



Government of Malawi Ministry of Health

Integrated HIV Program Report October-December 2020

- *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*
- *TB / HIV*
- *Sexually Transmitted Infections*
- *Supply of HIV Program Commodities*

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1 Executive Summary (October-December 2020)

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 3 editions of a circular to all HIV service delivery sites (on 3rd, 17th April, 15th June and 17th August) 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.

Access to most HIV services recovered during Q4 as COVID case numbers remained low during Q4 2020 but it remained below targets and lower than in the pre-COVID period.

Scale-up of integrated Program performance highlights by the end of December 2020:

- Scale-up of integrated HIV services had reached the following number of sites:
 - **763** static and **152** outreach HIV testing sites.
 - **754** (static) ART sites; **607** of these started at least one pregnant or breastfeeding woman.
 - **701** sites with HIV-exposed children in follow-up.
- **768,126** persons were tested for HIV by a trained provider and received their results; **154,465 (20%)** accessed HIV testing for the first time; **614,661 (80%)** were repeat testers and **25,267 (4%)** of these received confirmatory testing (after having tested positive in the past). **22,634 (3.0%)** clients received a positive result for the first time¹.
- A total of **119,205** people received **204,952** self-test kits; 84,867 (41%) of these were for use by the recipient and 120,85 (59%) for onward distribution to sex partners or other people.
- **19,919 (89%)** of **22,381** blood units collected were screened for (at least) HIV, hepatitis B and syphilis.
- **150,492 (98%)** of 154,299 women at ANC had their HIV status ascertained; **9,481 (7%)** of these were HIV positive. **134,184 (95%)** of 141,805 at maternity had their HIV status ascertained **10,692 (8%)** of these were HIV positive.
- **21,655** patients started ART this quarter; **87%** were classified as asymptomatic / in WHO stage 1 and started under the “Test & Treat” policy.

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%**.

- **864,491** patients were alive and on ART by end of December 2020.² This means that **80%** of the estimated 1,076,949 HIV positive population was on ART.³ ART coverage was **83%** (46,273/ 55,891) for children⁴ and **80%** (818,218 / 1,021,058) for adults.
- **136,281 (95%)** 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 **77%** and **96%**, respectively.
- **73%** of adults and **76%** of children were retained alive on ART at 12 months after initiation.⁵
- Out of **842,745** patients on first line adult ART **7,646 (1%)** were on TDF/3TC/EFV and **806,433 (97%)** had transitioned to TDF/3TC/DTG.
- **12,678⁶ (>99%)** of an estimated 10,364³ HIV infected pregnant women in Malawi were on ART this quarter. **9,832 (78%)** of these were already on ART when getting pregnant and **2,846 (22%)** started ART during pregnancy/delivery.
- An additional **811** breastfeeding women started ART in WHO stage 1 or 2.
- **82%** and **74%** of women started while pregnant or breastfeeding were retained on ART at **6 and 12 months** after initiation, respectively.
- **9,536 (7%)** of infants discharged alive from maternity were known to be HIV exposed, **9,129 (96%)** of these received ARV prophylaxis (nevirapine).
- A total of **12,391 HIV** exposed children were newly enrolled for follow-up this quarter; **11,385 (92%)** of these were enrolled before age 2 months.
- Out of the total 1,076,949 estimated PLHIV by end December 2020:
- An estimated **91%** of PLHIV knew their status (diagnosed)
- **88%** of whom were on ART
- **95%** of whom were virally suppressed.⁷

² 864,492 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 2020 Spectrum Model estimates for the HIV population in December 2020.

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.

⁷ Estimation methods for progress towards the 95-95-95 treatment targets

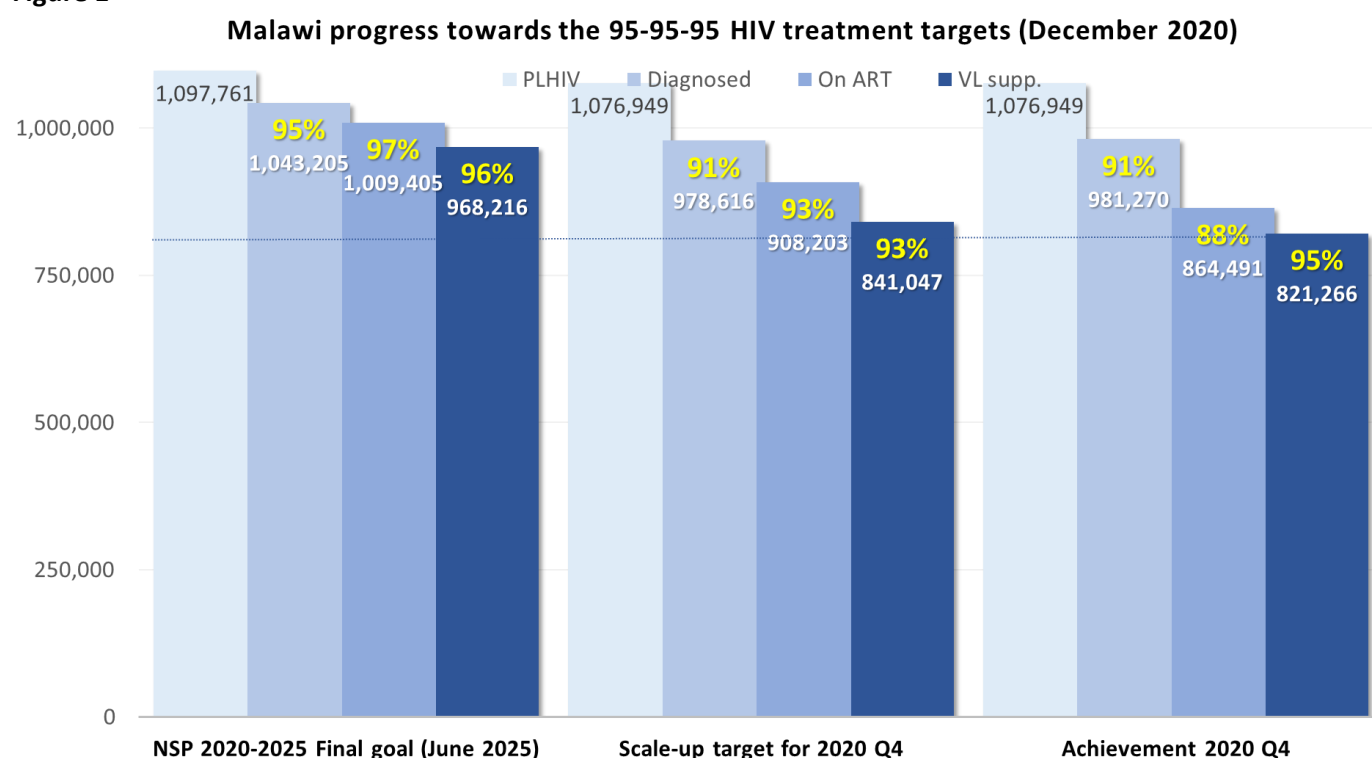
'First 95' (975,877 diagnosed): the 76.8% MPHIA estimate for adults (15-64) diagnosed (self-reported and/or presence of ARVs in blood sample) is assumed to represent the status for all PLHIV (Spectrum) by end of Q1 2016 (1,014,106 x 76.8% = 778,833); add: 318,828 = 47% of 601,310 people reported as newly diagnosed between April 2016 – December 2020 (HTS program data adjusted for an estimated 53% of repeat testers misclassified as newly diagnosed); subtract: 80,177 (83%) of 96,582 estimated deaths among all PLHIV (2020 Spectrum model) between April 2016 –December 2020 to account for deaths among the diagnosed population (on ART and not on ART).

'Second 95' (864,491 on ART): patients retained alive on ART by end Q4 2020 from routine ART program reports.

'Third 95' (821,266 virally suppressed): extrapolated from the 95% of patients with a routine VL monitoring result <1000 copies/ml this quarter, applied to the 864,491 patients on ART.

- This means that the Q4 2020 scale-up target for the population diagnosed was exceeded. The estimate for proportion of PLHIV who know their status was the same as previous quarter (91%) based on a new standard model method for the “first 90” (UNAIDS “Shiny90” model). The new estimate implies that undisclosed repeat testers account for 53% of clients reported as “new positive” in routine HTS data between 2016 and 2020.
- The apparent gap between the estimated number of PLHIV diagnosed and those on ART has slightly declined to 116,779 individuals diagnosed but not on ART. This gap may be explained by increasing challenges with early ART uptake and retention among the large number of PLHIV diagnosed over the last quarters, many of whom were asymptomatic when diagnosed.
- Malawi has already achieved two of the 90-90-90 targets (for diagnosis and viral suppression) which were set for December 2020. In line with the new National Strategic Plan 2020-25, the current and future reports will measure progress against the UNAIDS fast-track 95-95-95 targets. See **Figure 1** below:

Figure 1



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

760 public and private sector facilities were visited for **clinical HIV program supervision** between 11th and 22rd of January 2021.

The large number of sites was covered by **254** supervisors working in **32** teams that spent 1,970 **working hours** at the sites. Each site visit lasted on average 3.5 hours, but up to 2 days were spent at the busiest sites. **488 (64%)** sites were awarded a *certificate* for **excellent performance**. This number is lower than the previous quarter (544). **117 (12%)** 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 2020 Q4

Zone	Total facil. visited*	Supervision hours spent at facilities		Performance (# and % of sites)	
		Total	Average per site	Excellent perform.	Mentoring needed
NZ	136	338	2.5	74 54%	30 22%
CEZ	107	259	2.4	62 58%	8 7%
CWZ	171	433	2.5	112 65%	28 16%
SEZ	170	444	2.6	120 71%	19 11%
SWZ	177	496	2.8	120 68%	32 18%
Malawi	761	1,970	2.6	488 64%	117 15%

* 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. **239** sites had cumulatively registered more than 2,000 ART patient and **87** of these had registered more than 5,000. **207 (90%)** 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 **727** static and **152 outreach** HIV testing sites in Q4 2020.

Table 2

Facilities with integrated HIV services in the 5 Zones. Availability of services defined by performance (at least 1 patient enrolled) during 2020 Q4

Zone	Total fac.(1)	Facilities providing HIV services								CD4 count machines (2)					
		Exp. child		Pre-ART		PMTCT B+		ART		Installed		Functional		Results	
SEZ	170	161	95%	0	0%	150	88%	169	99%	19	11%	17	89%	1,670	
SWZ	176	163	93%	0	0%	144	82%	174	99%	32	18%	28	88%	2,994	
CWZ	172	149	87%	0	0%	128	74%	171	99%	21	12%	14	67%	1,136	
CEZ	107	103	96%	0	0%	87	81%	107	100%	15	14%	13	87%	646	
NZ	138	125	91%	0	0%	98	71%	133	96%	19	14%	19	100%	982	
Malawi	763	701	92%	0	0%	607	80%	754	99%	106	14%	91	86%	7,428	

(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 **763** sites designated to provide clinical HIV services in Q4 2020, by zone. At the national level, there were **754** (static) sites with at least one patient on ART; **607** sites had enrolled women under PMTCT Option B+; **701** 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 106 sites, and **91 (86%)** of these had produced at least 1 result during Q4 2020. The total number of CD4 results produced (**7,428**) was higher than previous quarter (4,762). **1,738 (23%)** of the 7,428 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.

4.2 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 2020 Q4 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, **1,267** were nurses and **831** were auxiliary staff (health surveillance assistants, clerks, etc.)

Table 3

	2020 Q1			2020 Q2			2020 Q3			2020 Q4		
Clinicians	825	29%	✓	860	30%	✓	879	28%	✓	919	28%	✓
Nurses	1,158	40%	✓	1,172	41%	✓	1,272	41%	✓	1,310	39%	✓
Pharmacy staff	124	4%	✓	123	4%	✓	131	4%	✓	261	8%	✓
Auxiliary Staff	787	27%	✓	725	25%	✓	818	26%	✓	830	25%	✓
Total	2,894			2,880			3,100			3,320		

An estimated 4.0 million ART patient visits are currently managed at the 754 ART sites per annum, based on 864,491 patients alive on ART and an average dispensing interval of 2.5 months. With 260 working days per year, an average of 15,960 patient visits is therefore managed by the ART sites per working day. At current staffing levels, this translates into an average of **17** ART patient visits per clinician and **12** 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 11 on page 32).

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 work load 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.

679 (93%) of the 727 active testing sites had documented at least 1 QC set this quarter and **639 (88%)** had recorded the minimum of 12 sets (one for each week). At **658 (90%)** of sites, all samples produced the expected result.

5.2 HIV Testing and Counselling Outputs

768,126 people ⁹ were tested and counselled for HIV between October and December 2020. This is a 9% increase from the previous quarter (697,991). 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".

724,313 (94%) of all tests were performed at health facilities, **7,424 (1%)** were done in stand-alone HTC sites, **35,810 (5%)** were done outside of facilities / in the community and **579 (<1%)** were from self-test returning clients tested at the facility. **22,634** people were reported as newly diagnosed with HIV this quarter. Out of these, **21,698 (96%)** were diagnosed at health facilities; **248 (1%)** at stand-alone HTC sites; **671 (3%)** through community-based testing and **17 (<1%)** were from self-test returning clients tested at the facility. The reported 'yield' for

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.

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 20,206 reported “new positives” results in an estimated **10,638** genuine new diagnoses this quarter. This reduces the true ‘yield’ of new diagnoses in the HTS program to **1.5%**.

5.3 HIV testing access type

570,240 (74%) of people tested were patients receiving provider-initiated testing and counselling (PITC); **163,623 (21%)** accessed voluntary testing and counselling, door-to-door, community-based testing, etc.; and **34,263 (4%)** came for testing with a *Family HTC Referral Slip* (FRS) that was issued to a family member at a prior HTS encounter. **34,263** family members or contacts presented with an FRS for testing to the facilities and this exceeded the total number of FRS issued this quarter (32,660) by 5%. This may be explained by the current emphasis on index testing as the key strategy for more targeted testing and as a means of reducing “over-testing “. Issuance and utilization of FRS has increased considerably over the last quarters.

5.4 Age and sex distribution among HIV testing clients

Out of **768,126** people tested and counselled, **33%** were males and **67%** were females. **36%** of females were pregnant. The ratio of males (**44%**) to non-pregnant females (**56%**) has remained constant. Testing among pregnant women is almost entirely provider-initiated and there is no comparable access route targeting males.

167,194 (25%) of all people tested accessed HTC with their partners (as a couple).

48% of all people tested and counselled were 25 years and above, **42%** were adolescents or young adults (15-24 years) and **9%** were children (<15 years). **1,283 (<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 2020 Q3 to Q4 2020, the number of males, pregnant women and non-pregnant females tested recovered by 9%, 11% and 6% respectively.

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

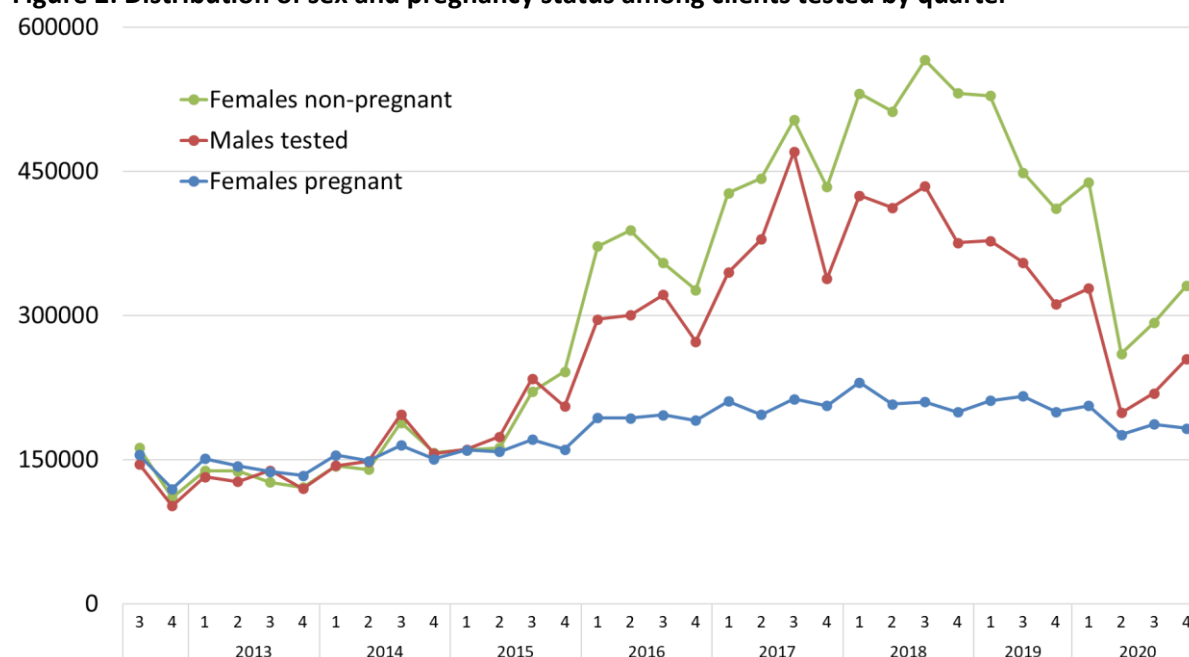
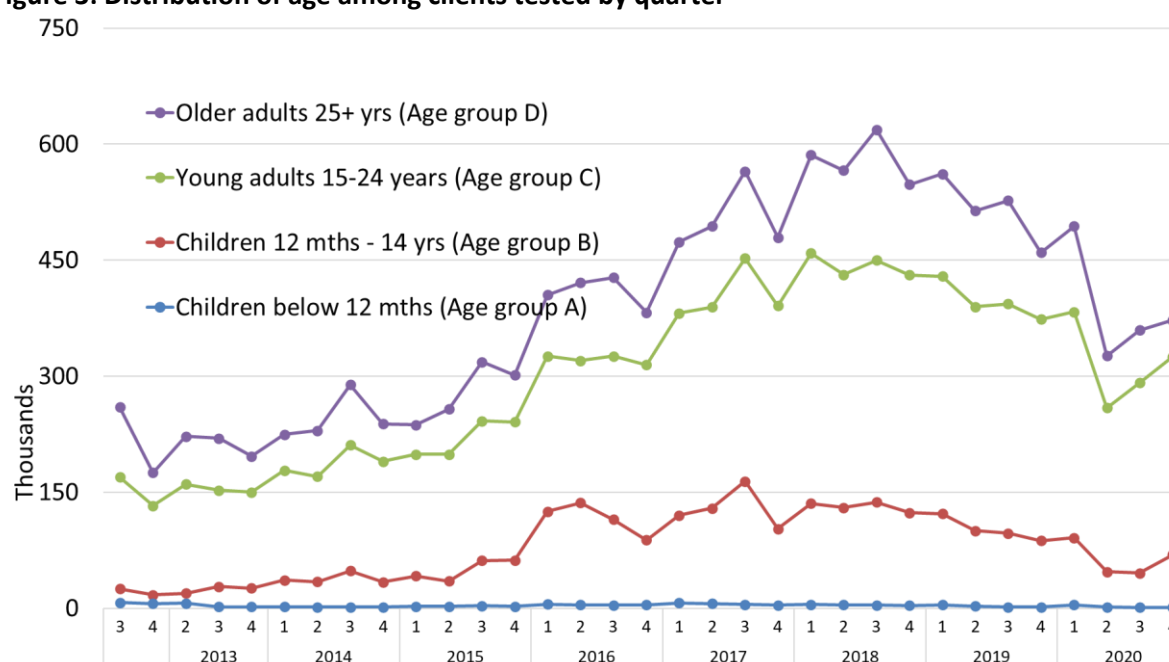


Figure 3: Distribution of age among clients tested by quarter



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.

