (10 each)	272	100,261		166,573	0.6	
	Depo-Provera 150mg/1ml vials (25 each)	416	616,645		244,445	2.5	
	Fluconazole (Diflucan) 2mg / 1 ml vials (10 ml)	10	2,774	1,984	0	0.0	0.0
	Gentamicin 80mg / 2ml vials (50 each)	437	232,363		156,752	1.5	
	Paclitaxel 6mg/ml vials (1 each)	38	2,593	4,485	0	0.0	0.0
	Streptomycin 1 g vials (50 each)	0	0				
	Vincristine 1mg / 1ml vials (1 each)	34	5,225	80	178	29.4	0.5
tabs	Aciclovir 200mg blist packs (500 tabs)	12	53,400		1,004,095	0.1	
	Aciclovir 200mg tins (100 tabs)	677	1,791,092	10,997,400	282,780	6.3	38.9
	Azithromycin 500mg blist packs (3 tabs)	499	230,866	20,486	4,100	56.3	5.0
	Ciprofloxacin 500mg blist packs (100 tabs)	406	462,076	1,533,300	62,257	7.4	24.6
	Clotrimazole 500mg boxes (1 each)	495	28,222	108,350	9,645	2.9	11.2
	Codeine 30mg tins (100 tabs)	8	267,509				
	Cotrimoxazole 100 / 20mg blist packs (1000 tabs)	584	35,506,475	238,328,000	6,524,538	5.4	36.5
	Cotrimoxazole 400 / 80mg tins (1000 tabs)	241	3,590,422		26,332,226	0.1	
	Cotrimoxazole 960mg blist packs (1000 tabs)	662	22,601,038	81,954,000	26,086,884	0.9	3.1

Inventory unit	Item	Sites with any Stock	Total Physical Stock		Consump-tion/ Month	Months of Stock *	
			At Sites	In Warehouse		At Sites	Wareh.
	Doxycycline 100mg blist packs (500 tabs)	32	467,526		10,066,490	0.0	
	Doxycycline 100mg tins (1000 tabs)	649	5,367,638	3,178,000	7,388,179	0.7	0.4
	E thambutol (E) 100 mg blist packs (100 tabs)	168	153,390				
	E thambutol (E) 400 mg blist packs (672 tabs)	26	34,743				
	Erythromycin 250mg tins (100 tabs)	372	332,073	896,400	189,729	1.8	4.7
	Erythromycin 250mg tins (1000 tabs)	86	343,580		6,211,163	0.1	
	Fluconazole (Diflucan) 200mg blist packs (100 ca	127	198,483	1,584,800	0	0.0	0.0
	Fluconazole (Diflucan) 200mg tins (28 tabs)	56	74,488		0	0.0	0.0
	Flucytosine 500mg blist packs (100 tabs)	36	63,000	17,900			
	Ibuprofen 200mg tins (100 tabs)	309	7,526,759		1,346,014	5.6	
	Isoniazid (H) 100mg blist packs (100 tabs)	220	189,690				
	Isoniazid (H) 300mg blist packs (672 tabs)	681	10,732,599	30,248,064	929,640	11.5	32.5
	Isoniazid (H) 300mg tins (1000 tabs)	7	33,232		26,086,884	0.0	
	Metronidazole 200mg tins (1000 tabs)	651	13,491,095	8,941,000	0	0.0	0.0
	Morphine 10mg blist packs (60 tabs)	23	97,322		343,013	0.3	
	Morphine 30mg blist packs (30 tabs)	25	71,459		0	0.0	0.0
	Pyridoxine 25mg tins (100 tabs)	651	8,052,143	61,869,600	929,640	8.7	66.6
	RH 150 / 75 mg blist packs (672 tabs)	397	1,780,048				
	RH 75/50mg blist packs (84 tabs)	180	313,598				
	RHZ 75/50/150mg blist packs (84 tabs)	139	93,022				
	RHZE 150/75/400/275mg blist packs (672 tabs)	387	1,003,153				
	Rifapentine 150mg tins (24 tabs)	407	1,099,920	763,680	546,384	2.0	1.4
sheets	ART pat. card adult (yellow) Ver8 bundles (50 she	668	364,669	256,600	59,044	6.2	4.3
	ART pat. card paed. (blue) Ver 8 bundles (50 she	594	54,025	87,550	3,956	13.7	22.1
	Exposed child card (pink) Ver2 bundles (50 sheet	574	63,103	61,500	4,159	15.2	14.8
	Polythene sleeve bundles (100 sheets)	466	122,490		13,863	8.8	
books	Family HTC Referral Slip bundles (100 sheets)	556	413,236				
	STI Partner Referral Slip bundles (100 sheets)	94	75,164	1,599,500			
tests	Cryptococcal antigen CrAg bundles (50 each)	78	8,249	35,500	0	0.0	0.0
	DBS kit (filter paper, lancet, etc.) 70ul boxes (50 t	610	120,756	600	247,700	0.5	0.0
	Determine HIV1/2 boxes (100 each)	565	346,985	2,647,400	214,087	1.6	12.4
	Determine TB LAM Ag bundles (100 each)	123	12,566				
	Hepatitis B HBsAg rapid test SD Bioline boxes (3	76	43,780	696,060	1,892	23.1	367.9
	OraQuick HIV Self-test bundles (25 each)	562	394,989	551,875	142,158	2.8	3.9
	SD Bioline Syphilis boxes (30 each)	469	54,012	564,600	53,467	1.0	10.6
	Uni-Gold HIV1/2 boxes (20 each)	614	53,188	80,240	17,421	3.1	4.6
pieces	Condoms female boxes (1000 each)	363	266,766	3,063	294,763	0.9	0.0
	Condoms male boxes (144 each)	680	22,375,315	56,133,648	5,912,990	3.8	9.5

* 'Consumption per month' and 'Months of stock' for ARVs, CPT, INH and HIV test kits are based on the respective patient-regimen groups in the standard service reports. Estimates are based on the number of patients on the respective regimen at the end of the quarter evaluated and do not account for potential (positive or negative) growth. Facility stock positions for OI and STI drugs include HIV Program and other supply sources. Total national consumption and MoS estimates are used for these commodity groups. 'Months of stock' is calculated from the day of the physical stock count, which is on average 1 month after the end of the quarter.

13.2 Availability of standard first line ARVs

Adequate stock levels of TLD in packs of 30 and 90 tablets were maintained at over 767 sites during this period, a total of 661,185 packs of 30's and 605,055 packs of 90's were distributed in two distribution rounds 62 and 63. This enabled sites to support patients eligible for 6-month dispensing with no stock out risk in country.

13.3 Bimonthly distribution of HIV Commodities

PSM coordinated allocation and distribution of two scheduled bimonthly distribution rounds of ARV's, test kits, OI/STI medicines and other HIV related commodities (distribution rounds 62 in July and 63 in September 2021).

Additionally, the logistics team at the Department of HIV and AIDS coordinated 3,439 individual commodity transactions between ART sites to mitigate stock imbalances (49% ARVs; 26% Test kits; 25% Others). All transactions were managed and authorized using the HIV Department Supply Chain Hot Line, a toll-free facility that was set up to facilitate communication between the health facilities and the central level. Health workers can communicate supply chain and other HIV commodities related issues that need to be resolved by the technical team at the department in a timely manner.

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We thank all facility staff for their sincere welcome and co-operation with the HIV Department and its partners during these supportive visits. We congratulate all staff for their excellent work.

