Government of Malawi Ministry of Health

Integrated HIV Program Report
July – September 2012

- *HIV Testing and Counselling*
- *Post Exposure Prophylaxis*
- *HIV Exposed Child Follow-Up*
- *Pre-ART*
- *Prevention of Mother to Child Transmission / Antiretroviral Therapy*
- *TB / HIV*
- *Sexually Transmitted Infections*
- *Supply of HIV Program Commodities*

1 Executive Summary

This is the 5th quarterly HIV Program report after implementation of the 2011 Integrated Clinical HIV Guidelines in July 2011. A summary of the key achievements between **July and September 2012** is provided below:

- Scale-up of integrated HIV services had reached the following number of sites:
  - **810** static (607 within and 203 outside of health facilities) and 322 outreach HTC sites
  - **641** (static) ART sites
  - **573** PMTCT sites (Option B+)
  - **562** Pre-ART sites
  - **561** sites with HIV-exposed child follow-up
- **579,509** persons were tested and counselled for HIV and **44,916 (8%)** were HIV positive; **226,243 (39%)** people tested for the first time. **268,119** (46%) of all tests performed during this quarter took place in August during the 2012 National HIV Testing Week campaign.
- **119,587 (76%)** of 156,778 women at ANC had their HIV status ascertained; **9,837 (8%)** of these were HIV positive. **114,897 (87%)** of 131,779 women at maternity had their HIV status ascertained; **9,491 (8%)** of these were HIV positive.
- **29,707** patients started ART during this quarter; this is an increase from the previous quarter (26,909) and meets the target of about 30,000 patients to be initiated on ART per quarter under the 2011 PMTCT/ART guidelines.
- **391,338** patients were alive and on ART by end of September 2012. This exceeds the projected number of ART patients (389,737) for this quarter by 1,601 (0.4%). **62,371 (17%)** of 362,754 on first line adult regimens were on ART regimen 5A (tenofovir / lamivudine / efavirenz)
- **83%** of adults and **84%** of children were retained alive on ART at 12 months after ART initiation.
- A total of **10,588** HIV positive pregnant women were on ART: **2,614 (25%)** of these were already on ART when getting pregnant and **7,974 (75%)** started ART during pregnancy/delivery. **7,754** (97%) of those newly initiated started ART due to ***Option B+*** (in WHO clinical stage 1 or 2) and **220** (3%) due to a low CD4 count and/or WHO clinical stage 3 or 4.
- An additional **2,689** breastfeeding women started ART due to ***Option B+*** (in WHO clinical stage 1 or 2), bringing the total number started on ART under *Option B+* to **10,663**.
- **83% and 79%** of women started under ***Option B+*** were retained at 6 and 12 month after ART initiation, respectively.
- **8,700 (8%)** of infants discharged alive from maternity were known to be HIV exposed; **8,109 (93%)** of these received ARV prophylaxis. **3,778 (43%)** were enrolled in exposed child follow-up before age 2 months.
- **8,490** HIV exposed children and **9,161** pre-ART patients enrolled for follow-up in *HIV Care Clinics (HCC)* during this quarter.
- **184** health workers were trained and certified in the new integrated PMTCT/ART curriculum during Q3 2012, bringing the total number re-trained in the new guidelines to **4,839**. An additional **25** tutors from training institutions were trained in the new curriculum.
- **171** health workers were trained and certified in PITC; **33** new basic HTC counsellors were trained and certified; **17** new HTC trainers were trained.

2 Integrated HIV Program Overview

In July 2011, Malawi started implementing a revised HIV Program in all health facilities following the ***2011 Malawi Integrated Clinical HIV Guidelines***. These guidelines were developed in 2010/11 by the PMTCT/ART Technical Working Group led by the Department for HIV and AIDS of the Ministry of Health. Key program policies include:

- **PMTCT Option B+:** universal life-long ART for all HIV infected pregnant and breastfeeding women regardless of clinical or immunological stage.

- Standard **HIV exposed child follow-up** to age 24 months. This program aims to improve early infant diagnosis and ART initiation using DNA-PCR testing for all infants from age 6 weeks; rapid antibody testing is considered diagnostic from age 12 months and repeated at 24 months. HIV exposed child enrolment and follow-up is integrated with maternal ART follow-up (*Option B+*) to improve retention and adherence.

- **Early ART initiation**: universal ART for children under 2 years (confirmed HIV infection), children 2-4 years with an absolute CD4 count of ≤750 (CD4% no longer required), children over 5 years and adults with a CD4 count ≤350, patients co-infected with HIV and hepatitis B.

- Transition to **more favourable first line ART regimens** for adults (Malawi regimen 5A: tenofovir / lamivudine / efavirenz) and children (Malawi regimen 2: zidovudine / lamivudine / nevirapine), including provision of paediatric ARV formulations for all children under 25kg. Transition to regimen 5A had to be restricted to certain patient groups due to funding limitations. Additional funding from Global Fund and from PEPFAR has now been secured and a full transition is scheduled to start in July 2013.

- Standard **pre-ART services** for all HIV-infected persons not yet eligible for ART. The pre-ART program aims to reduce the incidence of HIV-related diseases and to enable early ART initiation based on the new CD4 cell threshold (350) through scheduled CD4 count monitoring. Malawi had no standard pre-ART program until July 2011, although some sites had already started offering elements of the new standard pre-ART package.

- Provider-initiated provision of **contraceptives and condoms** for all adults in pre-ART and ART clinics to reduce the rate of unwanted pregnancies among HIV-infected adults and to reduce HIV-transmission between sexual partners.

- Isoniazid preventive therapy (**IPT**) for pre-ART patients to reduce the incidence of TB and intensified TB case finding (**ICF**) for all patients in pre-ART and ART follow-up to enable early diagnosis and treatment of TB.

- Roll-out of scheduled **viral load monitoring** to improve early detection of treatment failure and initiation of second line ART.

Implementation of PMTCT Option B+ requires provision of ART services at <u>all</u> health facilities with Maternal and Child Health services. This required a massive acceleration of the **decentralization of ART services** from 303 (static) sites by June 2011 to over 600 sites.

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 are working towards a full integration of their respective site supervision exercises.

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 HIV Department database. The 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 HTC, ANC, maternity, exposed child and pre-ART follow-up, ART and TB
- Physical Drug stock-level assessment
- Identification of sites as priority for Clinical Mentoring programme

One copy of the supervision form is returned to the Department for HIV and AIDS, where data are entered in a custom MS Access database 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. The involvement of a growing number of health workers from sites all over the country who participate in the quarterly supervision exercise has helped to build a strong identity for the national HIV Program and has greatly facilitated communication between program staff at the national, zonal, district and facility level.

The HTC Program 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

654 public and private sector facilities were visited for **clinical HIV program supervision** during the last 3 weeks of October 2012. The large number of sites included in this supervision round was covered by **63** supervisors working in **20** teams. The teams spent a total of **1,708 working hours** at the sites. Each site visit lasted **2.6** hours on average, but up to 2 days was spent at the busiest sites. **267** clinic teams were awarded a *Certificate of Excellence* for **excellent performance. 90** sites had significant weaknesses and were rated to require **intensive mentoring**. This represents an overall improvement of site performance from the previous quarter. The capacity to provide site mentoring will need to be further expanded over the next months.

Table 1: Outcomes of integrated HIV services supervision for 2012 Q3

Zone	Total facil. visited*	Supervision hours spent at facilities		Performance (# and % of sites)	
		Total	Average per site	Excellent perform.	Mentoring needed
NZ	115	236	2.1	37 32%	16 14%
CEZ	93	204	2.2	34 37%	16 17%
CWZ	150	384	2.6	68 45%	28 19%
SEZ	149	446	3	67 45%	25 17%
SWZ	147	438	3	61 41%	5 3%
Malawi	654	1,708	2.6	267 41%	90 14%

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

Table 1 provides a summary of the supervision outcomes by zone. Most facilities were using the standard national M&E tools, but 27 high burden sites were using the standard electronic data system for ART (EDS). Some NGO supported sites were using custom tools compatible with the national standard reporting requirements.

A total of 263 sites were visited for supportive HTC site supervision for Q3 2012. All visited sites had a minimum of 2 certified HTC providers, HTC guidelines, IEC materials, penis models and male condoms available and on display. However, testing protocols were not available or not displayed at some sites. Some providers were not adhering to the correct incubation period for the rapid test kits especially positives. HTC counsellor log books were available at almost all sites visited, but some counsellors and PITC providers did not have counsellor log books. It was observed that Proficiency Test was not being performed by all counsellors and proficiency testing results were not documented in most log books. Quality controls for HIV testing were not being performed in most sites due to unavailability of samples. Sharps containers were found at all sites, but some sites did not have waste disposal bins for other contaminated waste and some sites were lacking disposable gloves. HTC supervision at District level was not routinely conducted due to lack of logistics within the district. Most district supervisors that had conducted supportive supervision at the HTC sites did not use the standard checklist to guide them during monitoring. Peer session observation was reported to be practiced by counsellors in some sites. PITC was implemented at all central and district hospitals, but some health workers trained in PITC were not practicing due to competing priorities and high work load. Stock cards for HIV test kits were found at all visited sites. Most sites had HIV test kits in stock at facility level but not adequate for community based HIV testing.

4 Inventory of Sites and Services

A total of **810** static sites were reporting HTC services in Q3 2012 and **203** of these were outside of health facilities. In addition, HTC was provided at 322 mobile or outreach sites.

Table 2: Facilities with integrated HIV services in the 5 Zones. Availability of services defined by performance (at least 1 patient enrolled) during 2012 Q3

Zone	Total fac.(1	Facilities providing HIV services				CD4 count machines (2)		
		Exp. child	Pre-ART	PMTCT B+	ART	Installed	Functional	Results
NZ	118	101 86%	102 86%	100 85%	112 95%	17 14%	16 94%	2,585
CEZ	92	85 92%	77 84%	84 91%	89 97%	10 11%	8 80%	3,007
CWZ	154	120 78%	124 81%	126 82%	148 96%	22 14%	17 77%	4,047
SWZ	147	117 80%	124 84%	121 82%	144 98%	20 14%	18 90%	17,069
SEZ	151	138 91%	135 89%	142 94%	148 98%	14 9%	10 71%	6,816
Malawi	662	561 85%	562 85%	573 87%	641 97%	83 13%	69 83%	33,524

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

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

Table 2 shows the distribution of the **662** sites designated to provide clinical HIV services in Q3 2012, by zone. At the national level, there were **641** (static) sites with at least one patient on ART, **573** sites had enrolled women under PMTCT Option B+; **561** sites were providing pre-ART services and **561** had enrolled HIV exposed children for follow-up. ART services were now available at almost all designated sites in all 5 zones. The SE zone continued to lead in the number of sites providing PMTCT Option B+ (94%).