153,465 (20 %) of all clients tested accessed testing for the first time and **614,661 (80%)** were repeat testers. Based on the cumulative number of people who accessed HTC for the first

time, a total of **12,080,302** 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.

22,634 (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 (**189**) and inconclusive test results (**450**) both accounted for **<1 %** of new results given to clients.

590,023 (96%) of 614,661 repeat testers reported a *last negative* result. **24,999 (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 (25,267)* was very close to the number of previous positive clients. **25,027 (99%)** of 25,267 confirmatory test results were concordant positive and **240 (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 **21,655** patients who initiated ART this quarter represent **96%** of the **22,634** clients tested positive for the first time. Proxy linkage rates ranged from 82% in Dedza and Mzimba South to 115% in Balaka. Lilongwe had the highest number of new diagnoses (**3,418**) and ART initiations were at **3,360** implying a district-level linkage of **98%**. Very high or low linkage rates suggest that cross-border access to testing and ART was seen in several districts (e.g. Dedza, Mzimba South, Neno, Blantyre, etc.).

The number of confirmatory positives exceeded the number of new positives by 2,393 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 (755) of confirmatory positives compared with the number of new positives. Lilongwe, Blantyre, Zomba, Mangochi, Mulanje, Mzimba North, Nkhosakota, Mzimba South and Kasungu accounted for **1,840 (77%)** out of the 2,393 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 3,372 (13%).

Figure 4: Number of new positives, confirmatory positives and new ART initiations in Q3 2020 by district (percentages represent ART initiations over new positives for each district)



The full national HIV testing data are presented in the **Appendix**.

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.

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. Routine 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 October and December 2020, **119,205** people were counselled and given a total of **204,952** 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 1.7 kits given to each recipient. **45%** of the 119,205 recipients were males and **55%** were females. **18%** of the females were pregnant.

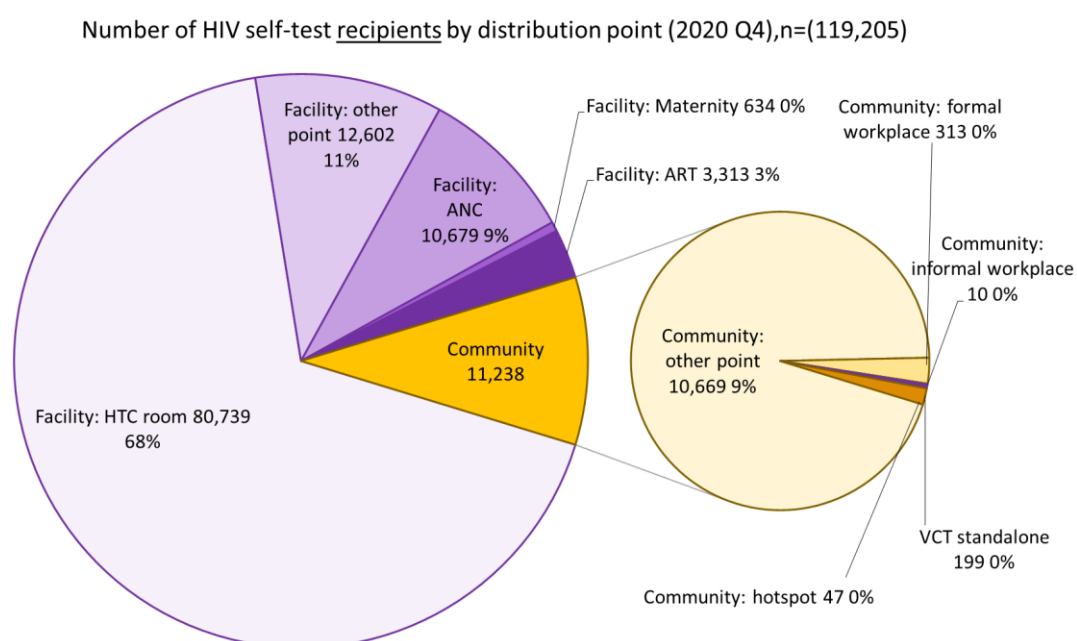
Out of all recipients, **13,854 (12%)** had never been tested for HIV before and **105,351 (88%)** reported a previous test result. **101,572 (96%)** of previously tested recipients were negative and **3,740 (3%)** were positive. **3,190 (85%)** of the positives were on ART and **15%** were not (yet) on ART. **39 (<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 2020 Q4. **107,967 (91%)** of all **119,205** recipients were seen at health facilities and **11,191 (9%)** in community settings. HTC rooms were the most common distribution point in facilities with **80,739 (68%)** recipients, followed by other facility points (**12,602**), ANC clinics (**10,679**), ART clinics (**3,313**) and Maternity (**634**). **10,669 (9%)** of clients received HIVST at unspecified community distribution points, while formal and informal workplace setting and VCT standalone accounted for <1% of recipients. None of the HIVST kits distributed were classified under community hotspot.

Figure 5



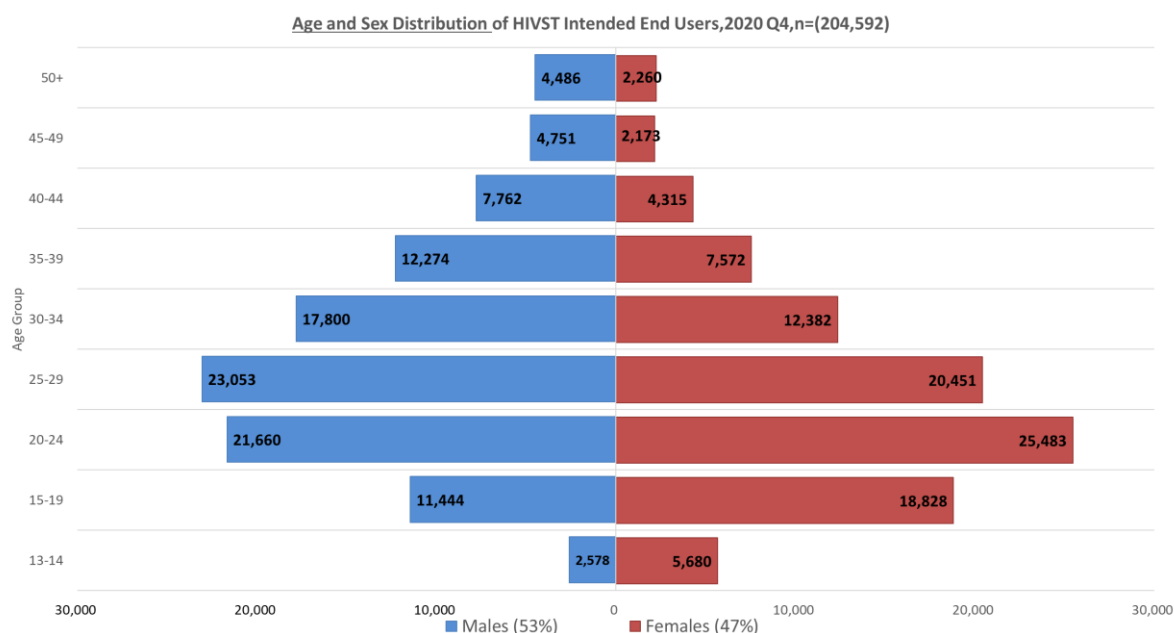
5.7.3 HIVST Distributed Kits: Intended User Attributes

Out of the **204,952** HIVST kits distributed in Q4 2020, **84,867 (41%)** were intended for self-use by the recipients and **120,085 (59%)** were for onward distribution. **86,829 (72%)** of the kits intended secondary distribution were for sexual partners and **33,256 (28%)** 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	57,473	42%	59,884	44%	19,073	14%	136,430	100%
	Other Point	9,312	38%	10,004	41%	5,181	21%	24,497	100%
	ANC	5,313	27%	8,795	45%	5,299	27%	19,407	100%
	Maternity	471	46%	379	37%	166	16%	1,016	100%
	ART	1,895	30%	2,488	39%	2,040	32%	6,423	100%
Community	Other Point	9,921	61%	5,047	31%	1,420	9%	16,388	100%
	Formal workplace	273	70%	92	24%	23	6%	388	100%
	Informal workplace	5	19%	16	62%	5	19%	26	100%
	Hotspot	47	100%	0	0%	0	0%	47	100%
	VCT standalone	157	48%	124	38%	49	15%	330	100%
		84,867	41%	86,829	42%	33,256	16%	204,952	

Figure 6 below shows the intended end user age and sex category for all the test kits that were distributed during 2020 Q4. Out of **204,952** test kits distributed, **105,808 (52%)** were for males and **99,144 (48%)** for females. 71% of the male end users were 20-39 years and 65% 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.

11,077 DNA PCR samples were drawn in the reporting period and documented in the facility DNA-PCR sample registers. **10,586 (96%)** of these were for the initial DNA-PCR test for exposed infant; **302 (3%)** were for the confirmatory testing of exposed children under 24 months when starting ART; **140 (1%)** were for repeat DNA-PCR for patients whose previous collected samples did not produce a valid result, and **50 (<1%)** were tie-breaker samples after repeat-inconclusive rapid antibody testing.

9,348 (84%) of 11,077 samples were collected using Dried Blood Spot (DBS); **1,721 (16%)** were collected directly in the device cartridge for Point of Care Machines (POCs) and 8 (<1%) were collected using other methods, e.g. plasma.

Results were received at the facility for **8,827 (80%)** of the 11,077 samples collected; for **2,208 (20%)** of all samples the result missing or still pending 12 weeks after the samples were collected. **42(<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, 9% were notified within 5-8 weeks and 2% within 9-12 weeks. **5,524 (50%)** patients were either notified after 12 weeks or the notification was still pending. **8,742 (99%)** of 8,827 samples with results were conclusive and **85% (1%)** were inconclusive. Out of the conclusive test results, **8,400 (96%)** were negative and **342 (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 **22,381** blood units were collected in Malawi during Q4 2020. MBTS collected **(80%)** of these, **100%** of which were screened comprehensively for the relevant TTIs (HIV, Hepatitis B, Hepatitis C, syphilis, malaria). In addition, **54** hospitals in Malawi collected a total of **4,512** units from replacement donors. **4,035 (89%)** of these units were screened for at least the 3 key TTIs (HIV, HepB and syphilis) and **3,250 (81%)** of these were also screened for HepC and malaria. This means that a total of **4,035 (89%)** 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, **50** were screened with any other combination of tests for TTIs.

A total of **6,684** potential replacement donors were documented in the blood donor registers at the facilities and **4,512 (68%)** 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 TTs may have only been carried out for donors who passed the screening for more common conditions. In total, 76% of potential donors were tested for HIV, 75% for HepB, 72% for syphilis, 71% for malaria and 58% for HepC. Detailed data on outcomes of individual tests among all potential blood donors are presented in the Appendix

8 Preventive Services

8.1 Post Exposure Prophylaxis (PEP)

A total of 5,004 persons received PEP during Q4 2020. This is a slight increase from the previous quarter's 4,326.

8.2 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 **68,545 (15%)** of 448,675 women received Depo-Provera from ART clinics in Q4 2020. The Northern zone had achieved the highest coverage. Patient coverage has slightly decreased from last quarter (16%). 554 (73%) of 754 ART/PMTCT sites had stocks of Depo-Provera in January 2021. This is an increase from the 537 sites with stocks in July 2020.¹⁰ The HIV Program is no longer supplementing FP supplies through procurement and distribution of additional Depo-Provera to sites.

8.3 Cotrimoxazole Preventive Therapy (CPT)

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%.

¹⁰ Many Mission hospitals do not provide family planning.

Table 6 shows that **604,764 (71%)** of 852,425 patients on ART were on CPT. Coverage was highest in Central East zones at **79%**.

8.4 Isoniazid Preventive Therapy (IPT) and BP Screening

ART patients with a negative screening outcome for TB symptoms in the 5 districts with the highest TB burden (Lilongwe, Blantyre, Chiradzulu, Thyolo, Zomba) were eligible for continuous IPT before the change of TPT policy. Currently the provision of IPT has also started in some districts amongst the newly initiated ART patients who have not completed the lifelong IPT. 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. These outputs will be reported from 2021 Q1.

667,438 (77%) of 864,491 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. **122,290 (18%)** of 664,039 were screened for hypertension at least once in 2020.

Table 5

Zone District	Patients on ART (all)			Women (18-49) on ART			Adults (30+) on ART		
	Total	On CPT	On IPT	Total	Given FP*		Total	BP screened**	
Malawi (National)	864,491	616,843	71%	448,671	68,545	15%	673,438	122,290	18%
Northern Zone	86,561	67,731	78%	44,925	7,603	17%	67,431	19,295	29%
Chitipa	6,920	2,781	40%	3,591	899	25%	5,391	19	0%
Karonga	14,910	11,161	75%	7,738	1,089	14%	11,615	3,684	32%
Nkhata Bay	11,065	10,070	91%	5,743	655	11%	8,620	3,394	39%
Rumphi	8,830	8,061	91%	4,583	814	18%	6,879	1,120	16%
Mzimba North	27,485	22,351	81%	14,265	2,569	18%	21,411	6,563	31%
Mzimba South	16,545	12,735	77%	8,587	1,548	18%	12,889	4,431	34%
Likoma	806	572	71%	418	28	7%	628	84	13%
Central East Zone	68,338	58,886	86%	35,467	4,032	11%	53,235	12,257	23%
Nkhotakota	13,556	11,583	85%	7,036	474	7%	10,560	4,029	38%
Kasungu	18,605	15,678	84%	9,656	901	9%	14,493	2,093	14%
Ntchisi	4,960	4,673	94%	2,574	261	10%	3,864	1,626	42%
Dowa	13,595	10,982	81%	7,056	1,080	15%	10,591	822	8%
Salima	17,622	15,971	91%	9,146	1,316	14%	13,728	3,687	27%
Central West Zone	178,392	112,222	63%	92,585	13,471	15%	138,967	19,061	14%
Lilongwe	111,298	67,320	60%	57,764	9,640	17%	86,701	13,695	16%
Mchinji	18,309	8,101	44%	9,502	1,780	19%	14,263	0	0%
Dedza	20,339	13,451	66%	10,556	349	3%	15,844	1,436	9%
Ntcheu	28,446	23,349	82%	14,763	1,702	12%	22,159	3,930	18%
South West Zone	269,482	198,439	74%	139,861	24,878	18%	209,926	34,156	16%
Chiradzulu	41,641	30,805	74%	21,612	5,570	26%	32,438	686	2%
Blantyre	101,252	69,292	68%	52,550	6,930	13%	78,875	17,980	23%
Mwanza	6,700	2,362	35%	3,477	701	20%	5,219	690	13%
Thyolo	56,749	41,892	74%	29,453	5,489	19%	44,207	2,341	5%
Chikwawa	31,185	25,837	83%	16,185	2,737	17%	24,293	3,177	13%
Nsanje	23,065	20,112	87%	11,971	2,122	18%	17,968	3,342	19%
Neno	8,890	8,140	92%	4,614	1,329	29%	6,925	5,939	86%
South East Zone	261,718	179,565	69%	135,832	18,560	14%	203,878	37,520	18%
Mangochi	55,035	37,492	68%	28,563	2,658	9%	42,872	2,854	7%
Machinga	31,860	23,410	73%	16,535	912	6%	24,819	9,199	37%
Zomba	58,737	38,890	66%	30,485	5,537	18%	45,756	12,119	26%
Mulanje	57,932	41,253	71%	30,067	7,391	25%	45,129	5,054	11%
Phalombe	35,653	20,202	57%	18,504	1,040	6%	27,774	3,263	12%
Balaka	22,501	18,317	81%	11,678	1,021	9%	17,528	5,032	29%

* 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.

8.5 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.

852,943 (99%) of all patients retained on ART were screened for TB at their last visit before end of December 2020. Out of these, **2,916 (<1%)** patients were classified as new TB suspects. **3,022 (<1%)** patients were confirmed to have TB (clinical or lab based) and **2,459 (81%)** 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)	11,548	1%
ICF done	852,943	99%
TB not suspected	847,005	99%
TB suspected	2,916	0%
TB confirmed	3,022	0%
TB confirmed, not on treatment	563	19%
TB confirmed, on TB treatment	2,459	81%

8.6 HIV-Related Diseases

Table 6 shows the number of patients treated for key HIV-related indicator diseases. **3,948** patients were started on TB treatment this quarter and HIV status was ascertained for **3,927 (99%)**; **1,798 (46%)** of these were HIV positive and **1,669 (93%)** of all HIV positives were already on ART when starting TB treatment. **61** 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, CM = cryptococcal meningitis, OC = oesophageal candidiasis).

