



Government of Malawi Ministry of Health

Integrated HIV Program Report July-September 2019

- *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*

1	EXECUTIVE SUMMARY (JULY – SEPTEMBER 2019)	2
2	INTEGRATED HIV PROGRAM OVERVIEW	5
3	SUPPORTIVE SITE SUPERVISION	6
3.1	METHODS	6
3.2	SUPERVISION OUTCOMES.....	7
4	INVENTORY OF SITES AND SERVICES	7
4.1	SITES AND SERVICES.....	7
4.2	STAFFING OF HIV SERVICES	8
5	HTS PROGRAM OUTPUTS	10
5.1	QUALITY CONTROL (QC) TESTING.....	11
5.2	HIV TESTING AND COUNSELLING OUTPUTS	11
5.3	HIV TESTING ACCESS TYPE	11
5.4	AGE AND SEX DISTRIBUTION AMONG HIV TESTING CLIENTS	12
5.5	FIRST TIME, REPEAT AND CONFIRMATORY TEST RESULTS	13
5.6	LINKAGE FROM HIV DIAGNOSIS TO ART	14
5.7	HIV SELF-TESTING (HIVST).....	14
6	DNA-PCR TESTING FOR EARLY DIAGNOSIS OF HIV IN INFANTS (EID)	17
7	BLOOD SAFETY	18
8	PREVENTIVE SERVICES	19
8.1	POST EXPOSURE PROPHYLAXIS (PEP)	19
8.2	PROVIDER-INITIATED FAMILY PLANNING (PIFP).....	19
8.3	COTRIMOXAZOLE PREVENTIVE THERAPY (CPT)	20
8.4	ISONIAZID PREVENTIVE THERAPY (IPT), FAMILY PLANNING AND BP SCREENING	20
8.5	INTENSIFIED TB CASE FINDING (ICF)	22
8.6	HIV-RELATED DISEASES	22
9	HIV-EXPOSED CHILD FOLLOW-UP	23
9.1	METHODS AND DEFINITION OF INDICATORS.....	23
9.2	HIV EXPOSED CHILD REGISTRATION DATA	23
9.3	BIRTH COHORT OUTCOMES.....	23
10	PMTCT / ART	24
10.1	DATA SOURCES AND REPORTING METHODS	24
10.2	ARV COVERAGE AMONG PREGNANT / BREASTFEEDING WOMEN AND EXPOSED INFANTS	26
10.3	HIV SERVICES AT ANC.....	27
10.4	HIV SERVICES AT MATERNITY	28
11	ART ACCESS AND FOLLOW-UP OUTCOMES	29
11.1	NEW ART REGISTRATIONS DURING Q3 2019	29
11.2	CUMULATIVE ART REGISTRATIONS UP TO SEPTEMBER 2019	30
11.3	ART OUTCOMES.....	31
11.4	ART COHORT SURVIVAL ANALYSIS	33
11.5	TB / HIV MANAGEMENT.....	39
12	STI TREATMENT	39
12.1	ACCESS TO STI TREATMENT AND COVERAGE	39
12.2	CLIENT TYPE AND STI HISTORY.....	39
12.3	HIV STATUS	40
12.4	STI SYNDROMES AND REFERRALS.....	40
13	SUPPLY CHAIN MANAGEMENT OF HIV PROGRAM COMMODITIES	40
13.1	QUANTIFICATION AND PROCUREMENT PLANNING.....	40
13.2	QUARTERLY SUPPLY CHAIN SUPPORT DURING Q3 INTEGRATED SUPERVISION.....	41
13.3	AVAILABILITY OF STANDARD FIRST LINE ARVs.....	41
13.4	BIMONTHLY DISTRIBUTION OF HIV & MALARIA COMMODITIES	41
14	TRAINING AND MENTORING	43
14.1	HIV TESTING SERVICES.....	43
15	PARTICIPANTS IN THE Q3 2019 SUPERVISION (8-18 JULY 2019)	44
16	APPENDIX (FULL NATIONAL HIV PROGRAM DATA)	45

1 Executive Summary (July – September 2019)

- Scale-up of integrated HIV services had reached the following number of sites:
 - **759** static and **197** outreach HIV testing sites
 - **750** (static) ART sites; **615** of these started at least one pregnant or breastfeeding woman and **732** started asymptomatic patients (Test & Treat) this quarter
 - **691** sites with HIV-exposed children in follow-up
- **1,019,610** persons were tested for HIV and received their results; **207,831 (20%)** accessed HIV testing for the first time; **811,779 (80%)** were repeat testers and **32,190 (4%)** of these received confirmatory testing (after having tested positive in the past). **28,376 (2.8%)** clients received a positive result for the first time¹.
- A total of **30,622** people received **38,444** self-test kits for either primary or secondary use.
- **14,482 (80%)** of 18,018 blood units collected were screened for (at least) HIV, hepatitis B and syphilis
- **168,033 (98%)** of 172,271 women at ANC had their HIV status ascertained; **11,669 (7%)** of these were HIV positive. **149,107 (96%)** of 155,842 at maternity had their HIV status ascertained **10,904 (7%)** of these were HIV positive.
- **27,624** patients started ART this quarter; **80%** were classified as asymptomatic / in WHO stage 1 and started under the “Test & Treat” policy.
- **826,102** patients were alive and on ART by end of September 2019². This means that **77%** of the estimated 1,070,896 HIV positive population were on ART. ³ ART coverage was **69%** (46,628/ 67,465) for children⁴ and **77%** (779,474 / 1,003,432) for adults.
- **125,766 (93%)** of viral load results from routine monitoring were <1000 copies/ml. Viral suppression rates for routine samples among children (0-14 years) and adults (15+ years) were **64%** and **92%**, respectively.
- **72%** of adults and **75%** of children were retained alive on ART at 12 months after initiation.⁵
- Out of **796,167** patients on first line adult ART **286,394 (37%)** were on TDF/3TC/EFV and **468,880 (60%)** had transitioned to TDF/3TC/DTG.
- **13,114** ⁶ (>99%) of an estimated 10,932 ³ HIV infected pregnant women in Malawi were on ART this quarter. **9,521(73%)** of these were already on ART when getting pregnant and **3,593 (27%)** started ART during pregnancy/delivery.

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

² This is the crude total number of ART patients without adjusting for patients who are in transit based on new transfer outs as done in previous quarters. This is because from 2019 Q2, PEPFAR’s implementing partners have re-classified the sites cumulative defaulter list into other primary outcomes. In this case, it was not possible to come up with incident transfer outs.

³ 2019 Spectrum Model estimates for the HIV population in September 2019.

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.

- An additional **1,112**² breastfeeding women started ART in WHO stage 1 or 2.
- **77%** and **71%** of women started while pregnant or breastfeeding were retained on ART at **6 and 12 months** after initiation, respectively.
- **10,136 (7%)** of infants discharged alive from maternity were known to be HIV exposed, **9,435 (93%)** of these received ARV prophylaxis (nevirapine).
- A total of **14,184 HIV** exposed children were newly enrolled for follow-up this quarter; **11,243 (81%)** of these were enrolled before age 2 months.
- Out of the total 1,070,896 estimated PLHIV by end September 2019:
 - An estimated **93%** of PLHIV knew their status (diagnosed)
 - **83%** of whom were on ART
 - **93%** of whom were virally suppressed.⁷
- This means that the Q3 2019 scale-up target for the population diagnosed was exceeded. The estimated proportion of PLHIV who know their status was reduced from previous quarter (94%) based on a new estimation method for the “first 90” (UNAIDS “Shiny90” model). The new estimate implies that undisclosed repeat testers account for 46% of clients reported as “new positive” in routine HTS data between 2016 and 2019.
- The apparent gap between the estimated number of PLHIV diagnosed and those on ART has slightly declined to almost 200,000 individuals diagnosed but not on ART. This gap may be explained by increasing challenges with early ART uptake among the large number of PLHIV diagnosed over the last quarters, many of whom are asymptomatic. However, the number of new diagnoses may also be considerably overestimated due to an increase in the number of people misclassified as ‘newly diagnosed’ while they were actually previously diagnosed and did not disclose this to the HTS provider

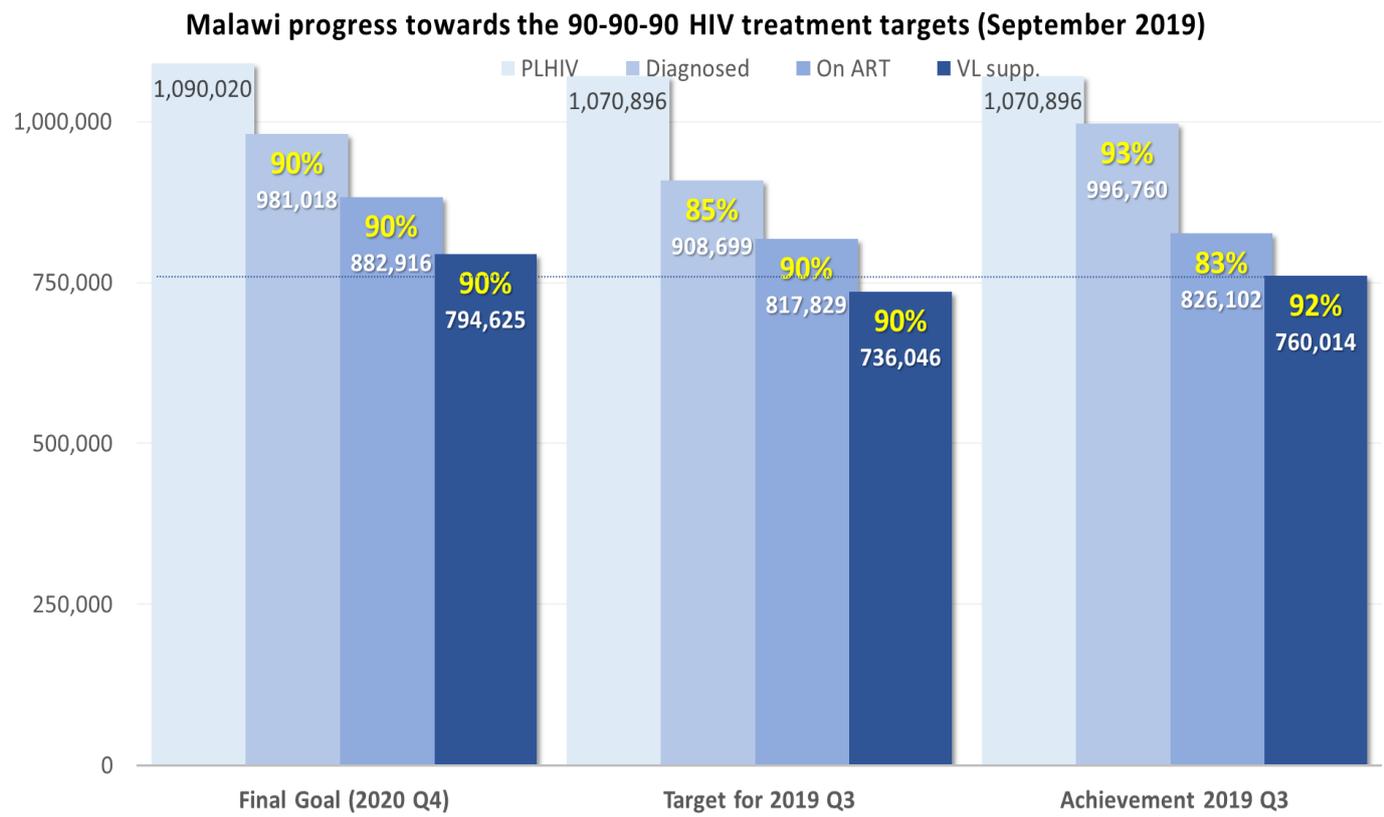
⁷ Estimation methods for progress towards the 95-95-95 treatment targets

‘First 90’ (996,760 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 (1,003,680 x 76.8% = 770,826); add: 261,997 = 54% of 485,180 people reported as newly diagnosed between April 2016 – December 2019 (HTS program data adjusted for an estimated 46% of repeat testers misclassified as newly diagnosed); subtract: 37,760 (82%) of 45,867 estimated deaths among all PLHIV (2019 Spectrum model) between April 2016 –September 2019 to account for deaths among the diagnosed population (on ART and not on ART).

‘Second 84’ (826,102 on ART): patients retained alive on ART by end Q3 2019 from routine ART program reports.

‘Third 93’ (760,014 virally suppressed): extrapolated from the 92% of patients with a routine VL monitoring result <1000 copies/ml this quarter, applied to the 826,102 patients on ART.

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 +including women who may get pregnant while on ART
- **Phasing out of NNRTI-Based (NVP) regimens:** Transitioning of clients on NVP to DTG or PI Based regimens.
- **Differentiated Service Delivery (DSD) Model:** Introduction of Six-Monthly Drug Refills
- **Phasing out of NNRTI-Based (NVP) regimens:** Transitioning of clients on NVP to DTG or PI Based regimens.
- **Viral Load Monitoring:** Moving from 2 yearly routine sample collection to yearly schedule
- Offer **oral PrEP** as additional prevention method for HIV-negative clients at substantial risk of HIV infection.

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

755 public and private sector facilities were visited for **clinical HIV program supervision** between 7th and 18th of October 2019.

The large number of sites was covered by **260** supervisors working in **32** teams that spent 2,059 **working hours** at the sites. Each site visit lasted on average 2.7 hours, but up to 2 days were spent at the busiest sites. **477 (63%)** sites were awarded a *certificate* for **excellent performance**. This number is lower than the previous quarter (539). **99 (13%)** sites had significant weaknesses and were rated to require **intensive mentoring**. Mentoring capacity will need to be further expanded.

Table 1: Outcomes of integrated HIV services supervision for 2019 Q3

Zone	Total facil. visited*	Supervision hours spent at facilities		Performance (# and % of sites)	
		Total	Average per site	Excellent perform.	Mentoring needed
NZ	133	342	2.6	78 59%	16 12%
CEZ	106	270	2.5	74 70%	10 9%
CWZ	171	403	2.4	123 72%	25 15%
SEZ	169	508	3	92 54%	17 10%
SWZ	176	536	3	110 63%	31 18%
Malawi	755	2,059	2.7	477 63%	99 13%

* 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. **225** sites had cumulatively registered more than 2,000 ART patient and **78** of these had registered more than 5,000. **203 (91%)** of these high burden sites were using electronic data systems, but EMR was also in use at 10 lower burden sites. 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 **759** static and **197** outreach HIV testing sites in Q3 2019.

Table 1

Facilities with integrated HIV services in the 5 Zones. Availability of services defined by performance (at least 1 patient enrolled) during 2019 Q3

Zone	Total fac.(1)	Facilities providing HIV services				CD4 count machines (2)		
		Exp. child	Pre-ART	PMTCT B+	ART	Installed	Functional	Results
SEZ	169	159 94%	0 0%	151 89%	167 99%	5 3%	2 40%	32
SWZ	176	161 91%	10 6%	144 82%	174 99%	13 7%	10 77%	2,177
CWZ	172	145 84%	0 0%	136 79%	171 99%	8 5%	4 50%	1,715
CEZ	106	103 97%	0 0%	86 81%	106 100%	2 2%	0 0%	0
NZ	136	123 90%	0 0%	98 72%	132 97%	8 6%	2 25%	151
Malawi	759	691 91%	10 1%	615 81%	750 99%	36 5%	18 50%	4,075

(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 1 shows the distribution of the **759** sites designated to provide clinical HIV services in Q3 2019, by zone. At the national level, there were **750** (static) sites with at least one patient on ART; **615** sites had enrolled women under PMTCT Option B+; **691** 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 36 sites, and **18** (50%) of these had produced at least 1 result during Q3 2019. The total number of CD4 results produced (**4,075**) increased from the previous quarter (4,595). With the introduction of the 'Test & Treat' policy, routine CD4 count testing to determine when to start ART has become obsolete. 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. Logbooks are routinely reviewed during quarterly supervision and key performance data for each provider are summarized on the site supervision forms.

Table 2

	2018 Q4		2019 Q1		2019 Q2		2019 Q3	
Sites visited	755		754		756		755	
Sites with any tests done	720	95%	711	94%	719	95%	722	96%
Sites with registered HTC staff	647	86%	660	88%	652	86%	682	90%
Total HTC staff at visited sites	4,288		4,216		4,068		4,429	
Providers with any DBS (VL) samples collected	1,924	45%	1,837	44%	1,873	46%	2,145	48%
Providers with any DBS (EID) samples collected	1,491	35%	1,477	35%	1,421	35%	1,556	35%
Providers with any Syphilis test done	1,895	44%	1,815	43%	1,947	48%	2,184	49%
Providers with any HIV test done	2,828	66%	2,597	62%	2,672	66%	2,869	65%
Providers with 300+ HIV tests done this quarter	1,056	31%	1,027	29%	909	27%	969	26%
Logbooks reviewed	3,410	80%	3,540	84%	3,351	82%	3,678	83%
Providers participating in PT this quarter	2,741	80%	2,675	76%	1,113	33%	2,852	78%
Total DBS (VL) Samples	68,949		56,992		100,642		108,656	
Total DBS (EID) Samples	9,556		9,250		10,375		10,863	
Total Syphilis tests	118,187		101,461		133,811		144,569	
Total HIV tests (HTC register)	1,106,090		1,117,587		1,007,296		1,019,610	
HIV tests accounted for by individual staff	844,128	76%	783,986	70%	695,140	69%	718,791	70%
Source: logbooks	789,003	93%	745,303	95%	653,500	94%	668,625	93%
Source: HTC register	55,125	7%	38,683	5%	41,640	6%	50,166	7%
Total tests by staff with 300+ tests	664,223	79%	619,309	79%	500,308	72%	502,663	70%

682 (90%) of the 755 visited facilities had registered HIV testing providers and **722 (96%)** sites had performed at least one test during Q3 2019. **3,678 (83%)** of 4,429 providers had their logbooks available for review. This is a slight increase from the previous quarter (82%). Based on the reviewed logbooks **2,869(67%)** had done at least one HIV test during the quarter; **2,184(51%)** at least one syphilis test; **2,145(50%)** had collected at least one VL sample; and **1,556 (36%)** had collected at least EID sample.

The national HIV reference laboratory organizes PT rounds every 6 months for all practising HIV testing providers (in Q1 and Q3). According to the 3,678 reviewed logbooks, **2,852 (78%)** testing providers had participated in proficiency (panel) testing (PT) this quarter. Documentation of PT may be incomplete given that not all logbooks were available for review.