CD4 count machines (including 'point of care' machines) were installed at **83** sites, but only **69 (83%)** of these had produced at least 1 result during Q3. The total number of CD4 results produced during Q3 was **33,524.** Half of these outputs were generated in the SW zone, implying that many CD4 machines continued to be down or to be running considerably below capacity.

5 HIV Testing and Counselling Program Outputs

579,509 people[1] were tested and counselled for HIV between July and September 2012. Testing increased considerably this quarter due to the HIV Testing Week campaign in August, which accounted for **268,119** tests performed. 44,916 (8%) of all people tested were HIV positive. This is a lower proportion than usual (11% in the previous quarter) resulting from testing of a lower risk population during the campaign.

Out of 579,509 people tested and counselled, **33%** were males and **67%** were females. **45%** of females were pregnant and **55%** were not pregnant. A similar proportion of males (**48%**) and non-

[1] 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 individual people.

pregnant females (**52%**) accessed HTC this quarter. Pregnant women have to be excluded from the comparison of male and female access to HTC because testing among pregnant women is almost entirely provider-initiated.

54% of all people tested and counselled were 25 years and above, **37%** were between 15-24 years and **9%** were children below 15 years. **95,232 (16%)** accessed HTC with their partners (as a couple), which is an increase from 14% seen in the previous quarter and is not explained by the testing week campaign (only 10% of people were counselled with their partner during testing week).

226,243 (39%) of 579,509 people tested and counselling accessed HTC for the first time in their life. Based on the cumulative number of people who accessed HTC for the first time, a total of **4,132,556** people were tested since introduction of the 'first time HTC access' indicator in July 2007. Detailed HTC service data are shown in the Annex.

6 Post Exposure Prophylaxis (PEP)

A total of **691** persons received PEP during Q3 2012. This is an increase from the previous quarter (506) and the highest quarterly number achieved since implementation of the 2011 Integrated Clinical HIV Curriculum which includes a streamlined PEP protocol.

7 Provider-Initiated Family Planning (PIFP)

The 2011 Integrated Clinical HIV Guidelines encourage health workers to routinely provide condoms to all adults in pre-ART and ART clinics. Women should also be able to receive at least the standard injectable contraceptive (Depo-Provera) during any pre-ART or ART visit. This policy aims to address the significant unmet need for family 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 pre-ART and ART clinics during the last quarter. The report does not account for family planning need nor does it include women who accessed family planning from elsewhere.

Table 3: Number and % of women retained in HIV care * who were on injectable contraceptives (Depo) by the end of 2012 Q3.

	Pre-ART		ART		Both patient groups	
Zone	Tot. women	On Depo	Tot. women	On Depo	Tot. women	On Depo
NZ	1,015	**172** *17%*	21,795	**2,166** *10%*	22,810	**2,338** *10%*
CEZ	563	**114** *20%*	17,833	**3,062** *17%*	18,396	**3,176** *17%*
CWZ	1,344	**144** *11%*	45,301	**4,961** *11%*	46,645	**5,105** *11%*
SEZ	4,058	**1,286** *32%*	63,665	**15,545** *24%*	67,724	**16,830** *25%*
SWZ	6,512	**515** *8%*	77,954	**6,604** *8%*	84,466	**7,118** *8%*
Malawi	13,492	**2,230** *17%*	226,549	**32,337** *14%*	240,041	**34,567** *14%*

* estimated from the total number of patients retained in pre-ART and ART, multiplied by the proportions of females and adults registered

Table 3 shows that **34,567 (14%)** women received Depo-Provera from HIV clinics in Q3 2012. This is an increase from Q2. The CE and SE Zones had achieved the highest coverage among women in pre-ART and ART, while the N and CW Zone remained far behind. An overall increase in PIFP output is expected over the next few quarters.

8 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 pre-ART and 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.

Table 4 shows that **223,615 (48%)** of all HIV patients in Q3 2012 were on CPT. Coverage had further decreased in all 3 eligible patient groups compared with the previous quarter and it was lowest in the SW Zone (35%). This decline was caused by stock outs of cotrimoxazole for CPT (see page 22 for further supply chain details).

Table 4: Number and % of patients retained in HIV care who were on cotrimoxazole and isoniazid preventive therapy (CPT, IPT) by the end of 2012 Q3.

	CPT								IPT	
	Exp. child		Pre-ART		ART		All patient groups		Pre-ART	
Zone	Tot. pat.	On CPT	Tot. pat.	On CPT	Tot. pat.	On CPT	Tot. pat.	On CPT	Tot. pat.	On IPT
NZ	3,469	**2,328** *67%*	3,056	**2,352** *77%*	39,205	**24,548** *63%*	45,730	**29,228** *64%*	3,056	**1,247** *41%*
CEZ	3,297	**2,083** *63%*	1,761	**953** *54%*	31,515	**14,277** *45%*	36,573	**17,312** *47%*	1,761	**573** *33%*
CWZ	7,151	**4,710** *66%*	4,377	**2,487** *57%*	79,700	**55,914** *70%*	91,228	**63,110** *69%*	4,377	**941** *21%*
SEZ	12,018	**8,143** *68%*	10,356	**5,045** *49%*	102,229	**43,328** *42%*	124,603	**56,515** *45%*	10,356	**4,065** *39%*
SWZ	13,606	**10,214** *75%*	15,715	**4,597** *29%*	134,288	**42,638** *32%*	163,609	**57,449** *35%*	15,715	**2,787** *18%*
Malawi	39,541	**27,478** *69%*	35,265	**15,432** *44%*	386,937	**180,705** *47%*	461,743	**223,615** *48%*	35,265	**9,613** *27%*

9 TB / HIV Interventions

9.1 Intensified 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, pre-ART and 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 pre-ART and exposed child follow-up.

353,356 (91%) of all patients retained on ART were screened for TB at their last visit before end of September 2011. As of that visit, **1,626 (0.5%)** patients were new TB suspects and had presumably been referred for examination by a clinician and for TB investigations. **2,035 (1%)** had confirmed TB (clinical or lab based). Out of these, **1,672 (82%)** were confirmed to be on TB treatment and **363 (18%)** had not yet started or had interrupted TB treatment. An excerpt from the data in the **Annex** (*Cumulative ART outcomes*) is shown below.

ICF (current TB status among ART patients)

Intensified case finding not done		33,581	9%
Intensified case finding done		353,356	91%
	TB not suspected	349,695	99%
	TB suspected	1,626	0%
	TB confirmed	2,035	1%
		TB confirmed, not on treatment	363	18%
		TB confirmed, on TB treatment	1,672	82%

9.2 Isoniazid Preventive Therapy (IPT)

All pre-ART patients with a negative screening outcome for TB symptoms are eligible for IPT. The first (large scale) distribution of isoniazid and pyridoxine for the HIV programs reached the sites during July 2012. **9,613 (27%)** of 35,265 patients retained in pre-ART were on IPT by the end of September 2012. IPT coverage was highest in the N (41%) and SE (39%) zones. A further increase in IPT implementation is expected over the next quarters.

10 HIV-Related Diseases

Table 5 shows the number of patients treated for 4 key HIV-related indicator diseases (data from TB, ART and Diflucan registers or ART treatment cards). The number of new TB cases increased to **5,723** in Q3 2012. The HIV ascertainment rate remained very high at **92%; 60%** of TB patients whose HIV status was ascertained were positive and **56%** of these were already on ART when starting TB treatment. The continuous increase in the number and proportion already on ART may be due to the scale-up of intensified active TB case finding (ICF) in ART clinics, resulting in increased TB case detection rates among ART patients. New oesophageal candidiasis (OC) cases increased to **293** in Q3 and cryptococcal meningitis (CM) cases decreased to **117**. Reporting on OC and CM is linked to the availability of fluconazole at the health facilities and remained unreliable. The Diflucan donation program has received renewed attention and significant stocks of fluconazole are distributed to all sites in November 2012. This is expected to result in the reporting of an increased number of cases.

Table 5: 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
2011 Q4	5,332	4,788 *90%*	2,957 *62%*	1,526 *52%*	604	219	716
2012 Q1	4,961	4,486 *90%*	2,815 *63%*	1,531 *54%*	571	149	231
2012 Q2	4,961	4,572 *92%*	2,769 *61%*	1,577 *57%*	474	233	348
2012 Q3	5,723	5,257 *92%*	3,179 *60%*	1,775 *56%*	492	117	293

11 HIV-Exposed Child Follow-Up

11.1 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; 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.

11.2 HIV Exposed Child Registration Data

This is the 5th quarterly report from the standard follow-up program for HIV exposed children and the reports are continuing to consolidate. The updating of DNA-PCR results on patient cards was still incomplete at many sites, leading to underreporting of HIV status ascertainment among the 2 month old cohort. **8,490** HIV exposed children were newly registered during Q3 2012; **3,778 (44%)** of these were enrolled under the age of 2 months.

11.3 Birth Cohort Outcomes

There were **5,269** infants in the **2 month age cohort**. **791 (15%)** had received a DNA-PCR result. **18 (2%)** of these were confirmed HIV infected. This is a decrease in the number of positives from the previous quarter, in spite of a further increase of the number with a test result. An additional **6** infants were diagnosed with *presumed severe HIV disease,* which means that a total of **24** infants were eligible for ART. **19 (79%)** of these had started ART. The proportion of positives starting ART early had increased further from the previous quarters. Out of the entire 2-month age cohort, **4,712 (90%)** were retained in exposed child follow-up, **19 (<1%)** had started ART and **8 (<1%)** were discharged confirmed uninfected[2]. **15 (<1%)** were known to have died and **465 (9%)** had been lost to follow-up.

There were **3,920** children in the **12 month age cohort**. Current HIV infection status was known for **709 (18%)** children (DNA-PCR or rapid antibody test) and **86 (12%)** of these were confirmed HIV infected. **29 (1%)** additional children had been diagnosed with *presumed severe HIV disease,* which means that a total of **115** children were eligible for ART. **97 (84%)** of these had started ART. Out of the entire age cohort, **2,790 (72%)** were retained in exposed child follow-up, **97 (2%)** had started ART and **17 (<1%)** were discharged confirmed uninfected[2]. **953 (25%)** were lost to follow-up and **24 (1%)** were known to have died.

[2] 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.

There were **1,225** children in the **24 month age cohort**. Current HIV infection status was known for **662 (54%)** children (DNA-PCR or rapid antibody test) and **70 (11%)** of these were confirmed HIV infected. **17** additional children had been diagnosed with *presumed severe HIV disease,* which means that a total of **87** children were eligible for ART. **59 (68%)** of these had started ART. Out of the entire age cohort, **255 (21%)** were retained in exposed child follow-up, **59 (5%)** had started ART and **487 (41%)** were discharged confirmed uninfected[2]. **368 (31%)** were lost to follow-up and **27 (2%)** were known to have died.