	TB				KS *	CM *	OC *
	Tot. cases	HIV status asc.	HIV positive	Already on ART	Tot. cases	Tot. cases	Tot. cases
2020 Q1	2,471	2,400 97%	1,263 53%	1,229 97%	120	0	0
2020 Q2	3,471	3,162 91%	1,287 41%	1,170 91%	148	0	0
2020 Q3	3,623	3,588 99%	1,576 44%	1,475 94%	71	0	0
2020 Q4	3,948	3,927 99%	1,798 46%	1,669 93%	61	0	0

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

12,391 HIV exposed children were newly enrolled into follow-up during Q4 2020; **11,385 (82%)** of these were under the age of 2 months. The total number of new enrolments (12,391) exceeds by 2,855 (23%) the total number of known HIV exposed children discharged from maternity (9,536). 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 **11,099** infants in the **2-month age cohort**. **7,999 (73%)** had received a DNA-PCR result. **85 (1%)** of these were confirmed HIV infected. An additional **8** infants were diagnosed with *presumed severe HIV disease*, which means that a total of **93** infants were eligible for

ART. **71 (76%)** of these had started ART. Out of the entire 2-month age cohort, **9,620 (95%)** were retained in exposed child follow-up, **71 (1%)** had started ART and **45 (<1%)** were discharged confirmed uninfected ¹¹. **376 (<1%)** were known to have died and **356 (5%)** had been lost to follow-up.

There were **12,574** children in the **12-month age cohort**. Current HIV infection status was known for **9,327 (74%)** children (DNA-PCR or rapid antibody test) and **196 (2%)** of these were confirmed HIV infected. **68 (2%)** additional children had been diagnosed with *presumed severe HIV disease*, which means that a total of **264** children were eligible for ART. **185 (70%)** had started ART. Out of the entire age cohort, **9,505 (85%)** were retained in exposed child follow-up, **264 (2%)** had started ART and **77 (<1%)** were discharged confirmed uninfected.¹¹ **1,310 (12%)** were lost to follow-up and **119 (1%)** were known to have died.

There were **12,126** children in the **24-month age cohort**. Current HIV infection status was known for **8,166 (67%)** children (DNA-PCR or rapid antibody test) and **219 (3%)** of these were confirmed HIV infected. **4** additional children had been diagnosed with *presumed severe HIV disease*, which means that a total of **223** children were eligible for ART. **221 (99%)** of these had started ART. Out of the entire age cohort, **347 (3%)** were retained in exposed child follow-up, **221 (2%)** had started ART and **7,624 (71%)** were discharged confirmed uninfected. **2,371 (22%)** were lost to follow-up and **123 (1%)** were known to have died.

Confirmed HIV-free survival at age 24 months in this quarter was **71%**. This was related to the fact that only **67%** in this cohort had a known HIV status. **3,960 (34%)** children were classified as ‘*current HIV infection status unknown*’ and many of these may be among the **2,371** children lost to follow-up and the **123** children who had died. Only **347 (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

¹¹ 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 of the known HIV infected women deliver at health facilities. ART coverage among known positives is therefore reliably calculated from maternity reports. Women admitted at maternity who are referred to another facility before / after delivery are double counted in aggregated maternity data. Assuming the probability of referral is independent of ART status, the number of women already on ART when getting pregnant is therefore **adjusted** by the overall proportion of referrals among women admitted to maternity.

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 10,700 HIV infected pregnant women in the population per quarter (1/4 of 42,802 in 2019).¹²

10.2 ARV Coverage among Pregnant / Breastfeeding Women and Exposed Infants

12,678 (>99%) of the estimated 10,364 HIV infected pregnant women in Malawi this quarter were on ART. This is based on **9,832**¹³ women at maternity who were already on ART when getting pregnant and **2,846**¹⁴ women who newly initiated ART in pregnancy. ART coverage was similar in the previous quarter (>99%).

An additional **811**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

¹² 2020 Spectrum model estimates for HIV infected pregnant women in 2020.

¹³ 9,832 women who started ART before pregnancy admitted at maternity; reduced by 6.8% to adjust for double counting of 9,575 referrals among 141,805 total admissions.

¹⁴ 2,846 women registered at ART clinics who were pregnant at the time of starting ART; a) 16.9% are discounted to adjust for double-counting of transfers based on 948 of 5,615 women who transferred within 12 months of registration (12-month Option B+ survival analysis); b) 11.9% are discounted to account for presumed failed ART initiations based on 525 of 4,422 women lost to follow-up within 6 months of registration (6-month Option B+ survival analysis).

¹⁵ 976 women registered at ART clinics who were breastfeeding at the time of starting ART; reduced by 16.9% to adjust for double-counting of transfers based on 948 of 5,615 women who transferred within 12 months of

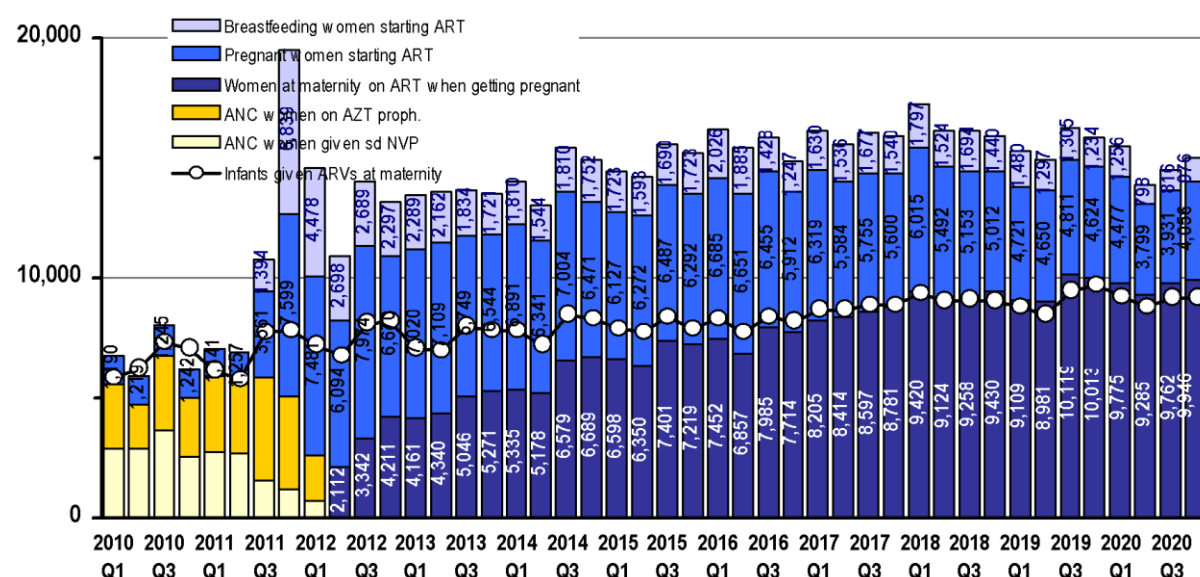
to **3,658**. Most women starting ART while breastfeeding were probably identified late in maternity or early in the postnatal period, but this group may also include some women who re-initiated after interrupting ART in pregnancy. **9,129 infants** were confirmed to have started NVP prophylaxis at maternity.

Figure 7 shows the transition from prophylactic ARV regimens for HIV infected mothers to universal ART under **Option B+** which has now been superseded by universal ART (registration data; not adjusted as above). 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 7

Figure 2: Transition from prophylactic ARV regimens for PMTCT to Option B+ in Malawi

Women who moved to Option B+ from sdNVP / AZT were double counted between Q3 2011 - Q1 2012. It is likely that <12,000 total women were on ARVs during these quarters. Data on women already on ART when getting pregnant are only available from Q2 2012.



10.3 HIV Services at ANC

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

10.3.1 HIV Ascertainment and ART Coverage

Booking cohort:

154,299 women attended ANC for their first visit between October and December 2020. This is below the estimated 157,574 pregnant women in the 2020 population during one quarter.¹⁶ **150,492 (98%)** of women in this cohort had their HIV status ascertained at the first visit. Out of these, **8,764 (6%)** presented with a valid previous test result and **141,728 (94%)** received a new test. A total of **9,841 (7%)** of women were found HIV positive: **7,426 (75%)** of these from a documented previous test and **2,415 (25%)** from a new test. **9,560 (97%)** of all positives

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.

¹⁶ Estimated as ¼ of 630,187 births projected for 2020 (Demographic Projection from Spectrum 2020).

received ART: **7,312 (76%)** of these were already on ART when starting ANC; **2,033 (21%)** initiated ART at their first ANC visit and **215 (2%)** started late at 28 + weeks during pregnancy.

Outcome cohort:

150,929 women had started ANC between April and June 2020 and their outcomes were reported between October and December 2020.

138,977 (99%) 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. **10,194 (7%)** presented with a valid documented previous HIV test result and **138,783 (93%)** received a new HIV test result at ANC. A total of **10,029 (7%)** women were found HIV positive. This is consistent with the latest Spectrum projections (6.6% HIV prevalence among pregnant women in 2020).¹²

9,942 (99%) of (known) HIV infected women were on ART by the end of ANC. This represents **93%** coverage of the estimated 10,700 HIV positive pregnant women per quarter at the population level. Of the **9,942** ANC women who were known to receive ART **7,675 (77%)** were already on ART when starting ANC, **2,004 (20%)** initiated before 28 weeks of pregnancy and **267 (3%)** initiated during the last trimester of pregnancy. **9,929 (99%)** of HIV infected women at ANC were on Cotrimoxazole Preventive Therapy. **9,869 (98%)** of known HIV infected women attending ANC received the infant dose of ARVs (nevirapine syrup) to take home.

10.3.2 Syphilis Screening

93,825 (62%) of women in the outcome cohort were tested for syphilis and **1,803 (2%)** were syphilis positive. The syphilis testing rate has decreased considerably from the previous quarter (**84%**). While syphilis RDT were available at all sites this decline was probably mainly due the re-assignment of many HIV Diagnostic Assistants away from testing services to ART retention activities.

10.4 HIV Services at Maternity

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

Between October and December 2020, **141,805** women were admitted for delivery to maternity; **9,575** of these were referred to another facility before delivery, resulting in **132,230** total admissions to maternity.

A total of **135,314** babies were born, **130,884 (97%)** were singletons and **4,430 (3%)** were twins/multiples. There were **132,902 (98%)** live births and **2,402 (2%)** stillbirths. **132,044 (99%)** of babies born alive were discharged alive and **863 (1%)** died before discharge.

10.4.1 HIV Ascertainment at Maternity

134,184 (95%) women had their HIV status ascertained at maternity. Out of these, **10,071 (8%)** presented with a valid previous HIV test result and **124,113 (92%)** received a new test. A total of **10,692 (8%)** women were HIV positive and **9,986 (97%)** of these had been previously diagnosed while **706 (1%)** received a new positive result at maternity. The **134,184** women whose HIV status was ascertained at maternity represent **88%** of the expected 154,750 women delivering in the population.

HIV exposure status was ascertained for **127,657 (97%)** out of **132,044** babies born and discharged alive. **9,536 (7%)** of these were born to a known HIV positive mother.

10.4.2 ARV Coverage at Maternity

A total of **10,374 (97%)** of known HIV infected women admitted to maternity received ART. Out of these, **9,946 (96%)** had started ART before pregnancy, **200 (2%)** initiated ART during the 1st or 2nd trimester, **88 (1%)** initiated during the 3rd trimester and **140 (1%)** initiated ART at maternity.

A total of **9,129 (96%)** of **9,536** infants who were known HIV exposed and discharged alive started daily NVP prophylaxis at maternity. This represents **85%** coverage of the estimated 10,700 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 Q4 2020

By the end of December 2020, there were 754 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 **Figure 8**). 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 **21,655** initiated ART for the first time in Q4 2020. From 2019 Q1, routine reporting during supportive supervision has included a disaggregation of first-time initiations by sex and pregnancy status. In Q4 2020, **21,655 (100%)** out of 21,655 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 **3,019 (23%)**.

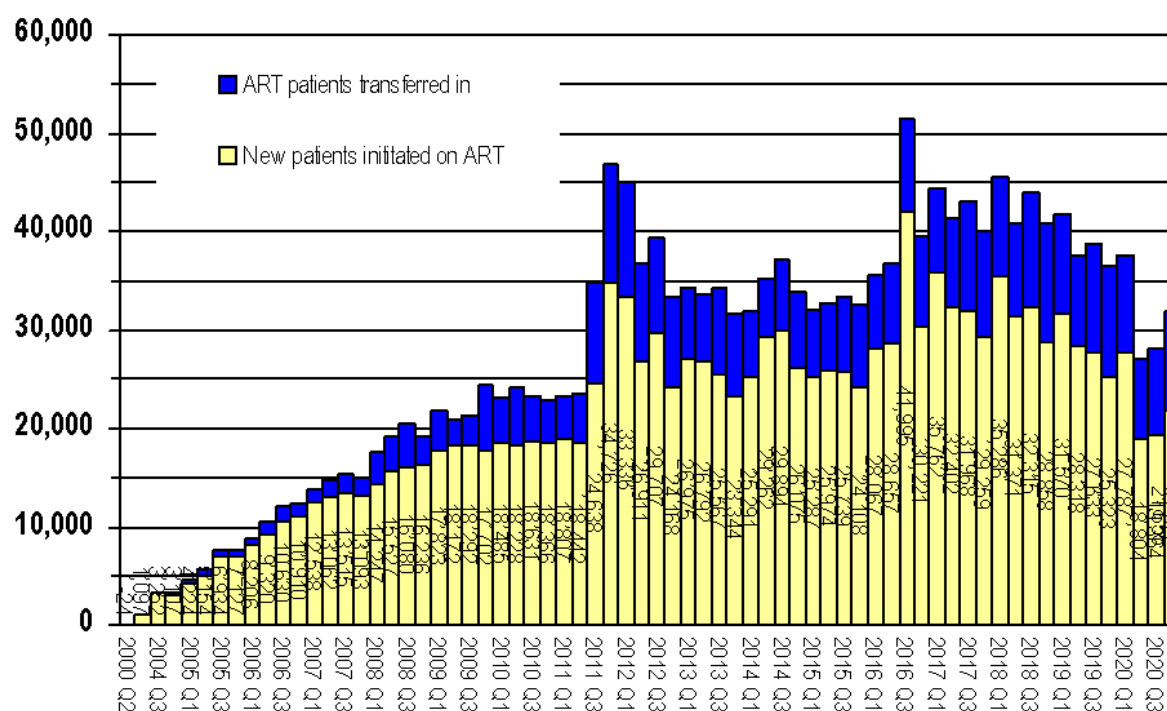
The total number of patients newly initiated on ART represents **96%** of the 22,634 people recorded as newly diagnosed with HIV during the quarter. Among all new ART clinic registrations¹⁷ in Q4 2020, **39%** were males and **61%** were females. **4,055 (21%)** of the registered females were pregnant at the time of starting ART.

¹⁷ These proportions include the 21,655 patients newly initiating ART, but also 10,014 patients previously started on ART who transferred between sites and 249 patients who re-initiated ART after treatment interruption.

Figure 8

Patients newly initiated on ART and total ART clinic registrations per quarter

Total ART clinic registrations include patients who transferred between sites. This results in double counting of patients at the national level. For 'patients newly initiated on ART' every patient is only counted once.



A total of **31,896 (87%)** of all patients registered started in WHO stage 1 or 2 and **20,187 (79%)** of these started as 'asymptomatic' under universal ART eligibility policy. **3,288 (10%)** of patients registered started in WHO stage 3 and **812 (3%)** started in stage four. **63 (<1)** had no documented clinical stage at initiation.

1,934 children were registered at ART sites in Q4 2020. **520 (27%)** of these were children aged 12-59 months in WHO stage 1 or 2. **22 (<1%)** infants started ART with presumed severe HIV disease. **110** 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 9,536 HIV exposed infants were identified at maternity and assuming a 2% transmission rate among the 97% of HIV positive mothers at maternity who received ART (and 20% transmission in the 3% who did not receive ART)¹⁸, only about 242 of these known HIV exposed infants may have been infected perinatally during Q4 2020. However, considering the projected 600 new infant HIV infections in the 2020 population per quarter¹⁹, early infant treatment coverage remains low at an estimated **40%** (242/600). The most significant bottleneck for early infant treatment remains the identification of HIV (probably mostly recently) infected pregnant / breastfeeding women.

543 (2%) out of all ART clinic registrations were patients with TB: **306 (1%)** had a current and **237 (1%)** a recent history of TB. **61 (<1%)** of patients registered had Kaposi's sarcoma.

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 2,400 estimated new infant infections in the population in 2020 (2020 Malawi Spectrum model)

11.2 Cumulative ART Registrations up to December 2020

By the end of December 2020, there were a cumulative total of **1,874,040 ART** clinic registrations, **1,489,966 (80%)** of whom were patients newly initiated on ART; **357,862 (19%)** were patients who transferred between clinics; **26,212 (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

864,491 patients were alive on ART by the end of December 2020. This is equivalent to **80% ART coverage** among the estimated 1,076,949 HIV positive population in Malawi in 2020 and it means that the revised national ART scale-up target²⁰ for December 2020 (84% coverage) has been missed.

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.

Out of the 1,874,040 patients ever initiated on ART, **864,491 (46%)** were retained alive on ART, **131,634 (7%)** were known to have died, **411,053 (22%)** were lost to follow-up and **13,741 (<1%)** were known to have stopped ART.

An estimated **818,218** adults and **46,273** children (<15 years)²¹ were alive on ART by the end of December 2020. This represents **83%** (46,273/ 55,891) and **80 %** (804,364/ 1,021,058) ART coverage among children and adults, respectively.