September 2022

HTC site report

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Clients at health facility (static)

HTC client details

*

Total HTC clients served

Total HIV tested	**605,401**	**100%**

Sex

Males tested	**194,388**	**32%**
Females tested	**411,013**	**68%**
Females non-pregnant	**240,624**	59%
Females pregnant	**170,389**	41%

Age

Children 0-14 yrs	**45,038**	**7%**
Children below 12 mths (Age group A)	**825**	2%
Children 12 mths - 14 yrs (Age group B)	**44,213**	98%
Adults 15+ years	**560,363**	**93%**
Young adults 15-24 years (Age group C)	**257,759**	46%
Older adults 25+ yrs (Age group D)	**302,604**	54%

HTC access type

PITC	**487,351**	**81%**
Family Referral Slip (FRS)	**24,275**	**4%**
Other (VCT, etc.) HTC access	**93,775**	**15%**

HTC first time / repeat

Never tested before	**106,204**	**18%**
Previously accessed HTC	**499,197**	**82%**
Last negative	**479,013**	96%
Last positive	**19,591**	4%
Last exposed infant	**285**	0%
Last inconclusive	**308**	0%

Counseling session type / Partner present

Counseled with partner / partner present	**144,549**	**24%**
Counseled alone / Partner not present	**460,852**	**76%**

Outcome summary (HIV test)

Single test negative	**566,651**	**94%**
Single test positive	**7**	**0%**
Test 1&2 negative	**393**	**0%**
Test 1&2 positive	**37,243**	**6%**
Test 1&2 discordant	**1,107**	**0%**

* Subgroups may not add to 100% due to rounding

HTC site report

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

HTC client details

*

Final result given to client

Results among clients never tested / last negative	**585,586**	**97%**
New negative	**566,968**	97%
New positive	**17,538**	3%
New positive (non-sex dissag)	**152**	1%
New positive (dissag by sex)	**17,386**	99%
New positive male	**7,301**	42%
New positive female	**10,085**	58%
New inconclusive	**1,027**	0%
New exposed infants	**53**	0%
Confirmatory results (previous positive clients)	**19,815**	**3%**
Confirmatory positive	**19,754**	100%
Confirmatory positive (non-sex dissag)	**209**	1%
Confirmatory positive (dissag by sex)	**19,545**	99%
Confirmatory positive male	**8,190**	42%
Confirmatory positive female	**11,355**	58%
Confirmatory inconclusive	**61**	0%

Partner / Family HTC referral slips

Sum of slips given	**24,533**	**100%**
Total clients presenting with referral slip	**24,275**	99%
Total failed referrals (slips not returned)	**258**	1%

Clients tested in the community

HTC client details

*

Total HTC clients served

Total HIV tested	**30,456**	**100%**

Sex

Males tested	**11,521**	**38%**
Females tested	**18,935**	**62%**
Females non-pregnant	**14,504**	77%
Females pregnant	**4,431**	23%

Age

Children 0-14 yrs	**3,786**	**12%**
Children below 12 mths (Age group A)	**19**	1%
Children 12 mths - 14 yrs (Age group B)	**3,767**	99%
Adults 15+ years	**26,670**	**88%**
Young adults 15-24 years (Age group C)	**13,935**	52%
Older adults 25+ yrs (Age group D)	**12,735**	48%

HTC access type

PITC	**12,459**	**41%**
Family Referral Slip (FRS)	**3,729**	**12%**
Other (VCT, etc.) HTC access	**14,268**	**47%**

* Subgroups may not add to 100% due to rounding

HTC site report

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

HTC client details

*

HTC first time / repeat

Never tested before	**8,123**	**27%**
Previously accessed HTC	**22,333**	**73%**
Last negative	**21,930**	98%
Last positive	**381**	2%
Last exposed infant	**13**	0%
Last inconclusive	**9**	0%

Counseling session type / Partner present

Counseled with partner / partner present	**2,033**	**7%**
Counseled alone / Partner not present	**28,423**	**93%**

Outcome summary (HIV test)

Single test negative	**29,120**	**96%**
Single test positive	**0**	**0%**
Test 1&2 negative	**8**	**0%**
Test 1&2 positive	**1,259**	**4%**
Test 1&2 discordant	**69**	**0%**

Final result given to client

Results among clients never tested / last negative	**30,055**	**99%**
New negative	**29,159**	97%
New positive	**865**	3%
New positive (non-sex dissag)	**40**	5%
New positive (dissag by sex)	**825**	95%
New positive male	**374**	45%
New positive female	**451**	55%
New inconclusive	**27**	0%
New exposed infants	**4**	0%
Confirmatory results (previous positive clients)	**401**	**1%**
Confirmatory positive	**385**	96%
Confirmatory positive (non-sex dissag)	**35**	9%
Confirmatory positive (dissag by sex)	**350**	91%
Confirmatory positive male	**124**	35%
Confirmatory positive female	**226**	65%
Confirmatory inconclusive	**16**	4%

Partner / Family HTC referral slips

Sum of slips given	**1,153**	**100%**
Total clients presenting with referral slip	**3,729**	323%
Total failed referrals (slips not returned)	**-2,576**	-223%

Clients at stand-alone HTC sites

HTC client details

*

Total HTC clients served

Total HIV tested	**4,333**	**100%**

Sex

Males tested	**3,070**	**71%**
Females tested	**1,263**	**29%**
Females non-pregnant	**1,034**	82%
Females pregnant	**229**	18%

* Subgroups may not add to 100% due to rounding

HTC site report

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

HTC client details

*

Age

Children 0-14 yrs	**67**	**2%**
Children below 12 mths (Age group A)	**1**	1%
Children 12 mths - 14 yrs (Age group B)	**66**	99%
Adults 15+ years	**4,266**	**98%**
Young adults 15-24 years (Age group C)	**2,183**	51%
Older adults 25+ yrs (Age group D)	**2,083**	49%

HTC access type

PITC	**2,520**	**58%**
Family Referral Slip (FRS)	**84**	**2%**
Other (VCT, etc.) HTC access	**1,729**	**40%**

HTC first time / repeat

Never tested before	**1,248**	**29%**
Previously accessed HTC	**3,085**	**71%**
Last negative	**2,968**	96%
Last positive	**115**	4%
Last exposed infant	**0**	0%
Last inconclusive	**2**	0%

Counseling session type / Partner present

Counseled with partner / partner present	**419**	**10%**
Counseled alone / Partner not present	**3,914**	**90%**

Outcome summary (HIV test)

Single test negative	**4,107**	**95%**
Single test positive	**0**	**0%**
Test 1&2 negative	**0**	**0%**
Test 1&2 positive	**223**	**5%**
Test 1&2 discordant	**3**	**0%**

Final result given to client

Results among clients never tested / last negative	**4,219**	**97%**
New negative	**4,108**	97%
New positive	**108**	3%
New positive (non-sex dissag)	**16**	15%
New positive (dissag by sex)	**92**	85%
New positive male	**40**	43%
New positive female	**52**	57%
New inconclusive	**3**	0%
New exposed infants	**0**	0%
Confirmatory results (previous positive clients)	**114**	**3%**
Confirmatory positive	**110**	96%
Confirmatory positive (non-sex dissag)	**9**	8%
Confirmatory positive (dissag by sex)	**101**	92%
Confirmatory positive male	**46**	46%
Confirmatory positive female	**55**	54%
Confirmatory inconclusive	**4**	4%

* Subgroups may not add to 100% due to rounding

HTC site report

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

HTC client details

*

Partner / Family HTC referral slips

Sum of slips given		**34**	**100%**
	Total clients presenting with referral slip	**84**	247%
	Total failed referrals (slips not returned)	**-50**	-147%

Clients returning to facilty after self-test

HTC client details

*

Total HTC clients served

Total HIV tested		**2,135**	**100%**

Sex

Males tested		**908**	**43%**
Females tested		**1,227**	**57%**
	Females non-pregnant	**960**	78%
	Females pregnant	**267**	22%

Age

Children 0-14 yrs		**76**	**4%**
	Children below 12 mths (Age group A)	**0**	0%
	Children 12 mths - 14 yrs (Age group B)	**76**	100%
Adults 15+ years		**2,059**	**96%**
	Young adults 15-24 years (Age group C)	**739**	36%
	Older adults 25+ yrs (Age group D)	**1,320**	64%

HTC access type

PITC	**1,136**	**53%**
Family Referral Slip (FRS)	**81**	**4%**
Other (VCT, etc.) HTC access	**918**	**43%**

HTC first time / repeat

Never tested before		**256**	**12%**
Previously accessed HTC		**1,879**	**88%**
	Last negative	**1,293**	69%
	Last positive	**578**	31%
	Last exposed infant	**0**	0%
	Last inconclusive	**8**	0%

Counseling session type / Partner present

Counseled with partner / partner present	**597**	**28%**
Counseled alone / Partner not present	**1,538**	**72%**

Outcome summary (HIV test)

Single test negative	**1,469**	**69%**
Single test positive	**1**	**0%**
Test 1&2 negative	**57**	**3%**
Test 1&2 positive	**592**	**28%**
Test 1&2 discordant	**16**	**1%**

* Subgroups may not add to 100% due to rounding

HTC site report

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

HTC client details

*

Final result given to client

Results among clients never tested / last negative		**1,587**	**74%**
	New negative	**1,524**	96%
	New positive	**57**	4%
		New positive (non-sex dissag)	**0**	0%
		New positive (dissag by sex)	**57**	100%
			New positive male	**26**	46%
			New positive female	**31**	54%
	New inconclusive	**6**	0%
	New exposed infants	**0**	0%
Confirmatory results (previous positive clients)		**548**	**26%**
	Confirmatory positive	**526**	96%
		Confirmatory positive (non-sex dissag)	**5**	1%
		Confirmatory positive (dissag by sex)	**521**	99%
			Confirmatory positive male	**217**	42%
			Confirmatory positive female	**304**	58%
	Confirmatory inconclusive	**22**	4%