Confirmed HIV-free survival at age 24 months in this quarter was only **41%**, which was still implausibly low and related to the fact that only 54% in this cohort had a known HIV status. 563 (46%) children in this cohort were classified as '*current HIV infection status unknown'* and many of these may among the 662 children lost to follow-up and the 70 children who had died. However, 255 (21%) were retained in follow-up beyond age 24 months, probably due to continued breast feeding and the final rapid test was not available for these children. There are still problems with scheduled HIV testing (and documentation of test results) at 6 weeks, 12 and 24 months of age.

12 Pre-ART

12.1 Pre-ART Registration Data

A total of **9,161** patients were newly registered for pre-ART follow-up in Q3 2012, which is about 5,000 fewer than in the previous quarter. **1,091 (12%)** of these were children aged 2-14 years. Several sites had already established pre-ART services before July 2011 and the cumulative number of pre-ART patients ever registered was **103,181**.

12.2 Cumulative Pre-ART Follow-up Outcomes

35,265 (37%) of all patients ever registered were retained in pre-ART follow-up by the end of Q3 2012; **25,825 (27%)** had started ART; **28,110 (30%)** had been lost to follow-up; **5,360 (6%)** were known to have died. The proportion of patients who started ART will continue to increase in the cumulative pre-ART cohort analysis over time.

15,432 (44%) of patients retained in pre-ART were on CPT and **9,613 (27%)** were on IPT. **2,230 (17%)** of 13,492 women had received Depo-Provera from their pre-ART clinic. Further details on CPT, Depo-Provera and IPT are presented in **Tables 3 and 4** in the sections above.

13 PMTCT / ART

The implementation of ***PMTCT Option B+*** has effectively integrated PMTCT and ART services. The program aims to initiate lifelong ART for all HIV infected women as early as possible from the 2nd trimester of pregnancy. 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.

13.1 Data Sources and Reporting Methods

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 becoming pregnant. Implementation of *Option B+* will further increase ART coverage in this group. **Maternal PMTCT coverage** is estimated from the number of pregnant women who were already on ART when starting ANC (from ANC report) ***plus*** those who newly started ART when pregnant (from ART report): **ANC reports** capture ART status as of the last ANC visit, with a breakdown of timing of ART initiation (before starting ANC, during 1st / 2nd or 3rd trimester). About 95% of pregnant women in Malawi attend ANC and ANC reports therefore provide almost complete data for the whole pregnant population. However, ANC reports do not capture women who initiated ART after their last ANC visit. The 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 became pregnant after starting ART. This is why both data sources have to be combined for the estimation of the total ART coverage among pregnant women.

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. About 70% of women deliver at a health facility in Malawi and maternity reports are therefore likely to underestimate the total infants receiving ARV prophylaxis.

New standard M&E tools for ANC and maternity were implemented in Malawi in January 2010 and revised tools have been distributed in Q2 2012 to reflect the new PMTCT policy. ANC and maternity clinic registers and reporting forms include patient management information as well as all relevant data elements for M&E of 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 inability to account for individual women's outcomes in the course of multiple visits. The cohort reporting system is designed to aggregate women's outcome data after they have completed their ANC visits. 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.

Coverage was calculated by dividing the number of patients served by population denominators. The denominators were derived from expected pregnancies based on population projections and HIV prevalence from epidemiological surveillance.

13.2 ARV Coverage among Pregnant / Breastfeeding Women and Exposed Infants

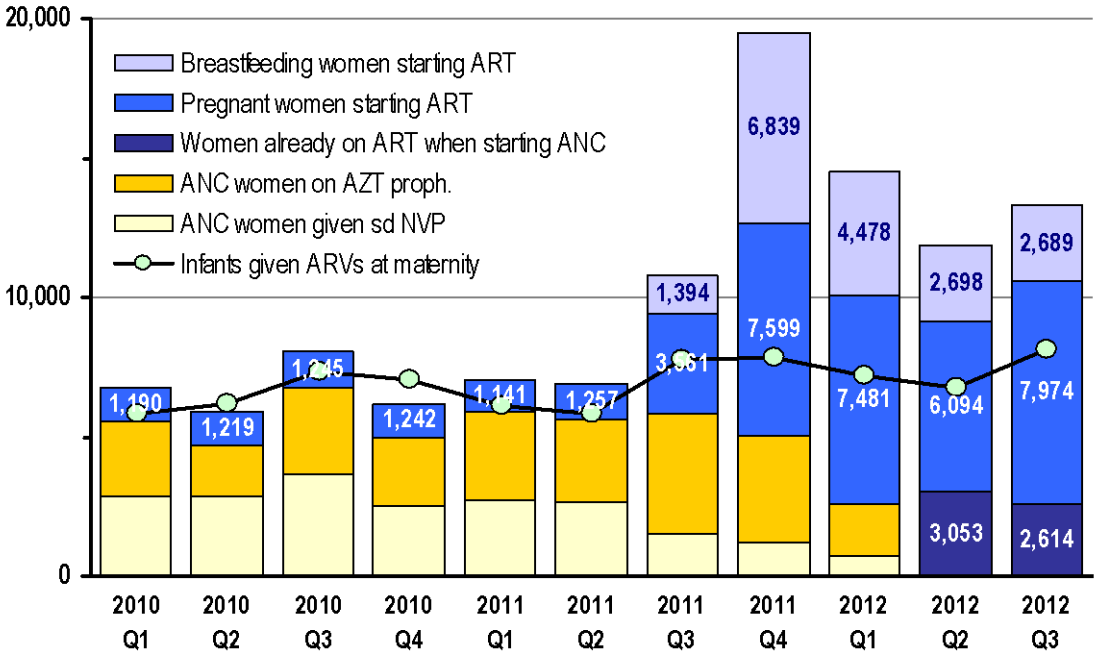
10,588 pregnant women were on ART in Q3 2012. This is based on the **2,614** women already on ART when starting ANC (ANC report, see below) and the **7,974** women who newly initiated ART while pregnant (ART report, see below). An additional **2,689** breastfeeding women started ART due to ***Option B+*** (in WHO clinical stage 1 or 2), bringing the total number newly started on ART under *Option B+* to **10,663**. Most women starting ART while breastfeeding were probably identified late in maternity or early in the postnatal period. This group may also include some women who re-initiated after interrupting ART in pregnancy. **8,109** infants were confirmed to have started NVP prophylaxis at maternity.

Figure 1 shows the transition from prophylactic ARV regimens for HIV infected mothers to universal ART under ***Option B+***. The (less effective) single dose NVP regimen and AZT combination prophylaxis were phased out completely by April 2012 and the total maternal ARV coverage more than doubled. The **10,588** pregnant women on ART in Q3 2012 represent **58% coverage** of the estimated 18,210 HIV positive pregnant women in the population per quarter (12% of 151,750).

This is an increase from the previous quarter, but ART coverage among pregnant women has remained below target. This was mainly due to challenges with supply and stock management of HIV test kits, compounded by sub-optimal sensitivity of testing under field conditions at ANC.

Figure 1: 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 starting ANC are only available from Q2 2012.



13.3 HIV Services at ANC

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

165,164 women attended ANC for their first visit between July and September 2012. This exceeds the estimated 151,750 pregnant women in the Malawian population during one quarter, which is likely explained by a considerable number of women from neighbouring countries who are accessing health services in Malawi.

The following report covers the outcomes of the **156,778** women who started ANC between January and March 2012 and who had finished ANC by September 2012. Only **13,737 (10%)** of these women started ANC in their first trimester and **33,428 (21%)** attended the minimum of 4 focussed ANC visits. **23,372 (15%)** were tested for syphilis at ANC and **1,055 (5%)** were syphilis positive. The syphilis testing rate further declined compared with the previous quarters due to stock outs of syphilis test kits. The shortage of syphilis test kits probably explains the higher (5%) than expected proportion (<1%) found positive as testing was likely selective of those suspected to be positive.

13.3.1 HIV Ascertainment at ANC

119,587 (76%) of ANC attendees had their HIV status ascertained. Out of these, **9,127 (8%)** presented with a valid documented previous HIV test result and **110,460 (92%)** received a new HIV test result at ANC. A total of **9,837 (8%)** women were found HIV positive. This is lower than the estimated 12% HIV prevalence among pregnant women and this is likely due to problems with sensitivity of HIV rapid testing in high volume service settings. The 119,587 women whose HIV status was ascertained at ANC represent 79% of the expected 151,750 pregnant women in the population. The rate of HIV status ascertainment at ANC has increased from the previous quarter following the new supply of test kits.

13.3.2 Provision of ART, CPT and infant NVP at ANC

8,542 (87%) of HIV infected women attending ANC were known to have received maternal ARVs. Of these, **2,614 (31%)** were already on ART when starting ANC, **4,283 (50%)** initiated in the first or second trimester and **1,645 (19%)** initiated during the last trimester of pregnancy. ART is more effective for preventing transmission when started early in pregnancy and 81% of women had started before the 3rd trimester.

8,554 (87%) of HIV infected women at ANC were on Cotrimoxazole Preventive Therapy.

3,922 (40%) of HIV infected women attending ANC received the infant dose of ARVs (nevirapine syrup) to take home. This is a considerable increase from the previous quarter (23%) and probably a result of a series of clinical review meetings with service providers around the country where special emphasis was placed on weak implementation areas.

13.3.3 HIV Services at Maternity

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

Between July and September 2012, **124,844** women were admitted to maternity; **6,935 (5%)** of these were referred to another facility before delivery, resulting in **131,779** total admissions to maternity. Out of all admissions, **122,883 (96%)** delivered at the health facility, while **5,384 (4%)** had already delivered before reaching a facility. The **122,883** facility deliveries represent **81%** of the estimated 151,750 deliveries in the population. This higher than the 72% of women reporting facility deliveries in the 2010 DHS, which is probably due to a recent increase in facility deliveries as well as due to women from neighbouring countries accessing maternity services in Malawi.

119,367 (95%) deliveries were conducted by skilled birth staff, **1,249 (1%)** by paramedical staff and **5,028 (4%)** were not attended by any of the above (probably mainly among women who delivered before reaching maternity). **14,488 (11%)** of women developed obstetric complications. The most common complications were obstructed / prolonged labour (**4,898 cases; 34%**) and post-partum haemorrhage (**1,795 cases; 12%**).

A total of **128,267** babies were born, **123,126 (96%)** were singletons and **5,141 (4%)** were twins/multiples. There were **125,908 (98%)** live births and **2,359 (2%)** stillbirths. **124,705 (99%)** of babies born alive were discharged alive and **1,203 (1%)** died before discharge. **131,708 (>99%)** of women were discharged alive and **115 (<1%)** women died before discharge, which is equivalent to a maternal mortality ratio of 91 per 100,000 live births among women attending maternity.

13.3.4 HIV Ascertainment at Maternity

114,897 (87%) women had their HIV status ascertained at maternity. Out of these, **108,514 (94%)** presented with a valid previous HIV test result and **6,383 (5%)** received a new HIV test result. A total of **9,491 (8%)** women were HIV positive and **105,406 (92%)** were negative. The **114,897** women whose HIV status was ascertained at maternity represent **76%** of the expected 151,750 women delivering in the population.

