



**Government of Malawi  
Ministry of Health**

**Quarterly HIV Programme Report**

*HIV Testing and Counseling*

*Prevention of Mother to Child Transmission*

*Antiretroviral Therapy*

*Treatment of Sexually Transmitted Infections*

**October – December 2010**

# MALAWI HIV TESTING AND COUNSELLING PROGRAMME

## QUARTERLY REPORT

### OCTOBER TO DECEMBER 2010

#### **1 People Tested and Counsellled for HIV**

370,604 people were reported to have been tested and counsellled between October and December 2010. This represents a 17% decline from the previous quarter. Stock-out of test kits were the main cause for this decline. Out of the total number tested, 202,934 (55%) accessed HTC for the first time in their life; 54,376 (15%) attended HTC with their partner; 44,026 (12%) of tests were positive.

123,606 (33%) of those tested were males and 131,846 (36%) were non-pregnant females. Testing of pregnant women contributed 115,152 (31%). The distribution by gender and pregnancy status was similar in the previous quarter. 190,813 (51%) of people tested were 25 years or above, 155,132 (42%) were 15-24 years and only 26,095 (7%) were children under 15 years.

A total of 3,096,780 people have accessed HTC in Malawi since introduction of the current M&E tools in July 2007. This is determined from the cumulative number of people testing for the first time, which eliminates multiple counting of people coming for repeat testing.

#### **2 HTC sites**

772 static HTC sites were operating and reporting data in Q4 2010. This number will be verified during the HTC supportive supervision in Q4. Data from mobile, door to door, and outreach HTC services are reported through static HTC sites and are included in this report.

#### **3 Provider Initiated HIV Testing and Counselling (PITC)**

A group of master trainers and senior experienced counsellors finalised the PITC training participant and trainer's manuals in this quarter.

#### **4 Development of Human Resource Capacity**

Between July and September, 196 participants successfully completed HTC site counsellors training. Cumulatively, there are 4,766 certified site counselors. NGOs and other implementing partners supported the trainings.

The HIV & AIDS Department supervised 8 out of the 12 site counsellors' trainings that took place using a standardized tool. It was observed that HTC trainers are facilitating in vernacular languages to enable the participants understand the materials. However the failure rate of counsellors still remains high at 11% (15% in the previous quarter).

#### **5 HIV Test Kits Supply System**

Most districts in the country reported stock outs of test kits during this quarter, leading to missed opportunities for HIV testing between November and December 2010. This is reflected in the decline in the number of people tested during the quarter. Despite the new HIV test kit supply chain management that showed success stories during the previous quarter, delays in shipping and ordering posed a challenge to the system.

## **6 Challenges**

- Frequent / persistent stock out of test kits is negatively affecting all HIV programs implementation.

## **7 Way Forward**

- The Pharmaceutical Unit in collaboration with the HIV & AIDS Department should strengthen efforts to facilitate the timely ordering and shipment of test kits to ensure uninterrupted availability of test kits at all sites.

## **8 HTC Supportive Supervision**

Selected sites in all districts were supervised in Q4 by teams from the national level. The health zones and district based HTC supervisors participated in the supportive supervision in their respective zones and districts. The areas for focus were:

- Availability of test kits and stock levels
- Infrastructure
- Availability of certified counselors
- Ensuring compliance with HTC protocols
- Ensuring infection prevention measures were being followed
- Ensuring proper documentation in HTC registers
- Ensuring timely quarterly reporting of district HTC data, i.e. by 21<sup>st</sup> day of month following the end of the quarter

## 2010 Q4 HTC Report

## National coverage

			Population denominator	
<b>Total Number of Clients</b>	<b>370,604</b>		3,772,503	10%
<b>Gender and Pregnancy</b>				
Males	123,606	33%	1,891,196	7%
Females	246,998	67%	1,881,306	13%
Non Pregnant	131,846	53%	1,274,306	10%
Pregnant	115,152	47%	151,750	76%
<b>Age</b>				
25 years and above	190,813	51%	1,256,106	15%
15 - 24 years	155,132	42%	789,500	20%
Children under 15 years	26,095	7%	872,055	3%
18months - 14 years	20,907	80%	41,215	51%
Below 18months	5,188	20%	830,840	1%
<b>HIV Test History</b>				
Previously tested	202,934	55%		
Never tested before	167,670	45%		
Number of people ever tested since 2007	167,670	45%		
<b>Counselling Type</b>				
Counseled with partner	54,376	15%		
Counseled alone	316,228	85%		
<b>HIV Test Results</b>				
Single test negative	326,203	88%		
First and second test negative	1,360	0%		
First and second test positive	44,026	12%		
First and second test discordant	1,214	0%		
<b>Final Result</b>				
Children <18months with HIV antibodies	686	0%		
Positive	43,677	12%		
Negative	328,261	89%		
Inconclusive	216	0%		
<b>Referrals (multiple possible)</b>				
ARVs	31,734			
TB	1,583			
PMTCT	12,777			
Other	9,211			