Partner / Family HTC referral slips

Sum of slips given		**86**	**100%**
	Total clients presenting with referral slip	**81**	94%
	Total failed referrals (slips not returned)	**5**	6%

* Subgroups may not add to 100% due to rounding

HIV self-test (ST) distribution

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

ANC clinic

HIV self test client details

*

Total HIV self-test kit

Total HIV self-test kit recipients	**4,584**	**100%**

Sex

Male recipients	**1,288**	**28%**
Female recipients	**3,296**	**72%**
Non-pregnant	**1,398**	42%
Pregnant	**1,898**	58%

Last HIV test of recipient

Never tested	**313**	**7%**
Previously tested	**4,271**	**93%**
Last negative	**4,158**	97%
Last positive	**111**	3%
Not on ART	**10**	9%
On art	**101**	91%
Last inconclusive	**2**	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	**7,513**	**100%**

Intended end user distribution type

Self (recipient)	**2,392**	**32%**
Secondary distribution	**5,121**	**68%**
Sex-partner	**3,900**	76%
Other	**1,221**	24%

Intended end user sex / age category

Total males	**4,384**	**58%**
Boys 13-14 years old	**91**	2%
Adolescent boys and young men 15-24 years old	**1,188**	27%
Adolescent boys 15 - 19 years old	**336**	28%
Young men 20 - 24 years old	**852**	72%
Adults	**3,105**	71%
Young adults 25 - 35 years old	**1,889**	61%
Middle adults 36 - 49 years old	**1,079**	35%
Older adults 50+	**137**	4%
Total females	**3,129**	**42%**
Girls 13-14 years old	**162**	5%
Adolescent girls and young women 15-24 years	**1,275**	41%
Adolescent girls 15 - 19 years old	**516**	40%
Young women 20 - 24 years old	**759**	60%
Adults	**1,692**	54%
Young adults 25 - 35 years old	**1,140**	67%
Middle adults 36 - 49 years old	**487**	29%
Older adults 50+	**65**	4%

Total condoms

Total condoms distributed	**19,359**	**100%**

* Subgroups may not add to 100% due to rounding

Maternity

HIV self test client details

*

Total HIV self-test kit

Total HIV self-test kit recipients	**731**	**100%**

Sex

Male recipients	**333**	**46%**
Female recipients	**398**	**54%**
Non-pregnant	**328**	82%
Pregnant	**70**	18%

Last HIV test of recipient

Never tested	**100**	**14%**
Previously tested	**631**	**86%**
Last negative	**622**	99%
Last positive	**9**	1%
Not on ART	**2**	22%
On art	**7**	78%
Last inconclusive	**0**	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	**1,214**	**100%**

Intended end user distribution type

Self (recipient)	**375**	**31%**
Secondary distribution	**839**	**69%**
Sex-partner	**674**	80%
Other	**165**	20%

Intended end user sex / age category

Total males	**656**	**54%**
Boys 13-14 years old	**17**	3%
Adolescent boys and young men 15-24 years old	**179**	27%
Adolescent boys 15 - 19 years old	**63**	35%
Young men 20 - 24 years old	**116**	65%
Adults	**460**	70%
Young adults 25 - 35 years old	**292**	63%
Middle adults 36 - 49 years old	**147**	32%
Older adults 50+	**21**	5%
Total females	**558**	**46%**
Girls 13-14 years old	**29**	5%
Adolescent girls and young women 15-24 years	**254**	46%
Adolescent girls 15 - 19 years old	**107**	42%
Young women 20 - 24 years old	**147**	58%
Adults	**275**	49%
Young adults 25 - 35 years old	**192**	70%
Middle adults 36 - 49 years old	**71**	26%
Older adults 50+	**12**	4%

Total condoms

Total condoms distributed	**2,097**	**100%**

HIV self-test (ST) distribution

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

ART clinic

HIV self test client details

*

Total HIV self-test kit

Total HIV self-test kit recipients	**2,744**	**100%**

Sex

Male recipients	**1,403**	**51%**
Female recipients	**1,341**	**49%**
Non-pregnant	**1,243**	93%
Pregnant	**98**	7%

Last HIV test of recipient

Never tested	**204**	**7%**
Previously tested	**2,540**	**93%**
Last negative	**2,283**	90%
Last positive	**255**	10%
Not on ART	**7**	3%
On art	**248**	97%
Last inconclusive	**2**	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	**5,489**	**100%**

Intended end user distribution type

Self (recipient)	**2,181**	**40%**
Secondary distribution	**3,308**	**60%**
Sex-partner	**2,242**	68%
Other	**1,066**	32%

Intended end user sex / age category

Total males	**2,754**	**50%**
Boys 13-14 years old	**88**	3%
Adolescent boys and young men 15-24 years old	**737**	27%
Adolescent boys 15 - 19 years old	**307**	42%
Young men 20 - 24 years old	**430**	58%
Adults	**1,929**	70%
Young adults 25 - 35 years old	**1,077**	56%
Middle adults 36 - 49 years old	**739**	38%
Older adults 50+	**113**	6%
Total females	**2,735**	**50%**
Girls 13-14 years old	**126**	5%
Adolescent girls and young women 15-24 years	**1,188**	43%
Adolescent girls 15 - 19 years old	**453**	38%
Young women 20 - 24 years old	**735**	62%
Adults	**1,421**	52%
Young adults 25 - 35 years old	**959**	67%
Middle adults 36 - 49 years old	**406**	29%
Older adults 50+	**56**	4%

Total condoms

Total condoms distributed	**10,079**	**100%**

* Subgroups may not add to 100% due to rounding

HIV self-test (ST) distribution

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

HTC room

HIV self test client details

*

Total HIV self-test kit

Total HIV self-test kit recipients	**107,937**	**100%**

Sex

Male recipients	**48,374**	**45%**
Female recipients	**59,563**	**55%**
Non-pregnant	**50,275**	84%
Pregnant	**9,288**	16%

Last HIV test of recipient

Never tested	**11,380**	**11%**
Previously tested	**96,557**	**89%**
Last negative	**94,866**	98%
Last positive	**1,680**	2%
Not on ART	**293**	17%
On art	**1,387**	83%
Last inconclusive	**11**	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	**176,488**	**100%**

Intended end user distribution type

Self (recipient)	**82,517**	**47%**
Secondary distribution	**93,971**	**53%**
Sex-partner	**72,884**	78%
Other	**21,087**	22%

Intended end user sex / age category

Total males	**88,081**	**50%**
Boys 13-14 years old	**1,454**	2%
Adolescent boys and young men 15-24 years old	**26,962**	31%
Adolescent boys 15 - 19 years old	**8,554**	32%
Young men 20 - 24 years old	**18,408**	68%
Adults	**59,665**	68%
Young adults 25 - 35 years old	**34,310**	58%
Middle adults 36 - 49 years old	**22,251**	37%
Older adults 50+	**3,104**	5%
Total females	**88,407**	**50%**
Girls 13-14 years old	**3,052**	3%
Adolescent girls and young women 15-24 years	**38,699**	44%
Adolescent girls 15 - 19 years old	**14,929**	39%
Young women 20 - 24 years old	**23,770**	61%
Adults	**46,656**	53%
Young adults 25 - 35 years old	**31,482**	67%
Middle adults 36 - 49 years old	**13,440**	29%
Older adults 50+	**1,734**	4%

Total condoms

Total condoms distributed	**430,476**	**100%**

* Subgroups may not add to 100% due to rounding

HIV self-test (ST) distribution

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Other point in HF

HIV self test client details

*

Total HIV self-test kit

Total HIV self-test kit recipients	**13,029**	**100%**

Sex

Male recipients	**6,220**	**48%**
Female recipients	**6,809**	**52%**
Non-pregnant	**6,061**	89%
Pregnant	**748**	11%

Last HIV test of recipient

Never tested	**951**	**7%**
Previously tested	**12,078**	**93%**
Last negative	**11,788**	98%
Last positive	**289**	2%
Not on ART	**15**	5%
On art	**274**	95%
Last inconclusive	**1**	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	**24,974**	**100%**

Intended end user distribution type

Self (recipient)	**10,610**	**42%**
Secondary distribution	**14,364**	**58%**
Sex-partner	**10,421**	73%
Other	**3,943**	27%