HIV exposure status was ascertained for **109,568 (88%)** out of 124,705 babies born and discharged alive. **8,700 (8%)** of these were born to a known HIV positive mother.

13.3.5 ARV Coverage at Maternity

A total of **8,844 (93%)** of HIV infected women attending maternity were on ART during labour. This is a slight Increase from the previous quarter. Out of these, **3,342 (38%)** had started ART before

pregnancy, **2,605 (29%)** initiated ART during the 1st or 2nd trimester, **2,265 (26%)** initiated during the 3rd trimester and **632 (7%)** initiated ART at maternity.

A total of **8,109 (93%)** of infants who were known HIV exposed and discharged alive started daily NVP prophylaxis at maternity. This represents **45%** coverage of the estimated 18,210 HIV exposed infants born in the population in this quarter (12% of 151,750).

14 ART Access and Follow-Up Outcomes

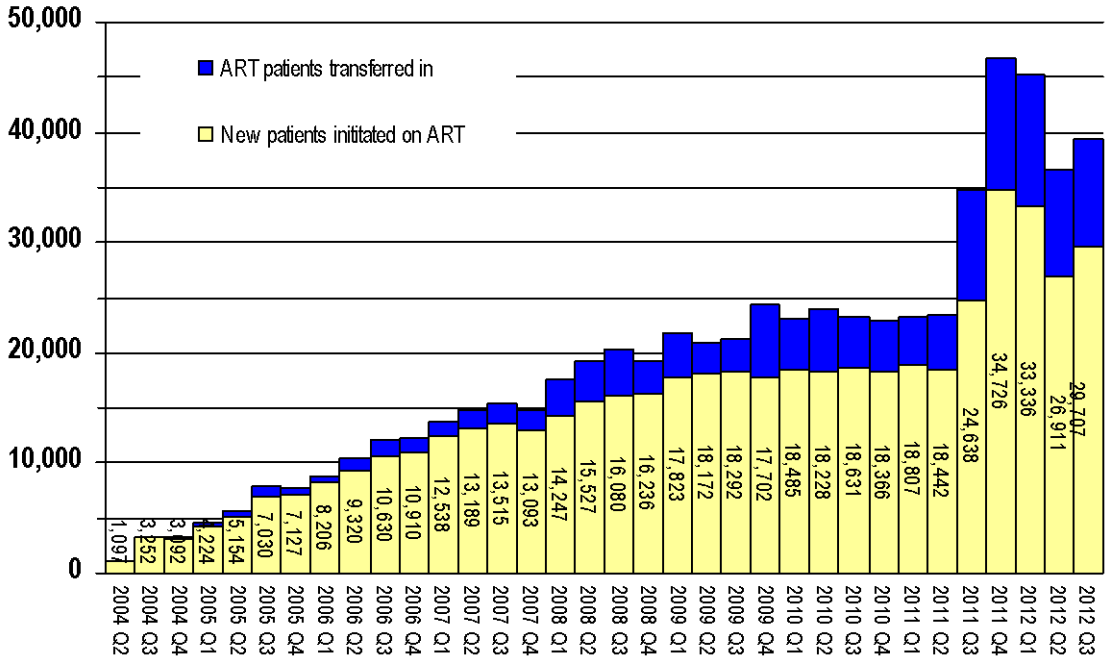
The full national data from the ART Program are shown in the **Annex**.

14.1 New ART Registrations during Q3 2012

By the end of September 2012, there were **641 static ART sites** in Malawi, managed by government, mission, NGOs and the private sector. Out of these, **67** were ART facilities in the private sector, charging a nominal MK500 per monthly prescription of drugs per patient.

Figure 2: Patients newly inititated 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.



Implementation of the Malawi Integrated Clinical HIV Guidelines started in July 2011 and triggered a massive surge in new ART initiations (see **Figure 2**). **29,707** patients initiated ART in Q3 2012. This is an increase from the previous quarter which had been affected by shortages of HIV test kits. The rate of transfers between sites remained high: **9,065** patients transferred between clinics (**23%** of the total **39,308** new ART clinic registrations).

Among all new registrations **32%** were males and **68%** females. **7,974 (30%)** of all females were pregnant and **7,754 (97%)** of these were started under ***Option B+*** in WHO stage 1 or 2, independent of their CD4 count. **220** pregnant women (the remainder) were otherwise eligible for ART, either due to WHO stage 3 or 4 conditions or because of a CD4 count <350. An additional **2,689** women in WHO stage 1 or 2 were started because of breastfeeding, bringing the total

number of women started under ***Option B+*** [3] to **10,443**. The number of pregnant women started on ART is expected to further increase over the next few quarters.

A total of **20,979** patients started in WHO stage 1 or 2 and **10,074 (48%)** of these due to a CD4 count below 350. This is only a slight increase from the previous quarter (9,669) and a further increase is expected over the next quarters through the roll out of the Pre-ART program and the scheduled monitoring of CD4 counts in these patients. **15,484 (40%)** of patients registered started in WHO stage 3 and **2,390 (6%)** started in stage 4.

3,150 children were registered in Q3 2012. **289** of these were registered under the policy of universal ART for children aged 12-23 months in WHO stage 1 or 2, independent of CD4 count. This is a 36% increase from the previous quarter and probably due to expansion of scheduled testing in the HIV exposed child follow-up program. The number of children with presumed severe HIV disease continued to decline slightly from 186 in Q2 to **178** in Q3 2012 and the number of infants in WHO stage 1 or 2 who started due to confirmed HIV infection through DNA-PCR decreased further from 165 in Q2 to **155** in Q3 2012. Early paediatric ART access has remained below targets, but this decline may also be due to reduced transmission rates: considering that 8,700 HIV exposed infants were identified at maternity and assuming a 2% transmission rate among the 93% of HIV positive mothers at maternity who received ART[4], only about 175 of these infants may have been infected perinatally during Q3 2012.

1,975 (5%) out of all ART clinic registrations were patients with TB: **1,346 (3%)** had a current and **629 (2%)** a recent history of TB. **492 (1%)** of patients registered had Kaposi's sarcoma.

14.2 Cumulative ART Registrations up to September 2012

By the end of September, there were a cumulative total of **657,188** clinic registrations, representing **535,502 (81%)** patients who newly initiated ART and **117,910 (18%)** ART patients who transferred between clinics. **3,776** (1%) out of all clinic registrations were patients who re-initiated ART after treatment interruption. Out of all registrations, **37**% were males and **63**% were females, **91**% were adults and **9**% were children (<15 years). Private sector clinics accounted for **21,611** (3.3%) of total patient registrations.

14.3 ART Outcomes

391,338 patients were alive on ART by the end of September 2012. This number includes **4,401** patients who were assumed to be 'in transit' as of the 30th September 2012, based on the difference between **122,311** patients *transferred out* and **117,910** patients *transferred in* at the facilities around the country. This difference is explained by patients registered as a *transfer out* in the last 2 months of the quarter who have not yet arrived at their new site.

Out of the **535,502** patients ever initiated on ART, **391,338 (73%)** were retained alive on ART, **55,369 (10%)** were known to have died, **90,376 (17%)** were lost to follow-up and **2,187** (<1%) were known to have stopped ART. An estimated **356,823** adults and **34,515** children (<15 years) were alive on ART by the end of September 2012**.**

[3] Universal ART for all HIV infected pregnant and breastfeeding women in WHO stage 1 or 2, independent of CD4 count
[4] UNAIDS Reference Group on Estimates Modelling and Projections (2011). Working paper on mother-to-child-transmission rates for use in Spectrum. Geneva, UNAIDS.

Figure 3: Patients alive on ART in public and private sector clinics in Malawi

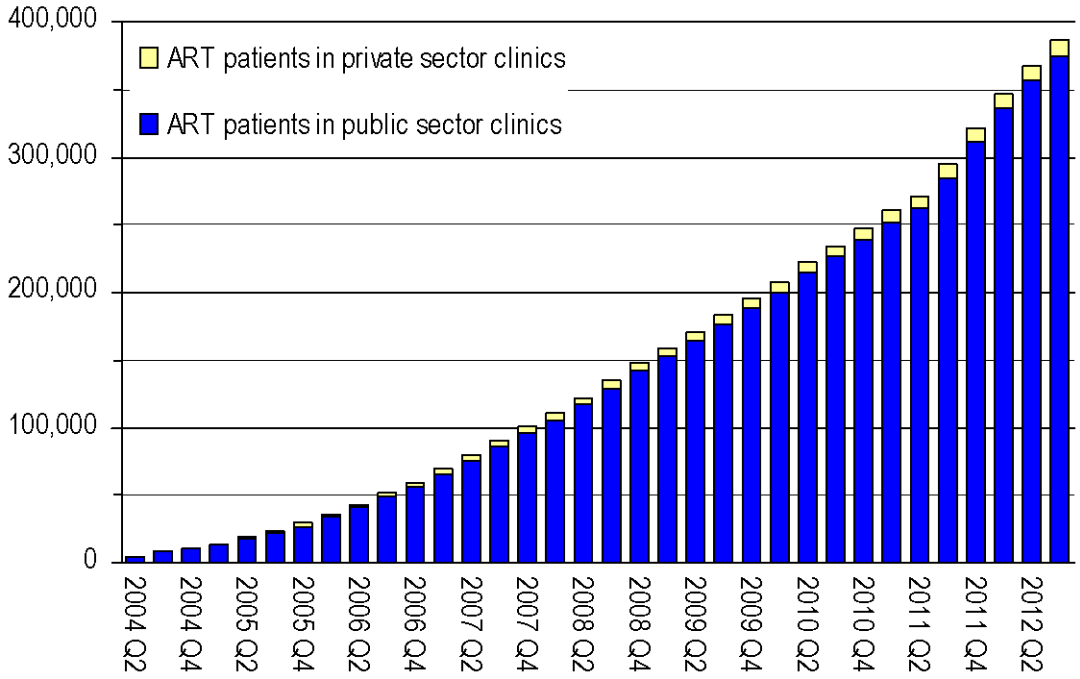


Figure 3 shows the increase of patients alive on ART by the end of each quarter. The number of patients alive on ART **increased by 21,902** in Q3 of 2012. This is similar to the growth observed in the previous quarter (21,453). The workload is expected to remain manageable due to the on-going decentralization to new sites.