718,791 (70%) of all 1,019,610 HTS tests conducted this quarter (according to HTC register reports) were accounted for by individual HTS staff working at the visited sites. **668,625(93%)** of these tests were documented in the reviewed logbooks and an additional **50,166 (7%)** could be attributed to individual providers from staff codes in the HTS registers. **969(26%)** of 4,429 providers with documented activity had tested 300 clients or more this quarter. A dedicated full-time HTC provider is expected serve 300 clients per quarter (average of 5 clients per day for 60 working days per quarter). The **969 staff** who met or exceeded this target provided **502,663 (70%)** of the total number of tests accounted for by individual staff this quarter.

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 150 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 been consistent over the last 3 quarters. However, the number of ART clinicians decreased by 3 from 881 to 878 from the previous quarter.

Among the other cadres, **1,253** were nurses and **950** were auxiliary staff (health surveillance assistants, clerks, etc.)

Table 3

	2018 Q4		2019 Q1		2019 Q2		2019 Q3	
Clinicians	847	27%	886	28%	883	28%	941	28%
Nurses	1,270	41%	1,325	41%	1,248	39%	1,349	40%
Pharmacy staff	44	1%	47	1%	116	4%	128	4%
Auxiliary Staff	929	30%	951	30%	951	30%	994	29%
Total	3,090		3,209		3,198		3,412	

An estimated 3.9 million ART patient visits are currently managed at the 750 ART sites per annum, based on 826,102 patients alive on ART and an average dispensing interval of 2.5 months. With 260 working days per year, an average of 15,453 patient visits is therefore managed by the ART sites per working day. At current staffing levels, this translates into an average of **16** ART patient visits per clinician and **11** per nurse per day. This approximate HRH capacity assessment does not take account of site-specific differences in patient burden and staffing levels and there are several medium and high burden sites with sub-optimal staffing. However, the national treatment program is fully decentralized to the health centre level and the program continues to devolve the growing patient burden to peripheral facilities. Since 2011, the steepest increase in ART patient numbers has been recorded at the 300 small peripheral sites that have the largest collective staffing capacity (see Figure 9 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:

- 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' 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 the facilities they are supporting.

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.

668 (92%) of the 719 active testing sites had documented at least 1 QC set this quarter and **495 (74%)** had recorded the minimum of 12 sets (one for each week). At **659 (99%)** of sites, all samples produced the expected result.

5.2 HIV Testing and Counselling Outputs

1,019,610 people⁸ were tested and counselled for HIV between July and September 2019. This is an increase of 1% decrease from the previous quarter (**1,007,296**). Similar to previous quarters, the high outputs were owed to the deployment of dedicated testing staff (HIV Diagnostic Assistants, HDAs) at about 200 facilities. HDAs are currently hired by PEPFAR implementing partner organizations and seconded to public sector facilities, primarily to ensure routine provider-initiated HIV testing for patients.

968,986 (95%) of all tests were performed at health facilities, **2,946 (<1%)** were done in stand-alone HTC sites and **47,878 (5%)** were done outside of facilities / in the community. **28,376** people were reported as newly diagnosed with HIV this quarter. Out of these, **27,280 (96%)** were diagnosed at health facilities; **63 (<1%)** at stand-alone HTC sites; and **1,033 (4%)** through community-based testing. The reported 'yield' for new diagnoses was 2.8% (excluding clients who disclosed a previous positive result from the denominator).

However, based on the triangulation of MPHIA results and program data for the 90-90-90 coverage estimates, **at least 46%** of all clients classified as "new positive" in HTS registers are assumed to be undisclosed repeat testers. Discounting 46% from the 28,376 reported "new positives" results in an estimated 15,323 genuine new diagnoses this quarter. This reduces the true 'yield' in the HTS program to **1.5%**.

5.3 HIV testing access type

732,659 (72%) of people tested were patients receiving provider-initiated testing and counselling (PITC); **266,613 (26%)** accessed voluntary testing and counselling, door-to-door, community-based testing, etc.; and **20,338 (2%)** came for testing with a *Family HTC Referral Slip* (FRS) that was issued to a family member at a prior HTS encounter. Based on a total of

⁸ 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.

53,284 FRS issued to index clients this quarter, the successful referral rate for family members was higher at **38%** (20,338 / 53,284) than last quarters at 28%. Issuance and utilization of FRS have increased considerably over the last quarters.

5.4 Age and sex distribution among HIV testing clients

Out of **1,019,610** people tested and counselled, **35%** were males and 65% were females. **33%** 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.

216,903 (21%) of all people tested accessed HTC with their partners (as a couple).

52% of all people tested and counselled were 25 years and above, **39%** were adolescents or young adults (15-24 years) and **10%** were children (<15 years). **1,775 (<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 Q2 to Q3 2019, the number of males and pregnant women tested increased by 3% and 4% respectively while the female-non pregnant decreased by 1%.

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

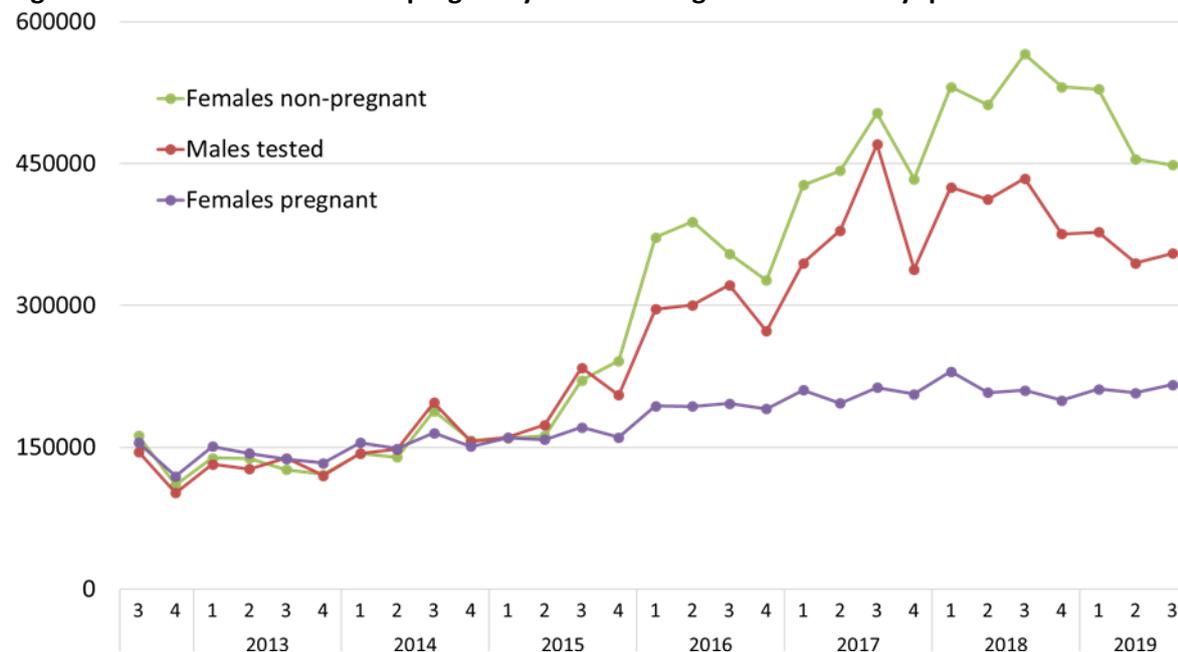
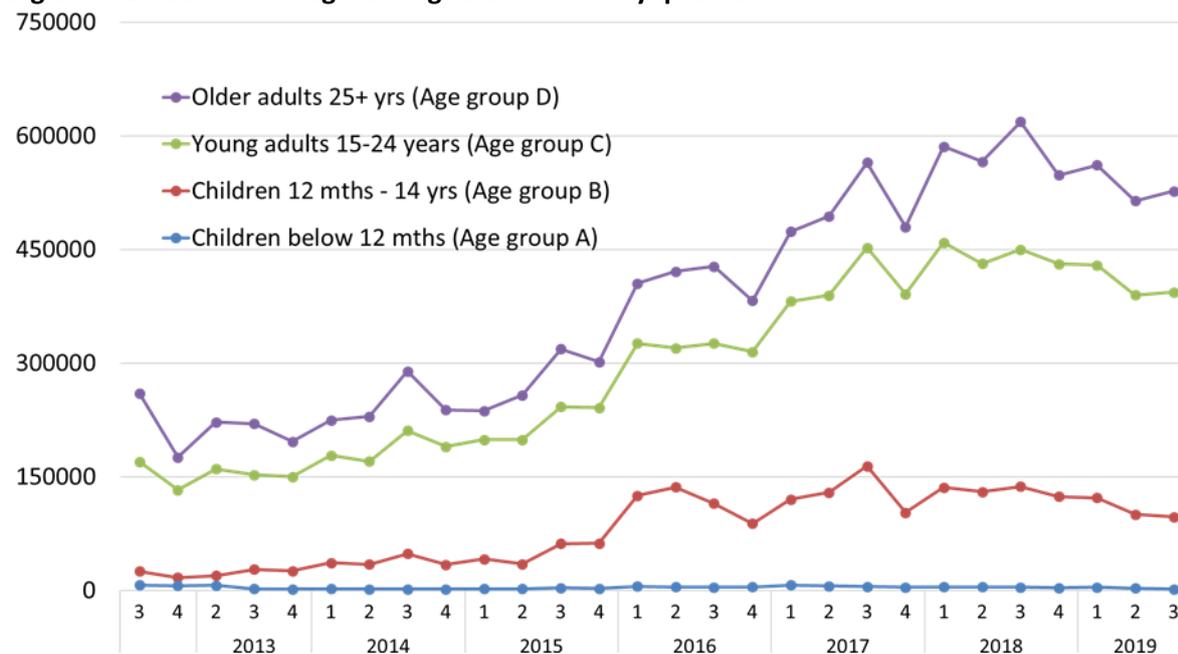


Figure 3: Distribution of age among clients tested by quarter



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.

207,831 (20%) of all clients tested accessed testing for the first time and **811,779 (80%)** were repeat testers. Based on the cumulative number of people who accessed HTC for the first time, a total of **11,321,121** 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.

28,376 (2.8%) 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 (**86**) and inconclusive test results (**1,660**) both accounted for **<1%** of new results given to clients.

778,261 (96%) of 811,779 repeat testers reported a *last negative* result. **32,190 (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. *Confirmatory test results (32,166)* were below the number of previous positive clients by 24. This may be explained by clients who only disclosed their previous positive status after receiving another positive result. **32,038 (99%)** of 32,166 confirmatory test results were concordant positive and **128 (<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

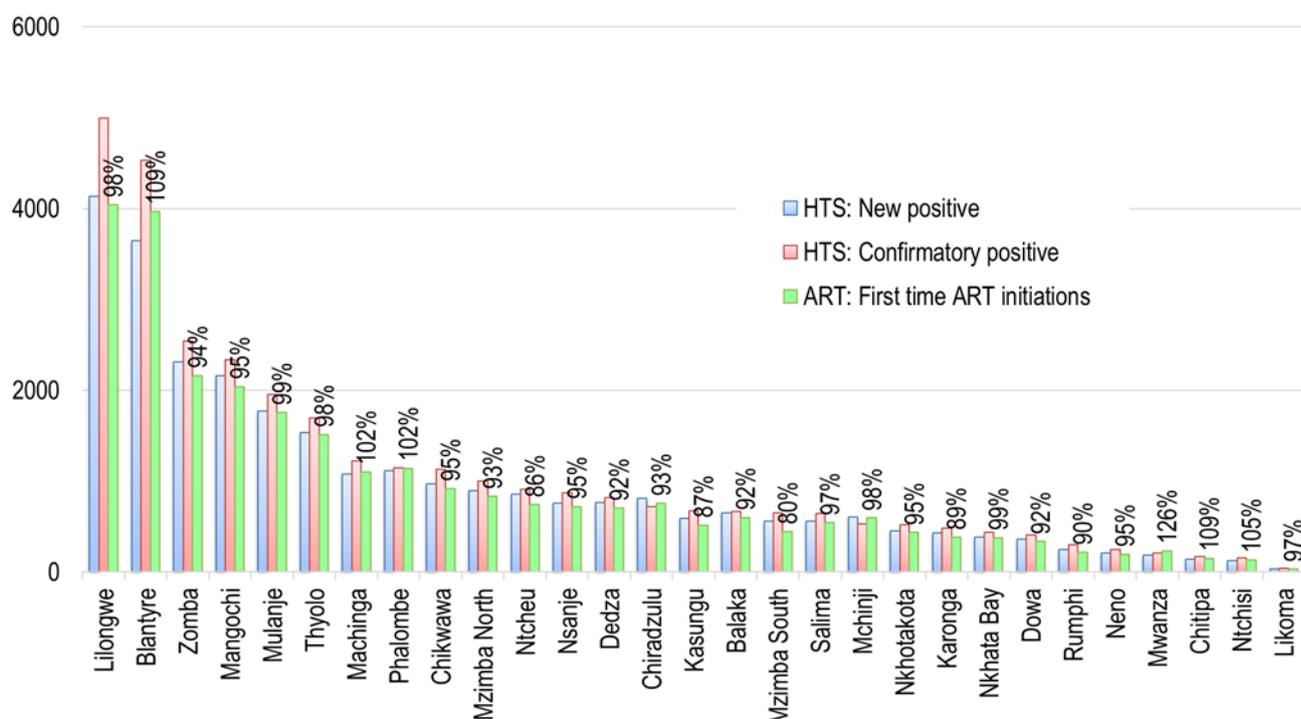
selective confirmatory testing among clients with doubts about their previous positive status, but it also underscores the importance of routine confirmatory testing before ART initiation and the need to strengthen quality assurance.

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 **27,624** patients who initiated ART this quarter represent **97%** of the **28,376** clients tested positive for the first time. Proxy linkage rates ranged from 86% in Ntcheu to 126% in Mwanza. Lilongwe had the highest number of new diagnoses (**4,132**) and ART initiations (**4,403**), 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. Salima, Likoma, Neno, Blantyre, etc.).

The number of confirmatory positives exceeded the number of new positives by 3,662 at the national level. This means a large number of clients who disclosed their previous positive status were getting tested again. Blantyre recorded the greatest excess (888) of confirmatory positives compared with the number of new positives. Lilongwe, Blantyre, Zomba, Mangochi, Mulanje and Thyolo accounted for **2,646** (72%) out of the 3,662 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 4,414 (14%).

Figure 4: Number of new positives, confirmatory positives and new ART initiations in Q3 2019 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 July and August 2019, **30,619** people were counselled and given a total of **38,444** 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 1.3 kits given to each recipient. **49%** of the 31,747 recipients were males and **51%** were females. **26%** of the females were pregnant.

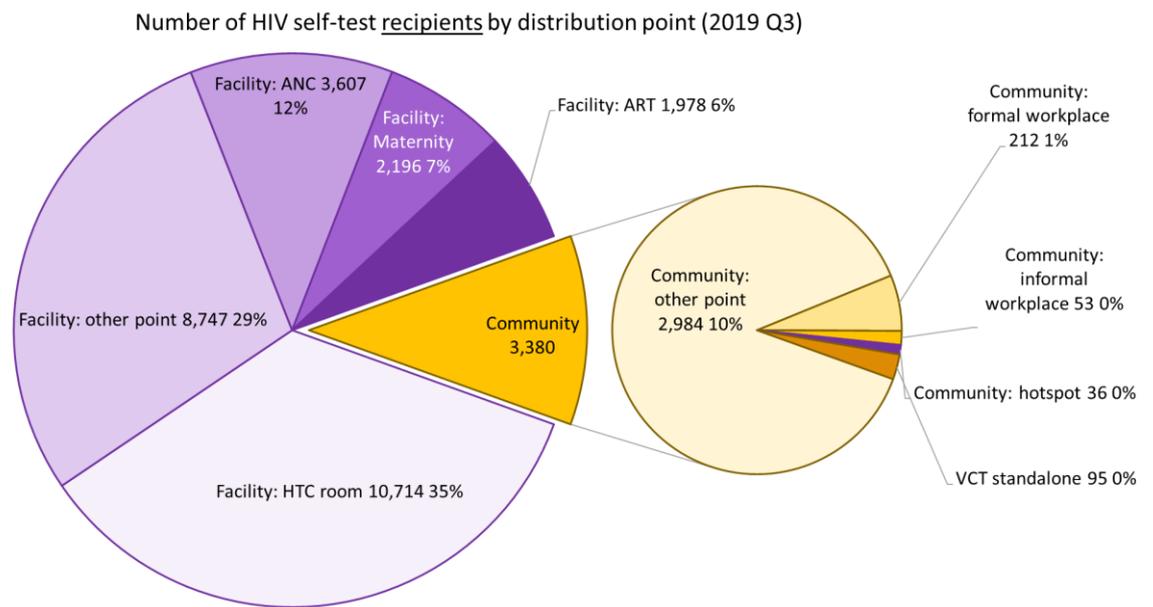
Out of all recipients, **4,206 (14%)** had never been tested for HIV before and **26,332 (86%)** reported a previous test result. **23,246 (88%)** of previously tested recipients were negative and **3,126 (12%)** were positive. **2,635 (84%)** of the positives were on ART and **16%** were not ART. **41 (<1%)** recipients reported an inconclusive previous test results.

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 2019 Q3. **27,242 (89%)** of all **30,622** recipients were seen at health facilities and **3,380(11%)** in community settings. HTC rooms were the most common distribution point in facilities with **10,714 (35%)** recipients, followed by other facility points (**8,747**), ANC clinics (**3,607**), maternity (**2,196**) and ART clinics (**1,978**). **2,984 (10%)** of clients received HIVST at unspecified community distribution points and formal workplaces had **212 (1%)** clients. Informal workplaces, community hotspots and stand-alone VCT settings each accounted for <1% of recipients.