# MALAWI PMTCT PROGRAMME QUARTERLY REPORT

## OCTOBER TO DECEMBER 2010

### 1 Executive Summary

Between October and December 2010, **7,209 (79%)** of 9,083 women attending ANC who were known to be HIV positive received ARVs. This represents **40% PMTCT coverage** among the estimated 18,210 <sup>1</sup> HIV positive pregnant women in Malawi during this quarter. **7,021 (93%)** of infants born to known HIV infected mothers at maternity received ARV prophylaxis. This represents **39% PMTCT coverage** among the estimated 18,210 HIV exposed infants born in Malawi during this quarter.

The national data from ANC and maternity are presented in 2 tables in the appendix.

### 2 Methods

New standard M&E tools for ANC and maternity were implemented in Malawi in January 2010. These tools consist of a set of clinic registers and reporting forms that fully integrate patient management information as well as all relevant data elements for M&E of the maternal and child health and PMTCT programs. The new 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 new system aggregates women's outcome data after they have completed their ANC visits. While this ensures that each woman is counted only once in each clinic, the system is still prone to a small degree of double-counting caused by women who access multiple clinics in the course of one pregnancy.

This is the second quarterly cohort report using the new tools. The report is based on the outcomes of the cohort of women who **started ANC between April and June 2010** and who **concluded their ANC visits before end of December 2010**. This cohort report therefore covers the services that these women received in the course of all of their ANC visits between April and December 2010.

Data were recorded for each patient visit in the facility paper register. Monthly facility reports were generated by facility staff and compiled into quarterly reports at the district health offices. Unlike the previous quarterly report, this report is based on passively reported data and no centrally coordinated active support was given to facilities. This has resulted in some incomplete reporting and the data in this report represent about 80% of the expected monthly facility reports. Nsanje District failed to report any data during this quarter due to an industrial dispute and an ensuing disruption in health services. Mzimba South failed to submit maternity data. All available data were compiled in an Excel spreadsheet at the Department for HIV and AIDS.

Data from ANC and maternity are collated and presented separately in this report. This is done because fewer women attend maternity than ANC and because it is practically impossible to link, collate and remove the overlap between ANC and maternity records of individual women for national reporting.

Coverage was estimated by dividing the number of patients served by the population in need of the respective service. Population denominators were derived from the expected number of HIV negative and positive pregnant women per quarter in Malawi, based on demographic and epidemiological projections. However, this denominator may not be a true representation of the actual population accessing the health facilities, particularly in the border districts.

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<sup>1</sup> Population denominators do not include patients from neighbouring countries accessing Malawian health facilities. In this report, the number of women attending ANC has for the first time exceeded the estimated number of pregnant women. (See Methods)

## 3 Results

### 3.1 PMTCT Sites

The number of facilities providing PMTCT services in the quarter is defined through reported performance of *PMTCT signal functions* within maternal and child health services. The actual number of PMTCT sites is not available due to incomplete reporting in this quarter, but it is thought to be unchanged from the previous quarter (491).

### 3.2 ANC

132,703 women were in the cohort that started ANC between April and June 2010 and that completed their ANC visits by December 2010. This is equivalent to **87%** of the expected 151,750 pregnant women in the population per quarter, which is below the expected 97% of pregnant women who attend ANC in Malawi (2010 DHS). This is likely explained by the underreporting within the districts due to passive reporting used in this quarter in contrast with the active reporting used in the previous quarters.

12,407 (9%) of women started ANC in their first trimester. The total number of visits for the cohort under review is 337,834. Only 28,885 (21%) of women attained the minimum 4 focussed ANC visits.

20,315 (15%) of women were tested for syphilis at ANC and 815 (4%) were syphilis positive. This proportion is higher than the expected syphilis prevalence among pregnant women (<1% ANC Surveillance Survey 2007). This is probably related to the limited availability of syphilis test kits at the facilities that may have prompted health workers to prioritise syphilis testing in women with specific risk factors.

#### 3.2.1 HIV Testing

95,764 (72%) of 132,703 ANC attendees had their HIV status ascertained. This represents a small decline from the previous quarter (75%) which was probably caused by stock-outs of HIV test kits. Out of all women with ascertained HIV status, 8,377 (9%) presented with a valid documented previous HIV test result and 87,387 (91%) received a new HIV test result at ANC. A total of 9,083 (9%) women were HIV positive. This is lower than the expected 12% HIV prevalence at ANC and this is likely due to suboptimal sensitivity of HIV testing in high volume service provision settings.