Figure 4: 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)

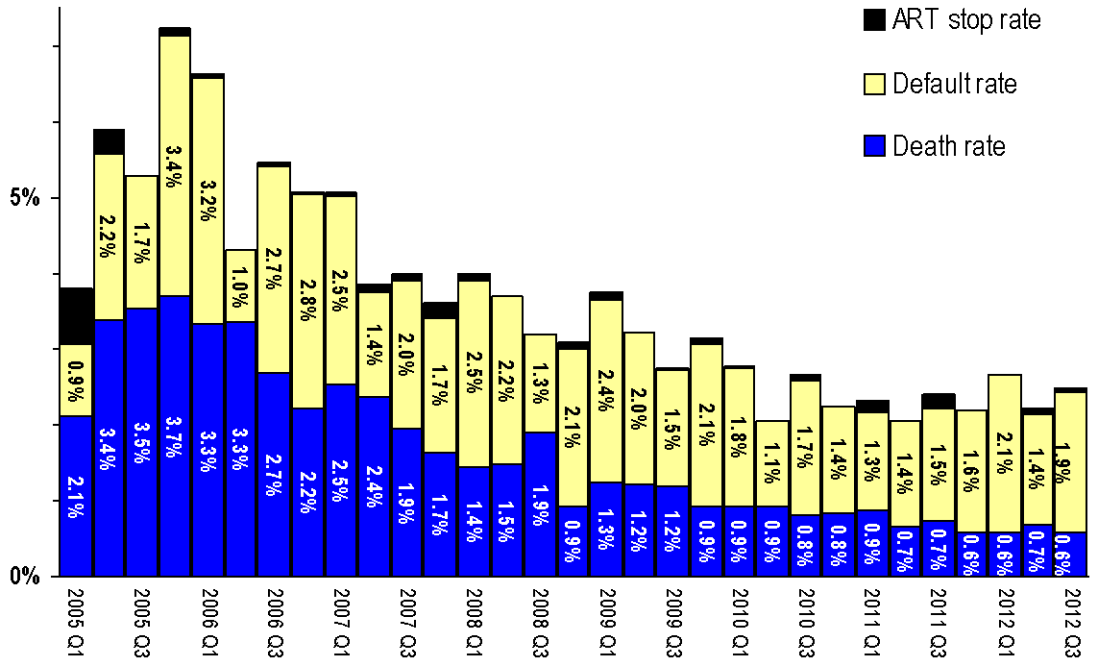


Figure 4 shows the considerable decrease of ART drop-out rates since the start of the national programme. During Q3 2012, there were **2,278** new deaths, **7,133** new defaulters, **181** new ART stops. This translates into a quarterly death rate of **0.6%** and a defaulter rate of **1.9%** among the patients alive and on treatment during this quarter. The default rate has increased from the previous quarter. Some of these patients have probably been misclassified as lost to follow-up

while they have transferred to another ART clinic without notifying their previous site. Based on previous operational studies, about half of the patients classified as lost to follow-up are thought to have died. By end of September 2012, a cumulative **55,369 (10%)** patients were known to have died **90,376 (17%)** were lost to follow-up and **2,187** (**<1%**) were known to have **stopped ART.**

Figure 5: Patients starting ART in WHO stage 4 and deaths in the first 3 months after ART initiation. (Shown as proportions among new patients registered each quarter)

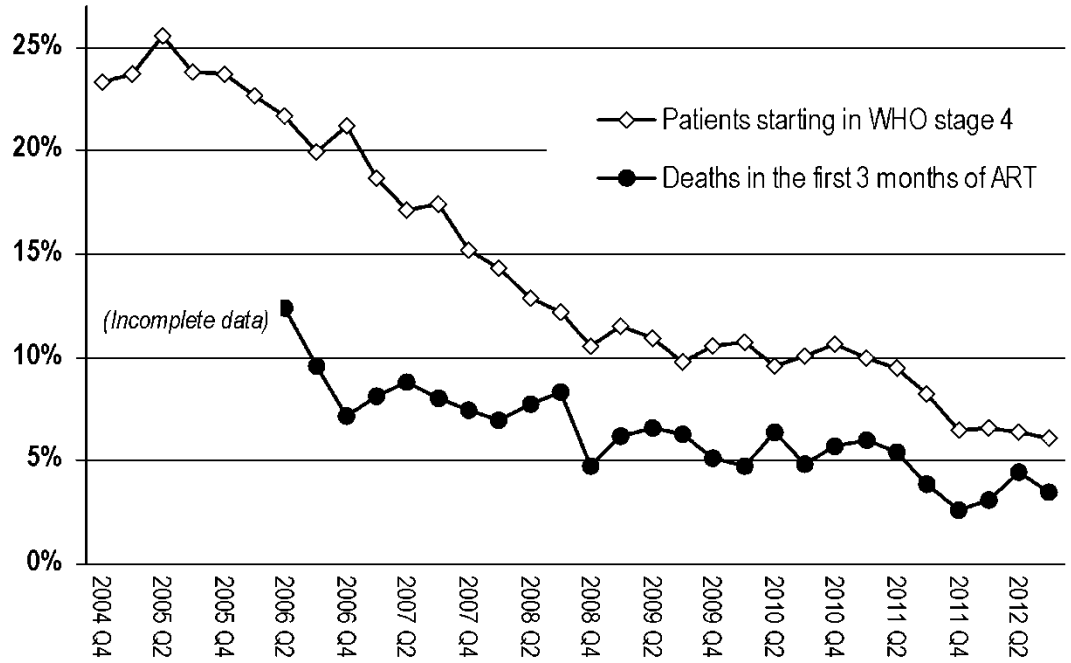


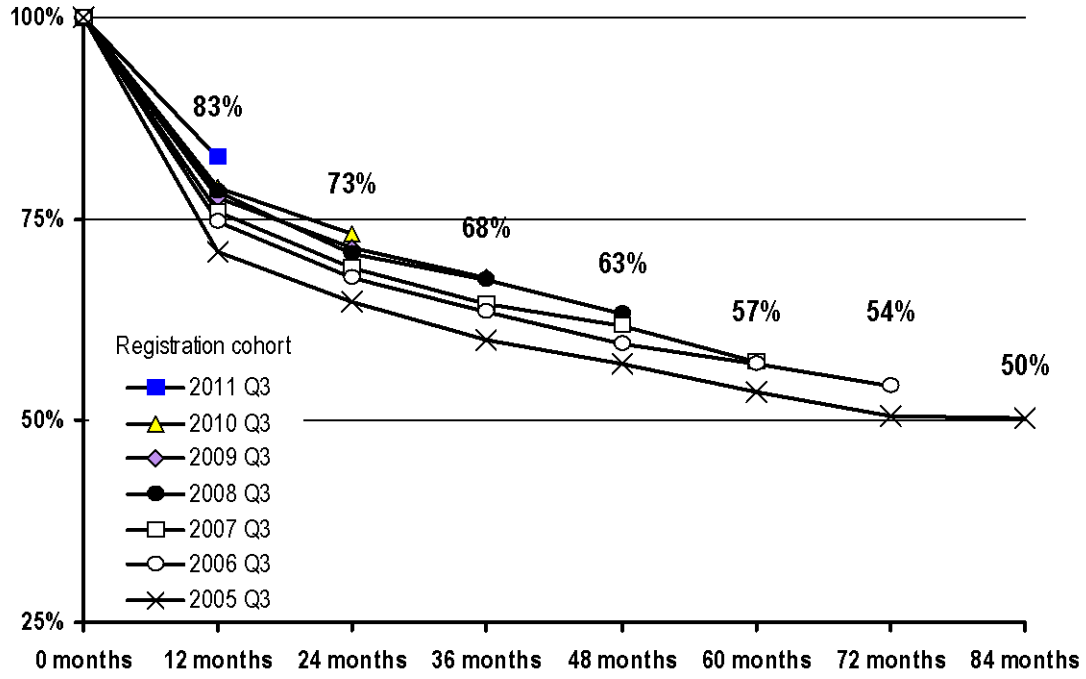
Figure 5 shows the considerable decline in **early mortality** since the start of the program. In Q2 of 2006 11% of new patients died within the first 3 months after ART initiation. There has been a remarkable decline in early mortality and the lowest point thus far was reached in Q4 2011. The decrease in early mortality is probably mainly due to earlier ART initiation (patients in WHO stage 2 with a CD4 count below the threshold or in stage 3). It correlates well with the decline in the proportion of patients starting ART in WHO clinical stage 4 from 25% in 2005 Q2 to **3.4%** in Q3 2012. Slight fluctuations in the calculated early mortality rates are mainly due to inconsistencies in the classification of month of death at the sites with electronic patient record systems. The 2011 guidelines are expected to further reduce early mortality, as more patients will be started in WHO stage 1 and 2 (universal ART for HIV infected pregnant and breastfeeding women and children under 2 years).

At the time of publication of this report, revised epidemiological projections for the population in need of ART (based on the changed eligibility criteria) were not available and estimates for ART population coverage are therefore not presented.

14.3.1 ART Cohort Survival Analysis

A 12, 24, 36, 48, 60, 72 and 84-month **'cohort outcome survival analysis'** was conducted for patients registered in Q3 of 2005, 2006, 2007, 2008, 2009, 2010 and 2011, respectively. A separate 12-month cohort outcome analysis was conducted for children who were under 15 years at the time of ART initiation and who registered for ART in Q3 2011. For the second time, a further subgroup analysis was done for women who started ART under ***Option B+*** during Q1 2012. **83% of adults** and **84% of children** were retained alive on ART after 12 months on treatment. This is a considerable increase for adults and for children from the previous quarter and close to the WHO target of 85%. **Figure 6** shows the continuous improvement of long-term treatment outcomes over time. **57%** and **50%** of patients registered 5 and 7 years ago had been retained alive on ART.

Figure 6: Group cohort survival analysis: Proportion of patients retained alive on ART 12, 24, 36, 48 60, 72 and 84 months after ART initiation



6-month group cohort survival outcomes were known for **10,273** (88%) of the 11,701 women registered as having started ART under *Option B+* in Q1 2012[5]. This number represents 548 (5%) women who transferred out and are therefore double counted and **9,725 (95%)** patients not transferred. **8,025 (83%)** of these were retained at 6 months after registration. **1,593 (94%)** of those not retained were lost to follow-up, **31 (2%)** were known to have stopped ART and **76 (4%)** were known to have died.

12-month group cohort survival outcomes were known for **3,264** women registered as having started ART under *Option B+* in Q3 2011[6]. This number represents **315 (10%)** women who transferred out and are therefore double counted and **2,949 (90%)** patients not transferred. **2,267 (77%)** of these were retained at 12 months after registration. **639 (94%)** of those not retained were lost to follow-up, **19 (3%)** were known to have stopped ART and **24 (4%)** were known to have died.

The majority of women classified as lost to follow-up are likely to have stopped/ interrupted ART, but others are likely to have transferred to another facility without notifying the previous site and the actual proportion retained on ART may be higher than reported. The 6-month retention rate is

[5] Group cohort survival analyses were not available from some sites running electronic data systems.
[6] This number exceeds by 23 the number of women registered in Q3 2012 under Option B+, indicating a small degree of incompleteness or errors in the classification of reason for starting in the original report.

identical to the previous quarter. 77% of the very first cohort of women started under *Option B+* was retained after 12 months. These are satisfactory results. Most of the women lost to follow-up failed to return after their first visit and many of these may have never actually started ART due to inadequate counselling and preparation in the initial phase of implementation. The program is examining the different modes of delivery closely to further improve uptake and retention on *Option B+*.