Figure 5

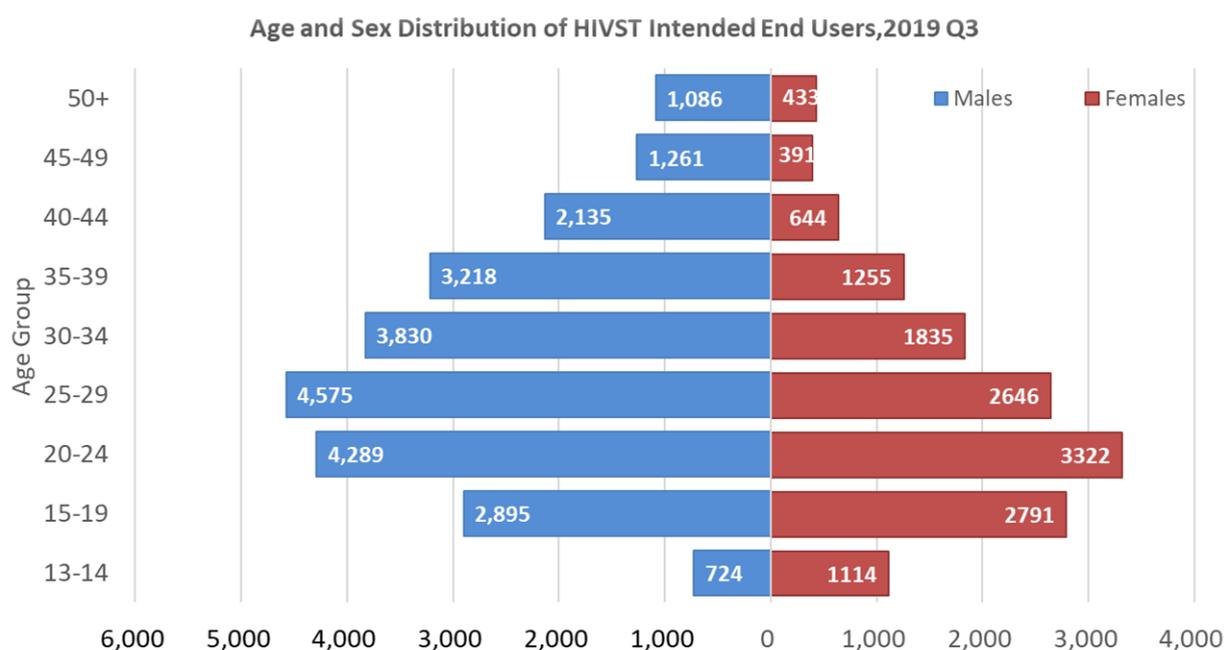


5.7.3 HIVST Distributed Kits: Intended User Attributes

Out of the **38,444** HIVST kits distributed in Q3 2019, **17,838 (46%)** were intended for self-use by the recipients and **20,606 (54%)** were for onward distribution. **16,321 (71%)** of the kits intended secondary distribution were for sexual partners and **4,285 (21%)** were for others, such as friends or relatives of the recipients.

Figure 6 below shows the intended end user age and sex category for all the test kits that were distributed during 2019 Q4. Out of **38,444** test kits distributed, **24,013 (62%)** were for males and **14,431 (38%)** for females. 70% of the male end users were 20-39 years and 64% 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.

(88%) of 691 sites with HIV exposed children in follow-up had collected and recorded at least 1 DNA-PCR sample during Q3 2019. **10,965** DNA-PCR samples were collected and recorded. By the time the logbooks were reviewed (between 1 and 3 weeks after the end of the quarter), results had been received at the sites for **7,695 (71%)** of these specimens and **5,084 (65%)** of these results had been communicated to the mother/guardian. The proportion of results received at the sites was **87%**, **77%** and **48%** for samples collected in April, May and June, respectively. A total of **366 (5%)** results received at the sites were positive.

The **10 laboratories** registered the receipt of **6,201** DNA-PCR samples that were collected during Q3 2019. This represents **57%** of the 10,965 samples recorded in the logbooks at the sites.

A total of **6,201** valid DNA-PCR results were dispatched from the labs in Q3 2019. **5,179 (83%)** of the dispatched results were from samples collected in Q2 2019, while 1,022(17%) were from samples collected in the previous quarters. The median time between sample collection

and dispatch of the result was **21 days**; 50% of results were dispatched between 14 and 29 days after sample collection.

4,105 (66%) of all results were from infants under 2 months old at the time of sample collection. 1,477 (24%) were 2-5 months; 360 (6%) were 6-11 months; 86 (1%) were 12-17 months; and 55 (1%) were 18 months or older. The date of birth and/or specimen collection was missing for 118 samples, some of which may include ‘tie-breaker’ samples for patients with inconclusive rapid test results.

The number of positive DNA-PCR results has increased considerably since April 2016 when the new policy of routine confirmatory PCR testing for all children started on ART below age 2 years was introduced. Reliable identification of these confirmatory DNA-PCR results is currently not possible from the LIMS, leading to double counting of children with initial positive results.

Table 4

Age at sample collection	Tot. Results	Positives	
<2 months	4,105	48	1.2%
2-5 months	1,477	71	4.8%
6-11 months	360	48	13.3%
12-17 months	86	32	37.2%
18 months +	55	27	49.1%
(missing)	118	25	21.2%
Total	6,201	251	4.0%

251 (4.0%) of all results dispatched were positive. The age-specific number (%) of positive results is shown on the left. Receipt of the DNA-PCR result at the health facility is a prerequisite to updating of patient records and for appropriate clinical management. Considering the delays between sample

collection and dispatch of the test result from the lab, the child’s age at the time of dispatch of the result from the lab is a useful indicator for early infant diagnosis and treatment. The table below shows the distribution of ages when results were dispatched from the lab.

Table 5

Age when result sent from lab	Tot. Res.	(Col %)	Positives	(Col %)
<2 months	1,239	20%	7	3%
2-5 months	4,257	69%	100	40%
6-11 months	395	6%	50	20%
12-17 months	130	2%	37	15%
18 months +	62	1%	32	13%
(missing)	118	2%	25	10%
Total	6,201	100%	251	100%

Out of **251** positive results dispatched, only **7 (3%)** were sent before the child was 2 months old. A total of **100 (40%)** positive results were sent before the child was 6 months old

and **50 (20%)** were sent before the child was 12 months old. A total of **105** infants were started on ART in WHO stage 1 or 2 on the basis of confirmed HIV infection (see ART section below). Due to the potential for double counting of positive infants in the lab data, this ratio can no longer be interpreted for early infant ART linkage.

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 **18,018** blood units were collected in Malawi during Q3 2019. MBTS collected **13,439 (75%)** 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 4,579 units from replacement donors. **3,536 (77%)** of these units were screened for at least the 3 key TTIs (HIV, HepB and syphilis) and **2,438 (69%)** of these were also screened for HepC and malaria. This means that a total of **14,482 (80%)** 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, 980 were screened with any other combination of tests for TTIs.

A total of **7,261** potential replacement donors were documented in the blood donor registers at the facilities and **4,579 (63%)** 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, 79% of potential donors were tested for HIV, 78% for HepB, 80% for syphilis, 69% for malaria and 51% 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 3,758 persons received PEP during Q3 2019. This is an increase from the previous quarter's 3,451.

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 6 shows that **70,819 (17%)** of 428,747 women received Depo-Provera from ART clinics in Q3 2019. The south east zone had achieved the highest coverage. Patient coverage has slightly decreased from 22% in the previous quarter. 543 (67%) of ART/PMTCT sites had stocks of Depo-Provera in October 2019. This is an increase from the previous quarter with 501 sites with Depo in July 2019.⁹ 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%.

Table 6 shows that **716,840 (87%)** of 826,102 patients on ART were on CPT. Coverage was highest in Central East and West zones at **95 and 91% respectively**.

8.4 Isoniazid Preventive Therapy (IPT), Family Planning 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) are currently eligible for continuous IPT.

Table 6 shows that 220,418 (**62%**) of the 353,304 ART patients in the 5 districts were on IPT by the end of Q3 2019. IPT coverage ranged from **56%** in Lilongwe to **74%** in Chiradzulu.

643,533 (78%) of 826,102 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. **200,716 (31%)** of 638,739 were screened for hypertension at least once in 2019.

⁹ Many Mission hospitals do not provide family planning.

Table 6

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)	826,102	716,840	87%	220,418	27%	428,747	70,819	17%	643,533	174,185	27%
Northern Zone	81,610	72,422	89%	0	0%	42,356	3,184	8%	63,574	24,159	38%
Chitipa	6,460	4,778	74%	0	0%	3,353	315	9%	5,032	1,907	38%
Karonga	14,319	11,678	82%	0	0%	7,432	921	12%	11,155	4,724	42%
Nkhata Bay	10,193	9,691	95%	0	0%	5,290	455	9%	7,940	3,830	48%
Rumphi	8,276	7,838	95%	0	0%	4,295	375	9%	6,447	1,578	24%
Mzimba North	25,724	23,364	91%	0	0%	13,351	890	7%	20,039	7,304	36%
Mzimba South	15,884	14,335	90%	0	0%	8,244	97	1%	12,374	4,440	36%
Likoma	754	739	98%	0	0%	391	131	34%	587	375	64%
Central East Zone	65,597	62,327	95%	0	0%	34,045	6,986	21%	51,100	14,113	28%
Nkhotakota	12,729	12,002	94%	0	0%	6,606	1,243	19%	9,916	5,951	60%
Kasungu	17,888	16,851	94%	0	0%	9,284	1,467	16%	13,935	2,193	16%
Ntchisi	4,864	4,760	98%	0	0%	2,524	857	34%	3,789	1,489	39%
Dowa	13,114	12,630	96%	0	0%	6,806	1,171	17%	10,216	2,520	25%
Salima	17,002	16,085	95%	0	0%	8,824	2,247	25%	13,245	1,959	15%
Central West Zone	168,958	153,744	91%	58,612	35%	87,689	21,227	24%	131,618	49,064	37%
Lilongwe	105,262	95,030	90%	58,612	56%	54,631	15,222	28%	81,999	42,147	51%
Mchinji	16,901	15,998	95%	0	0%	8,772	2,148	24%	13,166	704	5%
Dedza	19,610	18,962	97%	0	0%	10,178	502	5%	15,276	1,916	13%
Ntcheu	27,185	23,754	87%	0	0%	14,109	3,355	24%	21,177	4,297	20%
South West Zone	257,639	214,968	83%	125,479	49%	133,715	20,834	16%	200,701	42,422	21%
Chiradzulu	41,140	35,877	87%	30,473	74%	21,352	2,941	14%	32,048	1,269	4%
Blantyre	94,575	71,477	76%	59,512	63%	49,084	5,970	12%	73,674	20,540	28%
Mwanza	6,224	5,803	93%	0	0%	3,230	625	19%	4,848	1,336	28%
Thyolo	55,994	46,666	83%	35,493	63%	29,061	4,261	15%	43,619	3,113	7%
Chikwawa	29,794	26,451	89%	0	0%	15,463	2,293	15%	23,210	4,776	21%
Nsanje	21,389	20,250	95%	0	0%	11,101	1,074	10%	16,662	4,994	30%
Neno	8,523	8,445	99%	0	0%	4,423	3,669	83%	6,639	6,394	96%
South East Zone	252,298	213,379	85%	36,327	14%	130,943	18,588	14%	196,540	44,427	23%
Mangochi	53,990	49,514	92%	0	0%	28,021	2,514	9%	42,058	4,858	12%
Machinga	30,597	24,361	80%	0	0%	15,880	2,987	19%	23,835	4,782	20%
Zomba	55,334	46,369	84%	36,327	66%	28,718	4,740	17%	43,105	14,488	34%
Mulanje	56,895	47,321	83%	0	0%	29,529	5,356	18%	44,321	10,087	23%
Phalombe	33,630	25,979	77%	0	0%	17,454	1,479	8%	26,198	2,691	10%
Balaka	21,852	19,836	91%	0	0%	11,341	1,511	13%	17,023	7,520	44%

* 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.

821,052 (99%) of all patients retained on ART were screened for TB at their last visit before end of September 2019. Out of these, **5,418 (1%)** patients were classified as new TB suspects. **2,204 (<1%)** patients were confirmed to have TB (clinical or lab based) and **2,142 (97%)** of these were on TB treatment; the remaining 50 had either not yet started or interrupted TB treatment. An excerpt from the data in the **Annex (Cumulative ART outcomes)** is shown below.

Current TB status among ART patients (ICF)

ICF not done (Current TB status unknown/ not circ)	5,050	1%
ICF done	821,052	99%
TB not suspected	813,430	99%
TB suspected	5,418	1%
TB confirmed	2,204	0%
TB confirmed, not on treatment	62	3%
TB confirmed, on TB treatment	2,142	97%

8.6 HIV-Related Diseases

Table 7 shows the number of patients treated for key HIV-related indicator diseases. **4,008** patients were started on TB treatment this quarter and HIV status was ascertained for **3,977 (99%)**; **1,778 (45%)** of these were HIV positive and **1,702 (96%)** of all HIV positives were already on ART when starting TB treatment. In Q3 2019, **412** and **826** patients received Diflucan for acute cryptococcal meningitis and oesophageal candidiasis, respectively. 69 patients with Kaposi sarcoma were registered for ART in this quarter.

Table 7

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
2018 Q4	3,954	3,854 97%	2,001 52%	1,892 95%	138	574	738
2019 Q1	4,073	4,018 99%	1,874 47%	1,801 96%	130	271	611
2019 Q2	4,318	4,288 99%	1,873 44%	1,767 94%	91	523	859
2019 Q3	4,008	3,977 99%	1,778 45%	1,702 96%	69	412	826

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

14,184 HIV exposed children were newly enrolled into follow-up during Q3 2019; **11,254 (81%)** of these were under the age of 2 months. The total number of new enrolments (14,184) exceeds by 4,048 (29%) the total number of known HIV exposed children discharged from maternity (10,136). 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 **10,695** infants in the **2-month age cohort**. **7,926 (74%)** had received a DNA-PCR result. **106 (1%)** of these were confirmed HIV infected. An additional **4** infants were diagnosed with *presumed severe HIV disease*, which means that a total of **110** infants were eligible for

ART. **103 (94%)** of these had started ART. This is an increase from the previous quarter (74%). Out of the entire 2-month age cohort, **9,024 (93%)** were retained in exposed child follow-up, **103 (1%)** had started ART and **30 (<1%)** were discharged confirmed uninfected¹⁰. **57(1%)** were known to have died and **478(5%)** had been lost to follow-up.

There were **12,243** children in the **12-month age cohort**. Current HIV infection status was known for **9,234(75%)** children (DNA-PCR or rapid antibody test) and **199 (2%)** of these were confirmed HIV infected. **10 (<1%)** additional children had been diagnosed with *presumed severe HIV disease*, which means that a total of 209 children were eligible for ART. **184 (88%)** had started ART. Out of the entire age cohort, **9,265 (85%)** were retained in exposed child follow-up, **184 (2%)** had started ART and **73 (<1%)** were discharged confirmed uninfected.¹⁰ **1,313 (12%)** were lost to follow-up and **114 (1%)** were known to have died.

There were **11,794** children in the **24-month age cohort**. Current HIV infection status was known for **8,159 (69%)** children (DNA-PCR or rapid antibody test) and **241(3%)** of these were confirmed HIV infected. **11** additional children had been diagnosed with *presumed severe HIV disease*, which means that a total of **252** children were eligible for ART. **235 (93%)** of these had started ART. Out of the entire age cohort, **232 (2%)** were retained in exposed child follow-up, **235 (2%)** had started ART and **7,738 (74%)** were discharged confirmed uninfected. **2,173 (21%)** were lost to follow-up and **143(1%)** were known to have died.

Confirmed HIV-free survival at age 24 months in this quarter was **74%**. This was related to the fact that only 69% in this cohort had a known HIV status. 3,635 (31%) children were classified as '*current HIV infection status unknown*' and many of these may be among the 2,173 children lost to follow-up and the 143 children who had died. Only 232 (2%) 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

¹⁰ A small number of children may be rightfully discharged as 'confirmed uninfected' by 2 or 12 months of age, provided that 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 during 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: 201 Spectrum model for Malawi). There are an estimated 10,932 HIV infected pregnant women in the population per quarter (1/4 of 43,728 in 2019).¹¹

10.2 ARV Coverage among Pregnant / Breastfeeding Women and Exposed Infants

13,114 (>99%) of the estimated 10,932 HIV infected pregnant women in Malawi this quarter were on ART. This is based on **9,521**¹² women at maternity who were already on ART when getting pregnant and **3,593**¹³ women who newly initiated ART in pregnancy. ART coverage was similar in the previous quarter (>99%).

An additional **1,112**¹⁴ 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

¹¹ 2019 Spectrum model estimates for HIV infected pregnant women in 2019.

¹² 10,119 women who started ART before pregnancy admitted at maternity; reduced by 5.9% to adjust for double counting of 9,212 referrals among 155,842 total admissions.

¹³ 4,718 women registered at ART clinics who were pregnant at the time of starting ART; a) 14.6% are discounted to adjust for double-counting of transfers based on 794 of 5,457 women who transferred within 12 months of registration (12-month Option B+ survival analysis); b) 10.9% are discounted to account for presumed failed ART initiations based on 574 of 5,275 women lost to follow-up within 6 months of registration (6-month Option B+ survival analysis).

¹⁴ 1,302 women registered at ART clinics who were breastfeeding at the time of starting ART; reduced by 14.6% to adjust for double-counting of transfers based on 794 of 5,475 women who transferred within 12

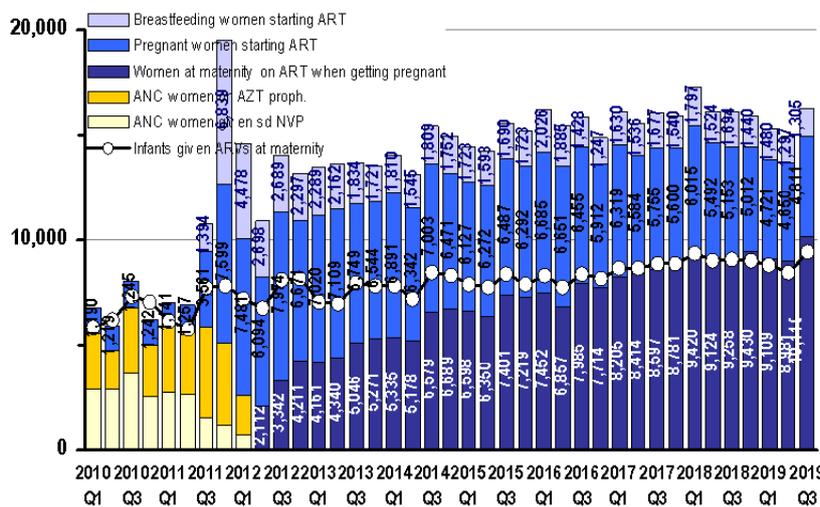
to **4,705**. Most women starting ART while breastfeeding were probably identified late in maternity or early in the postnatal period, but this group may also include some women who re-initiated after interrupting ART in pregnancy. **9,435 infants** were confirmed to have started NVP prophylaxis at maternity.