11.3.1 Differentiated Service Delivery (DSD)

Data on ART dispensing and appointment intervals was available for 717 (95%) of 755 ART sites with EMR (both PoC and eMastercard). **806,408 (93%)** of 864,491 patients retained alive on ART had information on dispensation intervals recorded; **8%** of these received ARVs for less than 3 months, **53%** for 3-5 months and **316,329 (39%)** of 806,408 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 9 below shows the distribution of the 718 ART facilities by proportion of patients who were given 6 months ARVs at their last recent visit during Q4 2020. **199 (27%)** of the 717 facilities had given ≥50% of their patients ≥6 months of ARVs.

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

²¹ The total national number of ART patients with current age <15 years is extrapolated from the (5.0%) of all patients at EMR sites who were <15 years at the end of Q4 2020.

Figure 9

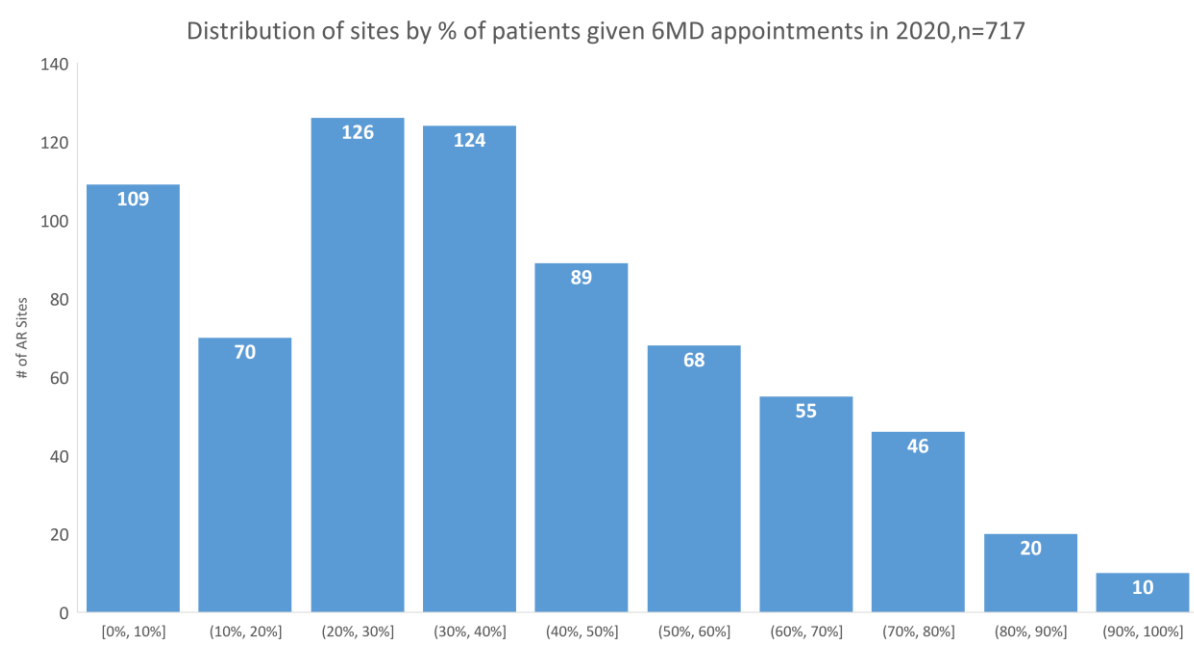


Figure 10 below shows the distribution of the ART dispensing and appointment intervals by district. Zomba, Likoma, Mchinji and Blantyre had given 6-month dispensation to more than half of their patients while 6-month dispensing coverage was only around 20% in Chikwawa, Karonga and Nsanje.

Figure 10

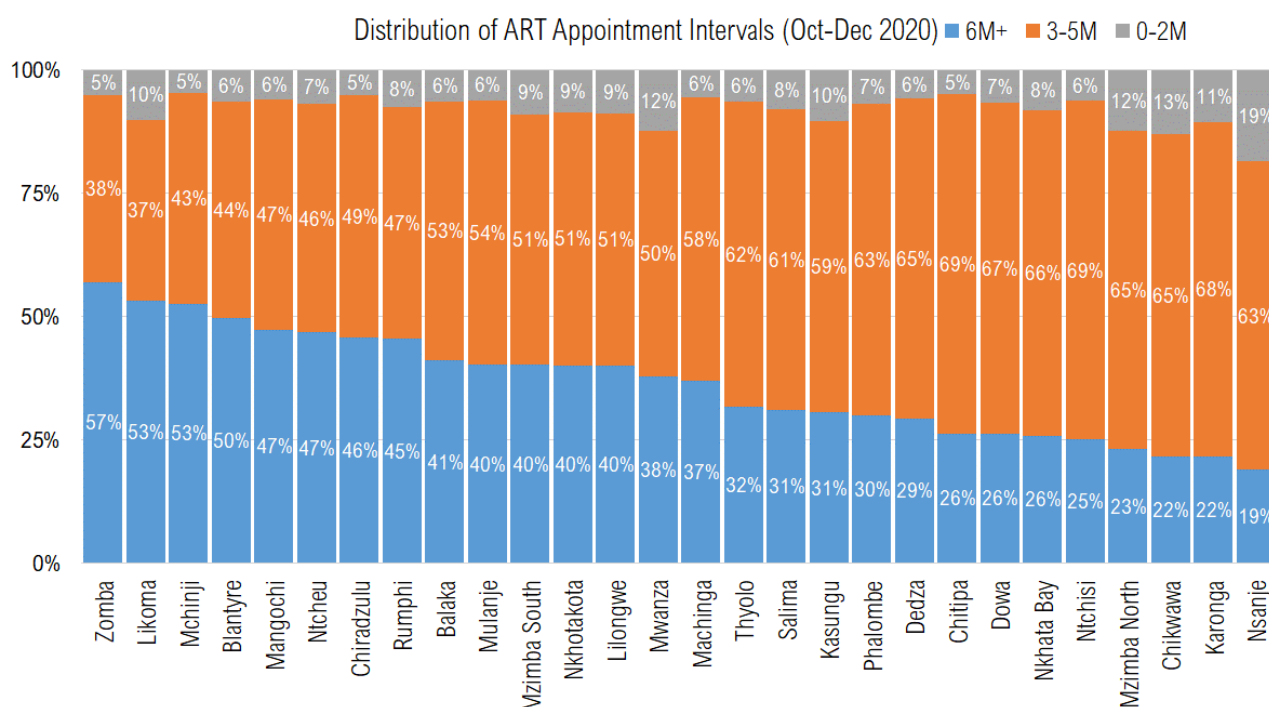


Figure 11: Patients alive on ART at the end of each quarter, stratified by size of facility (number of patients alive on ART)

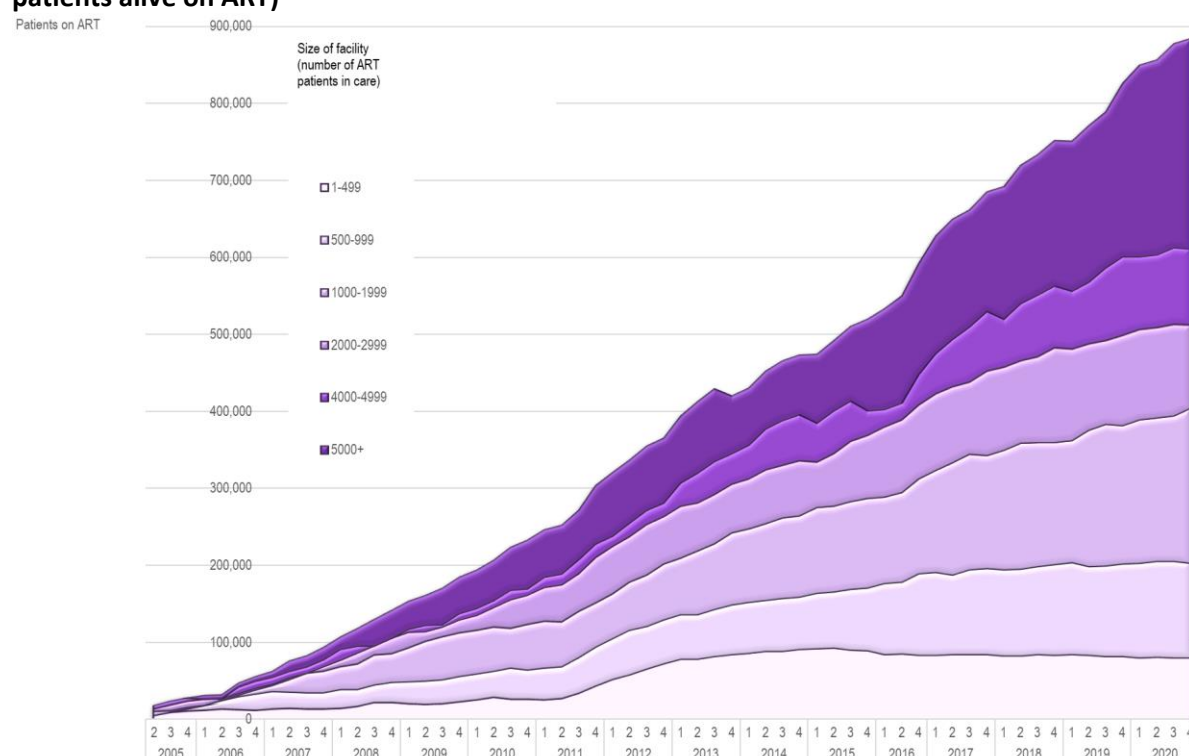


Figure 11 shows the increase of patients alive on ART by the end of each quarter, stratified by facility volume. The net increase of 12,364 patients alive on ART between October and December 2020 was double that of the previous quarter (5,963). **Figure 9** also shows the decentralization of Malawi's 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 December 2020, **43%** of the national ART patient cohort was in care at sites with fewer than 2,000 patients.

Figure 12

Quarterly rates of ART drop out (ART stop, defaulters and deaths)

Numerator: new ART stops, new defaulters and new deaths in the respective quarter

Denominator: total patients retained alive at the end of the previous quarter plus new patients registered in the respective quarter)

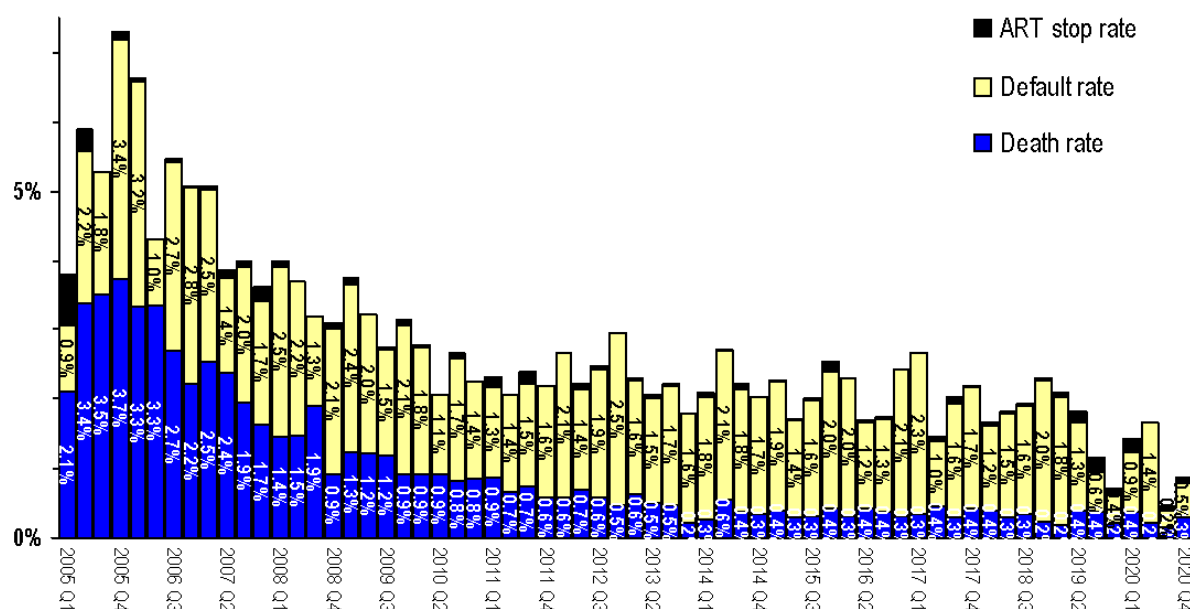


Figure 12 shows the considerable decrease of ART drop-out rates since the start of the national program, most of which was contributed by reduction in mortality. Quarterly defaulter rates appeared to have stabilized around 1.8% over the last 5 years, but the calculated attrition rates have fluctuated 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 slight increase in the calculated defaulter rate (0.30%) from 0.17% in 2020 Q3. 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 **2,414** net new deaths, **4,416** net new defaulters and **692** net new confirmed stops in Q4 2020. This translates into a quarterly death rate of **0.51%** and a defaulter rate of **0.30 %** among the patients alive and on treatment in this quarter.

The usual analysis of early vs. late mortality trends was not possible this quarter due to implausible changes in reported death outcomes related to the distortions reported in 2019 Q4.

11.4 ART Cohort Survival Analysis

A 12 month ‘cohort outcome survival analysis’ was conducted for patients registered in Q4 of 2019, 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 Q4 2019. A further subgroup analysis was done for women who started ART while pregnant or breastfeeding (Option B+).

73% of adults and **76% of children** were retained alive on ART after 12 months on treatment. 12-month retention rates were lower for adults (75%) and children (79%) 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 **4,422** women registered as having started ART under Option B+ in Q2 2020. This is 125 fewer than the number of women registered under Option B+ in the quarterly cohort analysis in Q2 2020. This discrepancy is likely due to errors in data abstraction.²³ The 4,422 women in this cohort survival analysis include 525 (12%) women who transferred between sites. These transfers are double counted and discounted from the denominator (3,897) from the calculation of retention rates.

3,192 (82%) women in this cohort were retained at 6 months after registration. Of those not retained, **658 (93%)** were lost to follow-up, **24 (3%)** were known to have stopped ART and **23 (3%)** were known to have died.

12-month group cohort survival outcomes were known for **5,615** women registered as having started ART under Option B+ in Q4 2019. This is less by 78 the number of women registered under Option B+ in the quarterly cohort analysis in Q4 2019. This discrepancy is likely due to errors in data abstraction.²⁴ The **5,615** women in this cohort survival analysis include 948 (17%) women who transferred between sites. These transfers are double counted and discounted from the denominator (**4,667**) for the calculation of retention rates.

3,443 (74%) of women in this cohort were retained at 12 months after registration. **1,156 (94%)** of those not retained were lost to follow-up, **39 (3%)** were known to have stopped ART and **29 (2%)** were known to have died.

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

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.

6 month survival OptionB+

Survival and retention in ART program

*

ART cohort registration group outcomes

Total ART clinic registrations	4,422	100%
Transfers out (double counted)	525	12%
Total not transferred out (patients in cohort)	3,897	88%
Total alive on ART	3,192	82%
Total not retained	705	18%
Defaulted	658	93%
Stopped ART	24	3%
Died	23	3%

12 month survival OptionB+

Survival and retention in ART program

*

ART cohort registration group outcomes

Total ART clinic registrations	5,615	100%
Transfers out (double counted)	948	17%
Total not transferred out (patients in cohort)	4,667	83%
Total alive on ART	3,443	74%
Total not retained	1,224	26%
Defaulted	1,156	94%
Stopped ART	39	3%
Died	29	2%

11.5 Secondary outcomes of patients retained on ART

864,486 patients who were alive on ART and remained registered at their facilities have documented secondary outcomes.

ART Regimens

842,754 (97%) of patients were on first line 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 **10,604** from 30,917 in the previous quarter to **20,313 (2%)** by the end of Q4 2020. **2,819 (<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 first line regimens, **8,270 (1%)** were on paediatric formulations. Most of these had transitioned from the previous standard first line for children; only **1,299 (16%)** remained on regimen 2P: AZT/3TC/NVP. A total of **6,792 (82%)** were on regimen 15P: ABC/3TC+DTG. **806,433 (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 **7,646 (1%)** remained on regimen **5A** (tenofovir / lamivudine / efavirenz).

Adherence to ART

Completeness of adherence reporting has remained very high: **835,382 (97%)** 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. **611,707 (73%)** 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 and caused by a known error in one version of the point of care EMR system that was in use at many sites this quarter.

ART Side Effects

832,082 (97%) patients on ART had information on drug side effects documented at their last clinic visit before end of December 2020. **4,216 (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 appears to decline further following the recent 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

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

256,944 VL samples were drawn in the reporting period and documented in the facility sample logbook. **256,944 (92%)** of these were for routine/scheduled VL monitoring; **18,125 (7%)** were extra-schedular and **3,511 (1%)** were replacements of lost samples. **17%** of the extra-schedular samples were targeted (suspected treatment failure) and **83%** 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

81,176 samples were drawn by facilities between April and June 2020 and outcomes were documented for **all** of these samples. **22,497 (23%)** results were received at the facility within 4 weeks of sample collection; **34%** were received between 5-8 weeks and **19%** between 9-12 weeks. The remaining **19%** were received after 12 weeks or were still missing. **9%** of patients were notified of their result within 4 weeks of sample collection, **15%** were notified within 5-8 weeks and **20%** within 9-12 weeks. **44,992 (55%)** of 81,176 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).

71,230 (88%) of samples produced valid VL test results. **627 (1%)** samples were rejected, or the results were invalid and **9,319 (11%)** of samples had outstanding or missing results. **64,495 (91%)** results were suppressed below 1000 copies/ml and **6,735 (9%)** were high (≥ 1000 copies/ml).

Outcomes from High VL Registers

Between October and December 2020, **8,711** high VL results (≥ 1000 copies/ml) were received at facilities and entered in the High VL Registers. **7,722 (89%)** of these were from routine monitoring samples, **761 (9%)** from targeted samples and **228 (3%)** from repeat samples. **5,129 (59%)** patients had completed intensive adherence support by December 2020 and follow-up samples were drawn for **4,135 (47%)**. Valid results were recorded for **2,902 (70%)** of follow-up samples and **74%** of these were re-suppressed (<1000 copies/ml).

A final treatment decision was available for **2,866** high VL patients. **2,498 (87%)** were maintained on the current regimen, **364 (15%)** were switched to second line and **4 (<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.