6 month survival OptionB+

Survival and retention in ART program *

ART cohort registration group outcomes

Total ART clinic registrations	10,273	100%
Transfers out (double counted)	548	5%
Total not transferred out (patients in cohort)	9,725	95%
Total alive on ART	8,025	83%
Total not retained	1,700	17%
Defaulted	1,593	94%
Stopped ART	31	2%
Died	76	4%

12 month survival OptionB+

Survival and retention in ART program *

ART cohort registration group outcomes

Total ART clinic registrations	3,264	100%
Transfers out (double counted)	315	10%
Total not transferred out (patients in cohort)	2,949	90%
Total alive on ART	2,267	77%
Total not retained	682	23%
Defaulted	639	94%
Stopped ART	19	3%
Died	24	4%

14.3.2 Secondary outcomes of patients retained on ART

Secondary outcomes are known for the **386,937** patients alive on ART who remained at their sites at end of the quarter. They are assumed to be similar for the 4,401 patients *in transit*.

ART Regimens

383,938 (99%) of patients were on first line and **2,323 (1%)** were on second line regimens; **676 (<1%)** 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, **21,184 (6%)** were on paediatric formulations and **19,896 (94%)** of these were on the new standard first line for children (regimen 2P: AZT/3TC/NVP).

263,560 (73%) of **362,754** patients on adult formulation first line regimen were on regimen 1A (stavudine / lamivudine / nevirapine); **27,543 (8%)** were on regimen 2A (zidovudine / lamivudine / nevirapine), which is the main alternative regimen for patients with stavudine side-effects.

By the end of September 2012, **62,371 (17%)** of patients on adult first line were receiving regimen **5A** (tenofovir / lamivudine / efavirenz). The majority of these were new initiations under Option B+ or because of concurrent TB treatment. Only a minority were substituted to regimen 5A due to confirmed lipodystrophy or other severe ART side effects.

Adherence to ART

Pill counts and the number of missed doses were documented for **360,007 (93%)** out of all patients retained on ART and **312,822 (87%)** of these were classified as >95% adherent in Q3 2012. Manual estimation of adherence from pill counts is practically difficult and classification can be misleading. To improve on accuracy of adherence assessment, the ART program has switched to a direct evaluation of doses missed in 2010. Most ART sites are now recording this measure consistently and more plausible adherence levels are recorded with this method.

ART Side Effects

309,327 (80%) patients on ART had information on drug side effects documented at their last clinic visit before end of September 2012. **16,925 (5%)** of these had side-effects. This may be under-ascertainment of the true rate of drug side effects, as an assumed 20-25% of patients develop at least mild side effects on regimen 1 (stavudine / lamivudine / nevirapine). However, 27% of patients on first line regimen adult formulation are no longer on stavudine containing regimens, so a lower proportion of patients with side-effects is plausible. Malawi continues to increase access to alternative first line regimens for such patients, and those with severe lipodystrophy are now moved to regimen 5A (tenofovir / lamivudine / efavirenz).

15 TB / HIV Management

Approximately **86%** of HIV infected TB patients were receiving ART in Q3 2012. This estimate is based on the following triangulation of TB and ART program data:

TB Program Data: A total of **5,723** TB patients were registered during Q3 2012. Assuming an average HIV prevalence of 66% among TB patients, **3,815** TB patients were HIV positive and therefore in need of ART. Given that **1,775** TB patients registered were already on ART at the time of starting TB treatment, 3,815 – 1,775 = **2,040** TB patients needed to initiate ART.

ART Program Data: An estimated **1,493** patients[7] started ART with a current or recent episode of TB during Q3 2012. This is **73%** (1,493 of 2,040) of the TB patients who needed to start ART. This means that a total of 1,775 + 1,493 = **3,268** (**86%**) of the estimated 3,815 HIV infected TB patients were receiving ART in Q3 2012.

TB / ART program triangulation *

HIV-burden among TB patients (estimated)

HIV negative (est. 33%)	1,908	33%
HIV positive (est. 66%) in need of ART	3,815	67%
Not on ART	548	14%
Total on ART (coverage)	3,268	86%
Already on ART (TB prog)	1,775	54%
Started ART within 24m of TB diagnosis (ART prog)	1,493	46%
ART initiations with current TB (ART prog)	1,017	68%
ART initiations after recent TB (ART prog)	475	32%

16 STI Treatment

STI program reports remained incomplete and 5 out of 29 district-level reports could not be included in this quarterly report. The STI service data presented below are estimated to represent **83%** of the total national STI program outputs.

Detailed STI Program data are presented in the **Annex.**

16.1 STI Treatment Access and Coverage

Between July and September 2012, **34,915** STI clients were served at health facilities in Malawi, representing **35%** of the 98,600 expected quarterly STI cases in the population. Out of all clients, **13,761 (39%)** were male and **21,154 (61%)** were female. **2,976 (14%)** of female STI clients were pregnant. **23,120 (66%)** of clients were 25 years and above, **8,536 (24%)** were 20-24 years and **3,309 (10%)** were under 20 years old. Considering the estimated STI case burden in the population , access to STI clinics remained particularly low among under 20 year olds: **3,309 (19%)** of the expected 17,323 STI cases in this age group were seen at the health facilities during this quarter.

16.2 Client Type and STI History

27,581 (79%) of clients were index cases and **7,334 (21%)** were partners of index cases. **4,518 (62%)** of partners were asymptomatic. Considering that a total of **16,515** partner notification slips were issued, **44%** of those notified presented to the clinic. **26,288 (75%)** of clients presented with their first lifetime episode of STI, **5,507 (16%)** clients reported to have had an STI in over three months ago and **3,119 (9%)** 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.

[7] 23% of the 1,975 ART patients who were registered with a recent or current episode of TB at the time of ART initiation were assumed to be transfers and were subtracted to adjust for double-counting.

16.3 HIV Status

HIV status was ascertained for **20,077 (58%)** clients and **5,779 (29%)** of these were HIV positive. **1,214 (21%)** of positives were identified through a new test initiated at the STI clinic, while **5,134 (89%)** presented with a documented previous positive HIV test result. **3,189 (62%)** of clients with a previous positive HIV test result were on ART.

The rate of HIV status ascertainment remained low at STI clinics in Malawi. This is likely due to poor implementation of provider initiated testing and counselling, combined with weak back-referral systems which may lead to incomplete documentation of new HIV test results at the STI clinics. 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.

16.4 STI Syndromes

The most common syndrome was abnormal vaginal discharge (AVD) with **10,646 (28%)** cases. Similar to the previous quarter, balanitis, bubo, warts and neonatal conjunctivitis each accounted for 1 – 3% of cases.

17 Supply of HIV Program Commodities

All procurement of HIV commodities was conducted by the *Partnership for Supply Chain Management* through the Voluntary Pooled Procurement mechanism under the Global Fund. During Q3 2012, ARV medicines worth $4.7 million were received by the Central Medical Store Trust warehouse dedicated for HIV Program commodities. This included 3.6 months of stock (MOS) of Tenofovir/Lamuvidine/Efavirenz (Regimen 5A; 58% of the value of adult ARVs) and 2 MOS of Stavudine/Lamivudine/Nevirapine (Regimen 1A; 42% of the value of adult ARVs). An additional 2.2 MOS of the latter worth were delivered in October 2012. With this the program has over 5 months of stock of Regimen 1A at central level and approximately 3 MOS at facility level which will cover consumption period ending May 2013 with 2 months buffer.

In preparation for phase 2 of the first line regimen transition in the 2011 guidelines, the program updated the supply plan for HIV commodities to facilitate a smooth transition from the Stavudine based Regimen 1A to the Tenofovir based Regimen 5A. Orders totalling over 1.6 million tins (1 tin = supply for 1 patient for 1 month) of Tenofovir/Lamuvidine/Efavirenz (Regimen 5A) were confirmed with VPP. An additional PEPFAR donation for 0.5 Million tins was also confirmed during the same period. These will be delivered in Q1 and Q2 2013 as staggered shipments in time for the first line regimen transition from July 2013.

The scheduled quarterly distribution of HIV commodities (scheduled for September-October 2012) started with a delay on the 10th October 2012 and all 648 sites had received their supplies by 23rd November 2012. The distribution included all paediatric and adult formulation ARVs and other medicines for opportunistic infections such as Co-trimoxazole (equivalent to 800,000 doses of 60s) and Diflucan formulations. Both Determine and Unigold HIV test kits were also distributed to individual health facilities to enable the health facilities provide uninterrupted testing services.

Physical stock counts for ARVs and other medicines for HIV-related diseases were performed at all sites during the supervision visits in October 2012. **Table 6** shows the total medicine stocks found at the sites and the estimated consumption periods. Following the quarterly distribution cycle and maintaining a 2-month minimum stock level at the sites, stocks of the main adult and pediatric regimens were estimated to last until end of February 2013.

Minimum stocks of AZT/3TC 300/150mg are maintained at all sites for post-exposure prophylaxis (PEP) and the total stocks at the sites therefore far exceeds the actual consumption from patients using this regimen in alternative ART regimens or as PEP.

62,371 patients were on Regimen 5A, which was 1,055 (1.7%) less than projected in the procurement plan for the end of this quarter (63,426). This confirms that mid-term ART program projections have a high degree of accuracy. The national ART program forecast and quantification was updated in Q3 2012, based on the last 4 quarters of new program data since implementation of the 2011 guidelines.

Table 6: Total stocks of HIV program commodities at all sites visited during the 2012 Q3 supportive site supervision. Stock positions are from the date of the visit (between 1-4 weeks after the end of the quarter).