The 95,764 women whose HIV status was ascertained at ANC represent 63% of the expected 151,750 pregnant women in the population.

#### 3.2.2 ARV Coverage

7,209 (79%) of HIV infected women attending ANC received maternal ARVs. This represents 40% coverage of the estimated 18,210 HIV positive pregnant women in the population in this quarter. This is a substantial decrease from the 51% reported in the previous quarter and is probably related to incomplete reporting.

Of the 7,209 women who received any ARVs, 2,550 (35%) were given a single tablet of nevirapine to take home and 2,421 (34%) were started on AZT combination regimen.

5,391 (59%) of 9,083 HIV positive women were assessed for ART eligibility through a CD4 count and/or WHO clinical staging, or by the fact that they were already on ART. At the end of ANC follow-up, 2,234 (41%) were found ART eligible and 2,238 were on ART. This represents 25% ART coverage among the estimated 9,105 pregnant women eligible for ART in the population.<sup>2</sup>

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<sup>2</sup> About half all HIV positive pregnant women in Malawi are estimated to have a CD4 count <350 cells/mm<sup>3</sup> and are therefore eligible for ART.

8,110 (89%) of HIV infected women at ANC were on Cotrimoxazole Preventive Therapy.

469 (5%) of HIV infected women attending ANC received the infant dose of ARVs (single dose nevirapine syrup) to take home, this is a decline from the previous quarter's 10%, likely explained by incomplete reporting.

### **3.3 Maternity**

Between October and December 2010, **94,683** women attended maternity. This is equivalent to **62%** of the expected 151,750 deliveries in the population during the quarter. Out of all **100,476** admissions (including referrals to other facilities before delivery), **92,243 (89%)** delivered at a health facility, while 10,860 (**11%**) had already delivered before reaching the facility. This is equivalent to **61%** of estimated deliveries in Malawi occurring at health facilities, which is lower than the 72% of estimated hospital deliveries in the 2010 DHS and lower than the 71% reported in the previous quarter (likely due to incomplete reporting). A total of **88,966 (94%)** of deliveries were conducted by skilled medical staff, **1,429 (2%)** by paramedical staff and **4,288 (5%)** were not attended by any of the above (probably mainly among women who delivered before reaching the facility). **9,312 (9%)** of women developed obstetric complications. The most common leading complications were obstructed / prolonged labour (**2,686 cases, 29%**) and haemorrhage (**1,781 cases, 19%**). **94,474 (>99%)** of women were discharged alive and **209 (<1%)** women died before discharge, which is equivalent to a maternal mortality ratio of 220 per 100,000 live births among women attending maternity.

A total of **96,593** babies were born, **93,365 (97%)** were singletons and **3,228 (3%)** were twins/multiples. There were **94,877 (98%)** live births and **1,816 (2%)** stillbirths. **93,900 (99%)** of babies born alive were discharged alive and **977 (1%)** died before discharge.

#### **3.3.1 HIV Testing**

**87,928 (88%)** women had their HIV status ascertained at maternity. Out of these, **83,200 (95%)** presented with a valid previous HIV test result and **4,728 (5%)** received a new HIV test result. A total of **7,976 (9%)** women were HIV positive and **79,952 (91%)** were negative. The **87,928** women whose HIV status was ascertained at maternity represent **58%** of the expected 151,750 women delivering in the population.

HIV exposure status was ascertained for **83,783 (89%)** out of 93,900 babies born and discharged alive. **7,558 (9%)** were born to a known HIV positive mother.

#### **3.3.2 ARV Coverage**

A total of **6,754 (85%)** of HIV infected women attending maternity received ARVs during labour, which represents an increase from **80%** in the previous quarter. Out of these, **3,193 (47%)** received the labour dose of AZT combination regimen, **1,583 (23%)** received single dose nevirapine and **1,978 (29%)** were on ART. The proportion of women on AZT combination regimen during labour has increased considerably from the previous (23%) to the current quarter (47%), while single dose nevirapine has decreased from 41% to 23%. This shows the successful continued roll-out of combination regimen at more sites. **5,258 (66%)** of HIV positive women were taking ARVs already during pregnancy: **3,023 (57%)** of these were on AZT combination regimen and **2,235 (43%)** were on ART (lifelong triple therapy). AZT and ART should be taken for more than 4 weeks during pregnancy to ensure optimal effectiveness. **2,027 (67%)** of women on AZT and **1,942 (87%)** of women on ART had received the respective regimen for over 4 weeks during pregnancy.