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

The number of VL results produced increased from 120,902 in Q3 to **162,464 in Q4 2020**. 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.

164,464 VL results were dispatched from the labs to **666 sites** between October and December 2020. **72 sites** accounted for half of all results released this quarter.

20,733 (13%) of 162,464 samples processed were plasma and **141,731 (87%)** were DBS.

Lab	Samples Processed			Turn-around Time (Days) [§]
	Plasma	DBS	Total	
DREAM Blantyre	4,311	21,273	25,584	26
DREAM Balaka	202	16,889	17,091	28
Kamuzu CH	7,697	15,162	22,859	34
Mzimba DH	0	8,287	8,287	35
Mzuzu CH	0	15,016	15,016	22
Nsanje DH	0	15,253	15,253	36
Partners in Hope	2,889	13,006	15,895	48
QECH	765	8654	9,419	25
Thyolo DH	0	10,034	10,034	29
Zomba CH	4,869	18,156	23,025	40
Total	20,733	141,731	162,464	32
§ Median days between sample collection and printing of results in lab				

DREAM Blantyre, Zomba CH, Kamuzu CH and DREAM Balaka produced 55 % of all VL results. The median interval between sample collection and printing of results was **32 days** at the national level, ranging from **22 days** at Mzuzu CH to **48 days** at Partners in Hope. The most significant delays occurred between sample receipt and process run in the lab (median 19 days), while on average only 7 days elapsed between samples draw and sample receipt in the lab. The overall system capacity remains challenged by the high number of samples.

136,281 (84%) of VL results released this quarter were classified as *routine scheduled*²⁵. This is **64%** of the estimated 211,527 ART patients passing a VL monitoring milestone this quarter. **24,158 (15%)** of samples were classified as *targeted (suspected treatment failure / repeat)* and for **2,024 (1%)** the reason for the sample was 'other' or not specified. **95% (129,756)** 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 achieved.

Viral suppression rates were significantly lower for routine samples among children (0-9 yrs: **74%**) and adolescents (10-19 yrs: **83%**) compared with adults in the age groups 20-29, 30-39, 40+ years who had viral suppression rates of **94%, 96% and 97%**, respectively. 90% of routine VL samples were from adults 20+ years. Patient age was not recorded for 5,062 (2%) of routine samples.

Reason	Suppressed		Low-Level Viraemia		Viraemia 1000+		Total
Routine	110,999	81%	18,757	14%	6,525	5%	136,281
Targeted	17,325	72%	4,369	18%	2,465	10%	24,158
Other/unk	1,341	66%	442	22%	241	12%	2,025
Total	129,665	80%	23,568	15%	9,231	6%	162,464

23,568 (15%) 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 addendum²⁶ 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. **2,465 (10%) of 24,158** of targeted VL results were ≥1000 which is indicative of treatment failure and a potential indication for switching to 2nd line regimens.

The **24,158** targeted VL results this quarter exceed the 5,467 routine VL results ≥1000 copies/ml from the previous quarter by a factor of four 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 4,952 samples were marked as *confirmatory (follow-up)* and 756 as *targeted (treatment failure suspected)* on the lab request form. 18,478 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 3,788 patients on protease inhibitor-based (PI) 2nd line ART²⁷ this quarter due to the ongoing routine transition of patients

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.

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.

from PI-based to DTG-based 2nd line regimens. Regimen lines are no longer distinguishable as DTG is used in 1st and 2nd line ART.

The time on ART was entered for 101,807 (75%) of 136,281 routine samples registered on the LIMS and only **23,614 (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 **92%, 94%, 95%, 96%** and **96%** at 6, 24, 72, 96 and 120 months on ART respectively. Viral suppression rates of samples drawn on schedule were similar to those of 'catch-up' (extra-schedular) samples and samples with unknown timing both at 95%.

11.6 TB / HIV Management

3,927 (99%) of 3,948 new TB patients had their HIV status ascertained this quarter and **1,798 (46%)** of these were HIV positive. **1,669 (93%)** 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 718 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 **108,770** STI cases were treated in Q4 2020. Considering the 75% site-level completeness of reporting, this number is estimated to represent a total of **146,986** STI cases treated. This is equivalent to **60%** of the estimated quarterly 244,001 STI cases in the population (extrapolation from 2015/16 MDHS)²⁹.

Out of **108,770** documented clients treated, **44,558 (41%)** were male and **64,212 (59%)** were female. **9,464 (15%)** of female STI clients were pregnant. **14,157 (32%)** of male STI clients were circumcised. **72,920 (67%)** clients were 25 years and above, **26,212 (24%)** were 20-24 years and **9,638 (9%)** were under 20 years old.

12.2 Client Type and STI History

96,704 (89%) of clients were symptomatic and **12,066 (11%)** were asymptomatic (treated as partners). Among symptomatic clients, **88,157 (91%)** were index cases and **8,547 (9%)** were partners. A total of **27,563** partner notification slips were issued, equivalent to an average of

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 976,003 annual STI cases are estimated by applying these proportions to the 3.9 million men and 4.2 million women in these age groups in the 2018 population (NSO projections) for 2020. Quarterly STI cases are assumed as ¼ of the estimated annual cases in the population.

0.31 slips per index case. Considering the 27,563 partner notification slips issued, **75% (20,613)** of those notified presented to the clinic. **81,236 (75%)** of clients presented with their first lifetime episode of STI, **20,767 (75%)** clients out of 27,534 with previously treated STIs were reported to have had an STI more than 3 months ago and **6,767 (25%)** 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.

12.3 HIV Status

HIV status was ascertained for **98,938 (91%)** clients and **17,781 (18%)** of these were HIV positive. **2,197 (12%)** of positives were identified through a new test initiated at the STI clinic, while **15,584 (88%)** presented with a documented previous positive HIV test result. **14,943 (96%)** 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. **46,604 (51%)** of the 90,989 STI clients with unknown or new negative test result were referred for repeat HTS. **5,866** patients were reported as “referred for ART”. This exceeds the sum of new positives (2,197) and previous positives not on ART (641) 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 **35,257 (30%)** cases, followed by urethral discharge (UD, **31,463** cases), genital ulcers (GUD, **13,769** cases) and lower abdominal pain (LAP, **14,482** cases). Serologically confirmed syphilis accounted for 10% of the cases. Scrotal swelling, bubo and genital warts each accounted for 1% of cases.

13 Supply Chain Management of HIV Program Commodities

13.1 Quantification and procurement planning

The routine quarterly quantification review was based on Q4 2020 ART cohort analysis and physical site level stock data collected during the October 2020 supervision visits. This review informed the quantification of ARVs and test kits and the submission of new orders through Pooled Procurement Mechanism (PPM). The program has also continued to provide quarterly supply planning updates to the Procurement Services Agents (PSA).

Malawi has made significant progress with the planned transition to dolutegravir-based first and second line regimens, which started in January 2019. 832,566 of 864,491 total patients alive on ART Q4, are on Dolutegravir based regimen representing **96%** of patients alive on ART. The team from PSM and M&E did the quantification of paediatric Dolutegravir to be applauded in Wambo

The Department for HIV and AIDS received ARVs and OIs medicine worth **787,996,759** USD from October to December 2020 through I-PLUS Solutions, PFSCM and IDA. (Iplus Solutions- 6,713,367.59, PFSCM- 1052600 and IDA- 114,000

13.2 Quarterly supply chain support during 2020 Q4 integrated supervision

Supply chain and logistics officers from district and central level provided stock management visited 763 sites during the Q4 2020 integrated HIV program site supervision. This included a physical inventory 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. The supply chain team monitored logistics tools documentation including use of Daily Activity Registers and completion of stock cards.

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

13.3 Availability of standard first line ARVs

Adequate stock levels of TLD in packs of 30 and 90 tablets were maintained at over 763 sites during this period, with an appropriate ratio of 673,414 packs of 30's and 372,694 packs of 90's. This has enabled sites transition patients eligible for 6-month dispensing with no stock out risk in country.

Tenofovir/lamivudine/efavirenz 300/300/600mg (TLE) 1.3 months of stock at warehouse reported last quarter has been distributed remaining with 82 packs.

13.4 Bimonthly distribution of HIV & Malaria Commodities

Two scheduled bimonthly distribution round of HIV & Malaria commodities including laboratory items and cervical cancer equipment (Distribution Rounds 57 happened in October and 58 in December).

During Q4 2020, the logistics team at the Department of HIV and AIDS coordinated **3,338 individual commodity transactions** between ART sites to mitigate stock imbalances (52% ARVs; 37% Test kits; 11% 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 (most of the relocations were nevirapine based regimens). Health workers are able to 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.

Table 7

Total stocks of HIV program commodities at all sites visited during the 2020 Q4 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 29/03/2021

Inventory unit	Item	Sites with any Stock	Total Physical Stock		Consumption/ Month	Months of Stock*	
			At Sites	In Warehouse		At Sites	Wareh.
tins	ABC / 3TC 120 / 60mg tins (30 tabs)	686	260,398	641,283	57,813	4.5	11.1
	ABC / 3TC 600 / 300mg tins (30 tabs)	721	77,152	41,502	13,138	5.9	3.2
	ATV / r 300 / 100mg tins (30 tabs)	598	41,972	14,043	6,653	6.3	2.1
	AZT / 3TC / NVP 300 / 150 / 200mg tins (60 tabs)	515	127,942		632	202.4	
	AZT / 3TC / NVP 60 / 30 / 50mg tins (60 tabs)	644	232,595	6,897	3,248	71.6	2.1
	AZT / 3TC 300 / 150mg tins (60 tabs)	682	26,866	56,776	12,789	2.1	4.4
	AZT / 3TC 60 / 30mg tins (60 tabs)	104	4,431	11,622	190	23.3	61.2
	DRV 600mg tins (60 tabs)	23	1,149	2,330	0	0.0	0.0
	DTG 50mg tins (30 tabs)	686	150,626	168,571	26,076	5.8	6.5
	EFV 200mg tins (90 tabs)	164	1,769	412	24	73.7	17.2
	EFV 600mg tins (30 tabs)	279	9,385	6,261	159	59.0	39.4
	LPV / r 100 / 25mg tins (60 tabs)	618	69,812	8,609	19,704	3.5	0.4
	LPV / r 200 / 50mg tins (120 tabs)	428	12,744	11,873	856	14.9	13.9
	LPV / r 40 / 10mg tins (120 capsules)	682	61,641	52,275	7,240	8.5	7.2
	LPV / r 40 / 10mg tins (120 pellets)	3	55		0	0.0	0.0
	NVP 200mg tins (60 tabs)	444	30,163		289	104.4	
	NVP 50mg tins (60 tabs)	6	255		70	3.6	
	r 100mg tins (60 tabs)	23	796		143	5.6	
	r 25mg tins (30 tabs)	579	14,275	23,274	1,275	11.2	18.3
	RAL 25mg tins (60 tabs)	41	1,423	15	0	0.0	0.0
	RAL 400mg tins (60 tabs)	1	60		0	0.0	0.0
	TDF / 3TC / DTG 300 / 300 / 50mg tins (30 tabs)	751	1,226,478	782,290	161,287	7.6	4.9
	TDF / 3TC / DTG 300 / 300 / 50mg tins (90 tabs)	749	558,904	665,765	215,043	2.6	3.1
	TDF / 3TC / EFV 300 / 300 / 600mg tins (30 tabs)	738	252,224	82	7,680	32.8	0.0
	TDF / 3TC 300 / 300mg tins (30 tabs)	270	11,202	41,267	3,452	3.2	11.9
bottles	Fluconazole (generic) 50mg / 5ml bottles (35 ml)	12	810	1,129			
	NVP 50mg 5ml bottles (100 ml)	640	48,765	65,550	6,844	7.1	9.6
vials	Amphotericin B Liposomal 50mg vials (10 each)	46	8,629	3,430			
	Benzathine Penicillin 1440 vials (50 each)	588	180,416	121,650	16,603	10.9	7.3
	Bleomycin 15,000 IU vials (1 each)	38	14,254	25,861	24	584.2	1059.9
	Ceftriaxone 1g vials (10 each)	395	278,524		162,289	1.7	
	Deco-Provera 150mg/1ml vials (25 each)	554	858,948		270,330	3.2	
	Fluconazole (Diflucan) 2mg / 1 ml vials (10 ml)	38	3,276	9,950	0	0.0	0.0
	Gentamicin 80mg / 2ml vials (50 each)	555	486,381		152,721	3.2	
	Paclitaxel 6mg/ml vials (1 each)	30	3,034	9,435	0	0.0	0.0
	Stedocain 1g vials (50 each)	1	2,600				
	Vincristine 1mg / 1ml vials (1 each)	34	5,665	2,770	146	38.7	18.9
tabs	Aciclovir 200mg blister packs (500 tabs)	9	19,013		978,274	0.0	
	Aciclovir 200mg tins (100 tabs)	175	408,752	14,592,000	449,535	0.9	32.5
	Azithromycin 500mg blister packs (3 tabs)	532	27,309	11,316	4,523	6.0	2.5
	Ciprofloxacin 500mg blister packs (100 tabs)	466	413,384	2,320,900	69,056	6.0	33.6
	Clotrimazole 500mg boxes (1 each)	571	161,576	55,844	11,190	14.4	5.0
	Codeine 30mg tins (100 tabs)	19	1,886,016				
	Cotrimoxazole 100 / 20mg blister packs (1000 tabs)	688	95,239,792	215,868,000	19,457,787	4.9	11.1
	Cotrimoxazole 400 / 80mg tins (1000 tabs)	510	14,725,093		25,655,067	0.6	
	Cotrimoxazole 960mg blister packs (1000 tabs)	649	22,732,713	29,096,000	25,416,035	0.9	1.1
	Doxycycline 100mg blister packs (500 tabs)	118	284,276		9,866,976	0.0	
	Doxycycline 100mg tins (1000 tabs)	184	952,906	1,507,000	6,856,356	0.1	0.2
	E thambutol (E) 100 mg blister packs (100 tabs)	114	88,549				

Inventory unit	Item	Sites with any Stock	Total Physical Stock		Consumption/ Month	Months of Stock *	
			At Sites	In Warehouse		At Sites	Wareh.
	E thambutol (E) 400 mg blister packs (672 tabs)	31	41,488				
	Erythromycin 250mg tins (100 tabs)	13	62,684	2,737,900	210,303	0.3	13.0
	Erythromycin 250mg tins (1000 tabs)	61	506,346		6,051,437	0.1	
	Fluconazole (Diflucan) 200mg blister packs (100 ca	115	230,542	1,879,600	0	0.0	0.0
	Fluconazole (Diflucan) 200mg tins (28 tabs)	95	344,126		0	0.0	0.0
	Flucytosine 500mg blister packs (100 tabs)	36	12,653	140,700			
	Ibuprofen 200mg tins (100 tabs)	179	1,756,420		1,311,400	1.3	
	Isoniazid (H) 100mg blister packs (100 tabs)	347	1,886,524		0	0.0	0.0
	Isoniazid (H) 300mg blister packs (672 tabs)	616	15,876,237	45,765,888	1,071,273	14.8	42.7
	Isoniazid (H) 300mg tins (1000 tabs)	10	197,008		25,416,035	0.0	
	Metronidazole 200mg tins (1000 tabs)	477	12,110,229	26,055,000	0	0.0	0.0
	Morphine 10mg blister packs (60 tabs)	37	351,565		334,192	1.1	
	Morphine 30mg blister packs (30 tabs)	27	43,654	131,460	0	0.0	0.0
	Pyridoxine 25mg tins (100 tabs)	552	5,251,894	74,040,100	1,071,273	4.9	69.1
	RH 150 / 75 mg blister packs (672 tabs)	404	2,240,106				
	RH 75/50mg blister packs (84 tabs)	133	230,059				
	RHZ 75/50/150mg blister packs (84 tabs)	169	124,212				
	RHZE 150/75/400/275mg blister packs (672 tabs)	397	1,299,715				
	Rifapentine 150mg tins (24 tabs)	10	22,716	1,129,488	519,720	0.0	2.2
sheets	ART pat. card adult (yellow) Ver8 bundles (50 she	305	31,563	558,700	56,853	0.6	9.8
	ART pat. card paed. (blue) Ver 8 bundles (50 she	41	3,202	86,650	3,825	0.8	22.7
	Exposed child card (pink) Ver2 bundles (50 sheet	535	59,420	109,750	4,717	12.6	23.3
	Family HTC Referral Slip bundles (100 sheets)	424	218,902				
	Polythene sleeve bundles (100 sheets)	42	6,817		15,365	0.4	
	STI Partner Referral Slip bundles (100 sheets)	69	47,846	799,650			
tests	Cryptococcal antigen CrAg bundles (50 each)	109	78,699	35,100	0	0.0	0.0
	DBS kit (filter paper, lancet, etc.) 70ul boxes (50 t	704	259,930	284,150	92,110	2.8	3.1
	Determine HIV1/2 boxes (100 each)	591	593,752	420,500	220,118	2.7	1.9
	Determine TB LAM Ag bundles (100 each)	81	16,788	1,500			
	OraQuick HIV Self-test bundles (25 each)	556	290,227	666,275	119,205	2.4	5.6
	SD Bioline Syphilis boxes (30 each)	614	160,336	93,690	50,274	3.2	1.9
	Uni-Gold HIV1/2 boxes (20 each)	621	85,296	99,420	21,419	4.0	4.6
pieces	Condoms female boxes (1000 each)	370	390,942		287,183	1.4	
	Condoms male boxes (144 each)	692	31,962,707	22,190,400	6,968,810	4.6	3.2

* '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.

14 Training and Mentoring

In compliance with Covid-19 guidelines, most planned trainings were suspended and only a few critical ones were conducted as reported below:

14.1 HIV Testing Services

29 testing providers were trained in HIV self-testing and oriented in the active index testing. **192** HDAs were trained in the 2016 HIV testing guidelines.

14.2 Pre-Exposure Prophylaxis (PrEP)

During 2020 Q4, the Ministry of Health with support from different implementing partners supported PrEP trainings for the **75** Trainer of Trainers (TOT) and **192** service providers drawn from different health facilities including Drop in Centres (DICs). The main goal was to equip TOT and Providers with knowledge and skills in management of Clients at substantial risk of HIV acquisition by providing PrEP services.