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

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:

172,271 women attended ANC for their first visit between July and September 2019. This is >99% of the estimated 160,169 pregnant women in the 2019 population during one quarter.¹⁵ **168,033 (98%)** of women in this cohort had their HIV status ascertained at the first visit. Out of these, **11,669 (7%)** presented with a valid previous test result and **156,364 (93%)** received a new test. A total of **11,029 (7%)** of women were found HIV positive: **8,284 (75%)** of these from a documented previous test and **2,745 (25%)** from a new test. **10,846 (98%)** of all positives were on ART: **8,177 (75%)** of these were already on ART when starting ANC and

months of registration (12-month Option B+ survival analysis). Failed ART initiations are thought to be less common among this group, so no further adjustment is made.

¹⁵ Estimated as ¼ of 640,675 births projected for 2019 (Demographic Proj Spectrum 2019).

2,368 (22%) newly started ART at their first ANC visit and **301 (3%)** started late at 28 + weeks during pregnancy.

Outcome cohort:

164,820 women had started ANC between January and March 2019 and their outcomes were reported between July and September 2019.

160,693 (97%) of the outcome cohort had their HIV status ascertained at least once in the course of ANC. This value has remained the same as in the previous quarter but is slightly lower than Q1 2019 (98%). **10,621 (7%)** presented with a valid documented previous HIV test result and **150,072(93%)** received a new HIV test result at ANC. A total of **10,677 (7%)** women were found HIV positive. This is slightly lower than the latest Spectrum projections (6.8% HIV prevalence among pregnant women in 2019).¹¹

10,570 (99%) of (known) HIV infected women were on ART by the end of ANC. This represents **97%** coverage of the estimated 10,932 HIV positive pregnant women per quarter at the population level. Of the **10,570** ANC women who were known to receive ART **7,507 (71%)** were already on ART when starting ANC, **2,675 (25%)** initiated before 28 weeks of pregnancy and **388 (4%)** initiated during the last trimester of pregnancy. **10,381 (97%)** of HIV infected women at ANC were on Cotrimoxazole Preventive Therapy. **10,161 (95%)** of known HIV infected women attending ANC received the infant dose of ARVs (nevirapine syrup) to take home

10.3.2 Syphilis Screening

117,203 (71%) of women in the outcome cohort were tested for syphilis and **1,824 (2%)** were syphilis positive. The syphilis testing rate has declined as compared to the last quarter (79%). However, the proportion of positive syphilis test results is consistent with syphilis prevalence estimated from the 2010 ANC sentinel surveillance round

10.4 HIV Services at Maternity

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

Between July and September 2019, **155,842** women were admitted for delivery to maternity; **9,214** of these were referred to another facility before delivery, resulting in **146,628** total admissions to maternity during Q3 2019.

A total of **150,082** babies were born, **144,964 (97%)** were singletons and **5,118 (3%)** were twins/multiples. There were **147,472 (98%)** live births and **2,610 (2%)** stillbirths. **146,510 (99%)** of babies born alive were discharged alive and **962 (1%)** died before discharge.

10.4.1 HIV Ascertainment at Maternity

149,107 (96%) women had their HIV status ascertained at maternity. Out of these, **12,239 (13%)** presented with a valid previous HIV test result and **136,868 (92%)** received a new test. A total of **10,904 (7%)** women were HIV positive and **138,203(93%)** were negative. The **149,107** women whose HIV status was ascertained at maternity represent **90%** of the expected **166,250** women delivering in the population.

HIV exposure status was ascertained for 142,405 (97%) out of 147,472 babies born and discharged alive. 10,136 (7%) of these were born to a known HIV positive mother.

10.4.2 ARV Coverage at Maternity

A total of **10,801 (99%)** of known HIV infected women admitted to maternity received ART. Out of these, **10,119 (94%)** had started ART before pregnancy, **405 (4%)** initiated ART during the 1st or 2nd trimester, **140 (1%)** initiated during the 3rd trimester and **137 (1%)** initiated ART at maternity.

A total of **9,435 (93%)** of 10,136 infants who were known HIV exposed and discharged alive started daily NVP prophylaxis at maternity. This represents **86%** coverage of the estimated 10,932 HIV exposed infants born in the population in this quarter.

11 ART Access and Follow-Up Outcomes

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

11.1 New ART Registrations during Q3 2019

By the end of September 2019, there were 750 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 has led to an unprecedented increase in ART initiations in Q3 2016 when almost all remaining pre-ART patients-initiated ART.

A total of **27,624** initiated ART for the first time in Q3 2019. The programme from 2019 Q1 started disaggregating the first-time initiations by sex and pregnant status. In Q3 2019, **26,951 (92%)** out of 23,318 first time initiations had been disaggregated¹⁶. Among the disaggregated first-time initiations on ART, 41% were males and **59%** were females. Total number of pregnant women amongst first time initiating females was **4,539 (29%)**.

The total number of patients newly initiated on ART represents 98% of the 28,812 people recorded as newly diagnosed with HIV during the quarter. Among all new ART clinic registrations¹⁷ in Q3 2019, **39%** were males and **61%** were females. **4,813 (21%)** of the registered females were pregnant at the time of starting ART.

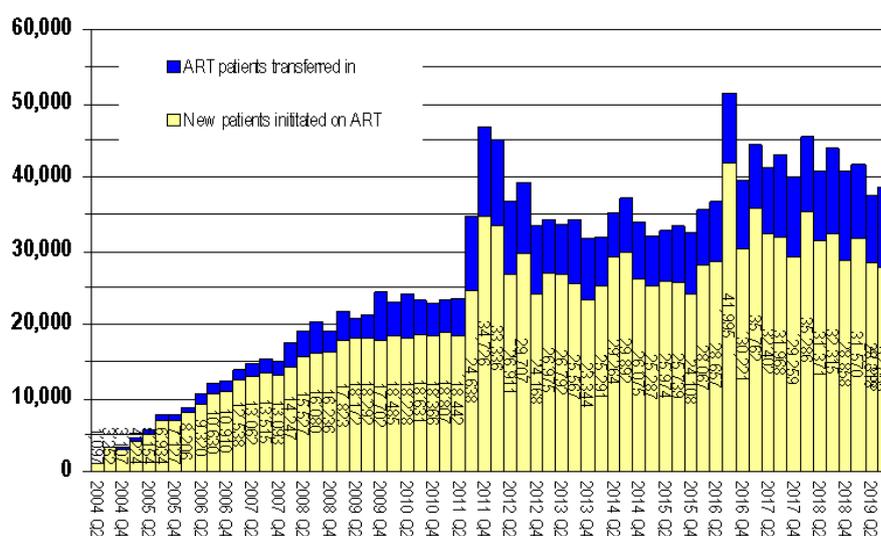
¹⁶ Manual sex and pregnant status disaggregation’s for first time initiations for some high burden sites by supervisors was not possible because of the volume of work.

¹⁷ These proportions include the 27,624 patients newly initiating ART, but also 10,481 patients previously started on ART who transferred between sites and 515 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 **34,187 (89%)** of all patients registered started in WHO stage 1 or 2 and **26,034 (80%)** of these started as 'asymptomatic' under universal ART eligibility policy. **3,479 (9%)** of patients registered started in WHO stage 3 and **873(2%)** started in stage 4.

2,491 children were registered at ART sites in Q3 2019. **510 (20%)** of these were children aged 12-59 months in WHO stage 1 or 2. **20 (<1%)** children started ART with presumed severe HIV disease. **105** 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 10,136 HIV exposed infants were identified at maternity and assuming a 2% transmission rate among the 99% of HIV positive mothers at maternity who received ART (and 20% transmission in the 1% who did not receive ART)¹⁸, only about 221 of these known HIV exposed infants may have been infected perinatally during Q3 2019. However, considering the projected 834 new infant HIV infections in the 2019 population per quarter¹¹, early infant treatment coverage remains low at an estimated **26%** (221/ 834). The most significant bottleneck for early infant treatment remains the identification of HIV (probably mostly recently) infected pregnant / breastfeeding women.

585 (2%) out of all ART clinic registrations were patients with TB: **265 (1%)** had a current and **430 (<1%)** a recent history of TB. **69 (<1%)** of patients registered had Kaposi's sarcoma.

11.2 Cumulative ART Registrations up to September 2019

By the end of September 2019, there were a cumulative total of **1,716,004** clinic registrations, **1,342,087 (78%)** of whom were patients newly initiated on ART; **342,045 (20%)** were patients who transferred between clinics; **31,872 (2%)** re-initiated ART after treatment interruption.

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

Out of all registrations, **37%** were males and **63%** were females, **92%** were adults and **8%** were children (<15 years).

11.3 ART Outcomes

826,102 patients were alive on ART by the end of September 2019. This is equivalent to **78% ART coverage** among the estimated 1,070,896 HIV positive population in Malawi in 2019 and it means that the national ART scale-up target for September 2019 (76% coverage) has been achieved. The number of patients on ART includes an estimated 10,996 patients in transit between sites: given the standard 3 month dispensing interval, 50% of the 21,932 patients newly registered as transferred out at sites across the country are assumed to be in transit at the end of the quarter.¹⁹

Out of the 1,716,004 patients ever initiated on ART, **826,102 (48%)** were retained alive on ART, **120,577 (9%)** were known to have died, **381,458(28%)** were lost to follow-up and **10,310 (<1%)** were known to have stopped ART.

An estimated **779,474** adults and **45,274** children (<15 years)²⁰ were alive on ART by the end of September 2019. This represents **67%** (46,628 / 67,465) and **78 %** (779,474/ 1,003,432) ART coverage among children and adults, respectively.

¹⁹ Starting from 2019 Q2 reporting period, several high-volume sites were involved in a massive back-to-care campaign. This is where sites reviewed all cumulative defaulters and conducted defaulter tracing; and re-classified those not traced into transfer-outs, stopped and died. It is impossible to come up with 2019 Q3 incident transfer-outs.

²⁰ The total national number of ART patients with current age <15 years is extrapolated from the (5.5%) of all patients at EMR sites who were <15 years at the end of Q3 2019.

Figure 9: Patients alive on ART at the end of each quarter, stratified by size of facility (number of patients alive on ART)

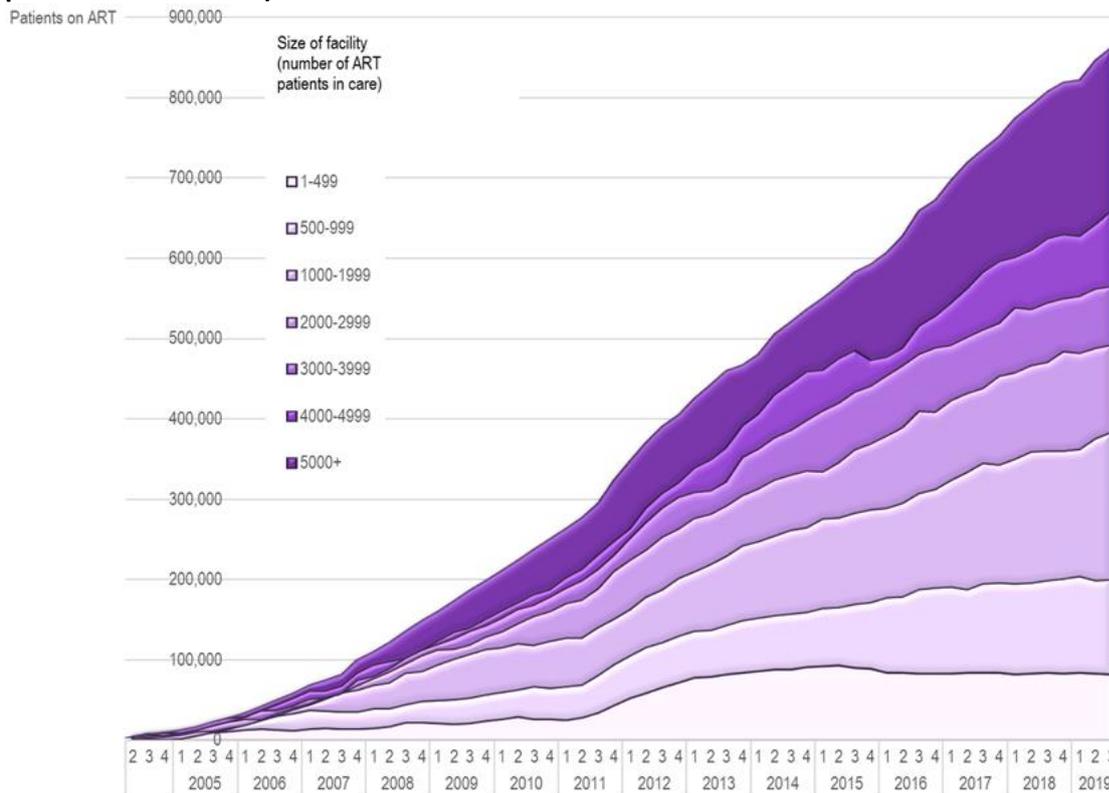


Figure 8 shows the increase of patients alive on ART by the end of each quarter, stratified by facility volume. The net increase of 8,744 patients alive on ART between July and September 2019 was lower than last quarter. **Figure 8** also shows the decentralization of Malawi’s ART program that followed 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 September 2019, **44%** of the national ART patient cohort was in care at sites with fewer than 2,000 patients.

Figure 10

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)

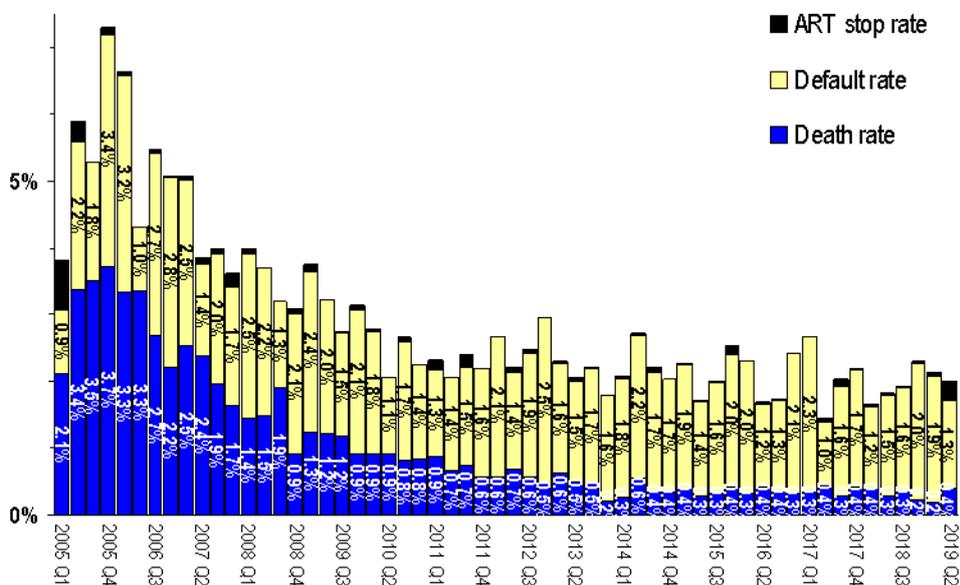


Figure 9 shows the considerable decrease of ART drop-out rates since the start of the national program, most of which was contributed by reduction in mortality. Quarterly defaulter rates appeared to have stabilized around 1.8% over the last 5 years. However, this quarter¹⁹ there has been a significant decrease in the defaulter rates (0.61%) as compared to the 1.32% for 2019Q2. 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 **3,082** new deaths, **5,037** new defaulters and **1,931** new confirmed stops in Q3 2019. This translates into a quarterly death rate of **0.4%** and a defaulter rate of **0.6 %** among the patients alive and on treatment in this quarter. The stop rate has increased from 0.17 % in 2019 Q2 to 0.23% in 2019 Q3 which is likely attributed to re-classification¹⁹ and misclassification of outcomes from the EMR sites.

11.4 ART Cohort Survival Analysis

A 12 month ‘**cohort outcome survival analysis**’ was conducted for patients registered in Q2 of 2018, 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 Q2 2018. A further subgroup analysis was done for women who started ART under **Option B+** Q4 of 2018.

72% of adults and **75% of children** were retained alive on ART after 12 months on treatment. Retention was slightly higher for adults (70%) but slightly lower for children (76%) when

compared with 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.²¹

6-month group cohort survival outcomes were known for **5,280** women registered as having started ART under Option B+ in Q4 2018. This is less by 1,119 (21%) the number of women registered under Option B+ in the quarterly cohort analysis in Q4 2018. This discrepancy is likely due to errors in data abstraction.²² The 5,280 women in this cohort survival analysis include 574 (11%) women who transferred between sites. These transfers are double counted and discounted from the denominator (4,706) for the calculation of retention rates.

3,611 (77%) women in this cohort were retained at 6 months after registration. Of those not retained, **1,041 (95%)** were lost to follow-up, **12 (1%)** were known to have stopped ART and **42 (4%)** were known to have died.

12-month group cohort survival outcomes were known for **5,464** women registered as having started ART under Option B+ in Q3 2018. This is less by 1,186 (21%) the number of women registered under Option B+ in the quarterly cohort analysis in Q3 2018. This discrepancy is likely due to errors in data abstraction.²³ The **5,464** women in this cohort survival analysis include 795 (15%) women who transferred between sites. These transfers are double counted and discounted from the denominator (**4,699**) for the calculation of retention rates.

3,306 (71%) of women in this cohort were retained at 12 months after registration. **1,268 (93%)** of those not retained were lost to follow-up, 34 (**2%**) were known to have stopped ART and **61 (2%)** were known to have died.

²¹ 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

²² 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.

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.

ART survival analysis

Malawi (National)

2019 Q3 (Quarter)

6 month survival OptionB+

Survival and retention in ART program

*

ART cohort registration group outcomes

Total ART clinic registrations	5,280	100%
Transfers out (double counted)	574	11%
Total not transferred out (patients in cohort)	4,706	89%
Total alive on ART	3,611	77%
Total not retained	1,095	23%
Defaulted	1,041	95%
Stopped ART	12	1%
Died	42	4%

12 month survival OptionB+

Survival and retention in ART program

*

ART cohort registration group outcomes

Total ART clinic registrations	5,464	100%
Transfers out (double counted)	795	15%
Total not transferred out (patients in cohort)	4,669	85%
Total alive on ART	3,306	71%
Total not retained	1,363	29%
Defaulted	1,268	93%
Stopped ART	34	2%
Died	61	4%

11.4.1 Secondary outcomes of patients retained on ART

826,102 patients who were alive on ART and remained registered at their facilities have documented secondary outcomes. Secondary outcomes are not known for patients in transit.

ART Regimens

796,167 (96%) of patients were on first line regimens. The number of patients on 2nd line ART increased by 1,614 from 26,562 in the previous quarter, reaching **28,176 (3%)** of patients on ART at the end of Q3. **1,759 (<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, **20,047 (3%)** were on paediatric formulations and **19,079 (95%)** of these were on the standard first line for children (regimen 2P: AZT/3TC/NVP). The majority of patients on 1st line ART had transitioned from regimen **5A** (tenofovir / lamivudine / efavirenz) **286,394 (37%)** to the new standard first line regimen **13A (tenofovir / lamivudine / dolutegravir) 468,880 (60%)**.