A total of **7,021 (93%)** of infants who were known HIV exposed and discharged alive received ARV prophylaxis at maternity, an increase from last quarter's 87%. This represents **39% coverage** of the estimated 18,210 HIV exposed infants born in the population in this quarter. **1,605 (23%)** HIV exposed infants received single dose nevirapine and **5,416 (77%)** started AZT combination regimen, an increase from 67% in the last quarter. **3,561 (66%)** of infants on AZT combination regimen received nevirapine + AZT syrup and **1,855 (33%)** received only AZT syrup.

## 4 Trainings

A total of 26 health workers attended the basic PMTCT training in Nkhatabay. Countrywide, a total of 564 PMTCT providers received further training in combination regimen and Early Infant Diagnosis (EID). 24 experienced providers drawn from all 5 zones were trained in supervision in order to increase the national pool of supervisors.

## 5 Comments

This is the second quarterly cohort report for ANC services in Malawi. The improved reporting method has generated data of high completeness and accuracy, largely eliminating previous problems of multiple counting and omission of services received during subsequent visits. As expected, the reporting of women's final status at the end of ANC has led to an increase in the reported number women with ascertained HIV status (63% to 67%), those assessed for ART eligibility (57% to 63%) and those tested for syphilis (10% to 15%).

However, intermittent stock-outs of HIV and syphilis rapid test kits and ARVs continue to result in sub-optimal PMTCT coverage recorded during this quarter.

Inadequate PMTCT coverage at the population level may also be explained by the cascading losses of women in need of PMTCT when accessing services (women in the population > those attending MCH services > those getting HIV tested > those receiving ARVs). This is a main constraint for PMTCT interventions delivered at maternity due to the relatively low rate of facility deliveries in Malawi.

Consistently, the proportion of HIV positive women at ANC (9%) and maternity (9%) is lower than the estimated HIV prevalence among pregnant women (12%). There are 2 plausible explanations for this: 1) HIV positive women were less likely to attend ANC and / or have their HIV status ascertained; 2) sub-optimal sensitivity of HIV rapid testing at ANC. Quality assurance methods for HIV testing are currently being strengthened to address these concerns.

MOH with its partners is working to improve on these service delivery bottlenecks in order to address the situation. A major improvement of PMTCT coverage and impact is expected from the implementation of universal ART for HIV infected pregnant and breast feeding women which is scheduled to start mid 2011.



## 2010 Q4 ANC Report

## National coverage

Total women attending first ANC (Oct - Dec2010)	130,276		Population denominator	151,750	86%	<i>PMTCT 5</i>
Total women attending first ANC (April - June 2010)	132,703			151,750	87%	
Total number of ANC visits (April-June 2010)	337,834					
<b>Distribution of women by number of visits</b>						
Women with 1 visit	31,810	24%				
Women with 2 visits	34,270	26%				
Women with 3 visits	37,738	28%				
Women with 4 visits	23,065	17%				
Women with 5 or more visits	5,820	4%				
<b>Trimester of first visit</b>						
First visits at 0-12 weeks	12,407	9%	151,750		8%	
First visits at >12 weeks	120,296	91%	151,750		79%	
<b>(Pre-) Eclampsia</b>						
No	128,051	96%				
Yes	4,652	4%				
<b>TTV doses</b>						
0-1	53,352	40%				
2 or more	79,351	60%				
<b>SP doses received</b>						
0-1	52,909	40%				
2 or more	79,794	60%				
<b>Iron and folate tablets received</b>						
0-119 tabs	96,214	73%				
120 or more tabs	36,489	27%				
<b>Syphilis status</b>						
Total women not tested for syphilis	112,388	85%				
Total women tested for syphilis	20,315	15%	151,750		13%	
Syphilis negative	19,500	96%				
Syphilis positive	815	4%				
<b>HIV status</b>						
Total women with unknown HIV status	36,939	28%				
Total women with ascertained HIV status	95,764	72%	151,750		63%	
Total women with valid previous test result	8,377	9%				<i>PMTCT 6</i>
Negative	5,597	67%				
Positive	2,780	33%				<i>PMTCT 7</i>
Total women newly tested at ANC	87,387	91%				<i>PMTCT 8</i>
Negative	81,084	93%				
Positive	6,303	7%				<i>PMTCT 9</i>
Total women HIV negative	86,681	91%	133,540		65%	
Total women HIV positive	9,083	9%	18,210		50%	<i>PMTCT 10</i>
<b>ART eligibility among HIV positive women</b>						
Total women with unknown ART eligibility	3,692	41%	18,210		20%	
Total women assessed for ART eligibility	5,391	59%	18,210		30%	<i>PMTCT 11</i>
ART not eligible	3,157	59%				
ART eligible	2,234	41%				<i>PMTCT 12</i>
<b>CPT coverage among HIV infected women</b>						
Not on CPT	973	11%				
On CPT	8,110	89%				<i>PMTCT 17</i>
<b>ARV regimen among HIV infected women</b>						
Total women receiving no ARVs	1,874	21%	18,210		10%	
Total women receiving ARVs	7,209	79%	18,210		40%	<i>PMTCT 16</i>
ART (1)	2,238	31%	9,105		25%	<i>PMTCT 13</i>
Single dose NVP	2,550	35%				<i>PMTCT 14</i>
AZT combination regimen	2,421	34%				<i>PMTCT 15</i>
<b>ARVs dispensed for infant dose</b>						
ARVs not dispensed	8,614	95%				
ARVs dispensed	469	5%				<i>PMTCT 18</i>