15 Participants in the Q4 2020 Supervision (12-22 January 2021)

Richard Abudul (CO, MOH)	Hassan Chungano (, pvt)	Kondwani Kautsa (, MOH)
Sophie Bakali (, other)	Peter Donda (CO, Dedza DH)	Jean Kayamba (Nurse, MOH)
Knox Banda (TB Zonal Supervisor, MOH)	Lackson Gama (, MoH)	Innocent Kazembe (, MOH)
Lenard Banda (, MOH)	Lackson Gawani (, MoH)	Daniel Kazingatchire (, MOH)
Leonard Banda (, MoH)	Richard George (, MOH)	Robert Khombe (, MOH)
Rabecca Banda (, Lighthouse)	Sidrick Golden (, MOH)	Kalitera Konainge (, MOH)
Wells Banda (CO, MOH)	Symon Goliath (, Dignitas)	Emmanuel Kumpaliro (, MOH)
Robert Beston (, MOH)	Bertha Gombeza (, MOH)	Hope Kumwenda (, MoH)
Thomas Biseck (, MOH)	Andrew Gompho (Clinician, MOH)	Wongani Kumwenda (, MOH)
Annie Biza (, moh)	Grant Gondwe (, NTP)	Charles Kwenje (, Moh)
Regina Bwanali (, MOH)	Paul Gondwe (, MOH)	George Lipande (CO, MOH)
Herbert Chafulumira (, MOH)	Yananga Gondwe (, MoH)	Jesse Lobeni (Nurse, MOH)
Demobry Chagomerana (, MoH)	Sidder Hambisa (ENM, MOH)	Patricia Ludaka (, MoH)
Lincy Chalunda (CO, MOH)	Natasha Harawa (, MoH)	Wezzie Luhanga (, MOH)
Rachel Champiti (, MOH)	Chikondi Harrison (, Logistics)	Molly Lungu (Nurse, MOH)
Raymond Changamire (, Chemonics)	Louis Hawonga (, MOH)	Duncan Lupiya (CO, MOH)
Andrew Chapani (, MGBE)	John Kabichi (CO, MOH)	Diana Lweshwa (, MoH)
Grace Chawinga (, MOH)	John Kabitchi (, other)	Rose Mabviko (, MOH)
Ronard Chawinga (nurse, MOH)	Rabson Kachala (, MOH)	Chikayiko Majamanda (Nurse, MOH)
Maggie Chigona (, MoH)	Francis Kachali (, MoH)	Mercy Makaika (Nurse, MOH)
Margaret Chigona (CO, Blantyre DHO)	Lilian Kachali (Nurse, MOH)	Linda Makata (, MOH)
Grace Chikhwaya (, MOH)	Arlene Kachapira (, MoH)	Mwai Makina (, MOH)
Kondwani Chikoti (CO, MOH)	Fred Kachiponde (, cham)	Chifundo Makuluni (Nurse, MOH)
Patrick Chikuni (, MoH)	Ruth Kachitsa (, MoH)	Elizabeth Makwakwa (Nurse, MOH)
Lusayo Chikuta (, Nkhatabay)	Blessings Kadzuwa (, MOH)	Anne Makwale (CO, MOH)
Verydear Chilapondwa (, MOH)	Vera Kajawa (Nurse, MOH)	Felix Mala (, MOH)
George Chimadzuma (, MoH)	Nedson Kaliati (, MOH)	Lusayo Malanga (, MoH)
Dickens Chimatiro (, MOH)	Mike Kalulu (CO, MOH)	Grey Malata (, MOH)
Peter Chimphero (CO, MOH)	Alice Kalupsya (, Machinga DHO)	Pauline Maluwaya (, MOH)
Catherine Chinoko (, MoH)	Richard Kamalizeni (, MOH)	`symon Manda (, MOH)
Yunus Chiosa (, NTP)	Ever Blessings Kamanga (, MoH)	Simion Manda (, MOH)
Diana Chipande (, MOH)	Kepson Kamanga (MA, MOH)	Charles Mandambwe (, MoH)
Grace Chipanga (Nurse, Private)	Mary Kamiza (TB Zonal Supervisor, NTP)	Joe Manje (, MOH)
Clement Chiphota (CO, MoH)	Emmanuel Kampaliro (, MOH)	Cecilia Manyawa (Nurse, MOH)
Exvin Chipoya (, MoH)	Gift Kamphika (MA, MOH)	Fatsireni Mapulanga (, MOH)
Esnart Chirambo (, MoH)	Jacqueline Kamwana (, Moh)	Randof Maseya (, MOH)
Ruth Chirombo (, MOH)	Mercy Kamweka (, MOH)	Angela Masumba (, moh)
Patrick Chirwa (MO, Private)	Mercy Kamwela (, supervisor)	Jake Mataya (, moh)
Patrick Paul J M Chirwa (TB Zonal Supervisor, NTP)	Lameck Kandiero (, moh)	Jeke Mataya (, moh)
Thom Chirwa (, MOH)	Saulosi Kanyinji (, MoH)	Yamikani Matiya (, MoH)
Andy Chitsulo (, MOH)	Justice Kaphiri (, NTP)	Hannock Matupi (ARV clinician, MOH, Rumph DH)
Samson Chitsulo (, other)	Elisa Kapundi (NMT, MOH)	Rose Maviko (Nurse, Limbe HC)
Willie Chiumbuzo (, MoH)	Elsie Kasambwe (, other)	Emily Mawelera (Clerk, CHAM)
Madalitso Chiundira (, MoH)	Annie Kaseka (RNM, MOH)	Felix Mbalale (CO, MOH)
Dan Chiundu (, MOH)	Oscar Kasiyamphanje (Nurse, CHAM)	Nyuma Mbale (, MOH)
Paul Chiwenkha (, moh)	Catherine Kassam (, MOH)	Loyd Mbaza (, other)
Stuart Chuka (CO, MBCA)	Rodrick Kaulere (CO, CHAM (Sister Tereza))	Kingsley Mbewa (CO, MOH)
	Absalom Kaunda (CO, MOH, Mzimba DHO)	Brenda Mbewe (, MoH)
		Alice Mdolo (, MOH)

Topcy Mdolo (, MOH)	Ruockia Mwachumu (Nurse, MOH Nsanje DHO)	Sam Nowa (Pharmacist, MOH)
Dalitso Midian (, moh)	Jeremiah Mwale (CO, EGPAF)	George Nsitu (, MOH)
Priscilla Milongo (Nurse, Lighthouse)	Thomas Mwale (, MOH)	Evaristo Nthete (, moh)
Christopher Misomali (Lab Tech, MOH)	Innocent Mwaluka (, moh)	Judith Ntopa (Nurse, Cobbe Barracks)
Alex Mission (, MOH)	Patrick Mwamlima (, MoH)	Vincent Nyapigoti (NMT, MOH)
Portifer Mission (, moh)	Miriam Mwansambo (, MoH)	Aleka Nyasulu (, moh)
Owen Mitochi (, MOH)	Harold Mwareya (, MOH)	Alekazawo Nyasulu (, MOH)
Joel Mkandawire (, MoH)	Golden Mwathunga (MA, Press)	Jotham Nyasulu (, MOH)
Taonga Mkandawire (, moh)	Anne Mwenye (, Private)	Steven Nyika (, MOH)
Tawonga Mkandawire (, MoH)	Tuwepo Mwitha (, MOH)	Feliya Nyirenda (, Machinga)
Merium Mkangala (, moh)	Riff Mzava (Nurse, MOH)	Janet Nyirenda (, MOH)
Hermes Mlambe (, Chemonics)	Peter Mzumara (ART clinician, MOH)	Jannet Nyirenda (, KCH)
Lameck Mlauzi (, NTP(MOH))	Fred Namalima (MA, MOH)	Mike Nyirenda (CO, Lighthouse)
Chimwemwe Mlenga (, MOH)	Francis Nangantani (, moh)	Veronica Nyirenda (, moh)
Christopher Mlotha (, MoH)	Pepsy Nangwale (Nurse, MOH)	Abdul Richard Onani (, MOH)
Yvonne Mnjeza (, MOH)	Leonard Ndhlovu (Nurse, MOH)	Chrissy Padoko (, MOH)
Happy Mpawa (, MOH)	Overton Ndhlovu (, MOH)	Paul Petersen (, MoH)
Noel Mphasa (TB Zonal Supervisor, NTP)	Joel Ng'ambi (, MOH)	Paul Peterson (, MOH)
Tryness Mponda (NMT, MOH)	Emmanuel Ngomwa (, MOH)	Bright Phiri (, MOH)
Willie Mpute (, MoH)	Youngson Ngonya (, MoH)	Mackson Phiri (, PIH)
Damison Msiska (CO, Dwangwa)	Etta Ngulube (, MoH)	Maxon Phiri (, MOH)
Chawanangwa Msonda (, MOH)	Charles Ngwira (, MoH)	Precious Phiri (, MoH)
Catherine Flora Msukwa (, MoH)	Hislack Ngwira (, MOH)	Tifera Phiri (, MOH)
Egnatius Mtambalika (, DTO)	Jephter Ngwira (, MoH)	Macleod Piringu (ART CORDINATOR, MOH)
Erick Mtemang'ombe (CO, CHAM)	Beatrice Nindi (, MoH)	Alice Sajeni (, moh)
Temweka Mtenje (, MoH)	Trevor Chifundo Nindi (, Balaka DHO)	Dorica Sambo (Nurse, MOH)
Peter Mtika (, moh)	Dumbo Njera (, MOH)	Kondwani Shaba (, MoH)
Joshua Mtonga (, SHHC)	Merium Nkangala (, moh)	John Shadreck (, moh)
Dave Muhasuwa (, MoH)	Donald Nkhalango (, PIH)	Oscar Shaibu (, MoH)
Agnes Mulilima (, moh)	Grace Nkhata (, moh)	Juliana Soko (ARV nurse, MOH, Livingstonia MH)
Francis Munthali (, COM)	Grace Juma Nkhata (Nurse, MOH)	Ethel Susuwele (MA, MOH)
Fainala Muyila (Nurse, MOH)	Angela Nkhoma (Nurse, MOH)	Mark Suzumire (CO, MOH)
Fainala Muyira (Nurse, MOH)	Joe Nkhonjera (, moh)	Ephraim Tchale (, MoH)
Tereza Mvula (, MOH)	Vitu Nkhunga (, MOH)	Cecelia Tenesi (Nurse, MOH)
Theresa Mvula (, MOH)	Emmanuel Nkonde (, NTP)	Harry Tsapa (CO, MOH)
	Samuel Noah (, moh)	Gladson Waluza (, MOH)
		Lloyd Wella (CO, MOH)
		Mabvuto Zondola (, MOH)

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.

21st April 2021

16 Appendix (Full National HIV Program Data)

HTC site report

Malawi (National)

2020 Q4 (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	724,313	100%
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Sex

Males tested	238,880	33%
Females tested	485,433	67%
Females non-pregnant	306,301	63%
Females pregnant	179,132	37%

Age

Children 0-14 yrs	63,749	9%
Children below 12 mths (Age group A)	1,255	2%
Children 12 mths - 14 yrs (Age group B)	62,494	98%
Adults 15+ years	660,564	91%
Young adults 15-24 years (Age group C)	304,372	46%
Older adults 25+ yrs (Age group D)	356,192	54%

HTC access type

PITC	553,594	76%
Family Referral Slip (FRS)	29,930	4%
Other (VCT, etc.) HTC access	140,789	19%

HTC first time / repeat

Never tested before	140,315	19%
Previously accessed HTC	583,998	81%
Last negative	559,382	96%
Last positive	23,985	4%
Last exposed infant	183	0%
Last inconclusive	448	0%

Counseling session type / Partner present

Counseled with partner / partner present	164,963	23%
Counseled alone / Partner not present	559,350	77%

Outcome summary (HIV test)

Single test negative	676,740	93%
Single test positive	4	0%
Test 1&2 negative	392	0%
Test 1&2 positive	45,143	6%
Test 1&2 discordant	2,034	0%

HTC site report

Malawi (National)

2020 Q4 (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	700,129	97%
New negative	676,674	97%
New positive	21,698	3%
New positive (non-sex dissag)	1,294	6%
New positive (dissag by sex)	20,404	94%
New positive male	8,561	42%
New positive female	11,843	58%
New inconclusive	1,665	0%
New exposed infants	92	0%
Confirmatory results (previous positive clients)	24,184	3%
Confirmatory positive	24,056	99%
Confirmatory positive (non-sex dissag)	1,448	6%
Confirmatory positive (dissag by sex)	22,608	94%
Confirmatory positive male	9,462	42%
Confirmatory positive female	13,146	58%
Confirmatory inconclusive	128	1%

Partner / Family HTC referral slips

Sum of slips given	31,228	100%
Total clients presenting with referral slip	29,930	96%
Total failed referrals (slips not returned)	1,298	4%

Clients tested in the community

HTC client details

*

Total HTC clients served

Total HIV tested	35,810	100%
------------------	--------	------

Sex

Males tested	11,833	33%
Females tested	23,977	67%
Females non-pregnant	21,465	90%
Females pregnant	2,512	10%

Age

Children 0-14 yrs	6,588	18%
Children below 12 mths (Age group A)	27	0%
Children 12 mths - 14 yrs (Age group B)	6,561	100%
Adults 15+ years	29,222	82%
Young adults 15-24 years (Age group C)	16,933	58%
Older adults 25+ yrs (Age group D)	12,289	42%

HTC access type

PITC	12,051	34%
Family Referral Slip (FRS)	4,131	12%
Other (VCT, etc.) HTC access	19,628	55%

HTC site report

Malawi (National)

2020 Q4 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

HTC client details

*

HTC first time / repeat

Never tested before	11,475	32%
Previously accessed HTC	24,335	68%
Last negative	23,900	98%
Last positive	431	2%
Last exposed infant	3	0%
Last inconclusive	1	0%

Counseling session type / Partner present

Counseled with partner / partner present	1,642	5%
Counseled alone / Partner not present	34,168	95%

Outcome summary (HIV test)

Single test negative	34,640	97%
Single test positive	2	0%
Test 1&2 negative	3	0%
Test 1&2 positive	1,123	3%
Test 1&2 discordant	42	0%

Final result given to client

Results among clients never tested / last negative	35,277	99%
New negative	34,568	98%
New positive	671	2%
New positive (non-sex dissag)	41	6%
New positive (dissag by sex)	630	94%
New positive male	251	40%
New positive female	379	60%
New inconclusive	35	0%
New exposed infants	3	0%
Confirmatory results (previous positive clients)	533	1%
Confirmatory positive	431	81%
Confirmatory positive (non-sex dissag)	28	6%
Confirmatory positive (dissag by sex)	403	94%
Confirmatory positive male	144	36%
Confirmatory positive female	259	64%
Confirmatory inconclusive	102	19%

Partner / Family HTC referral slips

Sum of slips given	1,061	100%
Total clients presenting with referral slip	4,131	389%
Total failed referrals (slips not returned)	-3,070	-289%

Clients at stand-alone HTC sites

HTC client details

*

Total HTC clients served

Total HIV tested	7,424	100%
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Sex

Males tested	3,797	51%
Females tested	3,627	49%
Females non-pregnant	2,915	80%
Females pregnant	712	20%

HTC site report

Malawi (National)

2020 Q4 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

HTC client details

*

Age

Children 0-14 yrs	329	4%
Children below 12 mths (Age group A)	1	0%
Children 12 mths - 14 yrs (Age group B)	328	100%
Adults 15+ years	7,095	96%
Young adults 15-24 years (Age group C)	3,575	50%
Older adults 25+ yrs (Age group D)	3,520	50%

HTC access type

PITC	4,277	58%
Family Referral Slip (FRS)	146	2%
Other (VCT, etc.) HTC access	3,001	40%

HTC first time / repeat

Never tested before	1,658	22%
Previously accessed HTC	5,766	78%
Last negative	5,481	95%
Last positive	284	5%
Last exposed infant	0	0%
Last inconclusive	1	0%

Counseling session type / Partner present

Counseled with partner / partner present	512	7%
Counseled alone / Partner not present	6,912	93%

Outcome summary (HIV test)

Single test negative	6,876	93%
Single test positive	0	0%
Test 1&2 negative	0	0%
Test 1&2 positive	536	7%
Test 1&2 discordant	12	0%

Final result given to client

Results among clients never tested / last negative	7,138	96%
New negative	6,876	96%
New positive	248	3%
New positive (non-sex dissag)	16	6%
New positive (dissag by sex)	232	94%
New positive male	92	40%
New positive female	140	60%
New inconclusive	14	0%
New exposed infants	0	0%
Confirmatory results (previous positive clients)	286	4%
Confirmatory positive	286	100%
Confirmatory positive (non-sex dissag)	13	5%
Confirmatory positive (dissag by sex)	273	95%
Confirmatory positive male	119	44%
Confirmatory positive female	154	56%
Confirmatory inconclusive	0	0%

HTC site report

Malawi (National)

2020 Q4 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

HTC client details

*

Partner / Family HTC referral slips

Sum of slips given	322	100%
Total clients presenting with referral slip	146	45%
Total failed referrals (slips not returned)	176	55%

Clients returning to facility after self-test

HTC client details

*

Total HTC clients served

Total HIV tested	579	100%
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Sex

Males tested	261	45%
Females tested	318	55%
Females non-pregnant	306	96%
Females pregnant	12	4%

Age

Children 0-14 yrs	3	1%
Children below 12 mths (Age group A)	0	0%
Children 12 mths - 14 yrs (Age group B)	3	100%
Adults 15+ years	576	99%
Young adults 15-24 years (Age group C)	168	29%
Older adults 25+ yrs (Age group D)	408	71%

HTC access type

PITC	318	55%
Family Referral Slip (FRS)	56	10%
Other (VCT, etc.) HTC access	205	35%