Adherence to ART

Facilities are doing very well documenting patient adherence. **807,878 (98%)** of all patients retained in care had documented the number of missed doses at each visit and **504,198 (62%)** of these were classified as >95% adherent. 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.

ART Side Effects

821,545 (99%) patients on ART had information on drug side effects documented at their last clinic visit before end of September 2019. **10,970 (<1%)** of patients with information had documented side-effects. The prevalence of side effects seems to have stabilized at very low levels following the full transition to regimen 5A (tenofovir / lamivudine / efavirenz) that started in July 2013.

11.4.2 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. However, due to resource and staffing constraints at the sites and in the labs, the program was maintaining a bi-annual routine monitoring schedules. 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.

11.4.3 Facility data from VL Sample Logbooks and High VL Registers

212,737 VL samples were drawn in the reporting period and documented in the facility sample logbook. **198,510 (93%)** of these were for routine/scheduled VL monitoring; **12,773 (6%)** were extraschedular and **1,454 (1%)** were replacements of lost samples. **35%** of the extraschedular samples were targeted (suspected treatment failure) and **65%** 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.

Results from Sample Logbooks

90,653 samples were drawn by ~~665~~ facilities between January and March 2019 and results were documented for **83,798 (92%)** of these. **45,753 (50%)** results were received at the facility within 4 weeks of sample collection; **33%** were received between 5-8 weeks and **5%** between 9-12 weeks. The remaining **11%** were received after 12 weeks or were still missing. **23%** of patients were notified of their result within 4 weeks of sample collection, **24%** were notified within 5-8 weeks and **13%** within 9-12 weeks. **43,243 (48%)** of 92,260 were either notified after 12 weeks or the notification was still pending. **97%** of the results were printed in the lab and delivered at the facility. **3%** were electronically transmitted to the facility.

83,798 (92%) of samples produced valid VL test results. **329 (<1%)** samples were rejected or the results were invalid and **6,526 (7%)** of samples had outstanding or missing results. **72,425 (86%)** results were suppressed below 1000 copies/ml and **11,373(14%)** were high (≥ 1000 copies/ml).

Outcomes from High VL Registers

Between July and September 2019, **13,535** high VL results (≥ 1000 copies/ml) were received at facilities and entered in the High VL Registers. **12,066 (89%)** of these were from routine monitoring samples, **1,011 (10%)** from targeted samples and **180 (2%)** from repeat samples. **5,899 (59%)** patients had completed intensive adherence support by June 2019 and follow-up samples were drawn for **4,516 (45%)**. Valid results were recorded for **3,559 (79%)** of follow-up samples and **39%** of these were re-suppressed (< 1000 copies/ml).

A final treatment decision was available for **3,830** high VL patients. **2,692 (70%)** were maintained on the current regimen, **1,115 (29%)** were switched to second line and **23 (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.

11.4.4 VL Data from the Laboratory Information Management System (LMIS)

The number of VL results produced increased to **178,512 in Q2** from 138,431 in Q2 of 2019. Malawi now has a total of **13** 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.

178,512 VL results were dispatched from the labs to 643 sites between July and September 2019. 77 sites accounted for half of all results released this quarter.

23,900 (13%) of 178,512 samples processed were plasma and **154,612 (87%)** were DBS.

Lab	Samples Processed			Turn-around Time (Days) [§]
	Plasma	DBS	Total	
DREAM Blantyre	1,116	12,865	14,031	32
DREAM Balaka	249	10,618	10,867	30
Kamuzu CH	5,391	19,456	24,847	21
Mzimba DH	0	12,193	12,193	13
Mzuzu CH	0	14,865	14,865	14
Nsanje DH	0	11,150	11,150	28
Partners in Hope	2,393	20,010	22,403	29
QECH	7,005	22,471	29,476	60
Thyolo DH	0	11,647	11,647	27
Zomba CH	7,696	19,517	27,213	27
Total	23,900	154,612	178,512	27
§ Median days between sample collection and printing of results in lab				

Kamuzu CH, Queen Elizabeth CH, DREAM Balaka and Zomba CH and Partners in Hope labs produced 49 % of all VL results. The median interval between sample collection and printing of results was **27 days** at the national level, ranging from **13 days** at Mzimba DH to **60 days** at Queen Elizabeth CH. The most significant delays occurred between sample receipt and process run in the lab (median 14 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.

Reason	0-999		1000+		Total
Routine	125,766	93%	10,172	7%	135,938
Targeted	34,113	89%	4,738	12%	38,851
Other/unk	440	73%	159	26%	599
Total	160,319	91%	15,069	9%	175,388

135,938 (78%) of VL results released this quarter were classified as *routine scheduled*²⁴. This is **66%** of the estimated 206,525 ART patients passing a VL monitoring milestone this quarter. **34,113 (22%)** of samples were classified as *targeted (suspected treatment failure / repeat)* and for **599 (<1%)** the reason for the sample was 'other' or not specified. **93% (125,766)** of patients with a routine viral load result this quarter achieved viral suppression (i.e. <1,000 copies/ml). This mean the target for the "3rd 90" was met.

Viral suppression rates were significantly lower for routine samples among children (0-9 yrs: **60%**) and adolescents (10-19 yrs: **72%**) compared with adults in the age groups 20-29, 30-39, 40+ years who had viral suppression rates of **90%, 92%** and **93%**, respectively. 86% of routine VL samples were from adults 20+ years. Patient age was not recorded for 8,268 (6%) of routine samples.

The **34,113** targeted VL results this quarter represent 28% of the 9,650 routine VL results ≥ 1000 copies/ml from the previous quarter. 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 1,245 samples were marked as *confirmatory (follow-up)* and 729 as *targeted (treatment failure suspected)* on the lab request form. 37,167 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 increase of 1,614 patients on 2nd line ART this quarter which is equivalent to 17% of the 9,650 routine VL results ≥ 1000 copies/ml from the previous quarter. The facility VL registers were designed to facilitate tracking of samples and results and to improve appropriate follow-up action on high VL results.

The time on ART was entered for only **81,978 (60%)** of 135,931 routine samples registered on the LIMS and only **43,185 (40%)** 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 **90%, 87%, 92%, 92%, 91%** and **93%** at 6, 12, 24, 36, 48 and 60 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 92%.

²⁴ 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.

11.5 TB / HIV Management

3,977 (99%) of 4,008 new TB patients had their HIV status ascertained this quarter and **1,778 (45%)** of these were HIV positive. **1,702 (96%)** of HIV positives were already on ART at the time of TB treatment initiation. The number of new ART initiations during TB treatment is tracked by the National TB control program. Total ART coverage among co-infected patients at the end of TB treatment has consistently been >95%.

12 STI Treatment

This quarter, supervision teams collected STI data from 721 out of 928 facilities offering STI management according to the *2013-14 Service Provision Assessment*²⁵ in Malawi. The site-level reports included here may therefore only represent 78% 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 **101,658** STI cases were treated in Q2 2019. Considering the 77% site-level completeness of reporting, this number is estimated to represent a total of **132,023** STI cases treated. This is equivalent to **55%** of the estimated quarterly 241,725 STI cases in the population (extrapolation from 2015/16 MDHS)²⁶.

Out of **101,658** documented clients treated, **39,945 (39%)** were male and **61,713 (61%)** were female. **10,130 (16%)** of female STI clients were pregnant. **11,736 (29%)** of male STI clients were circumcised. **69,723 (69%)** clients were 25 years and above, **22,543 (22%)** were 20-24 years and **9,392 (9%)** were under 20 years old.

12.2 Client Type and STI History

89,716 (88%) of clients were symptomatic and **11,942 (12%)** were asymptomatic (treated as partners). Among symptomatic clients, **82,747 (92%)** were index cases and **6,969 (8%)** were partners. A total of **27,614** partner notification slips were issued, equivalent to an average of 0.33 slips per index case. Considering the 27,614 partner notification slips issued, **68%** (18,911) of those notified presented to the clinic. **75,399 (74%)** of clients presented with their first lifetime episode of STI, **18,965 (72%)** clients reported to have had an STI more than 3 months ago and **7,294 (28%)** 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.

²⁵ Ministry of Health, & ICF International. (2015). Malawi Service Provision Assessment (SPA) 2013-14. Lilongwe, Malawi and Rockville, Maryland, USA. Retrieved from <http://dhsprogram.com/pubs/pdf/SPA20/SPA20.pdf>

²⁶ According to the 2015/16 MDHS, 14.7% of women (15-49 years) and 9.6% of men (15-64 years) reported STI symptoms in the past 12 months. A total of 966,900 annual STI cases are estimated by applying these proportions to the 4.1 million men and 3.9 million women in these age groups in the 2016 population (NSO projections). Quarterly STI cases are assumed as ¼ of the estimated annual cases in the population.

12.3 HIV Status

HIV status was ascertained for **90,367** (89%) clients and **16,401** (18%) of these were HIV positive. **2,560** (16%) of positives were identified through a new test initiated at the STI clinic, while **13,841** (84%) presented with a documented previous positive HIV test result. **13,235** (96%) of clients with a previous positive HIV test result were on ART.

The rate of HIV status ascertainment at STI clinics has improved considerably over time. This is likely due to increased numbers of dedicated testing staff available at the sites (HDAs). Actual HIV ascertainment rates may be 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 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 **35,313** (32%) cases, followed by urethral discharge (UD, **26,049** cases), genital ulcers (GUD, **13,940** cases) and lower abdominal pain (LAP, **13,978** cases). Serologically confirmed syphilis accounted for 9% of the cases. Scrotal swelling, bubo and genital warts each accounted for 1% of cases.

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. **38,321 (45%)** of the 85,257 STI clients with unknown or new negative test result were referred for repeat HTS. **5,493 (188%)** of 2,923 new positives and previous positives not on ART were referred for ART. The high ART referral rate is due to protocol deviation among providers.

13 Supply Chain Management of HIV Program Commodities

13.1 Quantification and procurement planning

The program conducted a quarterly quantification review using Q3 2019 ART Cohort analysis, stock data and WHO Safety guidance for use of Dolutegravir based regimens. This enabled the program to process orders for ARVs and test kits orders Pooled Procurement Mechanism (PPM). The program has also continued to provide quarterly supply planning updates to the Procurement Services Agents (PSA).

In preparation for transition to dolutegravir based regimen in January 2019, **5.3 million packs of tenofovir/lamivudine/dolutegravir 300/300/50mg (TLD)** and **3.9 million packs of tenofovir/lamivudine/efavirenz 300/300/600mg (TLE)** have been processed through PPM for delivery from August to December 2018. The program has so far received over 3.2 million packs (8 months of stock) of dolutegravir based fixed dose formulation (TLD). This will enable a seamless transition with 8 months of stock secured in country. To maintain adequate stocks in the pipeline and hence ensure uninterrupted supply for subsequent orders, the MOHP

initiated orders for ARVs, OI, RDTs, Condoms and other related commodities through Partnership for Supply Chain Management (ARVs and RDTs), UNFPA (male condoms) and IDA Foundation (laboratory commodities and medicines for opportunistic infections) valued at **USD 106 million**. This will ensure uninterrupted availability of all critical HIV commodities required for attainment of the 90-90-90 targets and smooth transition to dolutegravir based regimens.

13.2 Quarterly supply chain support during Q3 integrated supervision

District and central level Supply Chain and Logistics Officers provided stock management support at **754 sites** during the Q3 2019 integrated ART/PMTCT 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 the logistics management of ARVs and medicines for OI medicines however facilities had the following gaps; 90% of the facilities have abandoned old medicines stores resulting in reduced space in the SIAB due to congestion, 70% of the facilities demonstrated documentation challenges especially M&E tools and the worst are private institutions and these were the recommendations; HTSS /DHO,s to ensure that facilities with storage space challenges are using old drug stores as a means of decongesting SIAB, DHMT and MBCA to strengthening supportive supervision.

Table 8 shows the total medicine stocks found at the sites and the estimated consumption patterns.

13.3 Availability of standard first line ARVs

791,146 (96%) of the 819,947 patients not transferred out from their site of last registration were on first line adult regimens and **323,124 (42%)** these were on the standard first line regimen (5A: tenofovir / lamivudine / efavirenz) and **422,245 (55%)** on (13A : tenofovir / lamivudine / dolutegravir). The physical stock count carried out during supportive supervision in July 2019 confirmed that all sites with patients on either of these regimens had available stocks. This translates into a stock out rate of 0 % at ART sites with any patients on 5A and 13A.

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 46 and 47) took place during Q3 2019.

Logistics monitoring and supply chain trail visits for distribution round 46 and 47 were conducted at **72 selected health facilities** to review performance of the third-party logistics provider and site-level stock management documentation. All visited health facilities received their supplies as per allocation and few discrepancies were noted on the delivery notes. The supply chain team conducted a physical inventory, mentorship in stock management and logistics tools documentation including use of Daily Activity Registers and completion of stock cards. 13.2 carries a summary of issues and recommendations raised during Q3 ART supervision and supply chain trail.

During Q3 2019, the logistics team at the Department of HIV and AIDS coordinated **2509 individual commodity transactions** between ART sites to mitigate stock imbalances (59% ARVs; 27% Test kits; 14% Others). All transactions were managed and authorized using the HIV Department toll free lines.

Table 8

Total stocks of HIV program commodities at all sites visited during the 2019 Q3 supportive site supervision. Stock positions are from the date of the visit (between 1-4 weeks after the end of the quarter). Warehouse stock positions are from 07/10/2019

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)	433	155,685	355,614	64,930	2.4	5.5
	ABC / 3TC 60 / 30mg tins (60 tabs)	218	9,453		17,247	0.5	
	ABC / 3TC 600 / 300mg tins (30 tabs)	434	16,641	136,674	23,784	0.7	5.7
	ATV / r 300 / 100mg tins (30 tabs)	612	76,203	114,797	20,689	3.7	5.5
	AZT / 3TC / NVP 300 / 150 / 200mg tins (60 tabs)	677	191,784		14,954	12.8	
	AZT / 3TC / NVP 60 / 30 / 50mg tins (60 tabs)	690	245,188	350,659	47,683	5.1	7.4
	AZT / 3TC 300 / 150mg tins (60 tabs)	701	41,884	49,950	15,691	2.7	3.2
	AZT / 3TC 60 / 30mg tins (60 tabs)	634	33,230	13,331	3,246	10.2	4.1
	DRV 600mg tins (60 tabs)	31	779	941	54	14.4	17.4
	DTG 50mg tins (30 tabs)	697	32,983	410,513	38,222	0.9	10.7
	EFV 200mg tins (90 tabs)	248	3,617	2,179	363	10.0	6.0
	EFV 600mg tins (30 tabs)	366	18,312	10,816	336	54.5	32.2
	ETV 100mg tins (120 tabs)	9	145	23	0	0.0	0.0
	LPV / r 100 / 25mg tins (120 tabs)	10	292		16,929	0.0	
	LPV / r 100 / 25mg tins (60 tabs)	410	46,588	47,307	16,929	2.8	2.8
	LPV / r 200 / 50mg tins (120 tabs)	397	20,469	7,562	1,789	11.4	4.2
	LPV / r 40 / 10mg tins (120 granules)	5	1,388	35,948	11,444	0.1	3.1
	LPV / r 40 / 10mg tins (120 pellets)	32	4,846	4,089	0	0.0	0.0
	NVP 200mg tins (60 tabs)	595	46,165		3,563	13.0	
	NVP 50mg tins (60 tabs)	266	10,603	12,389	1,510	7.0	8.2
	r 100mg tins (60 tabs)	13	311	600	0	0.0	0.0
	r 25mg tins (30 tabs)	3	212	16,928	564	0.4	30.0
	RAL 400mg tins (60 tabs)	5	212	50	0	0.0	0.0
	TDF / 3TC / DTG 300 / 300 / 50mg tins (30 tabs)	751	2,132,465	1,621,413	159,266	13.4	10.2
	TDF / 3TC / DTG 300 / 300 / 50mg tins (90 tabs)	0	0	1,079,956	251,753	0.0	4.3
	TDF / 3TC / EFV 300 / 300 / 600mg tins (30 tabs)	745	1,042,239	123,896	286,335	3.6	0.4
	TDF / 3TC 300 / 300mg tins (30 tabs)	746	96,080	202,565	9,555	10.1	21.2
bottles	Fluconazole (Diflucan) 50mg / 5ml bottles (50 ml)	4	161		90	1.8	
	NVP 100mg/ml bottles (100 ml)	625	42,748	60,289	7,193	5.9	8.4
vials	Benzathine Penicillin 144g vials (50 each)	449	60,513	83,450	1,586	38.2	52.6
	Bleomycine 15,000IU vials (1 each)	33	7,368	360	0	0.0	0.0
	Ceftriaxone 1g vials (10 each)	263	427,171		155,079	2.8	
	Depo-Provera 150mg/1ml vials (25 each)	543	708,546		74,348	9.5	
	Fluconazole (Diflucan) 2mg / 1 ml vials (100 ml)	7	4,749	899	0	0.0	0.0
	Gentamicin 80mg / 2ml vials (50 each)	610	1,303,333		66,817	19.5	
	Streptomycin 1 g vials (50 each)	38	21,099				
	Vincristine 1mg / 1ml vials (1 each)	13	3,334		0	0.0	0.0
tabs	Aciclovir 200mg blist packs (500 tabs)	609	3,180,561		934,813	3.4	
	Azithromycin 500mg blist packs (3 tabs)	368	108,336	1,686	19,563	5.5	0.1
	Ciprofloxacin 500mg blist packs (100 tabs)	525	1,939,515		0	0.0	0.0
	Clotrimazole 500mg boxes (1 each)	349	26,713	48,002	0	0.0	0.0
	Codeine 30mg tins (100 tabs)	8	151,260		0	0.0	0.0
	Cotrimoxazole 100 / 20mg blist packs (1000 tabs)	678	78,694,196	12,919,000	15,976,017	4.9	0.8
	Cotrimoxazole 400 / 80mg tins (1000 tabs)	662	134,328,503	55,205,000	24,515,312	5.5	2.3
	Cotrimoxazole 960mg blist packs (1000 tabs)	745	100,519,964	205,943,000	24,286,899	4.1	8.5
	Doxycycline 100mg tins (1000 tabs)	572	4,986,506		381,718	13.1	
	E thambutol (E) 100 mg blist packs (100 tabs)	160	169,081				
	E thambutol (E) 400 mg blist packs (672 tabs)	9	16,828				
	Erythromycin 250mg tins (100 tabs)	41	242,260		123,171	2.0	