(1) National coverage is calculated for 50% of HIV infected pregnant women as 50% of the HIV infected are assumed to have a CD4 count <350 and are therefore eligible for ART

# 2010 Q4 Maternity Report (Page 1)

	Facility Data	National coverage		Indicator
		Population denominator		
Total women attending Labour & Delivery	94,683	151,750	62%	PMTCT 19
Total admissions to Labour & Delivery (1)	100,476			
<b>HIV status</b>				
Total women with unknown HIV status	12,548			
Total women with ascertained HIV status	87,928	151,750	58%	
<u>Total women with valid previous result</u>	83,200			PMTCT 20
Negative	75,756			
Positive	7,444			PMTCT 21
<u>Total women newly tested at maternity</u>	4,728			PMTCT 22
Negative	4,196			
Positive	532			PMTCT 23
Total women HIV negative	79,952	133,540	60%	
Total women HIV positive	7,976	18,210	44%	PMTCT 24
<b>ARVs during pregnancy among HIV positives</b>				
Total women receiving no ARVs	2,718			
Total women receiving ARVs	5,258	18,210	29%	
<u>AZT combination regimen</u>	3,023			
AZT <4 weeks	996	18,210	5%	
AZT ≥4 weeks	2,027	18,210	11%	
<u>ART (triple therapy)</u>	2,235			
ART <4weeks	293	18,210	2%	
ART ≥4 weeks	1,942	18,210	11%	
<b>ARVs received during labour among HIV positives</b>				
Total women receiving no ARVs	1,222			
Total women receiving ARVs	6,754	18,210	37%	PMTCT 28
ART	1,978	18,210	11%	PMTCT 27
Single dose NVP	1,583	18,210	9%	PMTCT 25
AZT combination regimen	3,193	18,210	18%	PMTCT 26
<b>Obstetric complications</b>				
Total women with no complications	91,164			
Total women with complications	9,312			
Haemorrhage	1,781			
Obstructed / prolonged labour	2,686			
(pre-) Eclampsia	607			
Maternal sepsis	136			
Ruptured uterus	137			
Other maternal complications	3,965			
<b>Referred out before delivery</b>				
No	94,683			
Yes	5,793			
<b>Staff conducting delivery</b>				
MO, CO, nurse/midwife, MA	88,966	151,750	59%	
PA, WA, HSA	1,429			
Other	4,288			
<b>Mother survival</b>				
Discharged alive	94,474			
Died	209	94,877	220	MMR (2)

(1) Total admissions are subject to double counting of women referred out before delivery

(2) Maternal mortality ratio for facility deliveries (per 100,000 live births)

# 2010 Q4 Maternity Report (Page 2)

Facility Data National coverage *Indicator*

Twins					
Total babies born	96,593				
Singleton babies	93,365	97%			
Twin / multiple babies	3,228	3%			
Delivery place					
Total deliveries at a health facility	92,243	89%	151,750	61%	
This facility	91,644	99%			
Other facility	599	1%			
Total deliveries before reaching the facility	10,860	11%			
In transit	8,951	82%			
Home / TBA	1,909	18%			
Delivery mode					
Spontaneous vaginal	88,115	91%			
Vacuum extraction	1,338	1%			
Breech	2,067	2%			
Caesarean section	5,073	5%	151,750	3%	
Infant complications					
Total infants with no complications	86,576	90%			
Total infants with complications	10,017	10%			
Prematurity	3,147	31%			
Low birth weight (<2500g)	2,780	28%			
Asphyxia	2,114	21%			
Newborn sepsis	613	6%			
Other infant complications	1,363	14%			
Infant survival					
Total live births	94,877	98%			
Discharged alive	93,900	99%			
Neonatal deaths	977	1%			
Stillbirths	1,816	2%			
Fresh	1,040	57%			
Macerated	776	43%			
Infant HIV exposure and ARV prophylaxis					
Infants with unknown HIV exposure status	10,117	11%			
Infants with known HIV exposure status	83,783	89%			
Infants not HIV exposed	76,225	91%			
Infants HIV exposed	7,558	9%	18,210	42%	PMTCT 29
Received no ARVs	537	7%			
Received any ARVs	7,021	93%	18,210	39%	PMTCT 32
Single dose NVP	1,605	23%	18,210	9%	PMTCT 30
AZT prophylaxis	5,416	77%	18,210	30%	PMTCT 31
Started AZT + sd NVP	3,561	66%	18,210	20%	
Started AZT only	1,855	34%	18,210	10%	
Breast feeding initiated					
No	5,193	6%			
Yes	88,707	94%			