HTC first time / repeat

Never tested before	17	3%
Previously accessed HTC	562	97%
Last negative	260	46%
Last positive	299	53%
Last exposed infant	3	1%
Last inconclusive	0	0%

Counseling session type / Partner present

Counseled with partner / partner present	77	13%
Counseled alone / Partner not present	502	87%

Outcome summary (HIV test)

Single test negative	261	45%
Single test positive	0	0%
Test 1&2 negative	25	4%
Test 1&2 positive	286	49%
Test 1&2 discordant	7	1%

HTC site report

Malawi (National)

2020 Q4 (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	315	54%
New negative	292	93%
New positive	17	5%
New positive (non-sex dissag)	1	6%
New positive (dissag by sex)	16	94%
New positive male	6	38%
New positive female	10	63%
New inconclusive	6	2%
New exposed infants	0	0%
Confirmatory results (previous positive clients)	264	46%
Confirmatory positive	254	96%
Confirmatory positive (non-sex dissag)	2	1%
Confirmatory positive (dissag by sex)	252	99%
Confirmatory positive male	144	57%
Confirmatory positive female	108	43%
Confirmatory inconclusive	10	4%

Partner / Family HTC referral slips

Sum of slips given	49	100%
Total clients presenting with referral slip	56	114%
Total failed referrals (slips not returned)	-7	-14%

HIV self-test (ST) distribution

Malawi (National)

2020 Q4 (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	10,679	100%
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Sex

Male recipients	2,935	27%
Female recipients	7,744	73%
Non-pregnant	4,318	56%
Pregnant	3,426	44%

Last HIV test of recipient

Never tested	881	8%
Previously tested	9,798	92%
Last negative	9,408	96%
Last positive	390	4%
Not on ART	51	13%
On art	339	87%
Last inconclusive	0	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	19,407	100%
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Intended end user distribution type

Self (recipient)	5,313	27%
Secondary distribution	14,094	73%
Sex-partner	8,795	62%
Other	5,299	38%

Intended end user sex / age category

Total males	10,422	54%
Boys 13-14 years old	255	2%
Adolescent boys and young men 15-24 years old	2,996	29%
Adolescent boys 15 - 19 years old	851	28%
Young men 20 - 24 years old	2,145	72%
Adults	7,171	69%
Young adults 25 - 35 years old	4,199	59%
Middle adults 36 - 49 years old	2,430	34%
Older adults 50+	542	8%
Total females	8,985	46%
Girls 13-14 years old	500	6%
Adolescent girls and young women 15-24 years	3,563	40%
Adolescent girls 15 - 19 years old	1,484	42%
Young women 20 - 24 years old	2,079	58%
Adults	4,922	55%
Young adults 25 - 35 years old	3,195	65%
Middle adults 36 - 49 years old	1,551	32%
Older adults 50+	176	4%

Total condoms

Total condoms distributed	15,331	100%
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HIV self-test (ST) distribution

Malawi (National)

2020 Q4 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Maternity

HIV self test client details

*

Total HIV self-test kit

Total HIV self-test kit recipients	634	100%
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Sex

Male recipients	309	49%
Female recipients	325	51%
Non-pregnant	313	96%
Pregnant	12	4%

Last HIV test of recipient

Never tested	36	6%
Previously tested	598	94%
Last negative	593	99%
Last positive	5	1%
Not on ART	0	0%
On art	5	100%
Last inconclusive	0	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	1,016	100%
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Intended end user distribution type

Self (recipient)	471	46%
Secondary distribution	545	54%
Sex-partner	379	70%
Other	166	30%

Intended end user sex / age category

Total males	561	55%
Boys 13-14 years old	32	6%
Adolescent boys and young men 15-24 years old	152	27%
Adolescent boys 15 - 19 years old	53	35%
Young men 20 - 24 years old	99	65%
Adults	377	67%
Young adults 25 - 35 years old	216	57%
Middle adults 36 - 49 years old	137	36%
Older adults 50+	24	6%
Total females	455	45%
Girls 13-14 years old	29	6%
Adolescent girls and young women 15-24 years	208	46%
Adolescent girls 15 - 19 years old	89	43%
Young women 20 - 24 years old	119	57%
Adults	218	48%
Young adults 25 - 35 years old	143	66%
Middle adults 36 - 49 years old	66	30%
Older adults 50+	9	4%

Total condoms

Total condoms distributed	366	100%
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HIV self-test (ST) distribution

Malawi (National)

2020 Q4 (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	3,313	100%
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Sex

Male recipients	1,767	53%
Female recipients	1,546	47%
Non-pregnant	1,421	92%
Pregnant	125	8%

Last HIV test of recipient

Never tested	311	9%
Previously tested	3,002	91%
Last negative	2,751	92%
Last positive	251	8%
Not on ART	4	2%
On art	247	98%
Last inconclusive	0	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	6,423	100%
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Intended end user distribution type

Self (recipient)	1,895	30%
Secondary distribution	4,528	70%
Sex-partner	2,488	55%
Other	2,040	45%

Intended end user sex / age category

Total males	3,383	53%
Boys 13-14 years old	134	4%
Adolescent boys and young men 15-24 years old	872	26%
Adolescent boys 15 - 19 years old	243	28%
Young men 20 - 24 years old	629	72%
Adults	2,377	70%
Young adults 25 - 35 years old	1,252	53%
Middle adults 36 - 49 years old	933	39%
Older adults 50+	192	8%
Total females	3,040	47%
Girls 13-14 years old	147	5%
Adolescent girls and young women 15-24 years	1,410	46%
Adolescent girls 15 - 19 years old	573	41%
Young women 20 - 24 years old	837	59%
Adults	1,483	49%
Young adults 25 - 35 years old	1,005	68%
Middle adults 36 - 49 years old	415	28%
Older adults 50+	63	4%

Total condoms

Total condoms distributed	10,642	100%
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HIV self-test (ST) distribution

Malawi (National)

2020 Q4 (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	80,739	100%
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Sex

Male recipients	37,583	47%
Female recipients	43,156	53%
Non-pregnant	36,062	84%
Pregnant	7,094	16%

Last HIV test of recipient

Never tested	8,314	10%
Previously tested	72,425	90%
Last negative	69,733	96%
Last positive	2,669	4%
Not on ART	451	17%
On art	2,218	83%
Last inconclusive	23	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	136,430	100%
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Intended end user distribution type

Self (recipient)	57,473	42%
Secondary distribution	78,957	58%
Sex-partner	59,884	76%
Other	19,073	24%

Intended end user sex / age category

Total males	70,164	51%
Boys 13-14 years old	1,492	2%
Adolescent boys and young men 15-24 years old	21,630	31%
Adolescent boys 15 - 19 years old	7,205	33%
Young men 20 - 24 years old	14,425	67%
Adults	47,042	67%
Young adults 25 - 35 years old	27,685	59%
Middle adults 36 - 49 years old	16,658	35%
Older adults 50+	2,699	6%
Total females	66,266	49%
Girls 13-14 years old	3,087	5%
Adolescent girls and young women 15-24 years	29,554	45%
Adolescent girls 15 - 19 years old	12,025	41%
Young women 20 - 24 years old	17,529	59%
Adults	33,625	51%
Young adults 25 - 35 years old	22,677	67%
Middle adults 36 - 49 years old	9,360	28%
Older adults 50+	1,588	5%

Total condoms

Total condoms distributed	362,386	100%
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HIV self-test (ST) distribution

Malawi (National)

2020 Q4 (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	12,602	100%
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Sex

Male recipients	5,735	46%
Female recipients	6,867	54%
Non-pregnant	6,025	88%
Pregnant	842	12%

Last HIV test of recipient

Never tested	1,375	11%
Previously tested	11,227	89%
Last negative	10,899	97%
Last positive	312	3%
Not on ART	27	9%
On art	285	91%
Last inconclusive	16	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	24,497	100%
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Intended end user distribution type

Self (recipient)	9,312	38%
Secondary distribution	15,185	62%
Sex-partner	10,004	66%
Other	5,181	34%

Intended end user sex / age category

Total males	12,658	52%
Boys 13-14 years old	361	3%
Adolescent boys and young men 15-24 years old	4,239	33%
Adolescent boys 15 - 19 years old	1,612	38%
Young men 20 - 24 years old	2,627	62%
Adults	8,058	64%
Young adults 25 - 35 years old	4,704	58%
Middle adults 36 - 49 years old	2,826	35%
Older adults 50+	528	7%
Total females	11,839	48%
Girls 13-14 years old	680	6%
Adolescent girls and young women 15-24 years	5,618	47%
Adolescent girls 15 - 19 years old	2,442	43%
Young women 20 - 24 years old	3,176	57%
Adults	5,541	47%
Young adults 25 - 35 years old	3,624	65%
Middle adults 36 - 49 years old	1,617	29%
Older adults 50+	300	5%

Total condoms

Total condoms distributed	40,978	100%
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HIV self-test (ST) distribution

Malawi (National)

2020 Q4 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

VCT stand-alone

HIV self test client details

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Total HIV self-test kit

Total HIV self-test kit recipients	199	100%
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Sex

Male recipients	82	41%
Female recipients	117	59%
Non-pregnant	109	93%
Pregnant	8	7%

Last HIV test of recipient

Never tested	41	21%
Previously tested	158	79%
Last negative	155	98%
Last positive	3	2%
Not on ART	1	33%
On art	2	67%
Last inconclusive	0	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	330	100%
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Intended end user distribution type

Self (recipient)	157	48%
Secondary distribution	173	52%
Sex-partner	124	72%
Other	49	28%

Intended end user sex / age category

Total males	139	42%
Boys 13-14 years old	8	6%
Adolescent boys and young men 15-24 years old	59	42%
Adolescent boys 15 - 19 years old	21	36%
Young men 20 - 24 years old	38	64%
Adults	72	52%
Young adults 25 - 35 years old	48	67%
Middle adults 36 - 49 years old	20	28%
Older adults 50+	4	6%
Total females	191	58%
Girls 13-14 years old	19	10%
Adolescent girls and young women 15-24 years	113	59%
Adolescent girls 15 - 19 years old	70	62%
Young women 20 - 24 years old	43	38%
Adults	59	31%
Young adults 25 - 35 years old	39	66%
Middle adults 36 - 49 years old	20	34%
Older adults 50+	0	0%

Total condoms

Total condoms distributed	65	100%
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HIV self-test (ST) distribution

Malawi (National)

2020 Q4 (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	313	100%
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Sex

Male recipients	72	23%
Female recipients	241	77%
Non-pregnant	238	99%
Pregnant	3	1%

Last HIV test of recipient

Never tested	139	44%
Previously tested	174	56%
Last negative	173	99%
Last positive	1	1%
Not on ART	0	0%
On art	1	100%
Last inconclusive	0	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	388	100%
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Intended end user distribution type

Self (recipient)	273	70%
Secondary distribution	115	30%
Sex-partner	92	80%
Other	23	20%

Intended end user sex / age category

Total males	154	40%
Boys 13-14 years old	4	3%
Adolescent boys and young men 15-24 years old	29	19%
Adolescent boys 15 - 19 years old	12	41%
Young men 20 - 24 years old	17	59%
Adults	121	79%
Young adults 25 - 35 years old	38	31%
Middle adults 36 - 49 years old	32	26%
Older adults 50+	51	42%
Total females	234	60%
Girls 13-14 years old	113	48%
Adolescent girls and young women 15-24 years	46	20%
Adolescent girls 15 - 19 years old	22	48%
Young women 20 - 24 years old	24	52%
Adults	75	32%
Young adults 25 - 35 years old	53	71%
Middle adults 36 - 49 years old	18	24%
Older adults 50+	4	5%

Total condoms

Total condoms distributed	0
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HIV self-test (ST) distribution

Malawi (National)

2020 Q4 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Workplace informal

HIV self test client details

*

Total HIV self-test kit

Total HIV self-test kit recipients	10	100%
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Sex

Male recipients	5	50%
Female recipients	5	50%
Non-pregnant	5	100%
Pregnant	0	0%

Last HIV test of recipient

Never tested	0	0%
Previously tested	10	100%
Last negative	10	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	26	100%
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Intended end user distribution type

Self (recipient)	5	19%
Secondary distribution	21	81%
Sex-partner	16	76%
Other	5	24%

Intended end user sex / age category

Total males	12	46%
Boys 13-14 years old	0	0%
Adolescent boys and young men 15-24 years old	1	8%
Adolescent boys 15 - 19 years old	0	0%
Young men 20 - 24 years old	1	100%
Adults	11	92%
Young adults 25 - 35 years old	8	73%
Middle adults 36 - 49 years old	3	27%
Older adults 50+	0	0%
Total females	14	54%
Girls 13-14 years old	1	7%
Adolescent girls and young women 15-24 years	5	36%
Adolescent girls 15 - 19 years old	1	20%
Young women 20 - 24 years old	4	80%
Adults	8	57%
Young adults 25 - 35 years old	5	63%
Middle adults 36 - 49 years old	3	38%
Older adults 50+	0	0%

Total condoms

Total condoms distributed	0	
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HIV self-test (ST) distribution

Malawi (National)

2020 Q4 (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	47	100%
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Sex

Male recipients	47	100%
Female recipients	0	0%
Non-pregnant	0	
Pregnant	0	

Last HIV test of recipient

Never tested	17	36%
Previously tested	30	64%
Last negative	30	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	47	100%
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Intended end user distribution type

Self (recipient)	47	100%
Secondary distribution	0	0%
Sex-partner	0	
Other	0	

Intended end user sex / age category

Total males	47	100%
Boys 13-14 years old	0	0%
Adolescent boys and young men 15-24 years old	0	0%
Adolescent boys 15 - 19 years old	0	
Young men 20 - 24 years old	0	
Adults	47	100%
Young adults 25 - 35 years old	30	64%
Middle adults 36 - 49 years old	15	32%
Older adults 50+	2	4%
Total females	0	0%
Girls 13-14 years old	0	
Adolescent girls and young women 15-24 years	0	
Adolescent girls 15 - 19 years old	0	
Young women 20 - 24 years old	0	
Adults	0	
Young adults 25 - 35 years old	0	
Middle adults 36 - 49 years old	0	
Older adults 50+	0	

Total condoms

Total condoms distributed	0	
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HIV self-test (ST) distribution

Malawi (National)

2020 Q4 (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	10,669	100%
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Sex

Male recipients	5,558	52%
Female recipients	5,111	48%
Non-pregnant	4,860	95%
Pregnant	251	5%

Last HIV test of recipient

Never tested	2,740	26%
Previously tested	7,929	74%
Last negative	7,820	99%
Last positive	109	1%
Not on ART	16	15%
On art	93	85%
Last inconclusive	0	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	16,388	100%
---	--------	------

Intended end user distribution type

Self (recipient)	9,921	61%
Secondary distribution	6,467	39%
Sex-partner	5,047	78%
Other	1,420	22%

Intended end user sex / age category

Total males	8,268	50%
Boys 13-14 years old	292	4%
Adolescent boys and young men 15-24 years old	3,126	38%
Adolescent boys 15 - 19 years old	1,447	46%
Young men 20 - 24 years old	1,679	54%
Adults	4,850	59%
Young adults 25 - 35 years old	2,673	55%
Middle adults 36 - 49 years old	1,733	36%
Older adults 50+	444	9%
Total females	8,120	50%
Girls 13-14 years old	1,104	14%
Adolescent girls and young women 15-24 years	3,794	47%
Adolescent girls 15 - 19 years old	2,122	56%
Young women 20 - 24 years old	1,672	44%
Adults	3,222	40%
Young adults 25 - 35 years old	2,092	65%
Middle adults 36 - 49 years old	1,010	31%
Older adults 50+	120	4%

Total condoms

Total condoms distributed	43,230	100%
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Blood safety

Malawi (National)

2020 Q4 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Infect. disease screening among potential donors

*

HIV screening

HIV testing not done	1,594	24%
Tested for HIV	5,090	76%
HIV negative	4,871	96%
HIV positive	219	4%

Hepatitis B screening

HepB testing not done	1,639	25%
Tested for Hepatitis B	5,045	75%
HepB Negative	4,762	94%
HepB Positive	283	6%

Hepatitis C screening

HepC testing not done	2,776	42%
Tested for Hepatitis C	3,908	58%
HepC Negative	3,875	99%
HepC Positive	33	1%

Syphilis screening

Syphilis testing not done	1,867	28%
Tested for Syphilis	4,817	72%
Syphilis Negative	4,604	96%
Syphilis Positive	213	4%

Malaria screening

Malaria testing not done	1,944	29%
Tested for malaria	4,740	71%
Malaria Negative	4,211	89%
Malaria Positive	529	11%

Summary screening outcome

Not donated	2,172	32%
Donated	4,512	68%
Screened for at least HIV, HepB and syphilis	4,035	89%
Screened for HIV, HepB, HepC, Syphilis, Malaria	3,250	81%
Screened for HIV, HepB, Syphilis	785	19%
Screened for HIV, HepB	158	4%
Screened for HIV only	269	6%
Screened with any other combination of tests	50	1%

Cross-matching report

*

Blood group typing (for units and patients)

Total blood group typing done	17,976	100%
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Blood units cross-matched (by source)

Total blood units cross-matched	13,991	100%
Total units from MBTS (estimated)	9,479	68%
Total units from replacement donors	4,512	32%

Blood units cross-matched by patient group

Units cross-matched for maternity	3,363	24%
Units cross-matched for paediatrics	3,439	25%
Units cross-matched for other ward	7,189	51%

Blood safety

Malawi (National)

2020 Q4 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Cross-matching report

*

Transfusion reactions

Units transfused without adverse events	13,979	100%
Units with suspected transfusion reactions	7	0%
Units with confirmed transfusion reactions	5	0%

HIV exposed child follow-up

Malawi (National)

2020 Q4 (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	11,009	100%
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CPT status

On CPT	9,642	88%
Not on CPT	1,367	12%

HIV status

Current HIV infection status unknown	3,010	27%
HIV infection not confirmed, not ART eligible	3,002	100%
HIV infection not confirmed, ART eligible (PSHD)	8	0%
Current HIV infection status known	7,999	73%
Confirmed not infected	7,914	99%
Confirmed infected (ART eligible)	85	1%