Intended end user sex / age category

Total males	**12,321**	**49%**
Boys 13-14 years old	**398**	3%
Adolescent boys and young men 15-24 years old	**3,706**	30%
Adolescent boys 15 - 19 years old	**1,306**	35%
Young men 20 - 24 years old	**2,400**	65%
Adults	**8,217**	67%
Young adults 25 - 35 years old	**4,887**	59%
Middle adults 36 - 49 years old	**2,888**	35%
Older adults 50+	**442**	5%
Total females	**12,653**	**51%**
Girls 13-14 years old	**675**	5%
Adolescent girls and young women 15-24 years	**5,915**	47%
Adolescent girls 15 - 19 years old	**2,682**	45%
Young women 20 - 24 years old	**3,233**	55%
Adults	**6,063**	48%
Young adults 25 - 35 years old	**4,076**	67%
Middle adults 36 - 49 years old	**1,757**	29%
Older adults 50+	**230**	4%

Total condoms

Total condoms distributed	**82,149**	**100%**

* Subgroups may not add to 100% due to rounding

HIV self-test (ST) distribution

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

VCT stand-alone

HIV self test client details

*

Total HIV self-test kit

Total HIV self-test kit recipients	**590**	**100%**

Sex

Male recipients	**291**	**49%**
Female recipients	**299**	**51%**
Non-pregnant	**299**	100%
Pregnant	**0**	0%

Last HIV test of recipient

Never tested	**62**	**11%**
Previously tested	**528**	**89%**
Last negative	**523**	99%
Last positive	**5**	1%
Not on ART	**4**	80%
On art	**1**	20%
Last inconclusive	**0**	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	**772**	**100%**

Intended end user distribution type

Self (recipient)	**582**	**75%**
Secondary distribution	**190**	**25%**
Sex-partner	**184**	97%
Other	**6**	3%

Intended end user sex / age category

Total males	**369**	**48%**
Boys 13-14 years old	**0**	0%
Adolescent boys and young men 15-24 years old	**92**	25%
Adolescent boys 15 - 19 years old	**20**	22%
Young men 20 - 24 years old	**72**	78%
Adults	**277**	75%
Young adults 25 - 35 years old	**180**	65%
Middle adults 36 - 49 years old	**91**	33%
Older adults 50+	**6**	2%
Total females	**403**	**52%**
Girls 13-14 years old	**0**	0%
Adolescent girls and young women 15-24 years	**138**	34%
Adolescent girls 15 - 19 years old	**27**	20%
Young women 20 - 24 years old	**111**	80%
Adults	**265**	66%
Young adults 25 - 35 years old	**188**	71%
Middle adults 36 - 49 years old	**72**	27%
Older adults 50+	**5**	2%

Total condoms

Total condoms distributed	**849**	**100%**

HIV self-test (ST) distribution

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Workplace formal

HIV self test client details

*

Total HIV self-test kit

Total HIV self-test kit recipients	**541**	**100%**

Sex

Male recipients	**194**	**36%**
Female recipients	**347**	**64%**
Non-pregnant	**341**	98%
Pregnant	**6**	2%

Last HIV test of recipient

Never tested	**185**	**34%**
Previously tested	**356**	**66%**
Last negative	**348**	98%
Last positive	**5**	1%
Not on ART	**3**	60%
On art	**2**	40%
Last inconclusive	**3**	1%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	**762**	**100%**

Intended end user distribution type

Self (recipient)	**460**	**60%**
Secondary distribution	**302**	**40%**
Sex-partner	**250**	83%
Other	**52**	17%

Intended end user sex / age category

Total males	**296**	**39%**
Boys 13-14 years old	**10**	3%
Adolescent boys and young men 15-24 years old	**75**	25%
Adolescent boys 15 - 19 years old	**19**	25%
Young men 20 - 24 years old	**56**	75%
Adults	**211**	71%
Young adults 25 - 35 years old	**114**	54%
Middle adults 36 - 49 years old	**88**	42%
Older adults 50+	**9**	4%
Total females	**466**	**61%**
Girls 13-14 years old	**73**	16%
Adolescent girls and young women 15-24 years	**235**	50%
Adolescent girls 15 - 19 years old	**117**	50%
Young women 20 - 24 years old	**118**	50%
Adults	**158**	34%
Young adults 25 - 35 years old	**104**	66%
Middle adults 36 - 49 years old	**54**	34%
Older adults 50+	**0**	0%

Total condoms

Total condoms distributed	**85**	**100%**

* Subgroups may not add to 100% due to rounding

Workplace informal

HIV self test client details

*

Total HIV self-test kit

Total HIV self-test kit recipients	**268**	**100%**

Sex

Male recipients	**121**	**45%**
Female recipients	**147**	**55%**
Non-pregnant	**144**	98%
Pregnant	**3**	2%

Last HIV test of recipient

Never tested	**6**	**2%**
Previously tested	**262**	**98%**
Last negative	**262**	100%
Last positive	**0**	0%
Not on ART	**0**	
On art	**0**	
Last inconclusive	**0**	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	**386**	**100%**

Intended end user distribution type

Self (recipient)	**142**	**37%**
Secondary distribution	**244**	**63%**
Sex-partner	**193**	79%
Other	**51**	21%

Intended end user sex / age category

Total males	**197**	**51%**
Boys 13-14 years old	**6**	3%
Adolescent boys and young men 15-24 years old	**58**	29%
Adolescent boys 15 - 19 years old	**18**	31%
Young men 20 - 24 years old	**40**	69%
Adults	**133**	68%
Young adults 25 - 35 years old	**72**	54%
Middle adults 36 - 49 years old	**53**	40%
Older adults 50+	**8**	6%
Total females	**189**	**49%**
Girls 13-14 years old	**3**	2%
Adolescent girls and young women 15-24 years	**66**	35%
Adolescent girls 15 - 19 years old	**24**	36%
Young women 20 - 24 years old	**42**	64%
Adults	**120**	63%
Young adults 25 - 35 years old	**71**	59%
Middle adults 36 - 49 years old	**48**	40%
Older adults 50+	**1**	1%

Total condoms

Total condoms distributed	**48**	**100%**

* Subgroups may not add to 100% due to rounding

HIV self-test (ST) distribution

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Hotspot

HIV self test client details

*

Total HIV self-test kit

Total HIV self-test kit recipients	**492**	**100%**

Sex

Male recipients	**175**	**36%**
Female recipients	**317**	**64%**
Non-pregnant	**317**	100%
Pregnant	**0**	0%

Last HIV test of recipient

Never tested	**55**	**11%**
Previously tested	**437**	**89%**
Last negative	**407**	93%
Last positive	**30**	7%
Not on ART	**1**	3%
On art	**29**	97%
Last inconclusive	**0**	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	**614**	**100%**

Intended end user distribution type

Self (recipient)	**466**	**76%**
Secondary distribution	**148**	**24%**
Sex-partner	**125**	84%
Other	**23**	16%

Intended end user sex / age category

Total males	**301**	**49%**
Boys 13-14 years old	**0**	0%
Adolescent boys and young men 15-24 years old	**96**	32%
Adolescent boys 15 - 19 years old	**16**	17%
Young men 20 - 24 years old	**80**	83%
Adults	**205**	68%
Young adults 25 - 35 years old	**138**	67%
Middle adults 36 - 49 years old	**58**	28%
Older adults 50+	**9**	4%
Total females	**313**	**51%**
Girls 13-14 years old	**3**	1%
Adolescent girls and young women 15-24 years	**109**	35%
Adolescent girls 15 - 19 years old	**25**	23%
Young women 20 - 24 years old	**84**	77%
Adults	**201**	64%
Young adults 25 - 35 years old	**149**	74%
Middle adults 36 - 49 years old	**50**	25%
Older adults 50+	**2**	1%

Total condoms

Total condoms distributed	**60**	**100%**

HIV self-test (ST) distribution

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Other community point

HIV self test client details

*

Total HIV self-test kit

Total HIV self-test kit recipients	**11,242**	**100%**

Sex

Male recipients	**6,082**	**54%**
Female recipients	**5,160**	**46%**
Non-pregnant	**4,998**	97%
Pregnant	**162**	3%

Last HIV test of recipient

Never tested	**2,951**	**26%**
Previously tested	**8,291**	**74%**
Last negative	**8,193**	99%
Last positive	**93**	1%
Not on ART	**19**	20%
On art	**74**	80%
Last inconclusive	**5**	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	**16,921**	**100%**

Intended end user distribution type

Self (recipient)	**10,458**	**62%**
Secondary distribution	**6,463**	**38%**
Sex-partner	**5,059**	78%
Other	**1,404**	22%