Inventory unit	Item	Total physical stock	Sites with any stock	Consumption per month *	Months of stock *
tins	ABC / 3TC 60 / 30mg tins (60 tabs)	**2,949**	**32**	759	3.9
	AZT / 3TC 60 / 30mg tins (60 tabs)	**15,731**	**570**	1,851	8.5
	AZT / 3TC 300 / 150mg tins (60 tabs)	**25,367**	**566**	1,640	15.5
	AZT / 3TC / NVP 60 / 30 / 50mg tins (60 tabs)	**216,883**	**608**	49,740	4.4
	AZT / 3TC / NVP 300 / 150 / 200mg tins (60 tabs	**180,474**	**580**	27,543	6.6
	d4T / 3TC 6 / 30mg tins (60 tabs)	**5,414**	**382**	350	15.5
	d4T / 3TC 30 / 150mg tins (15 tabs)	**35,805**	**601**	6,438	5.6
	d4T / 3TC 30 / 150mg tins (60 tabs)	**65,751**	**524**	7,419	8.9
	d4T / 3TC / NVP 6 / 30 / 50mg tins (60 tabs)	**42,601**	**412**	2,383	17.9
	d4T / 3TC / NVP 30 / 150 / 200mg tins (15 tabs)	**38,869**	**575**	6,438	6.0
	d4T / 3TC / NVP 30 / 150 / 200mg tins (60 tabs)	**843,827**	**615**	263,560	3.2
	EFV 200mg tins (90 tabs)	**5,822**	**133**	122	47.7
	EFV 600mg tins (30 tabs)	**28,156**	**376**	8,547	3.3
	LPV / r 100 / 25mg tins (60 tabs)	**2,876**	**32**	759	3.8
	LPV / r 200 / 50mg tins (120 tabs)	**13,460**	**82**	2,070	6.5
	NVP 200mg tins (60 tabs)	**18,345**	**150**	733	25.0
	TDF / 3TC 300 / 300mg tins (30 tabs)	**33,896**	**478**	2,519	13.5
	TDF / 3TC / EFV 300 / 300 / 600mg tins (30 tabs)	**208,902**	**625**	62,371	3.3
bottles	NVP 10mg/ml bottles (25 ml)	**108,248**	**603**	15,434	7.0
vials	Depo-Provera 150mg/1ml vials (1 each)	**503,100**	**375**		
	Bleomycine 15,000IU vials (1 each)	**4,299**	**26**		
	Ceftriaxone 1g vials (10 each)	**35,982**	**91**		
	Ganciclovir 250mg / ml vials (1 each)	**1,041**	**10**		
	Vincristine 1mg / 1ml vials (1 each)	**22,442**	**36**		
tabs	Aciclovir 400mg tins (500 tabs)	**2,450,375**	**339**		
	Ciprofloxacine 500mg blist packs (10 tabs)	**1,692,672**	**313**		
	Codeine 30mg tins (500 tabs)	**314,442**	**74**		
	Cotrimoxazole 100 / 20mg tins (100 tabs)	**4,737,918**	**363**	2,103,321	2.3
	Cotrimoxazole 400 / 80mg blist packs (60 tabs)	**1,004,667**	**48**	24,825,477	0.0
	Cotrimoxazole 400 / 80mg tins (1000 tabs)	**53,226,564**	**486**		
	Fluconazole (generic) 200mg tins (100 tabs)	**271,702**	**82**		
	Ibuprofen 200mg tins (100 tabs)	**1,756,316**	**248**		
	Isoniazid 100mg blist packs (100 tabs)	**692,927**	**409**		
	Isoniazid 300mg blist packs (672 tabs)	**4,686,385**	**550**	940,729	5.0
	Morphine 10mg blist packs (60 tabs)	**33,350**	**25**		
	Pyridoxine 25mg tins (100 tabs)	**307,412**	**171**		
sheets	Exposed child card (pink) bundles (100 sheets)	**46,759**	**513**		
	Pre-ART pat. card (green) bundles (100 sheets)	**90,606**	**532**		
	ART pat. card adult (yellow) bundles (100 sheets	**103,066**	**542**		
	ART pat. card paed. (blue) bundles (100 sheets)	**63,539**	**527**		
tests	Determine HIV1/2 boxes (100 each)	**237,777**	**365**		
	Uni-Gold HIV1/2 boxes (20 each)	**50,285**	**447**		
	SD Bioline HIV boxes (30 each)	**5,694**	**147**		
	Determine syphilis boxes (100 each)	**59,817**	**115**	52,207	1.1
	DBS kit (filter paper, lancet, etc.) bundles (20 ea	**19,380**	**284**		
pieces	Condoms male boxes (1 each)	**8,468,132**	**449**		
	Condoms female boxes (1 each)	**1,185,637**	**322**		

* 'Consumption per month' and 'Months of stock' are only estimated for commodities that are directly related to 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. '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.

18 Trainings and Mentoring

18.1 HIV Testing and Counselling

Between July and September 2012 **171** health workers were trained and certified in PITC; **33** new basic HTC counsellors were trained and certified; **17** new HTC trainers were trained.

18.2 PMTCT/ART

200 health workers were trained in the new integrated PMTCT/ART curriculum during Q3 2012 and **184** passed the final exam, bringing the total number re-trained in the 2011 guidelines to **4,839**. These trainings were a continuation of initial wave of trainings aimed to establish at least 2 staff at each facility, enabling them to start implementing the new guidelines. An additional **25** tutors from training institutions were trained in the new curriculum.

18.3 HIV Clinical Mentoring Program

92 (61%) out of the 149 facilities with HIV services in SE Zone were covered by the Clinical Mentoring Program during Q3 2012. A total of 626 health workers at these sites received mentoring (1 doctor; 54 clinical officers; 318 nurses; 118 medical assistants; 136 clerks/counsellors). **9 (8%)** sites were performing well and were graduated from the mentoring program during this quarter. The main challenge in all zones remains the lack of seed funding for stationary, fuel/vehicles and allowances, this is compounded by a high rate of staff turnover through transfers and in search of 'greener pastures'.

19 Participants in Q1 2012 ART Supervision

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

27th December 2012

20 Appendix (Full National HIV Program Data)

2012 Q3 HTC Report

			National coverage	
			Population denominator	
Total Number of Clients	579,509		3,772,503	15%
Gender and Pregnancy				
Males	192,290	33%	1,891,196	10%
Females	387,219	67%	1,881,306	21%
Females Non Pregnant	211,773	55%	1,274,306	17%
Females Pregnant	175,446	45%	151,750	116%
Age				
25 years and above	311,944	54%	1,256,106	25%
15 - 24 years	212,591	37%	789,500	27%
Children Below 15	49,274	9%	872,055	6%
18months - 14 years	38,458	78%	41,215	93%
Below 18months	10,816	22%	830,840	1%
HIV Test History				
Previously tested	353,266	61%		
Never tested before	226,243	39%		
Number of people ever tested since 2007	4,132,556			
Counselling Type				
Counseled with partner	95,232	16%		
Counseled alone	484,277	84%		
HIV Test Resuts				
Single test negative	532,185	92%		
First and second test negative	121	0%		
First and second test positive	45,864	8%		
First and second test discordant	1,469	3.1%		
Final Result				
No of children <18months with antibody positive	1,535	0.3%		
Positive	44,916	8%		
Negative	531,833	92%		
Inconclusive	1,195	0.2%		

HIV Care Clinic (HCC) cohort analysis

Malawi (national)

2012 Q3 (Quarter)

Registration details

*

HCC clinic registrations

Total HCC registrations	17,651	100%

Registration type

Patients enrolled first time	16,919	96%
Patients re-enrolled	49	0%
Patients transferred in	683	4%

Sex

Males (all ages)	7,685	44%
Females (all ages)	9,966	56%
Non-pregnant	9,817	99%
Pregnant	149	1%

Age at registration

Adults 15+ yrs	8,215	47%
Children 0-14 yrs	9,436	53%
Children 24 months - 14 years	1,091	12%
Children below 24 months (exposed children)	8,345	88%
Children 2 - below 24 months	4,567	55%
Infants below 2 months	3,778	45%

Reason for HCC registration

Exposed infants	8,490	48%
Confirmed infected patients (pre-ART)	9,161	52%

* Subgroups may not add to 100% due to rounding

HIV Care Clinic (HCC) cohort analysis

Malawi (national)

2012 Q3 (Cumulative)

Registration details

*

HCC clinic registrations

Total HCC registrations	150,862	100%

Registration type

Patients enrolled first time	146,566	97%
Patients re-enrolled	349	0%
Patients transferred in	3,947	3%

Sex

Males (all ages)	58,812	39%
Females (all ages)	92,050	61%
Non-pregnant	87,571	95%
Pregnant	4,479	5%

Age at registration

Adults 15+ yrs	93,515	62%
Children 0-14 yrs	57,347	38%
Children 24 months - 14 years	8,917	16%
Children below 24 months (exposed children)	48,430	84%
Children 2 - below 24 months	30,001	62%
Infants below 2 months	18,429	38%

Reason for HCC registration

Exposed infants	47,681	32%
Confirmed infected patients (pre-ART)	103,181	68%

Pre-ART follow-up outcome

*

Primary follow-up outcomes

Total retained in pre-ART	35,265	37%
Started ART	25,825	27%
Defaulted	28,110	30%
Died	5,360	6%

Transfers between sites

Total not transferred out	94,581	92%
Transferred out	8,600	8%

* Subgroups may not add to 100% due to rounding

HIV exposed child follow-up

Malawi (national)

2012 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	5,269	100%

CPT status

On CPT	4,229	80%
Not on CPT	1,040	20%

HIV status

Current HIV infection status unknown	4,478	85%
HIV infection not confirmed, not ART eligible	4,472	100%
HIV infection not confirmed, ART eligible (PSHD)	6	0%
Current HIV infection status known	791	15%
Confirmed not infected	773	98%
Confirmed infected (ART eligible)	18	2%

ART eligibility summary

Not eligible for ART	5,245	100%
ART eligible	24	0%
ART not initiated	5	21%
Initiated ART	19	79%

Primary follow-up outcome

Discharged uninfected	8	0%
Continue follow-up	4,712	90%
Started ART	19	0%
Defaulted	465	9%
Died	15	0%

Transfers between sites

Total not transferred out	5,219	99%
Transferred out	50	1%

Age 12 months

Age cohort outcomes

*

Total children in birth cohort

Total children registered	3,920	100%

CPT status

On CPT	2,760	70%
Not on CPT	1,160	30%

HIV status

Current HIV infection status unknown	3,211	82%
HIV infection not confirmed, not ART eligible	3,182	99%
HIV infection not confirmed, ART eligible (PSHD)	29	1%
Current HIV infection status known	709	18%
Confirmed not infected	623	88%
Confirmed infected (ART eligible)	86	12%

* Subgroups may not add to 100% due to rounding

Age cohort outcomes *

ART eligibility summary

Not eligible for ART	3,805	97%
ART eligible	115	3%
ART not initiated	18	16%
Initiated ART	97	84%

Primary follow-up outcome

Discharged uninfected	17	0%
Continue follow-up	2,790	72%
Started ART	97	2%
Defaulted	953	25%
Died	24	1%

Transfers between sites

Total not transferred out	3,881	99%
Transferred out	39	1%

Age 24 months

Age cohort outcomes *

Total children in birth cohort

Total children registered	1,225	100%

CPT status

On CPT	425	35%
Not on CPT	800	65%

HIV status

Current HIV infection status unknown	563	46%
HIV infection not confirmed, not ART eligible	546	97%
HIV infection not confirmed, ART eligible (PSHD)	17	3%
Current HIV infection status known	662	54%
Confirmed not infected	592	89%
Confirmed infected (ART eligible)	70	11%

ART eligibility summary

Not eligible for ART	1,138	93%
ART eligible	87	7%
ART not initiated	28	32%
Initiated ART	59	68%

Primary follow-up outcome

Discharged uninfected	487	41%
Continue follow-up	255	21%
Started ART	59	5%
Defaulted	368	31%
Died	27	2%

Transfers between sites

Total not transferred out	1,196	98%
Transferred out	29	2%

Antenatal Care

Malawi (national)