Inventory unit	Item	Sites with any Stock	Total Physical Stock		Consumption/ Month	Months of Stock *	
			At Sites	In Warehouse		At Sites	Wareh.
	Erythromycin 250mg tins (1000 tabs)	194	1,325,048		0	0.0	0.0
	Fluconazole (Diflucan) 200mg tins (28 tabs)	184	1,125,786	163,660	0	0.0	0.0
	Ibuprofen 200mg tins (100 tabs)	285	4,696,056		1,253,140	3.7	
	Isoniazid (H) 100mg blist packs (100 tabs)	332	2,637,461		0	0.0	0.0
	Isoniazid (H) 300mg blist packs (672 tabs)	252	33,840,497	7,707,840			
	Isoniazid (H) 300mg tins (1000 tabs)	8	396,408		0	0.0	0.0
	Metronidazole 200mg tins (1000 tabs)	430	5,613,070	11,410,000	0	0.0	0.0
	Morphine 10mg blist packs (60 tabs)	38	327,365		319,345	1.0	
	Pyridoxine 25mg tins (100 tabs)	308	18,204,967	10,331,100			
	RH 150 / 75 mg blist packs (672 tabs)	324	1,841,934				
	RH 75/50mg blist packs (84 tabs)	112	676,605				
	RHE 150 / 75/ 275 mg blist packs (1000 tabs)	4	7,566				
	RHZ 75/50/150mg blist packs (84 tabs)	124	126,864				
	RHZE 150/75/400/275mg blist packs (672 tabs)	339	1,145,098				
sheets	ART pat. card adult (yellow) Ver6 bundles (50 shee	476	142,229				
	ART pat. card paed. (blue) Ver6 bundles (50 shee	191	18,812		47,090	0.4	
	Exposed child card (pink) Ver2 bundles (50 sheet	551	58,038		4,717	12.3	
	Family HTC Referral Slip bundles (100 sheets)	510	204,048				
	Polythene sleeve bundles (100 sheets)	98	11,727		17,601	0.7	
	STI Partner Referral Slip bundles (100 sheets)	118	15,282				
tests	Cryptococcal antigen CrAg bundles (50 each)	6	564	57,950	0	0.0	0.0
	DBS kit (filter paper, lancet, etc.) 70ul boxes (50 t	707	220,432	470,000	88,269	2.5	5.3
	Determine HIV1/2 boxes (100 each)	691	934,861	3,812,500	348,208	2.7	10.9
	Determine TB LAM Ag bundles (100 each)	4	967	85,400	0	0.0	0.0
	OraQuick HIV Self-test bundles (25 each)	234	101,959	358,450			
	SD Biline Syphilis boxes (30 each)	686	262,468	303,180	34,856	7.5	8.7
	Uni-Gold HIV1/2 boxes (20 each)	714	201,955	434,600	27,532	7.3	15.8
pieces	Condoms female boxes (1000 each)	550	534,528				
	Condoms male boxes (144 each)	680	33,597,797	30,790,800			

* '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

14.1 HIV Testing Services

446 participants were trained HIV self-Test kits distribution and 38 HTS Trainers were also oriented in VAPV. In support of Recency Surveillance, 40 both laboratory and Counselling participants were trained in Recency. About 80 HDAs had undergone training in Initial Comprehensive training in HIV Testing and Counselling.

15 Participants in the Q3 2019 Supervision (8 -18 September 2019)

Richard Abdul (CO, MOH)
 Charles Banda (. MoH)
 F Banda (Nurse, MOH)
 Knox Banda (TB Zonal Supervisor, MOH)
 Laurent Banda (. CCZ)
 Lawrent Banda (. EGPAF)
 Leonard Banda (. MoH)
 Mphonde Banda (. MOH)
 Wells Banda (CO, MOH)
 Robert Beston (. MOH)
 Wilson Bilal (. moh)
 Thomas Biseck (. MOH)
 Annie Biza (Nurse, MDF)
 Enock Bokola (. NGO)
 Regina Bwanah (. MOH)
 Regina Bwanali (. MOH)
 Herbert Chafulumira (. MOH)
 Ephraim Chale (. MoH)
 Lincy Chalunda (. MOH)
 Rachel Champiti (. MOH)
 Raymond Changamire (. Chemonics)
 Chikaiko Chibwana (CO, MOH)
 Maggie Chigona (. MoH)
 Margaret Chigona (CO, Blantyre DHO)
 Grace Chikhwaya (. MOH)
 Kondwani Chikoti (CO, MOH)
 Lusayo Chikuta (. Nkhatabay)
 Verydear Chilapondwa (. MOH)
 Chimwemwe Chimaliro (. MOH)
 Spain Chimaliro (. moh)
 Tiwonge Chimpandule (. MoH)
 Peter Chimphero (CO, MOH)
 Chikhulupiliro Chimwaza (. MOH)
 Mathews Chinyama (. moh)
 Yunus Chiosa (. NTP)
 Diana Chipande (. MOH)
 Grace Chipanga (Nurse, Private)
 Esnat Chirambo (. MoH)
 Patrick Paul J M Chirwa (TB Zonal Supervisor, NTP)
 Stella Chitawo (. MOH)
 Samson Chitsulo (. other)
 Brown Chiwandira (MA, MOH)
 Madalitso Chosalawa (. MOH)
 Stuart Chuka (CO, MBCA)
 Ackim Chuzu (. MoH)
 Ruth Deula (. MOH)
 Ruth Deula (. moh)
 Peter Donda (CO, Dedza DH)
 Bonaventure Dzanjalimodzi (. MOH)
 Felix Genti (. MSH)
 Grant Gondwe (. NTP)
 Paul Gondwe (. MOH)
 Sidder Hambisa (ENM, MOH)
 Mirriam Hanjahanja (. cham)
 Rhoda Jamu (. CHAM)
 Mataya Jeke (. Zomba Central)
 Lilian Jiah (. EGPAF)
 Joe Jumbe (. MoH)
 Lucky Kabanga (Pharmacist, MOH)
 John Kabichi (CO, MOH)
 Rabson Kachala (. MOH)
 Francis Kachali (. MoH)
 Lilian Kachali (Nurse, MOH)
 Arlene Kachapira (. MoH)
 Golgen Kachepatsonga (. MoH)
 Vera Kajawa (Nurse, MOH)
 Bannet Kalebe (Logistics, MOH)
 Enipher Kalengamaliro (. MOH)
 Joseph Kalino (Clerk, CHAM)
 Agnes Kalitsiro (Nurse, Mlambe Mission Hospital)
 Ashani Kaliza (. MOH)
 Richard Kamalizeni (Nurse, MOH)
 Blessings Kamanga (Clerk, MOH)
 Maltida Kamanga (. MAFCO)
 Saile Kamanga (. MOH)
 Alex Kambanga (. MoH)
 Mary Kamiza (TB Zonal Supervisor, NTP)
 Emmanuel Kampaliro (. MOH)
 Gift Kamphika (MA, MOH)
 Mercy Kamweka (. MOH)
 Cornelias Kang'ombe (. NTP)
 Cornelius Kang'ombe (. NTP)
 Annie Kanyemba (Nurse, MOH)
 Henry Kanyerere (TB/HIV Program Officer, MOH)
 Saulosi Kanyinji (. MoH)
 Lameck Kaonga (. Lighthouse)
 Mary Kaponya (. MOH)
 Elsie Kasambwe (. I-TECH)
 Fredrick Kasanga (Nurse, MOH)
 Benard Kasinja (CO, I-TECH)
 Bernald Kasinja (. private)
 Fortunata Kasongo (. MOH)
 Catherine Kassam (Nurse, MOH)
 Margaret Katumbi (Nurse, MOH)
 Rodrick Kaulere (CO, CHAM (Sister Tereza))
 Absalom Kaunda (CO, MOH, Mzimba DHO)
 William Kaunda (. Salima)
 Sharon Kawonga (. baylor)
 Jean Kayamba (Nurse, MOH)
 Mera Kayira (CO, MOH)
 Daniel Kazingatchire (. MOH)
 Andrew Khozi (. MoH)
 Sydney Kubwalo (. MoH)
 Aubrey Kudzala (. MOH)
 Charles Kwenje (. Moh)
 Michael Lemeka (. MoH)
 George Lipande (CO, MOH)
 Bright Lipenga (. MoH)
 Jesse Lobeni (Nurse, MOH)
 Duncan Lupiya (CO, MOH)
 Promise Mafuleka (. MoH)
 Wadson Maiden (Nurse, MOH)
 Chikayiko Majamanda (Nurse, MOH)
 Mercy Makaika (Nurse, MOH)
 Linda Makata (. MOH)
 Ellen Makawa (. MOH)
 Grey Malata (. MOH)
 Thokozani Malimelo (. MoH)
 Beatrice Malonje (Nurse, MOH)
 Limbitso Malunje (. MoH)
 Clement Manda (. MOH)
 Charles Mandambwe (. MoH)
 Relia Mandindi (. Public)
 Cecilia Manyawa (Nurse, MOH)
 Fatsireni Mapulanga (. MOH)
 James Maruwo (. MOH)
 Randof Maseya (. MOH)
 Angela Masumba (. moh)
 Jeke Mataya (. moh)
 Harry Matecheta (Nurse, LIGHTHOUSE)
 Steven Matewere (. Chichiri Prison Clinic)
 Martin Maulidi (CO, I-TECH)
 Rose Maviko (Nurse, Limbe HC)
 Yanjanani Mawindo (. MoH)
 Benjamin Mazalo (CO, SUCOMA Clinic)
 Felix Mbalale (CO, MOH)
 Nyuma Mbale (. MoH)
 Nyuma Mbale (. MOH)
 Loyd Mbaza (Nurse, MOH)
 Kingsley Mbewa (CO, MOH)
 Stony Mbiriyawanda (. MOH)
 Alice Mdolo (. MOH)
 Topcy Mdolo (. MOH)
 Fredrick Midian (. Lighthouse)
 Dalitso Midiani (PMTCT Officer, MOH)
 Portifer Mission (. moh)
 Towera Mjimapemba (. moh)
 Chimwemwe Francis Mkandawire (IT Fellow, I-TECH)
 Taonga Mkandawire (. moh)
 Tawonga Mkandawire (. MoH)
 Merium Mkangala (. moh)
 Lameck Mlauzi (. NTP (MOH))
 Yvonne Mnjeza (. MOH)
 Zakaliah Mphande (. CHAM)
 Joseph Mphasa (. MoH)
 Noel Mphasa (TB Zonal Supervisor, NTP)
 Cecilia Mphika (. MOH)
 Tryness Mponda (NMT, MOH)
 Voster Msutu (. MOH)
 Tiyamike Msyamboza (. other)
 Egnatius Mtambalika (. DTO)
 Temweka Mtenje (. MoH)
 Clement Mtika (CO, MOH, Mzuzu CH)
 William Mtonga (CO, CHAM)
 Andraida Mtoseni (Nurse, MOH)
 Ekwala Mubiala (HIV Zonal Supervisor, MOH, UNV)
 Dave Muhasuwa (. MoH)
 Yamikani Mulore (. MOH)
 Francis Munthali (. COM)
 Fainala Muyila (Nurse, MOH)
 Tereza Mvula (. MOH)
 Theresa Mvula (. MOH)
 Jeremiah Mwale (CO, EGPAF)
 Thomas Mwale (. MOH)
 Innocent Mwaluka (. moh)
 Patrick Mwamlima (. MoH)
 Patrick Mwanulima (NMT, MOH)
 Golden Mwachungu (MA, Press)
 Anne Mwenye (. Private)
 Tuwepo Mwitha (. MOH)
 Riff Mzava (Nurse, MOH)
 Peter Mzumara (ART clinician, MOH)
 Eric Mzungu (. moh)
 Nelson Namchinga (. Thyolo DHO)
 Austins Namondwe (CO, CHAM)
 Nelson Nanchinga (. MOH)
 Pepsy Nangwale (Nurse, MOH)
 Leonard Ndhlovu (Nurse, MOH)
 Overton Ndhlovu (. MOH)
 Offrey Nduwila (. MOH)
 Stanley Ngoma (CO, MOH)
 Youngson Ngonyana (. MoH)
 Chisomo Ngwalo (. COM)
 Charles Ngwira (. MoH)
 Eunice Ngwira (. MOH)
 Beatrice Nindi (. MoH)
 Trevor Chifundo Nindi (. Balaka DHO)
 Dumbo Njera (. MOH)
 Merium Nkangala (. moh)
 Donald Nkhalango (. PIH)
 Grace Juma Nkhata (Nurse, MOH)
 Angela Nkhoma (Nurse, MOH)
 Hannah Nkhoma (. MOH)
 Joe Nkhonjera (. moh)
 Vitu Nkhunga (. MOH)
 Sam Nowa (Pharmacist, MOH)
 George Nsitu (. MOH)
 Evaristo Nthete (. moh)
 Judith Ntopa (Nurse, Cobbe Barracks)
 Jonathan Nyasulu (. MOH)
 Jotham Nyasulu (. MOH)
 Paul Nyasulu (CO, I-TECH)

Misonzi Nyatuka (Nurse, MOH)
Steven Nyika (, MOH)
Feliya Nyirenda (, Machinga)
Janet Nyirenda (, MOH)
Mabvuto Nyirenda (, MOH)
Michael Nyirenda (, MOH)
Mike Nyirenda (CO, Lighthouse)
Chrissy Padoko (, MOH)
Laura Pangani (, moh)
Gift Pelani (, Baylor)
Paul Petersen (, MoH)
Mackson Phiri (, PIH)
Tifera Phiri (, moh)
Stanley Phombo (Nurse, MOH)
Enock Phwitiko (, MoH)
Kelvin Rambiki (Clinic Coordinator, Private)
Beston Robert (, MOH)

Enock Sabola (Nurse, MOH)
Alice Sajeni (, moh)
Dorica Sambo (Nurse, MOH)
George Sankhulani (CO, Dignitas)
Charles F Sekani (CO, EGPAF)
George Shaba (, MoH)
Kondwani Shaba (, MoH)
Gabriel Simwanza (, MOH)
Aleka Simwela (, MOH)
Juliana Soko (ARV nurse, MOH,
Livingstonia MH)
Joel Sosola (, MOH)
Issa Sulemani (, MOH)
Mark Suzumire (CO, MOH)
Bruce Tambwali (Nurse, NGO)
Jean Tazie (, I-TECH)
Andrea Tembo (Nurse, Dignitas)

Harrison Tembo (CO, MOH)
Vuso Tembo (, MoH)
Edith Thaulo (Nurse, MOH)
Tadzinani Thawe (, Lighthouse)
Mirriam Thindwa (Clinician, Limbe H/C)
Matilda Thomas (, MoH)
Harry Tsapa (CO, MOH)
Jimmy Villiera (, MOH)
Linda Vito (, MOH)
Maiden Wadson (, MOH)
Mwiza Wankhama (, CHAM)
Lloyd Wella (CO, MOH)
Oscar Witman (, MOH)
Moses Zawola (, 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.

25th September 2019

16 Appendix (Full National HIV Program Data)

HTC site report

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Clients at health facility (static)

HTC client details

*

Total HTC clients served

Total HIV tested	968,986	100%
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Sex

Males tested	331,444	34%
Females tested	637,542	66%
Females non-pregnant	425,635	67%
Females pregnant	211,907	33%

Age

Children 0-14 yrs	88,338	9%
Children below 12 mths (Age group A)	1,756	2%
Children 12 mths - 14 yrs (Age group B)	86,582	98%
Adults 15+ years	880,648	91%
Young adults 15-24 years (Age group C)	373,020	42%
Older adults 25+ yrs (Age group D)	507,628	58%

HTC access type

PITC	711,413	73%
Family Referral Slip (FRS)	17,957	2%
Other (VCT, etc.) HTC access	239,616	25%

HTC first time / repeat

Never tested before	189,949	20%
Previously accessed HTC	779,037	80%
Last negative	746,657	96%
Last positive	31,437	4%
Last exposed infant	310	0%
Last inconclusive	633	0%

Counseling session type / Partner present

Counseled with partner / partner present	214,115	22%
Counseled alone / Partner not present	754,871	78%

Outcome summary (HIV test)

Single test negative	907,712	94%
Single test positive	16	0%
Test 1&2 negative	385	0%
Test 1&2 positive	58,817	6%
Test 1&2 discordant	2,056	0%

HTC site report

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

HTC client details

*

Final result given to client

Results among clients never tested / last negative	937,491	97%
New negative	908,530	97%
New positive	27,280	3%
New positive (non-sex dissag)	1,839	7%
New positive (dissag by sex)	25,441	93%
New positive male	10,464	41%
New positive female	14,977	59%
New inconclusive	1,609	0%
New exposed infants	72	0%
Confirmatory results (previous positive clients)	31,495	3%
Confirmatory positive	31,370	100%
Confirmatory positive (non-sex dissag)	1,882	6%
Confirmatory positive (dissag by sex)	29,488	94%
Confirmatory positive male	12,023	41%
Confirmatory positive female	17,465	59%
Confirmatory inconclusive	125	0%

Partner / Family HTC referral slips

Sum of slips given	52,275	100%
Total clients presenting with referral slip	17,957	34%
Total failed referrals (slips not returned)	34,318	66%

Clients tested in the community

HTC client details

*

Total HTC clients served

Total HIV tested	47,878	100%
------------------	--------	------

Sex

Males tested	21,765	45%
Females tested	26,113	55%
Females non-pregnant	22,021	84%
Females pregnant	4,092	16%

Age

Children 0-14 yrs	10,260	21%
Children below 12 mths (Age group A)	16	0%
Children 12 mths - 14 yrs (Age group B)	10,244	100%
Adults 15+ years	37,618	79%
Young adults 15-24 years (Age group C)	19,364	51%
Older adults 25+ yrs (Age group D)	18,254	49%

HTC access type

PITC	19,493	41%
Family Referral Slip (FRS)	2,379	5%
Other (VCT, etc.) HTC access	26,006	54%

HTC site report

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

HTC client details

*

HTC first time / repeat

Never tested before	17,138	36%
Previously accessed HTC	30,740	64%
Last negative	30,031	98%
Last positive	688	2%
Last exposed infant	10	0%
Last inconclusive	11	0%

Counseling session type / Partner present

Counseled with partner / partner present	2,634	6%
Counseled alone / Partner not present	45,244	94%

Outcome summary (HIV test)

Single test negative	45,865	96%
Single test positive	6	0%
Test 1&2 negative	17	0%
Test 1&2 positive	1,666	3%
Test 1&2 discordant	324	1%