Intended end user sex / age category

Total males	**8,490**	**50%**
Boys 13-14 years old	**260**	3%
Adolescent boys and young men 15-24 years old	**3,126**	37%
Adolescent boys 15 - 19 years old	**1,277**	41%
Young men 20 - 24 years old	**1,849**	59%
Adults	**5,104**	60%
Young adults 25 - 35 years old	**3,020**	59%
Middle adults 36 - 49 years old	**1,751**	34%
Older adults 50+	**333**	7%
Total females	**8,431**	**50%**
Girls 13-14 years old	**664**	8%
Adolescent girls and young women 15-24 years	**4,288**	51%
Adolescent girls 15 - 19 years old	**2,132**	50%
Young women 20 - 24 years old	**2,156**	50%
Adults	**3,479**	41%
Young adults 25 - 35 years old	**2,261**	65%
Middle adults 36 - 49 years old	**1,046**	30%
Older adults 50+	**172**	5%

Total condoms

Total condoms distributed	**54,128**	**100%**

* Subgroups may not add to 100% due to rounding

HIV DNA PCR sample log report

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

DNA PCR samples

*

Total DNA PCR samples

Total DNA PCR samples collected	**9,696**	**100%**

Reason for test

EID initial	**9,316**	**96%**
Confirmatory DNA-PCR	**260**	**3%**
Confirmatory after initial positive DNA-PCR	**185**	71%
Confirmatory after initial positive rapid test	**75**	29%
Tie-breaker	**48**	**0%**
Repeat	**72**	**1%**

Sample type

DBS	**9,215**	**95%**
Point of care	**472**	**5%**
Other	**9**	**0%**

Test result

Results received	**8,653**	**89%**
Conclusive	**8,589**	99%
Negative	**8,243**	96%
Positive	**346**	4%
Indeterminate	**64**	1%
Sample rejected	**25**	**0%**
Result missing	**1,018**	**10%**

Mother - guardian notification

0 - 4 weeks	**3,737**	**39%**
5 - 8 weeks	**1,368**	**14%**
9 - 12 weeks	**322**	**3%**
13+ weeks	**4,269**	**44%**

* Subgroups may not add to 100% due to rounding

Blood safety

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Infect. disease screening among potential donors *

HIV screening

HIV testing not done	**442**	**17%**
Tested for HIV	**2,086**	**83%**
HIV negative	**2,019**	97%
HIV positive	**67**	3%

Hepatitis B screening

HepB testing not done	**442**	**17%**
Tested for Hepatitis B	**2,086**	**83%**
HepB Negative	**2,018**	97%
HepB Positive	**68**	3%

Hepatitis C screening

HepC testing not done	**1,079**	**43%**
Tested for Hepatitis C	**1,449**	**57%**
HepC Negative	**1,425**	98%
HepC Positive	**24**	2%

Syphilis screening

Syphilis testing not done	**431**	**17%**
Tested for Syphilis	**2,097**	**83%**
Syphilis Negative	**2,016**	96%
Syphilis Positive	**81**	4%

Malaria screening

Malaria testing not done	**403**	**16%**
Tested for malaria	**2,125**	**84%**
Malaria Negative	**1,961**	92%
Malaria Positive	**164**	8%

Summary screening outcome

Not donated	**734**	**29%**
Donated	**1,794**	**71%**
Screened for at least HIV, HepB and syphilis	**1,271**	71%
Screened for HIV, HepB, HepC, Syphilis, Malaria	**1,178**	93%
Screened for HIV, HepB, Syphilis	**93**	7%
Screened for HIV, HepB	**0**	0%
Screened for HIV only	**0**	0%
Screened with any other combination of tests	**523**	29%

Cross-matching report *

Blood group typing (for units and patients)

Total blood group typing done	**16,853**	**100%**

Blood units cross-matched (by source)

Total blood units cross-matched	**14,272**	**100%**
Total units from MBTS (estimated)	**12,478**	87%
Total units from replacement donors	**1,794**	13%

Blood units cross-matched by patient group

Units cross-matched for maternity	**3,612**	**25%**
Units cross-matched for paediatrics	**3,070**	**22%**
Units cross-matched for other ward	**7,590**	**53%**

* Subgroups may not add to 100% due to rounding

Blood safety

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Cross-matching report

*

Transfusion reactions

Units transfused without adverse events	**14,260**	**100%**
Units with suspected transfusion reactions	**10**	**0%**
Units with confirmed transfusion reactions	**2**	**0%**

* Subgroups may not add to 100% due to rounding

PrEP site report

Malawi (National)

2021 Q3 (Quarter)

Assessment details *

Potential PrEP clients assessed

Total clients assessed	**3,201**	**100%**

Acute HIV infection assessment

AHI assessment not done	**50**	**2%**
AHI assessment done	**3,151**	**98%**
AHI not suspected	**3,110**	99%
AHI suspected	**41**	1%

Baseline renal function screening

Creatinine sample not collected	**178**	**6%**
Creatinine sample collected	**3,023**	**94%**
Creatinine result pending	**2,558**	85%
Creatinine result available	**465**	15%
60+ ml/min clearance	**397**	85%
<60 ml/min clearance	**68**	15%

Baseline Hep test

Hep B test not done	**2,382**	**74%**
Hep B test done	**819**	**26%**
Negative	**801**	98%
Positive	**18**	2%

PrEP assessment outcomes

Total clients not eligible to start PrEP	**181**	**6%**
Initial HIV+ result	**36**	20%
Initial HIV- result	**145**	80%
Acute HIV infection suspected	**26**	18%
Acute HIV infection not suspected	**119**	82%
Low HIV risk	**113**	95%
High HIV risk	**6**	5%
Suspected kidney failure	**6**	100%
Total clients eligible to start PrEP	**3,020**	**94%**
Agreed to start PrEP	**2,666**	88%
Refused PrEP	**354**	12%

Registration details *

PrEP clinic registrations

Total PrEP clinic registrations	**2,666**	**100%**

Sex

Males	**1,048**	**39%**
Non-circumcised	**484**	46%
Circumcised	**564**	54%
Females	**1,618**	**61%**
Non-pregnant	**1,400**	87%
Pregnant	**119**	7%
Breastfeeding	**99**	6%

* Subgroups may not add to 100% due to rounding

PrEP site report

Malawi (National)

2021 Q3 (Quarter)

Registration details

*

Registration type

First time (PrEP_New)		**2,647**	**99%**
	Males	**1,054**	40%
		Adolescent boys and young men 15-24 years	**352**	33%
			Adolescent boys 15-19 years old	**66**	19%
			Young men 20-24 years old	**286**	81%
		Adults	**702**	67%
			Young adults 25-35 years old	**396**	56%
			Middle adults 36-49 years old	**224**	32%
			Older adults 50+	**82**	12%
	Females	**1,593**	60%
		Adolescent girls young women 15-24 years	**717**	45%
			Adolescent girls 15-19 years old	**236**	33%
			Young women 20-24 years old	**481**	67%
		Adults	**876**	55%
			Young adults 25-35 years old	**546**	62%
			Middle adults 36-49 years old	**308**	35%
			Older adults 50+	**22**	3%
Re-initiation		**17**	**1%**
Transfer-in		**2**	**0%**

PrEP current

*

Individuals that received PrEP atleast once in Qtr

Total PrEP current (PrEP_Curr)		**3,338**	**100%**

Sex

Males		**1,219**	**37%**
	Adolescent boys and young men 15-24 years	**403**	33%
		Adolescent boys 15-19 years old	**71**	18%
		Young men 20-24 years old	**332**	82%
	Adults	**816**	67%
		Young adults 25-35 years old	**454**	56%
		Middle adults 36-49 years old	**268**	33%
		Older adults 50+	**94**	12%
Females		**2,119**	**63%**
	Adolescent girls young women 15-24 years	**957**	45%
		Adolescent girls 15-19 years old	**302**	32%
		Young women 20-24 years old	**655**	68%
	Adults	**1,162**	55%
		Young adults 25-35 years old	**732**	63%
		Middle adults 36-49 years old	**384**	33%
		Older adults 50+	**46**	4%

Three-month test

Test not done		**1,470**	**44%**
Test done		**1,868**	**56%**
	Negative	**1,831**	98%
	Positive	**37**	2%

* Subgroups may not add to 100% due to rounding

PrEP site report

Malawi (National)

2021 Q3 (Cumulative)

Assessment details *

Potential PrEP clients assessed

Total clients assessed	**5,905**	**100%**

Acute HIV infection assessment

AHI assessment not done	**54**	**1%**
AHI assessment done	**5,851**	**99%**
AHI not suspected	**5,769**	99%
AHI suspected	**82**	1%

Baseline renal function screening

Creatinine sample not collected	**524**	**9%**
Creatinine sample collected	**5,381**	**91%**
Creatinine result pending	**4,117**	77%
Creatinine result available	**1,264**	23%
60+ ml/min clearance	**1,184**	94%
<60 ml/min clearance	**80**	6%