ART eligibility summary

Not eligible for ART	10,916	99%
ART eligible	93	1%
ART not initiated	22	24%
Initiated ART	71	76%

Primary follow-up outcome

Discharged uninfected	45	0%
Continue follow-up	9,620	95%
Started ART	71	1%
Defaulted	355	4%
Died	36	0%

Transfers between sites

Total not transferred out	10,127	92%
Transferred out	882	8%

Age 12 months

Age cohort outcomes

*

Total children in birth cohort

Total children registered	12,574	100%
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CPT status

On CPT	9,559	76%
Not on CPT	3,015	24%

HIV status

Current HIV infection status unknown	3,247	26%
HIV infection not confirmed, not ART eligible	3,179	98%
HIV infection not confirmed, ART eligible (PSHD)	68	2%
Current HIV infection status known	9,327	74%
Confirmed not infected	9,131	98%
Confirmed infected (ART eligible)	196	2%

HIV exposed child follow-up

Malawi (National)

2020 Q4 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Age cohort outcomes

*

ART eligibility summary

Not eligible for ART	12,310	98%
ART eligible	264	2%
ART not initiated	79	30%
Initiated ART	185	70%

Primary follow-up outcome

Discharged uninfected	77	1%
Continue follow-up	9,505	85%
Started ART	185	2%
Defaulted	1,310	12%
Died	119	1%

Transfers between sites

Total not transferred out	11,196	89%
Transferred out	1,378	11%

Age 24 months

Age cohort outcomes

*

Total children in birth cohort

Total children registered	12,126	100%
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CPT status

On CPT	524	4%
Not on CPT	11,602	96%

HIV status

Current HIV infection status unknown	3,960	33%
HIV infection not confirmed, not ART eligible	3,956	100%
HIV infection not confirmed, ART eligible (PSHD)	4	0%
Current HIV infection status known	8,166	67%
Confirmed not infected	7,947	97%
Confirmed infected (ART eligible)	219	3%

ART eligibility summary

Not eligible for ART	11,903	98%
ART eligible	223	2%
ART not initiated	2	1%
Initiated ART	221	99%

Primary follow-up outcome

Discharged uninfected	7,624	71%
Continue follow-up	347	3%
Started ART	221	2%
Defaulted	2,371	22%
Died	123	1%

Transfers between sites

Total not transferred out	10,686	88%
Transferred out	1,440	12%

Antenatal Care

Malawi (National)

2020 Q4 (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	154,299	100%
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ANC cohort analysis

*

HIV status ascertainment

HIV status not ascertained	3,807	2%
HIV status ascertained	150,492	98%
Valid previous test result	8,764	6%
Previous negative	1,338	15%
Previous positive	7,426	85%
New test at ANC	141,728	94%
New negative	139,313	98%
New positive	2,415	2%

HIV status summary

Total women HIV negative	140,651	93%
Total women HIV positive	9,841	7%

PMTCT regimen mother

No ARVs	281	3%
Any ARVs	9,560	97%
ART (by time of initiation)	9,560	100%
Already on ART when starting ANC	7,312	76%
Started ART at 0-27 weeks of pregnancy	2,033	21%
Started ART at 28+ weeks of preg.	215	2%

ANC women after 6 months

ANC cohort analysis

*

Total women completing ANC in the reporting period

Total women in booking cohort	150,929	100%
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Syphilis status

Not tested for syphilis	57,104	38%
Tested for syphilis	93,825	62%
Syphilis negative	92,022	98%
Syphilis positive	1,803	2%

HIV status ascertainment

HIV status not ascertained	1,952	1%
HIV status ascertained	148,977	99%
Valid previous test result	10,194	7%
Previous negative	2,443	24%
Previous positive	7,751	76%
New test at ANC	138,783	93%
New negative	136,505	98%
New positive	2,278	2%

HIV status summary

Total women HIV negative	138,948	93%
Total women HIV positive	10,029	7%

Antenatal Care

Malawi (National)

2020 Q4 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

ANC cohort analysis

*

CPT status (among HIV pos)

Not on CPT	100	1%
On CPT	9,929	99%

PMTCT regimen mother

No ARVs	87	1%
Any ARVs	9,942	99%
ART (by time of initiation)	9,942	100%
Already on ART when starting ANC	7,675	77%
Started ART at 0-27 weeks of pregnancy	2,004	20%
Started ART at 28+ weeks of preg.	263	3%

Baby's ARVs dispensed

No ARVs dispensed for infant	160	2%
ARVs dispensed for infant	9,869	98%

Maternity

Malawi (National)

2020 Q4 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Maternal details

*

Admissions in the reporting period

Total admissions (referrals double-counted)	141,805	100%
Not referred to other site (total women)	132,230	93%
Referred out before delivery (multiple admissions)	9,575	7%

HIV status ascertainment

HIV status not ascertained	7,621	5%
HIV status ascertained	134,184	95%
Valid previous test result	10,071	8%
Previous negative	85	1%
Previous positive	9,986	99%
New test at maternity	124,113	92%
New negative	123,407	99%
New positive	706	1%

HIV status summary

Total women HIV negative	123,492	92%
Total women HIV positive	10,692	8%

ARVs during pregnancy (among HIV pos)

No ARV in pregnancy	318	3%
Any ARVs	10,374	97%
ART (by time of initiation)	10,374	100%
ART initiated before pregnancy	9,946	96%
ART initiated in 1st / 2nd trimester	200	2%
ART initiated in 3rd trimester	88	1%
ART initiated during labour	140	1%

Infant details

*

Single babies / multiple deliveries

Total babies delivered	135,314	100%
Single babies	130,884	97%
Twin / multiple babies	4,430	3%

Infant survival

Total live births	132,907	98%
Discharged alive	132,044	99%
Neonatal deaths	863	1%
Stillbirths	2,407	2%
Stillbirth, fresh	1,170	49%
Stillbirth, macerated	1,237	51%

HIV exposure / ARV proph. (among discharged alive)

Infants with unknown HIV exposure status	4,387	3%
Infants with known HIV exposure status	127,657	97%
Not HIV exposed	118,121	93%
HIV exposed	9,536	7%
Received no ARVs	407	4%
Received ARVs	9,129	96%
Nevirapine	9,129	100%

ART cohort analysis

Malawi (National)

2020 Q4 (Quarter)

Registration details

*

ART clinic registrations

Total ART clinic registrations	31,918	100%
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Registration type

ART initiations, first time (total patients)	21,655	68%
ART initiations, first time (non sex-disagg.)	13	0%
ART initiations, first time (by sex)	21,642	100%
ART initiations, first time, males	8,772	41%
ART initiations, first time, females	12,870	59%
ART initiations, first time, females non-pregnant	9,851	77%
ART initiations, first time, females pregnant	3,019	23%
ART re-initiations	249	1%
ART transfers in	10,014	31%

Sex

Males	12,531	39%
Females	19,387	61%
Non-pregnant	15,332	79%
Pregnant	4,055	21%

Age at ART initiation

Adults 15+ yrs	29,984	94%
Children 0-14 yrs	1,934	6%
Children 2-14 yrs	1,433	74%
Children below 24 mths	501	26%

Reason for starting ART

Presumed severe HIV Disease	22	0%
Confirmed HIV infection	31,896	100%
WHO stage 1 or 2	27,733	87%
CD4 below threshold	2,054	7%
CD4 unknown or >threshold	25,679	93%
PCR infants	110	0%
Children 12-59 mths	520	2%
Pregnant women	3,886	15%
Breastfeeding mothers	976	4%
Asymptomatic / mild	20,187	79%
WHO stage 3	3,288	10%
WHO stage 4	812	3%
Unknown / reason outside of guidelines	63	0%

TB at ART initiation

Never TB / TB > 24 months ago	31,375	98%
TB within the last 24 months	237	1%
Current episode of TB	306	1%

Kaposi's sarcoma at ART initiation

No KS	31,857	100%
Patients with KS	61	0%

ART cohort analysis

Malawi (National)

2020 Q4 (Cumulative)

Registration details

*

ART clinic registrations

Total ART clinic registrations	1,874,040	100%
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Registration type

ART initiations, first time (total patients)	1,489,966	80%
ART initiations, first time (non sex-disagg.)	295,404	20%
ART initiations, first time (by sex)	1,194,562	80%
ART initiations, first time, males	453,857	38%
ART initiations, first time, females	740,705	62%
ART initiations, first time, females non-pregnant	591,826	80%
ART initiations, first time, females pregnant	148,879	20%
ART re-initiations	26,212	1%
ART transfers in	357,862	19%

Sex

Males	699,069	37%
Females	1,174,971	63%
Non-pregnant	943,613	80%
Pregnant	231,358	20%

Age at ART initiation

Adults 15+ yrs	1,722,814	92%
Children 0-14 yrs	151,226	8%
Children 2-14 yrs	115,910	77%
Children below 24 mths	35,316	23%

Reason for starting ART

Presumed severe HIV Disease	4,481	0%
Confirmed HIV infection	1,869,559	100%
WHO stage 1 or 2	1,143,384	61%
CD4 below threshold	370,149	32%
CD4 unknown or >threshold	773,235	68%
PCR infants	4,582	1%
Children 12-59 mths	22,377	3%
Pregnant women	217,222	28%
Breastfeeding mothers	67,683	9%
Asymptomatic / mild	461,371	60%
WHO stage 3	585,037	31%
WHO stage 4	127,003	7%
Unknown / reason outside of guidelines	14,135	1%

TB at ART initiation

Never TB / TB > 24 months ago	1,798,652	96%
TB within the last 24 months	37,518	2%
Current episode of TB	37,870	2%

Kaposi's sarcoma at ART initiation

No KS	1,853,013	99%
Patients with KS	21,027	1%

ART cohort analysis

Malawi (National)

2020 Q4 (Cumulative)

ART outcomes

*

Primary follow-up outcomes

Total alive on ART	864,491	61%
Alive on ART at site of last registration	864,491	100%
Defaulted	411,053	29%
Stopped ART	13,741	1%
Total died	131,634	9%
Died month 1	24,632	19%
Died month 2	15,081	11%
Died month 3	9,986	8%
Died month 4+	81,935	62%

Transfers between sites

Total not transferred out	1,421,382	76%
Transferred out	452,658	24%

ART cohort analysis

Malawi (National)

2020 Q4 (Cumulative)

ART outcomes

*

ART regimens

First line regimens	842,754	97%
Adult formulation	834,484	99%
Regimen 0A	51	0%
Regimen 2A	632	0%
Regimen 4A	105	0%
Regimen 5A	7,646	1%
Regimen 6A	290	0%
Regimen 13A	806,433	97%
Regimen 14A	8,275	1%
Regimen 15A	10,959	1%
Regimen 16A	5	0%
Regimen 17A	88	0%
Paed. formulation	8,270	1%
Regimen 0P	28	0%
Regimen 2P	1,299	16%
Regimen 4P	26	0%
Regimen 14P	50	1%
Regimen 15P	6,792	82%
Regimen 16P	65	1%
Regimen 17P	10	0%
Second line regimens	20,313	2%
Adult formulation	7,572	37%
Regimen 7A	2,342	31%
Regimen 8A	4,319	57%
Regimen 9A	605	8%
Regimen 10A	119	2%
Regimen 11A	130	2%
Regimen 12A	57	1%
Paed. Formulation	12,741	63%
Regimen 9P Tabs	9,608	75%
Regimen 9P Gran	2,761	22%
Regimen 11P Tabs	235	2%
Regimen 11P Gran	137	1%
Other regimen (adult / paed)	1,428	0%

Adherence

Adherence unknown (not recorded)	29,109	3%
Adherence recorded	835,382	97%
0-3 doses missed	611,707	73%
4+ doses missed	223,675	27%

ART side effects

Side effects unknown (not recorded)	29,577	3%
Side effects recorded	832,082	97%
No side effects	827,866	99%
Any side effects	4,216	1%

2020 Q4 (Cumulative)

ART outcomes

*

Current TB status among ART patients (ICF)

ICF not done (Current TB status unknown/ not circ)	11,548	1%
ICF done	852,943	99%
TB not suspected	847,005	99%
TB suspected	2,916	0%
TB confirmed	3,022	0%
TB confirmed, not on treatment	563	19%
TB confirmed, on TB treatment	2,459	81%

Pregnant / Breastfeeding

Pregnant females	864,491	100%
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2020 Q4 (Quarter)

12 month survival children**Survival and retention in ART program**

*

ART cohort registration group outcomes

Total ART clinic registrations	2,276	100%
Transfers out (double counted)	434	19%
Total not transferred out (patients in cohort)	1,842	81%
Total alive on ART	1,404	76%
Total not retained	438	24%
Defaulted	356	81%
Stopped ART	16	4%
Died	66	15%

12 month survival all ages**Survival and retention in ART program**

*

ART cohort registration group outcomes

Total ART clinic registrations	36,170	100%
Transfers out (double counted)	6,547	18%
Total not transferred out (patients in cohort)	29,623	82%
Total alive on ART	21,745	73%
Total not retained	7,878	27%
Defaulted	6,963	88%
Stopped ART	226	3%
Died	689	9%

6 month survival OptionB+**Survival and retention in ART program**

*

ART cohort registration group outcomes

Total ART clinic registrations	4,422	100%
Transfers out (double counted)	525	12%
Total not transferred out (patients in cohort)	3,897	88%
Total alive on ART	3,192	82%
Total not retained	705	18%
Defaulted	658	93%
Stopped ART	24	3%
Died	23	3%

12 month survival OptionB+**Survival and retention in ART program**

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ART cohort registration group outcomes

Total ART clinic registrations	5,615	100%
Transfers out (double counted)	948	17%
Total not transferred out (patients in cohort)	4,667	83%
Total alive on ART	3,443	74%
Total not retained	1,224	26%
Defaulted	1,156	94%
Stopped ART	39	3%
Died	29	2%

Viral load monitoring cohort report

Malawi (National)

2020 Q4 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

VL samples collected in the reporting period

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VL samples collected

Total VL samples	256,944	100%
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Reason for VL test

Routine / scheduled monitoring	235,308	92%
Extra-schedular	18,125	7%
Targeted (clinical suspicion of failure)	3,171	17%
Follow-up after high VL	14,954	83%
Replacement of lost sample / missing result	3,511	1%

Results for VL samples collected 6 months ago

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Total VL samples with outcomes

Total VL samples collected 6 months ago	81,176	100%
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VL test results

Valid results	71,230	88%
<1000 copies / ml	64,495	91%
1000+ copies / ml	6,735	9%
Rejected samples / invalid results	627	1%
Missing / outstanding results	9,319	11%

Result transmission type

Paper results	70,364	96%
Electronic results	2,778	4%

Time from sample collection to receipt of results

0-4 Weeks	22,497	28%
5-8 Weeks	27,709	34%
9-12 Weeks	15,241	19%
13+ Weeks / still missing	15,729	19%

Time from sample collection to client notification

0-4 Weeks	7,521	9%
5-8 Weeks	12,196	15%
9-12 Weeks	16,467	20%
13+ Weeks / pending	44,992	55%

Patients with high VL: outcome after 6 months

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Patients in high VL cohort

Total high VL patients evaluated after 6 months	8,711	100%
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Initial high VL: reason for test

Routine / scheduled monitoring	7,722	89%
Targeted (clinical suspicion of failure)	761	9%
Repeat sample	228	3%

Intensive adherence counselling

3 Sessions completed	5,129	59%
Sessions not completed	3,582	41%

Viral load monitoring cohort report

Malawi (National)

2020 Q4 (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	4,135	47%
Valid results	2,902	70%
<1000 copies / ml	2,134	74%
1000+ copies / ml	768	26%
Rejected samples / invalid results	7	0%
Missing / outstanding results	1,226	30%
Follow-up sample pending	4,576	53%

Preliminary opinion

Conclusion made	3,161	36%
Continue current regimen	2,772	88%
Switch to 2nd line ART	389	12%
Conclusion pending	5,550	64%

Final treatment decision (2nd line prescriber)

Decision made	2,866	33%
Continue current regimen	2,498	87%
Switch to 2nd line ART	364	13%
Refer to HIV specialist	4	0%
Decision pending	5,845	67%

STI site report

Malawi (National)

2020 Q4 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

STI clients treated in the reporting period

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Total STI clients

Total STI clients treated	108,770	100%
Index patients treated (symptomatic)	88,157	81%
Partners treated	20,613	19%

Sex

Males	44,558	41%
Males Non-circumcised	30,401	68%
Males Circumcised	14,157	32%
Females	64,212	59%
Non-pregnant	54,748	85%
Pregnant	9,464	15%

Age group

Age group A (0-19 years)	9,638	9%
Age group B (20-24 years)	26,212	24%
Age group C (25+ years)	72,920	67%

Client type

Symptomatic cases	96,704	89%
Index cases	88,157	91%
Partners symptomatic	8,547	9%
Partners asymptomatic	12,066	11%

STI treatment history

Never treated for STI	81,236	75%
Previously treated for STI	27,534	25%
Old >3 months ago	20,767	75%
Recent ≤3 months ago	6,767	25%

STI syndromic diagnosis

GUD	13,769	12%
UD	31,463	27%
AVD	35,257	30%
Low risk	9,498	27%
High risk	25,759	73%
LAP	14,482	12%
SS	1,104	1%
BU	639	1%
BA	1,162	1%
NC	442	0%
Genital Warts	902	1%
Syphilis RPR VDRL	11,784	10%
Other STI	6,639	6%

STI partner notification

Total partner notification slips issued	27,563	100%
Total partners returned	20,613	75%
Total partners not seen	6,950	25%

STI site report

Malawi (National)

2020 Q4 (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	9,832	9%
HIV status ascertained	98,938	91%
HIV negative (new test)	81,157	82%
HIV positive	17,781	18%
New positive	2,197	12%
Previous positive	15,584	88%
Not on ART	641	4%
On ART	14,943	96%

STI clients referred for services

Lab	1,965	3%
Gynae review	929	2%
Surgical review	792	1%
Repeat HTC	46,604	75%
ART (for assessment)	5,866	9%
Other (service referrals)	3,042	5%
VMMC	2,654	4%