Final result given to client

Results among clients never tested / last negative	47,275	99%
New negative	46,182	98%
New positive	1,033	2%
New positive (non-sex dissag)	267	26%
New positive (dissag by sex)	766	74%
New positive male	337	44%
New positive female	429	56%
New inconclusive	46	0%
New exposed infants	14	0%
Confirmatory results (previous positive clients)	603	1%
Confirmatory positive	600	100%
Confirmatory positive (non-sex dissag)	136	23%
Confirmatory positive (dissag by sex)	464	77%
Confirmatory positive male	214	46%
Confirmatory positive female	250	54%
Confirmatory inconclusive	3	0%

Partner / Family HTC referral slips

Sum of slips given	985	100%
Total clients presenting with referral slip	2,379	242%
Total failed referrals (slips not returned)	-1,394	-142%

Clients at stand-alone HTC sites

HTC client details

*

Total HTC clients served

Total HIV tested	2,746	100%
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Sex

Males tested	1,882	69%
Females tested	864	31%
Females non-pregnant	809	94%
Females pregnant	55	6%

HTC site report

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

HTC client details

*

Age

Children 0-14 yrs	348	13%
Children below 12 mths (Age group A)	3	1%
Children 12 mths - 14 yrs (Age group B)	345	99%
Adults 15+ years	2,398	87%
Young adults 15-24 years (Age group C)	1,274	53%
Older adults 25+ yrs (Age group D)	1,124	47%

HTC access type

PITC	1,753	64%
Family Referral Slip (FRS)	2	0%
Other (VCT, etc.) HTC access	991	36%

HTC first time / repeat

Never tested before	744	27%
Previously accessed HTC	2,002	73%
Last negative	1,933	97%
Last positive	65	3%
Last exposed infant	2	0%
Last inconclusive	2	0%

Counseling session type / Partner present

Counseled with partner / partner present	154	6%
Counseled alone / Partner not present	2,592	94%

Outcome summary (HIV test)

Single test negative	2,609	95%
Single test positive	1	0%
Test 1&2 negative	3	0%
Test 1&2 positive	128	5%
Test 1&2 discordant	5	0%

Final result given to client

Results among clients never tested / last negative	2,678	98%
New negative	2,610	97%
New positive	63	2%
New positive (non-sex dissag)	36	57%
New positive (dissag by sex)	27	43%
New positive male	12	44%
New positive female	15	56%
New inconclusive	5	0%
New exposed infants	0	0%
Confirmatory results (previous positive clients)	68	2%
Confirmatory positive	68	100%
Confirmatory positive (non-sex dissag)	33	49%
Confirmatory positive (dissag by sex)	35	51%
Confirmatory positive male	23	66%
Confirmatory positive female	12	34%
Confirmatory inconclusive	0	0%

HTC site report

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

HTC client details

*

Partner / Family HTC referral slips

Sum of slips given	24	100%
Total clients presenting with referral slip	2	8%
Total failed referrals (slips not returned)	22	92%

HIV self-test (ST) distribution

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

ANC clinic

HIV self test client details

*

Total HIV self-test kit

Total HIV self-test kit recipients	3,604	100%
------------------------------------	-------	------

Sex

Male recipients	1,261	35%
Female recipients	2,343	65%
Non-pregnant	960	41%
Pregnant	1,383	59%

Last HIV test of recipient

Never tested	349	10%
Previously tested	3,255	90%
Last negative	2,990	92%
Last positive	262	8%
Not on ART	80	31%
On art	182	69%
Last inconclusive	3	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	4,563	100%
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Intended end user distribution type

Self (recipient)	1,539	34%
Secondary distribution	3,024	66%
Sex-partner	2,591	86%
Other	433	14%

Intended end user sex / age category

Total males	3,359	74%
Boys 13-14 years old	100	3%
Adolescent boys and young men 15-24 years old	1,000	30%
Adolescent boys 15 - 19 years old	383	38%
Young men 20 - 24 years old	617	62%
Adults	2,259	67%
Young adults 25 - 35 years old	1,163	51%
Middle adults 36 - 49 years old	914	40%
Older adults 50+	182	8%
Total females	1,204	26%
Girls 13-14 years old	56	5%
Adolescent girls and young women 15-24 years	489	41%
Adolescent girls 15 - 19 years old	210	43%
Young women 20 - 24 years old	279	57%
Adults	659	55%
Young adults 25 - 35 years old	379	58%
Middle adults 36 - 49 years old	232	35%
Older adults 50+	48	7%

Total condoms

Total condoms distributed	10,505	100%
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HIV self-test (ST) distribution

Malawi (National)

2019 Q3 (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	2,196	100%
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Sex

Male recipients	1,570	71%
Female recipients	626	29%
Non-pregnant	616	98%
Pregnant	10	2%

Last HIV test of recipient

Never tested	476	22%
Previously tested	1,720	78%
Last negative	1,714	100%
Last positive	6	0%
Not on ART	3	50%
On art	3	50%
Last inconclusive	0	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	2,273	100%
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Intended end user distribution type

Self (recipient)	2,094	92%
Secondary distribution	179	8%
Sex-partner	130	73%
Other	49	27%

Intended end user sex / age category

Total males	1,665	73%
Boys 13-14 years old	47	3%
Adolescent boys and young men 15-24 years old	779	47%
Adolescent boys 15 - 19 years old	396	51%
Young men 20 - 24 years old	383	49%
Adults	839	50%
Young adults 25 - 35 years old	492	59%
Middle adults 36 - 49 years old	307	37%
Older adults 50+	40	5%
Total females	608	27%
Girls 13-14 years old	19	3%
Adolescent girls and young women 15-24 years	297	49%
Adolescent girls 15 - 19 years old	165	56%
Young women 20 - 24 years old	132	44%
Adults	292	48%
Young adults 25 - 35 years old	195	67%
Middle adults 36 - 49 years old	77	26%
Older adults 50+	20	7%

Total condoms

Total condoms distributed	125	100%
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HIV self-test (ST) distribution

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

ART clinic

HIV self test client details

*

Total HIV self-test kit

Total HIV self-test kit recipients	1,978	100%
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Sex

Male recipients	764	39%
Female recipients	1,214	61%
Non-pregnant	929	77%
Pregnant	285	23%

Last HIV test of recipient

Never tested	117	6%
Previously tested	1,861	94%
Last negative	944	51%
Last positive	916	49%
Not on ART	66	7%
On art	850	93%
Last inconclusive	1	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	2,598	100%
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Intended end user distribution type

Self (recipient)	296	11%
Secondary distribution	2,302	89%
Sex-partner	1,845	80%
Other	457	20%

Intended end user sex / age category

Total males	1,555	60%
Boys 13-14 years old	37	2%
Adolescent boys and young men 15-24 years old	238	15%
Adolescent boys 15 - 19 years old	78	33%
Young men 20 - 24 years old	160	67%
Adults	1,280	82%
Young adults 25 - 35 years old	581	45%
Middle adults 36 - 49 years old	625	49%
Older adults 50+	74	6%
Total females	1,043	40%
Girls 13-14 years old	44	4%
Adolescent girls and young women 15-24 years	372	36%
Adolescent girls 15 - 19 years old	143	38%
Young women 20 - 24 years old	229	62%
Adults	627	60%
Young adults 25 - 35 years old	431	69%
Middle adults 36 - 49 years old	176	28%
Older adults 50+	20	3%

Total condoms

Total condoms distributed	13,071	100%
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HIV self-test (ST) distribution

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

HTC room

HIV self test client details

*

Total HIV self-test kit

Total HIV self-test kit recipients	10,714	100%
------------------------------------	--------	------

Sex

Male recipients	4,520	42%
Female recipients	6,194	58%
Non-pregnant	3,936	64%
Pregnant	2,258	36%

Last HIV test of recipient

Never tested	901	8%
Previously tested	9,813	92%
Last negative	8,054	82%
Last positive	1,724	18%
Not on ART	291	17%
On art	1,433	83%
Last inconclusive	35	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	13,840	100%
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Intended end user distribution type

Self (recipient)	3,972	29%
Secondary distribution	9,868	71%
Sex-partner	8,166	83%
Other	1,702	17%

Intended end user sex / age category

Total males	8,658	63%
Boys 13-14 years old	188	2%
Adolescent boys and young men 15-24 years old	2,069	24%
Adolescent boys 15 - 19 years old	693	33%
Young men 20 - 24 years old	1,376	67%
Adults	6,401	74%
Young adults 25 - 35 years old	3,387	53%
Middle adults 36 - 49 years old	2,658	42%
Older adults 50+	356	6%
Total females	5,182	37%
Girls 13-14 years old	233	4%
Adolescent girls and young women 15-24 years	2,136	41%
Adolescent girls 15 - 19 years old	860	40%
Young women 20 - 24 years old	1,276	60%
Adults	2,813	54%
Young adults 25 - 35 years old	1,796	64%
Middle adults 36 - 49 years old	877	31%
Older adults 50+	140	5%

Total condoms

Total condoms distributed	47,054	100%
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HIV self-test (ST) distribution

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Other point in HF

HIV self test client details

*

Total HIV self-test kit

Total HIV self-test kit recipients	2,987	100%
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Sex

Male recipients	1,233	41%
Female recipients	1,754	59%
Non-pregnant	1,650	94%
Pregnant	104	6%

Last HIV test of recipient

Never tested	206	7%
Previously tested	2,781	93%
Last negative	2,627	94%
Last positive	152	5%
Not on ART	34	22%
On art	118	78%
Last inconclusive	2	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	5,015	100%
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Intended end user distribution type

Self (recipient)	1,149	23%
Secondary distribution	3,866	77%
Sex-partner	2,603	67%
Other	1,263	33%

Intended end user sex / age category

Total males	2,661	53%
Boys 13-14 years old	103	4%
Adolescent boys and young men 15-24 years old	658	25%
Adolescent boys 15 - 19 years old	222	34%
Young men 20 - 24 years old	436	66%
Adults	1,900	71%
Young adults 25 - 35 years old	1,015	53%
Middle adults 36 - 49 years old	783	41%
Older adults 50+	102	5%
Total females	2,354	47%
Girls 13-14 years old	152	6%
Adolescent girls and young women 15-24 years	1,121	48%
Adolescent girls 15 - 19 years old	453	40%
Young women 20 - 24 years old	668	60%
Adults	1,081	46%
Young adults 25 - 35 years old	710	66%
Middle adults 36 - 49 years old	319	30%
Older adults 50+	52	5%

Total condoms

Total condoms distributed	12,267	100%
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HIV self-test (ST) distribution

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

VCT stand-alone

HIV self test client details

*

Total HIV self-test kit

Total HIV self-test kit recipients	95	100%
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Sex

Male recipients	47	49%
Female recipients	48	51%
Non-pregnant	48	100%
Pregnant	0	0%

Last HIV test of recipient

Never tested	4	4%
Previously tested	91	96%
Last negative	90	99%
Last positive	1	1%
Not on ART	1	100%
On art	0	0%
Last inconclusive	0	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	204	100%
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Intended end user distribution type

Self (recipient)	77	38%
Secondary distribution	127	62%
Sex-partner	95	75%
Other	32	25%

Intended end user sex / age category

Total males	82	40%
Boys 13-14 years old	2	2%
Adolescent boys and young men 15-24 years old	6	7%
Adolescent boys 15 - 19 years old	2	33%
Young men 20 - 24 years old	4	67%
Adults	74	90%
Young adults 25 - 35 years old	33	45%
Middle adults 36 - 49 years old	37	50%
Older adults 50+	4	5%
Total females	122	60%
Girls 13-14 years old	16	13%
Adolescent girls and young women 15-24 years	44	36%
Adolescent girls 15 - 19 years old	26	59%
Young women 20 - 24 years old	18	41%
Adults	62	51%
Young adults 25 - 35 years old	42	68%
Middle adults 36 - 49 years old	20	32%
Older adults 50+	0	0%

Total condoms

Total condoms distributed	223	100%
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HIV self-test (ST) distribution

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Workplace formal

HIV self test client details

*

Total HIV self-test kit

Total HIV self-test kit recipients	212	100%
------------------------------------	-----	------

Sex

Male recipients	157	74%
Female recipients	55	26%
Non-pregnant	54	98%
Pregnant	1	2%

Last HIV test of recipient

Never tested	18	8%
Previously tested	194	92%
Last negative	194	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	410	100%
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Intended end user distribution type

Self (recipient)	207	50%
Secondary distribution	203	50%
Sex-partner	160	79%
Other	43	21%

Intended end user sex / age category

Total males	223	54%
Boys 13-14 years old	4	2%
Adolescent boys and young men 15-24 years old	59	26%
Adolescent boys 15 - 19 years old	13	22%
Young men 20 - 24 years old	46	78%
Adults	160	72%
Young adults 25 - 35 years old	92	58%
Middle adults 36 - 49 years old	60	38%
Older adults 50+	8	5%
Total females	187	46%
Girls 13-14 years old	15	8%
Adolescent girls and young women 15-24 years	77	41%
Adolescent girls 15 - 19 years old	27	35%
Young women 20 - 24 years old	50	65%
Adults	95	51%
Young adults 25 - 35 years old	68	72%
Middle adults 36 - 49 years old	27	28%
Older adults 50+	0	0%

Total condoms

Total condoms distributed	558	100%
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HIV self-test (ST) distribution

Malawi (National)

2019 Q3 (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	53	100%
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Sex

Male recipients	38	72%
Female recipients	15	28%
Non-pregnant	15	100%
Pregnant	0	0%

Last HIV test of recipient

Never tested	4	8%
Previously tested	49	92%
Last negative	46	94%
Last positive	3	6%
Not on ART	0	0%
On art	3	100%
Last inconclusive	0	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	95	100%
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Intended end user distribution type

Self (recipient)	46	48%
Secondary distribution	49	52%
Sex-partner	44	90%
Other	5	10%

Intended end user sex / age category

Total males	40	42%
Boys 13-14 years old	0	0%
Adolescent boys and young men 15-24 years old	7	18%
Adolescent boys 15 - 19 years old	1	14%
Young men 20 - 24 years old	6	86%
Adults	33	83%
Young adults 25 - 35 years old	22	67%
Middle adults 36 - 49 years old	11	33%
Older adults 50+	0	0%
Total females	55	58%
Girls 13-14 years old	1	2%
Adolescent girls and young women 15-24 years	26	47%
Adolescent girls 15 - 19 years old	3	12%
Young women 20 - 24 years old	23	88%
Adults	28	51%
Young adults 25 - 35 years old	19	68%
Middle adults 36 - 49 years old	7	25%
Older adults 50+	2	7%

Total condoms

Total condoms distributed	338	100%
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HIV self-test (ST) distribution

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Hotspot

HIV self test client details

*

Total HIV self-test kit

Total HIV self-test kit recipients	36	100%
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Sex

Male recipients	36	100%
Female recipients	0	0%
Non-pregnant	0	
Pregnant	0	

Last HIV test of recipient

Never tested	0	0%
Previously tested	36	100%
Last negative	36	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	36	100%
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Intended end user distribution type

Self (recipient)	36	100%
Secondary distribution	0	0%
Sex-partner	0	
Other	0	

Intended end user sex / age category

Total males	36	100%
Boys 13-14 years old	2	6%
Adolescent boys and young men 15-24 years old	21	58%
Adolescent boys 15 - 19 years old	15	71%
Young men 20 - 24 years old	6	29%
Adults	13	36%
Young adults 25 - 35 years old	3	23%
Middle adults 36 - 49 years old	4	31%
Older adults 50+	6	46%
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	408	100%
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HIV self-test (ST) distribution

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Other community point

HIV self test client details

*

Total HIV self-test kit

Total HIV self-test kit recipients	8,744	100%
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Sex

Male recipients	5,468	63%
Female recipients	3,276	37%
Non-pregnant	3,236	99%
Pregnant	40	1%

Last HIV test of recipient

Never tested	2,131	24%
Previously tested	6,613	76%
Last negative	6,551	99%
Last positive	62	1%
Not on ART	16	26%
On art	46	74%
Last inconclusive	0	0%

HIV ST kits given: Intended end user attributes

Total self-test kits distributed to end users	9,410	100%
---	-------	------

Intended end user distribution type

Self (recipient)	8,422	90%
Secondary distribution	988	10%
Sex-partner	687	70%
Other	301	30%

Intended end user sex / age category

Total males	5,734	61%
Boys 13-14 years old	241	4%
Adolescent boys and young men 15-24 years old	2,347	41%
Adolescent boys 15 - 19 years old	1,092	47%
Young men 20 - 24 years old	1,255	53%
Adults	3,146	55%
Young adults 25 - 35 years old	1,617	51%
Middle adults 36 - 49 years old	1,215	39%
Older adults 50+	314	10%
Total females	3,676	39%
Girls 13-14 years old	578	16%
Adolescent girls and young women 15-24 years	1,551	42%
Adolescent girls 15 - 19 years old	904	58%
Young women 20 - 24 years old	647	42%
Adults	1,547	42%
Young adults 25 - 35 years old	841	54%
Middle adults 36 - 49 years old	555	36%
Older adults 50+	151	10%

Total condoms

Total condoms distributed	4,248	100%
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Blood safety

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Infect. disease screening among potential donors

*

HIV screening

HIV testing not done	1,530	21%
Tested for HIV	5,731	79%
HIV negative	5,490	96%
HIV positive	241	4%

Hepatitis B screening

HepB testing not done	1,576	22%
Tested for Hepatitis B	5,685	78%
HepB Negative	5,398	95%
HepB Positive	287	5%

Hepatitis C screening

HepC testing not done	3,582	49%
Tested for Hepatitis C	3,679	51%
HepC Negative	3,353	91%
HepC Positive	326	9%

Syphilis screening

Syphilis testing not done	1,459	20%
Tested for Syphilis	5,802	80%
Syphilis Negative	5,536	95%
Syphilis Positive	266	5%

Malaria screening

Malaria testing not done	2,265	31%
Tested for malaria	4,996	69%
Malaria Negative	4,619	92%
Malaria Positive	377	8%

Summary screening outcome

Not donated	2,682	37%
Donated	4,579	63%
Screened for at least HIV, HepB and syphilis	3,536	77%
Screened for HIV, HepB, HepC, Syphilis, Malaria	2,438	69%
Screened for HIV, HepB, Syphilis	1,098	31%
Screened for HIV, HepB	3	0%
Screened for HIV only	60	1%
Screened with any other combination of tests	980	21%

Cross-matching report

*

Blood group typing (for units and patients)

Total blood group typing done	23,157	100%
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Blood units cross-matched (by source)

Total blood units cross-matched	18,745	100%
Total units from MBTS (estimated)	14,166	76%
Total units from replacement donors	4,579	24%