# Malawi Antiretroviral Treatment Programme

## QUARTERLY REPORT

### Results up to 31<sup>st</sup> December 2010

#### Executive Summary

By the end of December 2010, **250,987** patients were alive and on ART in Malawi, equivalent to **63%** coverage of the estimated population in need of ART. There were **417** ART clinics (**295** static clinics and **122** outreach / mobile clinics).

Out of the **345,598** patients ever initiated on ART, **250,987** (73%) were retained alive on ART, **40,211** (12%) had died, **53,281** (15%) were lost to follow-up (defaulted) and **1,350** (<1%) were known to have stopped ART. **81%** of adults and **75%** of children were retained alive on ART 12 months after ART initiation. An estimated **228,478** adults and **22,509** children (<15 years) were alive on ART by the end of December 2010.

In the fourth quarter of 2010 (October to December) a total of **18,366** new patients initiated ART. **4,414** ART patients transferred between clinics (19% of the total **22,835** new ART clinic registrations). Among new registrations 40% were male, 60% female; 90% were adults and 10% children.

The number of infants starting ART in the fourth quarter of 2010 in WHO stage 1 or 2 with confirmed HIV infection (DNA-PCR) increased slightly at **141** (previous **105**), while children under 18 months starting due to presumed severe HIV disease increased from **153** to **165**.

The delayed release of funds in 2009 has continued to affect the supply chain for ARVs during quarter 4, 2010, as emergency procurement drugs continued to arrive late and in small batches, requiring several rounds of distribution and re-location of remaining stocks as well as excess stocks of triomune. The scheduled June consignment only started to arrive in October 2010. However, 2 emergency orders, procured from 'cost savings' with UNICEF arrived between June and September 2010. As of September 2010, total ARV stocks in country and in pipeline are estimated to last until mid 2011. This has led to a disjoint in stocks between the ARV's and the other HIV commodities necessitating adjustments in the next order.

In June 2010, MOH management endorsed a change in PMTCT and ART and infant feeding policy. The National policy guidelines based on the new recommendations have been developed and approved by MOH. Work on the new guidelines/curriculum development continues and implementation is scheduled from July 2011.

**Table 1: ART programme December 2003- December 2010 (public and private sector)**

	Dec 2003	Dec 2004	Dec 2005	Dec 2006	Dec 2007	Dec 2008	Dec 2009	Dec 2010
ART sites	9	24	83	141	163	221	377	417
Patients alive on ART	No data	10,761	29,087	59,980	100,649	147,497	198,846	250,987
Coverage of pop. in need of ART <sup>1</sup>	No Data	3%	9%	17%	28%	41%	53%	63%
New ART registrations in year	No Data	10,183	25,634	46,351	61,688	76,581	88,126	88,813
Patients ever initiated on ART (cumulative)	~3000	12,848	35,621	75,503	129,276	200,901	271,105	345,598

<sup>1</sup> ART need defined by CD4<250 cells/mm<sup>3</sup>

## Methods

This report includes quarterly data from all patients who registered at ART clinics in Malawi between October and December 2010 and cumulative data from all patients who ever registered up to 31<sup>st</sup> December 2010.

All health facilities with static ART clinics in the public and private sectors were visited during Jan / Feb 2011. Data collected covered all 295 static and 122 outreach / mobile ART sites. The majority of facilities were using the standard national monitoring & evaluation tools (paper-based or electronic data system); some NGO supported sites were using custom tools compatible with the national standard reporting requirements.