Baseline Hep test

Hep B test not done	**4,458**	**75%**
Hep B test done	**1,447**	**25%**
Negative	**1,412**	98%
Positive	**35**	2%

PrEP assessment outcomes

Total clients not eligible to start PrEP	**326**	**6%**
Initial HIV+ result	**69**	21%
Initial HIV- result	**257**	79%
Acute HIV infection suspected	**44**	17%
Acute HIV infection not suspected	**213**	83%
Low HIV risk	**202**	95%
High HIV risk	**11**	5%
Suspected kidney failure	**11**	100%
Total clients eligible to start PrEP	**5,579**	**94%**
Agreed to start PrEP	**4,750**	85%
Refused PrEP	**829**	15%

Registration details *

PrEP clinic registrations

Total PrEP clinic registrations	**4,750**	**100%**

Sex

Males	**1,528**	**32%**
Non-circumcised	**734**	48%
Circumcised	**794**	52%
Females	**3,222**	**68%**
Non-pregnant	**2,890**	90%
Pregnant	**172**	5%
Breastfeeding	**160**	5%

* Subgroups may not add to 100% due to rounding

PrEP site report

Malawi (National)

2021 Q3 (Cumulative)

Registration details

*

Registration type

First time (PrEP_New)	**4,695**	**99%**
Males	**1,554**	33%
Adolescent boys and young men 15-24 years	**512**	33%
Adolescent boys 15-19 years old	**88**	17%
Young men 20-24 years old	**424**	83%
Adults	**1,042**	67%
Young adults 25-35 years old	**554**	53%
Middle adults 36-49 years old	**360**	35%
Older adults 50+	**128**	12%
Females	**3,141**	67%
Adolescent girls young women 15-24 years	**1,394**	44%
Adolescent girls 15-19 years old	**410**	29%
Young women 20-24 years old	**984**	71%
Adults	**1,747**	56%
Young adults 25-35 years old	**1,150**	66%
Middle adults 36-49 years old	**549**	31%
Older adults 50+	**48**	3%
Re-initiation	**44**	**1%**
Transfer-in	**11**	**0%**

PrEP outcome details

*

Primary follow-up outcomes

Loss to follow-up	**911**	**19%**
Died	**0**	**0%**
Retained	**3,839**	**81%**
HIV positive	**12**	0%
HIV negative	**3,827**	100%
Side effects	**6**	0%
No side effects	**3,821**	100%
Low risk	**63**	2%
High risk	**3,758**	98%
Quit	**153**	4%
Continue	**3,605**	96%
Transfer out	**40**	1%
Here	**3,565**	99%
STI current	**445**	12%
STI none	**2,519**	71%
STI screening not done	**601**	17%

* Subgroups may not add to 100% due to rounding

HIV exposed child follow-up

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Age 2 months

Age cohort outcomes

*

Total children in birth cohort

Total children registered	**9,592**	**100%**

CPT status

On CPT	**8,016**	**84%**
Not on CPT	**1,576**	**16%**

HIV status

Current HIV infection status unknown	**2,180**	**23%**
HIV infection not confirmed, not ART eligible	**2,159**	99%
HIV infection not confirmed, ART eligible (PSHD)	**21**	1%
Current HIV infection status known	**7,412**	**77%**
Confirmed not infected	**7,323**	99%
Confirmed infected (ART eligible)	**89**	1%

ART eligibility summary

Not eligible for ART	**9,482**	**99%**
ART eligible	**110**	**1%**
ART not initiated	**32**	29%
Initiated ART	**78**	71%

Primary follow-up outcome

Discharged uninfected	**88**	**1%**
Continue follow-up	**8,015**	**93%**
Started ART	**78**	**1%**
Defaulted	**344**	**4%**
Died	**53**	**1%**

Transfers between sites

Total not transferred out	**8,578**	**89%**
Transferred out	**1,014**	**11%**

Age 12 months

Age cohort outcomes

*

Total children in birth cohort

Total children registered	**11,255**	**100%**

CPT status

On CPT	**8,830**	**78%**
Not on CPT	**2,425**	**22%**

HIV status

Current HIV infection status unknown	**2,490**	**22%**
HIV infection not confirmed, not ART eligible	**2,485**	100%
HIV infection not confirmed, ART eligible (PSHD)	**5**	0%
Current HIV infection status known	**8,765**	**78%**
Confirmed not infected	**8,587**	98%
Confirmed infected (ART eligible)	**178**	2%

* Subgroups may not add to 100% due to rounding

HIV exposed child follow-up

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Age cohort outcomes

*

ART eligibility summary

Not eligible for ART	**11,072**	**98%**
ART eligible	**183**	**2%**
ART not initiated	**10**	5%
Initiated ART	**173**	95%

Primary follow-up outcome

Discharged uninfected	**75**	**1%**
Continue follow-up	**8,746**	**87%**
Started ART	**173**	**2%**
Defaulted	**990**	**10%**
Died	**97**	**1%**

Transfers between sites

Total not transferred out	**10,081**	**90%**
Transferred out	**1,174**	**10%**

Age 24 months

Age cohort outcomes

*

Total children in birth cohort

Total children registered	**11,870**	**100%**

CPT status

On CPT	**387**	**3%**
Not on CPT	**11,483**	**97%**

HIV status

Current HIV infection status unknown	**3,725**	**31%**
HIV infection not confirmed, not ART eligible	**3,723**	100%
HIV infection not confirmed, ART eligible (PSHD)	**2**	0%
Current HIV infection status known	**8,145**	**69%**
Confirmed not infected	**7,889**	97%
Confirmed infected (ART eligible)	**256**	3%

ART eligibility summary

Not eligible for ART	**11,612**	**98%**
ART eligible	**258**	**2%**
ART not initiated	**22**	9%
Initiated ART	**236**	91%

Primary follow-up outcome

Discharged uninfected	**7,534**	**74%**
Continue follow-up	**302**	**3%**
Started ART	**236**	**2%**
Defaulted	**2,032**	**20%**
Died	**142**	**1%**

Transfers between sites

Total not transferred out	**10,246**	**86%**
Transferred out	**1,624**	**14%**

* Subgroups may not add to 100% due to rounding

Antenatal Care

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

New ANC registrations in reporting period *

Women with first visit in reporting period

New women registered	163,446	100%

ANC cohort analysis *

HIV status ascertainment

HIV status not ascertained	6,894	4%
HIV status ascertained	156,552	96%
Valid previous test result	**7,998**	5%
Previous negative	**1,210**	15%
Previous positive	**6,788**	85%
New test at ANC	**148,554**	95%
New negative	**146,457**	99%
New positive	**2,097**	1%

HIV status summary

Total women HIV negative	147,667	94%
Total women HIV positive	8,885	6%

PMTCT regimen mother

No ARVs	76	1%
Any ARVs	8,809	99%
ART (by time of initiation)	**8,809**	100%
Already on ART when starting ANC	**6,751**	77%
Started ART at 0-27 weeks of pregnancy	**1,862**	21%
Started ART at 28+ weeks of preg.	**196**	2%

ANC women after 6 months

ANC cohort analysis *

Total women completing ANC in the reporting period

Total women in booking cohort	160,512	100%

Syphilis status

Not tested for syphilis	29,232	18%
Tested for syphilis	131,280	82%
Syphilis negative	**128,323**	98%
Syphilis positive	**2,957**	2%

HIV status ascertainment

HIV status not ascertained	2,949	2%
HIV status ascertained	157,563	98%
Valid previous test result	**8,516**	5%
Previous negative	**1,446**	17%
Previous positive	**7,070**	83%
New test at ANC	**149,047**	95%
New negative	**146,837**	99%
New positive	**2,210**	1%

HIV status summary

Total women HIV negative	148,283	94%
Total women HIV positive	9,280	6%

* Subgroups may not add to 100% due to rounding

Antenatal Care

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

ANC cohort analysis

*

CPT status (among HIV pos)

Not on CPT	30	0%
On CPT	9,250	100%

PMTCT regimen mother

No ARVs	50	1%
Any ARVs	9,230	99%
ART (by time of initiation)	**9,230**	100%
Already on ART when starting ANC	**7,005**	76%
Started ART at 0-27 weeks of pregnancy	**2,012**	22%
Started ART at 28+ weeks of preg.	**213**	2%

Baby's ARVs dispensed

No ARVs dispensed for infant	61	1%
ARVs dispensed for infant	9,219	99%

* Subgroups may not add to 100% due to rounding

Maternity

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Maternal details

*

Admissions in the reporting period

Total admissions (referrals double-counted)	**145,024**	**100%**
Not referred to other site (total women)	**132,265**	91%
Referred out before delivery (multiple admissions)	**12,759**	9%