2012 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	165,164	100%

ANC cohort analysis *

Total women completing ANC in the reporting period

Total women in booking cohort	156,778	100%

Visits per woman

Women with 1 visit	35,586	23%
Women with 2 visits	41,601	27%
Women with 3 visits	46,163	29%
Women with 4 visits	27,290	17%
Women with 5+ visits	6,138	4%

Trimester of first visit

Started ANC 0-12 wks	13,737	9%
Started ANC 13+ wks	143,041	91%

Pre-eclampsia

No pre-eclampsia	154,131	98%
Pre-eclampsia	2,647	2%

TTV doses

0-1 TTV doses	68,589	44%
2+ TTV doses	88,189	56%

SP tablets

0 SP doses	66,251	42%
1 SP dose (1 x 3 tabs)	48,651	31%
6+ SP tablets (2 x 3 tabs)	41,876	27%

FeFo tablets

0-119 FeFo tablets	144,195	92%
120+ FeFo tablets	12,583	8%

Albendazole (Deworming)

0 Albend. doses	89,801	61%
1 Albend. dose	58,508	39%

ITN (bednets)

No ITN	91,561	62%
ITN received	57,035	38%

Syphilis status

Not tested for syphilis		133,406	85%
Tested for syphilis		23,372	15%
	Syphilis negative	22,317	95%
	Syphilis positive	1,055	5%

* Subgroups may not add to 100% due to rounding

Antenatal Care

Malawi (national)

2012 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

ANC cohort analysis

*

HIV status ascertainment

HIV status not ascertained	37,191	24%
HIV status ascertained	119,587	76%
Valid previous test result	9,127	8%
Previous negative	5,631	62%
Previous positive	3,496	38%
New test at ANC	110,460	92%
New negative	104,119	94%
New positive	6,341	6%

HIV status summary

Total women HIV negative	109,750	92%
Total women HIV positive	9,837	8%

CPT status (among HIV pos)

Not on CPT	1,283	13%
On CPT	8,554	87%

Final PMTCT regimen mother

No ARVs	1,295	13%
Any ARVs	8,542	87%
ART (by time of initiation)	8,542	100%
Already on ART when starting ANC	2,614	31%
Started ART at 0-27 weeks of pregnancy	4,283	50%
Started ART at 28+ weeks of preg.	1,645	19%

Baby's ARVs dispensed

No ARVs dispensed for infant	5,915	60%
ARVs dispensed for infant	3,922	40%

* Subgroups may not add to 100% due to rounding

Maternity

Malawi (national)

2012 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)	131,779	100%
Not referred to other site (total women)	124,844	95%
Referred out before delivery (multiple admissions)	6,935	5%

HIV status ascertainment

HIV status not ascertained	17,682	13%
HIV status ascertained	114,897	87%
Valid previous test result	108,514	94%
Previous negative	99,475	92%
Previous positive	9,039	8%
New test at maternity	6,383	6%
New negative	5,931	93%
New positive	452	7%

HIV status summary

Total women HIV negative	105,406	92%
Total women HIV positive	9,491	8%

ARVs during pregnancy (among HIV pos)

None	647	7%
Any ARVs	8,844	93%
ART (by time of initiation)	8,844	100%
ART initiated before pregnancy	3,342	38%
ART initiated in 1st / 2nd trimester	2,605	29%
ART initiated in 3rd trimester	2,265	26%
ART initiated during labour	632	7%

Obstetric complications

None	118,091	89%
Any complications	14,488	11%
Haemorrhage	2,614	18%
Haemorrhage ante-partum	819	31%
Haemorrhage post-partum	1,795	69%
Obstr / prol labour	4,898	34%
(pre-) Eclampsia	990	7%
Maternal sepsis	138	1%
Ruptured uterus	189	1%
Other	5,659	39%

Emergency obstetric care

Oxytocin	98,339	95%
Anticonvulsive	520	1%
Antibiotics	4,198	4%
Blood transfusion	259	0%
Manual removal of placenta	214	0%

Vitamin A

Vit A not given	41,549	31%
Vit A given	91,030	69%

* Subgroups may not add to 100% due to rounding

Maternity

Malawi (national)

2012 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Maternal details

*

Staff conducting delivery

Category A: MO, CO, nurse/midwife, MA	119,367	95%
Category B: PA, WA, HSA	1,249	1%
Category C: Other	5,028	4%

Mother survival

Mother alive	131,708	100%
Mother died	115	0%

Infant details

*

Single babies / multiple deliveries

Total babies delivered	128,267	100%
Single babies	123,126	96%
Twin / multiple babies	5,141	4%

Delivery place

Total deliveries at a health facility	122,883	96%
This facility	122,490	100%
Other facility	393	0%
Total deliveries before reaching the facility	5,384	4%
In transit	3,281	61%
Home / TBA	2,103	39%

Delivery mode

Spontaneous vaginal	116,726	91%
Vacuum extraction	1,718	1%
Breech	2,486	2%
Caesarean section	7,337	6%

Infant complications

None	114,063	89%
Total infants with complications	14,204	11%
Prematurity	3,615	25%
Weight less 2500g	4,534	32%
Asphyxia	3,658	26%
Sepsis	720	5%
Other newborn complication	1,677	12%

Infant survival

Total live births	125,908	98%
Discharged alive	124,705	99%
Neonatal deaths	1,203	1%
Stillbirths	2,359	2%
Stillbirth, fresh	1,284	54%
Stillbirth, macerated	1,075	46%

Maternity

Malawi (national)

2012 Q3 (1st month of quarter, 2nd month of quarter, 3rd month of quarter)

Infant details

*

HIV exposure / ARV proph. (among discharged alive)

Infants with unknown HIV exposure status	15,137	12%
Infants with known HIV exposure status	109,568	88%
Not HIV exposed	100,868	92%
HIV exposed	8,700	8%
Received no ARVs	591	7%
Received ARVs	8,109	93%
Nevirapine	8,109	100%

Breastfeeding initiated

BF not started within 60min	9,406	7%
BF started within 60min	118,861	93%

Tetracycline eye ointment given

TO not given	50,540	39%
TO given	77,727	61%

* Subgroups may not add to 100% due to rounding

ART cohort analysis

Malawi (national)

2012 Q3 (Quarter)

Registration details

*

ART clinic registrations

Total ART clinic registrations	39,308	100%

Registration type

First time ART initiations (total patients)	29,707	76%
ART re-initiations	536	1%
ART transfers in	9,065	23%

Sex

Males	12,475	32%
Females	26,833	68%
Non-pregnant	18,859	70%
Pregnant	7,974	30%

Age at ART initiation

Adults 15+ yrs	36,158	92%
Children 0-14 yrs	3,150	8%
Children 2-14 yrs	2,305	73%
Children below 24 mths	845	27%

Reason for starting ART

Presumed severe HIV Disease	178	0%
Confirmed HIV infection	39,130	100%
WHO stage 1 or 2	20,979	54%
Total lymphocytes <threshold	18	0%
CD4 below threshold	10,074	48%
CD4 unknown or >threshold	10,887	52%
PCR infants	155	1%
Children 12-23 mths	289	3%
Pregnant women	7,754	71%
Breastfeeding mothers	2,689	25%
WHO stage 3	15,484	40%
WHO stage 4	2,390	6%
Unknown / reason outside of guidelines	277	1%

TB at ART initiation

Never TB / TB > 24 months ago	37,333	95%
TB within the last 24 months	629	2%
Current episode of TB	1,346	3%

Kaposi's sarcoma at ART initiation

No KS	38,816	99%
Patients with KS	492	1%

* Subgroups may not add to 100% due to rounding

ART cohort analysis

Malawi (national)

2012 Q3 (Cumulative)

Registration details

*

ART clinic registrations

Total ART clinic registrations	657,188	100%

Registration type

First time ART initiations (total patients)	535,502	81%
ART re-initiations	3,776	1%
ART transfers in	117,910	18%

Sex

Males	241,443	37%
Females	415,745	63%
Non-pregnant	366,777	88%
Pregnant	48,968	12%

Age at ART initiation

Adults 15+ yrs	599,226	91%
Children 0-14 yrs	57,962	9%
Children 2-14 yrs	45,378	78%
Children below 24 mths	12,584	22%

Reason for starting ART

Presumed severe HIV Disease	2,430	0%
Confirmed HIV infection	654,758	100%
WHO stage 1 or 2	223,856	34%
Total lymphocytes <threshold	659	0%
CD4 below threshold	171,233	76%
CD4 unknown or >threshold	51,964	23%
PCR infants	2,051	4%
Children 12-23 mths	1,580	3%
Pregnant women	30,536	59%
Breastfeeding mothers	17,797	34%
WHO stage 3	344,297	53%
WHO stage 4	80,094	12%
Unknown / reason outside of guidelines	6,511	1%

TB at ART initiation

Never TB / TB > 24 months ago	597,855	91%
TB within the last 24 months	35,669	5%
Current episode of TB	23,664	4%

Kaposi's sarcoma at ART initiation

No KS	641,238	98%
Patients with KS	15,950	2%

ART cohort analysis

Malawi (national)

2012 Q3 (Cumulative)

ART outcomes

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Primary follow-up outcomes

Total alive on ART	391,338	73%
Alive on ART at site of last registration	386,937	99%
ART patients in transit between sites	4,401	1%
Defaulted	90,376	17%
Stopped ART	2,187	0%
Total died	55,369	10%
Died month 1	15,178	27%
Died month 2	9,863	18%
Died month 3	5,533	10%
Died month 4+	24,795	45%

Transfers between sites

Total not transferred out	534,877	81%
Transferred out	122,311	19%

ART regimens

First line regimens	383,938	99%
Adult formulation	362,754	94%
Regimen 1A	263,560	73%
Regimen 2A	27,543	8%
Regimen 3A	7,419	2%
Regimen 4A	1,128	0%
Regimen 5A	62,371	17%
Regimen 6A	733	0%
Paed. formulation	21,184	6%
Regimen 1P	953	4%
Regimen 2P	19,896	94%
Regimen 3P	140	1%
Regimen 4P	195	1%
Second line regimens	2,323	1%
Adult formulation	2,070	89%
Regimen 7A	1,786	86%
Regimen 8A	284	14%
Paed. Formulation	253	11%
Regimen 9P	253	100%
Other regimen (adult / paed)	676	0%

Adherence

Adherence not recorded	26,930	7%
Adherence recorded	360,007	93%
0-6 doses missed	312,822	87%
7+ doses missed	47,185	13%

ART side effects

Side effects not recorded	77,610	20%
Side effects recorded	309,327	80%
No side effects	292,402	95%
Any side effects	16,925	5%

ART cohort analysis

Malawi (national)

2012 Q3 (Cumulative)

ART outcomes

*

ICF (current TB status among ART patients)

Intensified case finding not done	33,581	9%
Intensified case finding done	353,356	91%
TB not suspected	349,695	99%
TB suspected	1,626	0%
TB confirmed	2,035	1%
TB confirmed, not on treatment	363	18%
TB confirmed, on TB treatment	1,672	82%