**30 ART supervisors** (MOH Department of HIV and AIDS staff, experienced ART clinic staff from the districts, MBCA and NGO partners) in 10 teams spent a total of **700 working hours** at the sites, each visit lasting an average of 2 ½ hours, but up to 2 full days at the busiest sites. Structured supervision included:

- Quality assessment of service provision
- M&E data verification
- Drug stock-level assessment
- Patient chart review, clinical mentoring for irregular/complex cases

M&E data were collected from the patient master cards and the ART Registers. Much effort was made to ensure that registration data and treatment outcomes (particularly death and defaulter) were correct, and we believe that outcomes are accurately represented in this report. Certificates were awarded to clinic teams with excellent performance during the previous supervision visit.

All data were entered into an MS Access database at the Department for HIV and AIDS. ART coverage was calculated from ART program data and epidemiological projections for the population in need of ART. Projections were based on HIV prevalence using standard epidemiological modelling software (EPP and Spectrum) and assuming ART eligibility from a CD4 count <250 cells/mm<sup>3</sup>.

## Results

National data for quarterly and cumulative ART data are summarized in 2 tables in **Annex 1**.

### Access to ART

By the end of December 2010 there were **295 static ART sites** in Malawi, owned by government, mission, NGOs and the private sector. Out of these **58** were ART facilities in the private sector, charging a nominal MK500 per monthly prescription of drugs per patient.

### New patients registered between October and December 2010

In Q4 2010, there were a total of 22,835 ART clinic registrations, representing **18,366** (80%) patients who newly initiated ART and 4,414 (19%) ART patients who transferred between clinics. Out of all clinic registrations, 40% were males and 60% were females, 90% were adults and 10% were children (<15 years). The majority of patients (**53%**) started ART in WHO Stage 3. The proportion of patients starting in Stage 1 or 2 with a low CD4 count (**34%**) has remained similar to the previous quarter (35%), as well as those starting in WHO stage 4 (**10%**).

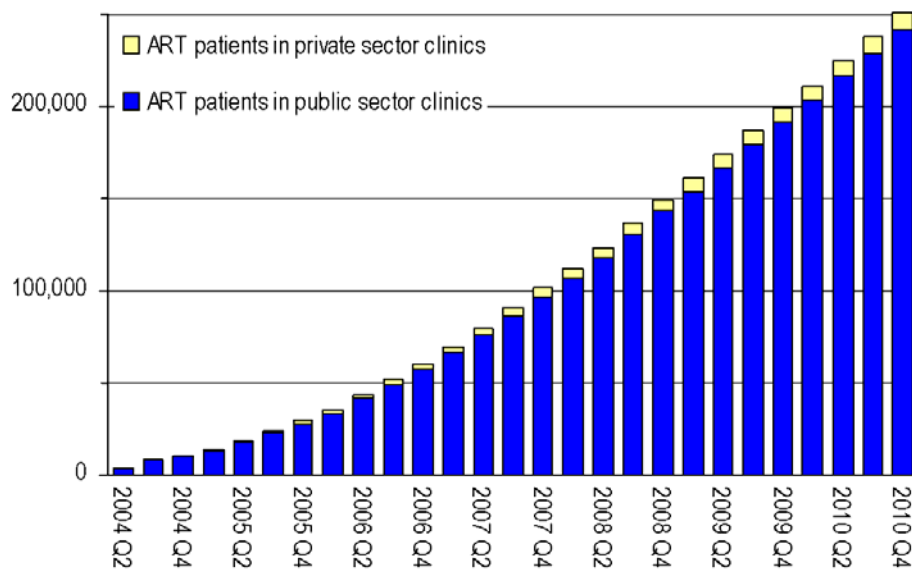
Out of **434** children under 18 months of age who started ART, **141**(46%) were infants in WHO stage 1 or 2 with confirmed HIV infection (previous **105**) (DNA-PCR, policy of universal ART for infected infants); **165** (previous **153**) were initiated as presumed severe HIV disease; and **128** started in WHO stage 3 or 4. **1,242** (**5%**) of patients registered during Q4, 2010 were pregnant women (at the time of ART initiation).

## Cumulative patients ever registered up to December 2010

By the end of December 2010, there were a cumulative total of **406,453** clinic registrations, representing **345,598** (85%) patients who newly initiated ART and **60,624** (15%) ART patients, who transferred between clinics. Out of all clinic registrations, 39% were males and 61% were females, 91% were adults and 9% were children (<15 years). Private sector clinics accounted for **15,683** (3.9%) of total patient registrations.

## Treatment Outcomes

**Figure 1: Patients alive on ART in public and private sector clinics in Malawi**



By the end of December 2010, a total of **250,987** patients were alive on ART. This number includes 3,827 patients who were assumed to be 'in transit' as of the 31<sup>st</sup> December 2010, based on the difference between 64,451 patients *transferred out* and 60,624 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 by the end of the quarter.