HIV status ascertainment

HIV status not ascertained	**7,766**	**5%**
HIV status ascertained	**137,258**	**95%**
Valid previous test result	**8,566**	6%
Previous negative	**96**	1%
Previous positive	**8,470**	99%
New test at maternity	**128,692**	94%
New negative	**128,449**	100%
New positive	**243**	0%

HIV status summary

Total women HIV negative	**128,545**	**94%**
Total women HIV positive	**8,713**	**6%**

ARVs during pregnancy (among HIV pos)

No ARV in pregnancy	**0**	**0%**
Any ARVs	**8,713**	**100%**
ART (by time of initiation)	**8,713**	100%
ART initiated before pregnancy	**8,374**	96%
ART initiated in 1st / 2nd trimester	**158**	2%
ART initiated in 3rd trimester	**59**	1%
ART initiated during labour	**122**	1%

Infant details

*

Single babies / multiple deliveries

Total babies delivered	**138,188**	**100%**
Single babies	**133,818**	97%
Twin / multiple babies	**4,370**	3%

Infant survival

Total live births	**135,537**	**98%**
Discharged alive	**134,690**	99%
Neonatal deaths	**847**	1%
Stillbirths	**2,651**	**2%**
Stillbirth, fresh	**1,236**	47%
Stillbirth, macerated	**1,415**	53%

HIV exposure / ARV proph. (among discharged alive)

Infants with unknown HIV exposure status	**4,504**	**3%**
Infants with known HIV exposure status	**130,186**	**97%**
Not HIV exposed	**121,247**	93%
HIV exposed	**8,939**	7%
Received no ARVs	**1,034**	12%
Received ARVs	**7,905**	88%
Nevirapine	**7,905**	100%

* Subgroups may not add to 100% due to rounding

ART cohort analysis

Malawi (National)

2021 Q3 (Quarter)

Registration details

*

ART clinic registrations

Total ART clinic registrations	**29,004**	**100%**

Registration type

ART initiations, first time (total patients)	**18,792**	**65%**
ART initiations, first time (non sex-disagg.)	**18**	0%
ART initiations, first time (by sex)	**18,774**	100%
ART initiations, first time, males	**7,619**	41%
ART initiations, first time, females	**11,155**	59%
ART initiations, first time, females non-pregnant	**8,538**	77%
ART initiations, first time, females pregnant	**2,617**	23%
ART re-initiations	**254**	**1%**
ART transfers in	**9,958**	**34%**

Sex

Males	**11,460**	**40%**
Females	**17,544**	**60%**
Non-pregnant	**13,840**	79%
Pregnant	**3,704**	21%

Age at ART initiation

Adults 15+ yrs	**27,113**	**93%**
Children 0-14 yrs	**1,891**	**7%**
Children 2-14 yrs	**1,284**	68%
Children below 24 mths	**607**	32%

Reason for starting ART

Presumed severe HIV Disease	**18**	**0%**
Confirmed HIV infection	**28,986**	**100%**
WHO stage 1 or 2	**25,290**	87%
CD4 below threshold	**1,711**	7%
CD4 unknown or >threshold	**23,579**	93%
PCR infants	**106**	0%
Children 12-59 mths	**453**	2%
Pregnant women	**3,622**	15%
Breastfeeding mothers	**882**	4%
Asymptomatic / mild	**18,516**	79%
WHO stage 3	**2,802**	10%
WHO stage 4	**741**	3%
Unknown / reason outside of guidelines	**153**	1%

TB at ART initiation

Never TB / TB > 24 months ago	**28,415**	**98%**
TB within the last 24 months	**240**	**1%**
Current episode of TB	**349**	**1%**

Kaposi's sarcoma at ART initiation

No KS	**28,930**	**100%**
Patients with KS	**74**	**0%**

* Subgroups may not add to 100% due to rounding

ART cohort analysis

Malawi (National)

2021 Q3 (Cumulative)

Registration details

*

ART clinic registrations

Total ART clinic registrations	1,948,873	100%

Registration type

ART initiations, first time (total patients)	1,539,775	79%
ART initiations, first time (non sex-disagg.)	**294,817**	19%
ART initiations, first time (by sex)	**1,244,958**	81%
ART initiations, first time, males	**471,403**	38%
ART initiations, first time, females	**773,555**	62%
ART initiations, first time, females non-pregnant	**616,808**	80%
ART initiations, first time, females pregnant	**156,747**	20%
ART re-initiations	26,754	1%
ART transfers in	382,344	20%

Sex

Males	728,400	37%
Females	1,220,473	63%
Non-pregnant	**979,479**	80%
Pregnant	**240,994**	20%

Age at ART initiation

Adults 15+ yrs	1,789,205	92%
Children 0-14 yrs	159,668	8%
Children 2-14 yrs	**119,871**	75%
Children below 24 mths	**39,797**	25%

Reason for starting ART

Presumed severe HIV Disease	4,456	0%
Confirmed HIV infection	1,944,417	100%
WHO stage 1 or 2	**1,216,439**	63%
CD4 below threshold	**374,778**	31%
CD4 unknown or >threshold	**841,661**	69%
PCR infants	**4,897**	1%
Children 12-59 mths	**23,650**	3%
Pregnant women	**227,169**	27%
Breastfeeding mothers	**69,798**	8%
Asymptomatic / mild	**516,147**	61%
WHO stage 3	**586,477**	30%
WHO stage 4	**127,519**	7%
Unknown / reason outside of guidelines	**13,982**	1%

TB at ART initiation

Never TB / TB > 24 months ago	1,872,465	96%
TB within the last 24 months	37,680	2%
Current episode of TB	38,728	2%

Kaposi's sarcoma at ART initiation

No KS	1,928,037	99%
Patients with KS	20,836	1%

ART cohort analysis

Malawi (National)

2021 Q3 (Cumulative)

ART outcomes

*

Primary follow-up outcomes

Total alive on ART		887,338	61%
	Alive on ART at site of last registration	**887,338**	100%
Defaulted		417,706	29%
Stopped ART		14,990	1%
Total died		138,732	10%
	Died month 1	**25,143**	18%
	Died month 2	**15,309**	11%
	Died month 3	**10,204**	7%
	Died month 4+	**88,076**	63%

Transfers between sites

Total not transferred out	1,457,870	75%
Transferred out	491,003	25%

* Subgroups may not add to 100% due to rounding

ART cohort analysis

Malawi (National)

2021 Q3 (Cumulative)

ART outcomes

*

ART regimens

First line regimens		874,993	99%
	Adult formulation	**864,599**	99%
		Regimen 0A	**19**	0%
		Regimen 2A	**144**	0%
		Regimen 4A	**18**	0%
		Regimen 5A	**2,450**	0%
		Regimen 6A	**113**	0%
		Regimen 13A	**840,657**	97%
		Regimen 14A	**8,696**	1%
		Regimen 15A	**12,463**	1%
		Regimen 16A	**17**	0%
		Regimen 17A	**22**	0%
	Paed. formulation	**10,394**	1%
		Regimen 0P	**4**	0%
		Regimen 2P	**321**	3%
		Regimen 4P	**4**	0%
		Regimen 16P	**106**	1%
		Regimen 17P	**12**	0%
		Regimen 14PA	**82**	1%
		Regimen 14PP	**35**	0%
		Regimen 15PA	**5,553**	53%
		Regimen 15PP	**4,277**	41%
Second line regimens		11,803	1%
	Adult formulation	**3,269**	28%
		Regimen 7A	**899**	28%
		Regimen 8A	**1,899**	58%
		Regimen 9A	**236**	7%
		Regimen 10A	**92**	3%
		Regimen 11A	**63**	2%
		Regimen 12A	**80**	2%
	Paed. Formulation	**8,534**	72%
		Regimen 9P Tabs	**6,802**	80%
		Regimen 9P Gran	**1,651**	19%
		Regimen 11P Tabs	**57**	1%
		Regimen 11P Gran	**24**	0%
Other regimen (adult / paed)		542	0%

Adherence

Adherence unknown (not recorded)		17,284	2%
Adherence recorded		870,054	98%
	0-3 doses missed	**643,274**	74%
	4+ doses missed	**226,780**	26%

ART side effects

Side effects unknown (not recorded)		17,770	2%
Side effects recorded		869,568	98%
	No side effects	**866,032**	100%
	Any side effects	**3,536**	0%

* Subgroups may not add to 100% due to rounding

ART cohort analysis

Malawi (National)

2021 Q3 (Cumulative)

ART outcomes

*

Current TB status among ART patients (ICF)