Blood units cross-matched by patient group

Units cross-matched for maternity	3,207	17%
Units cross-matched for paediatrics	7,990	43%
Units cross-matched for other ward	7,548	40%

Blood safety

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Cross-matching report

*

Transfusion reactions

Units transfused without adverse events	18,711	100%
Units with suspected transfusion reactions	29	0%
Units with confirmed transfusion reactions	5	0%

HIV exposed child follow-up

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Age 2 months

Age cohort outcomes

*

Total children in birth cohort

Total children registered	10,695	100%
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CPT status

On CPT	9,027	84%
Not on CPT	1,668	16%

HIV status

Current HIV infection status unknown	2,769	26%
HIV infection not confirmed, not ART eligible	2,765	100%
HIV infection not confirmed, ART eligible (PSHD)	4	0%
Current HIV infection status known	7,926	74%
Confirmed not infected	7,820	99%
Confirmed infected (ART eligible)	106	1%

ART eligibility summary

Not eligible for ART	10,585	99%
ART eligible	110	1%
ART not initiated	7	6%
Initiated ART	103	94%

Primary follow-up outcome

Discharged uninfected	30	0%
Continue follow-up	9,024	93%
Started ART	103	1%
Defaulted	478	5%
Died	57	1%

Transfers between sites

Total not transferred out	9,692	91%
Transferred out	1,003	9%

Age 12 months

Age cohort outcomes

*

Total children in birth cohort

Total children registered	12,243	100%
---------------------------	--------	------

CPT status

On CPT	9,317	76%
Not on CPT	2,926	24%

HIV status

Current HIV infection status unknown	3,009	25%
HIV infection not confirmed, not ART eligible	2,999	100%
HIV infection not confirmed, ART eligible (PSHD)	10	0%
Current HIV infection status known	9,234	75%
Confirmed not infected	9,035	98%
Confirmed infected (ART eligible)	199	2%

HIV exposed child follow-up

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Age cohort outcomes

*

ART eligibility summary

Not eligible for ART	12,034	98%
ART eligible	209	2%
ART not initiated	25	12%
Initiated ART	184	88%

Primary follow-up outcome

Discharged uninfected	73	1%
Continue follow-up	9,265	85%
Started ART	184	2%
Defaulted	1,313	12%
Died	114	1%

Transfers between sites

Total not transferred out	10,949	89%
Transferred out	1,294	11%

Age 24 months

Age cohort outcomes

*

Total children in birth cohort

Total children registered	11,794	100%
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CPT status

On CPT	465	4%
Not on CPT	11,329	96%

HIV status

Current HIV infection status unknown	3,635	31%
HIV infection not confirmed, not ART eligible	3,624	100%
HIV infection not confirmed, ART eligible (PSHD)	11	0%
Current HIV infection status known	8,159	69%
Confirmed not infected	7,918	97%
Confirmed infected (ART eligible)	241	3%

ART eligibility summary

Not eligible for ART	11,542	98%
ART eligible	252	2%
ART not initiated	17	7%
Initiated ART	235	93%

Primary follow-up outcome

Discharged uninfected	7,738	74%
Continue follow-up	232	2%
Started ART	235	2%
Defaulted	2,173	21%
Died	143	1%

Transfers between sites

Total not transferred out	10,521	89%
Transferred out	1,273	11%

Antenatal Care

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

New ANC registrations in reporting period

*

Women with first visit in reporting period

New women registered	172,271	100%
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ANC cohort analysis

*

HIV status ascertainment

HIV status not ascertained	4,238	2%
HIV status ascertained	168,033	98%
Valid previous test result	11,669	7%
Previous negative	3,385	29%
Previous positive	8,284	71%
New test at ANC	156,364	93%
New negative	153,619	98%
New positive	2,745	2%

HIV status summary

Total women HIV negative	157,004	93%
Total women HIV positive	11,029	7%

PMTCT regimen mother

No ARVs	183	2%
Any ARVs	10,846	98%
ART (by time of initiation)	10,846	100%
Already on ART when starting ANC	8,177	75%
Started ART at 0-27 weeks of pregnancy	2,368	22%
Started ART at 28+ weeks of preg.	301	3%

ANC women after 6 months

ANC cohort analysis

*

Total women completing ANC in the reporting period

Total women in booking cohort	164,820	100%
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Syphilis status

Not tested for syphilis	47,617	29%
Tested for syphilis	117,203	71%
Syphilis negative	115,379	98%
Syphilis positive	1,824	2%

HIV status ascertainment

HIV status not ascertained	4,127	3%
HIV status ascertained	160,693	97%
Valid previous test result	10,621	7%
Previous negative	3,106	29%
Previous positive	7,515	71%
New test at ANC	150,072	93%
New negative	146,910	98%
New positive	3,162	2%

HIV status summary

Total women HIV negative	150,016	93%
Total women HIV positive	10,677	7%

Antenatal Care

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

ANC cohort analysis

*

CPT status (among HIV pos)

Not on CPT	296	3%
On CPT	10,381	97%

PMTCT regimen mother

No ARVs	107	1%
Any ARVs	10,570	99%
ART (by time of initiation)	10,570	100%
Already on ART when starting ANC	7,507	71%
Started ART at 0-27 weeks of pregnancy	2,675	25%
Started ART at 28+ weeks of preg.	388	4%

Baby's ARVs dispensed

No ARVs dispensed for infant	516	5%
ARVs dispensed for infant	10,161	95%

Maternity

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Maternal details

*

Admissions in the reporting period

Total admissions (referrals double-counted)	155,842	100%
Not referred to other site (total women)	146,628	94%
Referred out before delivery (multiple admissions)	9,214	6%

HIV status ascertainment

HIV status not ascertained	6,753	4%
HIV status ascertained	149,107	96%
Valid previous test result	12,239	8%
Previous negative	1,608	13%
Previous positive	10,631	87%
New test at maternity	136,868	92%
New negative	136,595	100%
New positive	273	0%

HIV status summary

Total women HIV negative	138,203	93%
Total women HIV positive	10,904	7%

ARVs during pregnancy (among HIV pos)

No ARV in pregnancy	103	1%
Any ARVs	10,801	99%
ART (by time of initiation)	10,801	100%
ART initiated before pregnancy	10,119	94%
ART initiated in 1st / 2nd trimester	405	4%
ART initiated in 3rd trimester	140	1%
ART initiated during labour	137	1%

Infant details

*

Single babies / multiple deliveries

Total babies delivered	150,082	100%
Single babies	144,964	97%
Twin / multiple babies	5,118	3%

Infant survival

Total live births	147,472	98%
Discharged alive	146,510	99%
Neonatal deaths	962	1%
Stillbirths	2,610	2%
Stillbirth, fresh	1,386	53%
Stillbirth, macerated	1,224	47%

HIV exposure / ARV proph. (among discharged alive)

Infants with unknown HIV exposure status	4,105	3%
Infants with known HIV exposure status	142,405	97%
Not HIV exposed	132,269	93%
HIV exposed	10,136	7%
Received no ARVs	701	7%
Received ARVs	9,435	93%
Nevirapine	9,435	100%

ART cohort analysis

Malawi (National)

2019 Q3 (Quarter)

Registration details

*

ART clinic registrations

Total ART clinic registrations	38,620	100%
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Registration type

ART initiations, first time (total patients)	27,624	72%
ART initiations, first time (non sex-disagg.)	11,047	40%
ART initiations, first time (by sex)	16,577	60%
ART initiations, first time, males	7,482	45%
ART initiations, first time, females	9,095	55%
ART initiations, first time, females non-pregnant	7,021	77%
ART initiations, first time, females pregnant	2,074	23%
ART re-initiations	515	1%
ART transfers in	10,481	27%

Sex

Males	15,213	39%
Females	23,407	61%
Non-pregnant	18,594	79%
Pregnant	4,813	21%

Age at ART initiation

Adults 15+ yrs	36,129	94%
Children 0-14 yrs	2,491	6%
Children 2-14 yrs	1,905	76%
Children below 24 mths	586	24%

Reason for starting ART

Presumed severe HIV Disease	20	0%
Confirmed HIV infection	38,600	100%
WHO stage 1 or 2	34,187	89%
CD4 below threshold	1,512	4%
CD4 unknown or >threshold	32,675	96%
PCR infants	105	0%
Children 12-59 mths	510	2%
Pregnant women	4,724	14%
Breastfeeding mothers	1,302	4%
Asymptomatic / mild	26,034	80%
WHO stage 3	3,479	9%
WHO stage 4	873	2%
Unknown / reason outside of guidelines	61	0%

TB at ART initiation

Never TB / TB > 24 months ago	37,770	98%
TB within the last 24 months	585	2%
Current episode of TB	265	1%

Kaposi's sarcoma at ART initiation

No KS	38,551	100%
Patients with KS	69	0%

ART cohort analysis

Malawi (National)

2019 Q3 (Cumulative)

Registration details

*

ART clinic registrations

Total ART clinic registrations	1,716,004	100%
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Registration type

ART initiations, first time (total patients)	1,342,087	78%
ART initiations, first time (non sex-disagg.)	1,252,589	93%
ART initiations, first time (by sex)	89,498	7%
ART initiations, first time, males	40,492	45%
ART initiations, first time, females	49,006	55%
ART initiations, first time, females non-pregnant	39,167	80%
ART initiations, first time, females pregnant	9,839	20%
ART re-initiations	31,872	2%
ART transfers in	342,045	20%

Sex

Males	637,495	37%
Females	1,078,509	63%
Non-pregnant	867,362	80%
Pregnant	211,147	20%

Age at ART initiation

Adults 15+ yrs	1,574,727	92%
Children 0-14 yrs	141,277	8%
Children 2-14 yrs	108,664	77%
Children below 24 mths	32,613	23%

Reason for starting ART

Presumed severe HIV Disease	4,433	0%
Confirmed HIV infection	1,711,571	100%
WHO stage 1 or 2	996,250	58%
CD4 below threshold	361,743	36%
CD4 unknown or >threshold	634,507	64%
PCR infants	4,132	1%
Children 12-59 mths	19,569	3%
Pregnant women	196,041	31%
Breastfeeding mothers	63,953	10%
Asymptomatic / mild	350,812	55%
WHO stage 3	572,420	33%
WHO stage 4	129,460	8%
Unknown / reason outside of guidelines	13,441	1%

TB at ART initiation

Never TB / TB > 24 months ago	1,641,841	96%
TB within the last 24 months	37,581	2%
Current episode of TB	36,582	2%

Kaposi's sarcoma at ART initiation

No KS	1,696,125	99%
Patients with KS	19,879	1%

ART cohort analysis

Malawi (National)

2019 Q3 (Cumulative)

ART outcomes

*

Primary follow-up outcomes

Total alive on ART	861,613	63%
Alive on ART at site of last registration	826,102	96%
ART patients in transit between sites	35,511	4%
Defaulted	381,458	28%
Stopped ART	10,310	1%
Total died	120,577	9%
Died month 1	23,355	19%
Died month 2	14,218	12%
Died month 3	9,339	8%
Died month 4+	73,665	61%

Transfers between sites

Total not transferred out	1,338,448	78%
Transferred out	377,556	22%

ART regimens

First line regimens	796,167	96%
Adult formulation	776,120	97%
Regimen 0A	749	0%
Regimen 2A	14,950	2%
Regimen 4A	337	0%
Regimen 5A	286,394	37%
Regimen 6A	3,563	0%
Regimen 13A	468,880	60%
Regimen 14A	504	0%
Regimen 15A	743	0%
Paed. formulation	20,047	3%
Regimen 0P	606	3%
Regimen 2P	19,079	95%
Regimen 4P	362	2%
Second line regimens	28,176	3%
Adult formulation	22,533	80%
Regimen 7A	7,279	32%
Regimen 8A	13,412	60%
Regimen 9A	1,456	6%
Regimen 10A	147	1%
Regimen 11A	185	1%
Regimen 12A	54	0%
Paed. Formulation	5,643	20%
Regimen 9P	5,145	91%
Regimen 11P	498	9%
Other regimen (adult / paed)	1,759	0%

Adherence

Adherence unknown (not recorded)	18,224	2%
Adherence recorded	807,878	98%
0-3 doses missed	504,198	62%
4+ doses missed	303,680	38%

ART cohort analysis

Malawi (National)

2019 Q3 (Cumulative)

ART outcomes

*

ART side effects

Side effects unknown (not recorded)	4,557	1%
Side effects recorded	821,545	99%
No side effects	810,575	99%
Any side effects	10,970	1%

Current TB status among ART patients (ICF)

ICF not done (Current TB status unknown/ not circ)	5,050	1%
ICF done	821,052	99%
TB not suspected	813,430	99%
TB suspected	5,418	1%
TB confirmed	2,204	0%
TB confirmed, not on treatment	62	3%
TB confirmed, on TB treatment	2,142	97%

Pregnant / Breastfeeding

Pregnant females	826,102	100%
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2019 Q3 (Quarter)

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

*

ART cohort registration group outcomes

Total ART clinic registrations	2,382	100%
Transfers out (double counted)	399	17%
Total not transferred out (patients in cohort)	1,983	83%
Total alive on ART	1,483	75%
Total not retained	500	25%
Defaulted	409	82%
Stopped ART	23	5%
Died	68	14%

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

*

ART cohort registration group outcomes

Total ART clinic registrations	36,390	100%
Transfers out (double counted)	5,930	16%
Total not transferred out (patients in cohort)	30,460	84%
Total alive on ART	21,867	72%
Total not retained	8,593	28%
Defaulted	7,636	89%
Stopped ART	166	2%
Died	791	9%

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

*

ART cohort registration group outcomes

Total ART clinic registrations	5,316	100%
Transfers out (double counted)	575	11%
Total not transferred out (patients in cohort)	4,741	89%
Total alive on ART	3,638	77%
Total not retained	1,103	23%
Defaulted	1,049	95%
Stopped ART	12	1%
Died	42	4%

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

*

ART cohort registration group outcomes

Total ART clinic registrations	5,502	100%
Transfers out (double counted)	796	14%
Total not transferred out (patients in cohort)	4,706	86%
Total alive on ART	3,329	71%
Total not retained	1,377	29%
Defaulted	1,282	93%
Stopped ART	34	2%
Died	61	4%

Viral load monitoring cohort report

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

VL samples collected in the reporting period

*

VL samples collected

Total VL samples	212,737	100%
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Reason for VL test

Routine / scheduled monitoring	198,510	93%
Extra-schedular	12,773	6%
Targeted (clinical suspicion of failure)	3,770	30%
Follow-up after high VL	9,003	70%
Replacement of lost sample / missing result	1,454	1%

Results for VL samples collected 6 months ago

*

Total VL samples with outcomes

Total VL samples collected 6 months ago	90,653	100%
---	--------	------

VL test results

Valid results	83,798	92%
<1000 copies / ml	72,425	86%
1000+ copies / ml	11,373	14%
Rejected samples / invalid results	329	0%
Missing / outstanding results	6,526	7%

Result transmission type

Paper results	82,433	97%
Electronic results	2,603	3%

Time from sample collection to receipt of results

0-4 Weeks	45,743	50%
5-8 Weeks	29,908	33%
9-12 Weeks	4,681	5%
13+ Weeks / still missing	10,321	11%

Time from sample collection to client notification

0-4 Weeks	20,521	23%
5-8 Weeks	21,953	24%
9-12 Weeks	11,929	13%
13+ Weeks / pending	36,250	40%

Patients with high VL: outcome after 6 months

*

Patients in high VL cohort

Total high VL patients evaluated after 6 months	13,535	100%
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Initial high VL: reason for test

Routine / scheduled monitoring	12,066	89%
Targeted (clinical suspicion of failure)	1,293	10%
Repeat sample	176	1%

Intensive adherence counselling

3 Sessions completed	7,768	57%
Sessions not completed	5,767	43%

Viral load monitoring cohort report

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Patients with high VL: outcome after 6 months

*

Follow-up VL test

Follow-up sample collected	6,366	47%
Valid results	5,125	81%
<1000 copies / ml	2,747	54%
1000+ copies / ml	2,378	46%
Rejected samples / invalid results	12	0%
Missing / outstanding results	1,229	19%
Follow-up sample pending	7,169	53%

Preliminary opinion

Conclusion made	4,794	35%
Continue current regimen	3,297	69%
Switch to 2nd line ART	1,497	31%
Conclusion pending	8,741	65%

Final treatment decision (2nd line prescriber)

Decision made	4,109	30%
Continue current regimen	2,699	66%
Switch to 2nd line ART	1,384	34%
Refer to HIV specialist	26	1%
Decision pending	9,426	70%

STI site report

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

STI clients treated in the reporting period

*

Total STI clients

Total STI clients treated	106,213	100%
Index patients treated (symptomatic)	85,982	81%
Partners treated	20,231	19%

Sex

Males	42,791	40%
Males Non-circumcised	30,049	70%
Males Circumcised	12,742	30%
Females	63,422	60%
Non-pregnant	53,288	84%
Pregnant	10,134	16%

Age group

Age group A (0-19 years)	8,896	8%
Age group B (20-24 years)	23,408	22%
Age group C (25+ years)	73,909	70%

Client type

Symptomatic cases	93,315	88%
Index cases	85,982	92%
Partners symptomatic	7,333	8%
Partners asymptomatic	12,898	12%

STI treatment history

Never treated for STI	78,819	74%
Previously treated for STI	27,394	26%
Old >3 months ago	20,019	73%
Recent ≤3 months ago	7,375	27%

STI syndromic diagnosis

GUD	13,533	12%
UD	27,819	25%
AVD	33,154	29%
Low risk	9,455	29%
High risk	23,699	71%
LAP	15,299	14%
SS	1,311	1%
BU	812	1%
BA	1,301	1%
NC	472	0%
Genital Warts	558	0%
Syphilis RPR VDRL	11,967	11%
Other STI	6,257	6%

STI partner notification

Total partner notification slips issued	30,699	100%
Total partners returned	20,231	66%
Total partners not seen	10,468	34%

STI site report

Malawi (National)

2019 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

STI clients treated in the reporting period

*

HIV test / ART status

HIV status not ascertained	11,594	11%
HIV status ascertained	94,619	89%
HIV negative (new test)	77,415	82%
HIV positive	17,204	18%
New positive	2,317	13%
Previous positive	14,887	87%
Not on ART	606	4%
On ART	14,281	96%

STI clients referred for services

Lab	2,058	4%
Gynae review	914	2%
Surgical review	284	1%
Repeat HTC	39,408	70%
ART (for assessment)	5,493	10%
Other (service referrals)	4,565	8%
VMMC	3,851	7%