ICF not done (Current TB status unknown/ not circ)	5,954	1%
ICF done	881,384	99%
TB not suspected	**874,823**	99%
TB suspected	**3,555**	0%
TB confirmed	**3,006**	0%
TB confirmed, not on treatment	**23**	1%
TB confirmed, on TB treatment	**2,983**	99%

Pregnant / Breastfeeding

Pregnant females	24,871	3%
Breastfeeding	54,997	6%
All others (not recorded)	807,470	91%

* Subgroups may not add to 100% due to rounding

ART survival analysis

Malawi (National)

2021 Q3 (Quarter)

12 month survival children

Survival and retention in ART program *

ART cohort registration group outcomes

Total ART clinic registrations	**1,661**	**100%**
Transfers out (double counted)	**341**	21%
Total not transferred out (patients in cohort)	**1,320**	79%
Total alive on ART	**1,074**	81%
Total not retained	**246**	19%
Defaulted	**170**	69%
Stopped ART	**6**	2%
Died	**70**	28%

12 month survival all ages

Survival and retention in ART program *

ART cohort registration group outcomes

Total ART clinic registrations	**28,321**	**100%**
Transfers out (double counted)	**5,413**	19%
Total not transferred out (patients in cohort)	**22,908**	81%
Total alive on ART	**18,018**	79%
Total not retained	**4,890**	21%
Defaulted	**4,161**	85%
Stopped ART	**117**	2%
Died	**612**	13%

6 month survival OptionB+

Survival and retention in ART program *

ART cohort registration group outcomes

Total ART clinic registrations	**4,438**	**100%**
Transfers out (double counted)	**629**	14%
Total not transferred out (patients in cohort)	**3,809**	86%
Total alive on ART	**3,285**	86%
Total not retained	**524**	14%
Defaulted	**496**	95%
Stopped ART	**9**	2%
Died	**19**	4%

12 month survival OptionB+

Survival and retention in ART program *

ART cohort registration group outcomes

Total ART clinic registrations	**4,719**	**100%**
Transfers out (double counted)	**855**	18%
Total not transferred out (patients in cohort)	**3,864**	82%
Total alive on ART	**3,069**	79%
Total not retained	**795**	21%
Defaulted	**749**	94%
Stopped ART	**16**	2%
Died	**30**	4%

* Subgroups may not add to 100% due to rounding

TB/HIV program

Malawi (National)

2021 Q3 (Quarter)

TB program report

*

TB clinic registrations

Total TB patients registered	**3,470**	**100%**

HIV status ascertainment

HIV status not ascertained	**8**	**0%**
HIV status ascertained	**3,462**	**100%**
HIV negative	**1,964**	57%
HIV positive	**1,498**	43%
Already on ART	**1,434**	96%
Not on ART when starting TB treatment	**64**	4%

TB / ART program triangulation

*

HIV-burden among TB patients (estimated)

HIV negative (est. 40%)	**1,388**	**40%**
HIV positive (est. 60%) in need of ART	**2,082**	**60%**
Not on ART	**648**	31%
Total on ART (coverage)	**1,434**	69%
Already on ART (TB prog)	**1,434**	100%
Started ART within 24m of TB diagnosis (ART prog)	**0**	0%
ART initiations with current TB (ART prog)	**0**	59%
ART initiations after recent TB (ART prog)	**0**	41%

* Subgroups may not add to 100% due to rounding

Viral load monitoring cohort report

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

VL samples collected in the reporting period *

VL samples collected

Total VL samples	**214,546**	**100%**

Reason for VL test

Routine / scheduled monitoring	**187,645**	**87%**
Extra-schedular	**20,619**	**10%**
Targeted (clinical suspicion of failure)	**2,809**	14%
Follow-up after high VL	**17,810**	86%
Replacement of lost sample / missing result	**6,282**	**3%**

Results for VL samples collected 6 months ago *

Total VL samples with outcomes

Total VL samples collected 6 months ago	**161,667**	**100%**

VL test results

Valid results	**141,216**	**87%**
<1000 copies / ml	**131,342**	93%
1000+ copies / ml	**9,874**	7%
Rejected samples / invalid results	**2,236**	**1%**
Missing / outstanding results	**18,215**	**11%**

Result transmission type

Paper results	**139,005**	**96%**
Electronic results	**5,356**	**4%**

Time from sample collection to receipt of results

0-4 Weeks	**33,601**	**21%**
5-8 Weeks	**57,252**	**35%**
9-12 Weeks	**35,568**	**22%**
13+ Weeks / still missing	**35,246**	**22%**

Time from sample collection to client notification

0-4 Weeks	**13,912**	**9%**
5-8 Weeks	**22,786**	**14%**
9-12 Weeks	**34,225**	**21%**
13+ Weeks / pending	**90,744**	**56%**

Patients with high VL: outcome after 6 months *

Patients in high VL cohort

Total high VL patients evaluated after 6 months	**11,435**	**100%**

Initial high VL: reason for test

Routine / scheduled monitoring	**10,187**	**89%**
Targeted (clinical suspicion of failure)	**970**	**8%**
Repeat sample	**278**	**2%**

Intensive adherence counselling

3 Sessions completed	**8,270**	**72%**
Sessions not completed	**3,165**	**28%**

* Subgroups may not add to 100% due to rounding

Viral load monitoring cohort report

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Patients with high VL: outcome after 6 months *

Follow-up VL test

Follow-up sample collected		**6,964**	**61%**
	Valid results	**5,187**	74%
		<1000 copies / ml	**3,662**	71%
		1000+ copies / ml	**1,525**	29%
	Rejected samples / invalid results	**24**	0%
	Missing / outstanding results	**1,753**	25%
Follow-up sample pending		**4,471**	**39%**

Preliminary opinion

Conclusion made		**5,443**	**48%**
	Continue current regimen	**4,980**	91%
	Switch to 2nd line ART	**463**	9%
Conclusion pending		**5,992**	**52%**

Final treatment decision (2nd line prescriber)

Decision made		**5,109**	**45%**
	Continue current regimen	**4,661**	91%
	Switch to 2nd line ART	**395**	8%
	Refer to HIV specialist	**53**	1%
Decision pending		**6,326**	**55%**

* Subgroups may not add to 100% due to rounding

STI site report

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

STI clients treated in the reporting period

*

Total STI clients

Total STI clients treated		**97,255**	**100%**
	Index patients treated (symptomatic)	**80,021**	82%
	Partners treated	**17,234**	18%

Sex

Males		**40,008**	**41%**
	Males Non-circumcised	**26,887**	67%
	Males Circumcised	**13,121**	33%
Females		**57,247**	**59%**
	Non-pregnant	**49,203**	86%
	Pregnant	**8,044**	14%

Age group

Age group A (0-19 years)	**8,346**	**9%**
Age group B (20-24 years)	**23,099**	**24%**
Age group C (25+ years)	**65,810**	**68%**

Client type

Symptomatic cases		**87,193**	**90%**
	Index cases	**80,021**	92%
	Partners symptomatic	**7,172**	8%
Partners asymptomatic		**10,062**	**10%**

STI treatment history

Never treated for STI		**71,813**	**74%**
Previously treated for STI		**25,442**	**26%**
	Old >3 months ago	**19,378**	76%
	Recent ≤3 months ago	**6,064**	24%

STI syndromic diagnosis

GUD		**12,410**	**12%**
UD		**28,586**	**28%**
AVD		**30,676**	**30%**
	Low risk	**8,819**	29%
	High risk	**21,857**	71%
LAP		**12,226**	**12%**
SS		**1,045**	**1%**
BU		**628**	**1%**
BA		**1,446**	**1%**
NC		**310**	**0%**
Genital Warts		**560**	**1%**
Syphilis RPR VDRL		**9,111**	**9%**
Other STI		**6,727**	**6%**

STI partner notification

Total partner notification slips issued		**25,149**	**100%**
	Total partners returned	**17,234**	69%
	Total partners not seen	**7,915**	31%

* Subgroups may not add to 100% due to rounding

STI site report

Malawi (National)

2021 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

STI clients treated in the reporting period *

HIV test / ART status

HIV status not ascertained	**10,855**	**11%**
HIV status ascertained	**86,400**	**89%**
HIV negative (new test)	**70,697**	82%
HIV positive	**15,703**	18%
New positive	**1,844**	12%
Previous positive	**13,859**	88%
Not on ART	**456**	3%
On ART	**13,403**	97%

STI clients referred for services

Lab	**1,228**	**2%**
Gynae review	**726**	**1%**
Surgical review	**324**	**1%**
Repeat HTC	**40,243**	**77%**
ART (for assessment)	**5,145**	**10%**
Other (service referrals)	**2,569**	**5%**
VMMC	**2,360**	**4%**

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