**Figure 1** shows the increase of patients alive on ART by the end of each quarter. The number of patients alive on ART increased by **13,366** in Q4 of 2010. This growth has been very consistent over time allowing for reliable forecasting and quantification.

Implementation of revised PMTCT and ART guidelines in 2011 is expected to gradually accelerate ART access, putting more strain on human and financial resources.

**Table 2:**

ART coverage among adults and children in the 5 Zones. Proportion of the population in need of ART who were alive on ART at the end of 2010 Q4 (ART need based on SPECTRUM projection CD4<250)

Zone	Adults (15 yrs and older)			Children (<15 years)			All ages		
	ART need	On ART	Cov.	ART need	On ART	Cov.	ART need	On ART	Cov.
<b>N</b>	25,832	25,594	<b>99%</b>	6,193	2,407	<b>39%</b>	32,025	28,001	<b>87%</b>
<b>CW</b>	67,558	50,666	<b>75%</b>	16,198	5,139	<b>32%</b>	83,756	55,805	<b>67%</b>
<b>CE</b>	20,210	21,354	<b>106%</b>	4,845	1,791	<b>37%</b>	25,055	23,145	<b>92%</b>
<b>SW</b>	100,677	81,129	<b>81%</b>	24,138	8,232	<b>34%</b>	124,815	89,361	<b>72%</b>
<b>SE</b>	108,522	49,725	<b>46%</b>	26,019	4,950	<b>19%</b>	134,541	54,675	<b>41%</b>
<b>Nat. Total</b>	322,799	228,468	<b>71%</b>	77,393	22,519	<b>29%</b>	400,192	250,987	<b>63%</b>

**Table 2** shows the **national ART coverage** at the end of December 2010: 250,987 (63%) of 400,192 population in need were on ART. Coverage by geographical zone was inversely related to the absolute population in need of ART: 23,145 (92%) of 25,055 people in need of ART in the **Central East Zone** were on ART, while only 54,675 (41%) of 134,541

people in the **South East Zone** were covered. Coverage among children and adults was **29%** and **71%**, respectively, a slight increase from the previous quarter. The average population in need per ART site was **627** in the **Northern** and **2,446** in the **South East Zone**. This is likely the main reason for the difference in ART coverage. MOH are addressing this situation by accelerating the opening of new ART sites in the CW, SW and SE zone. The high estimated coverage in the Central East and Northern Zone may be due to patients who are

regular residents elsewhere, but who are accessing ART in these zones (for confidentiality, as migrant workers, patients from neighbouring countries, etc.).

**Figure 2:** ART coverage by Zone. Proportion of the population in need of ART who were alive on ART at the end of the quarter (ART need based on SPECTRUM projection CD4<250)

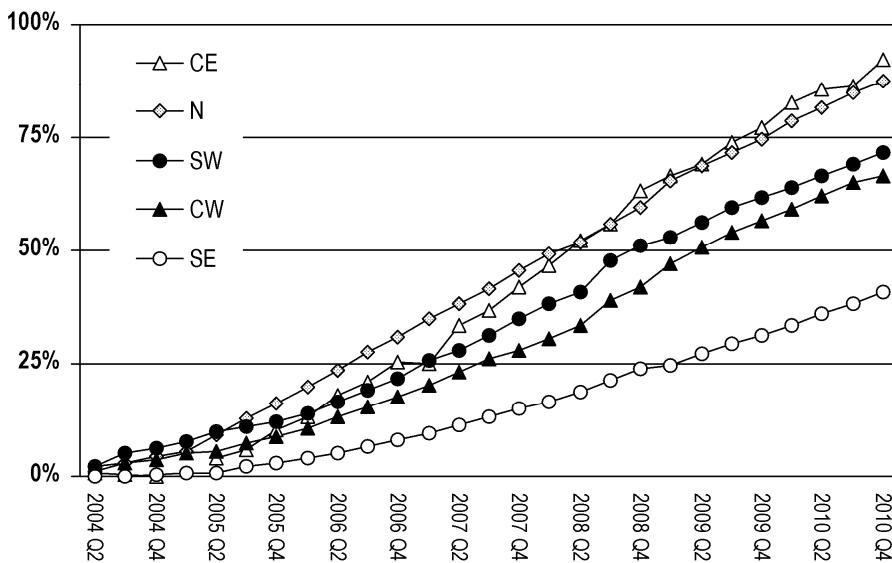


Figure 2 shows that ART coverage has increased much faster in the Central East and Northern Zone than in the South East Zone. There is an indication that the increase in coverage in the Central West and South West Zones may have started to slow down.

**Figure 3: 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)

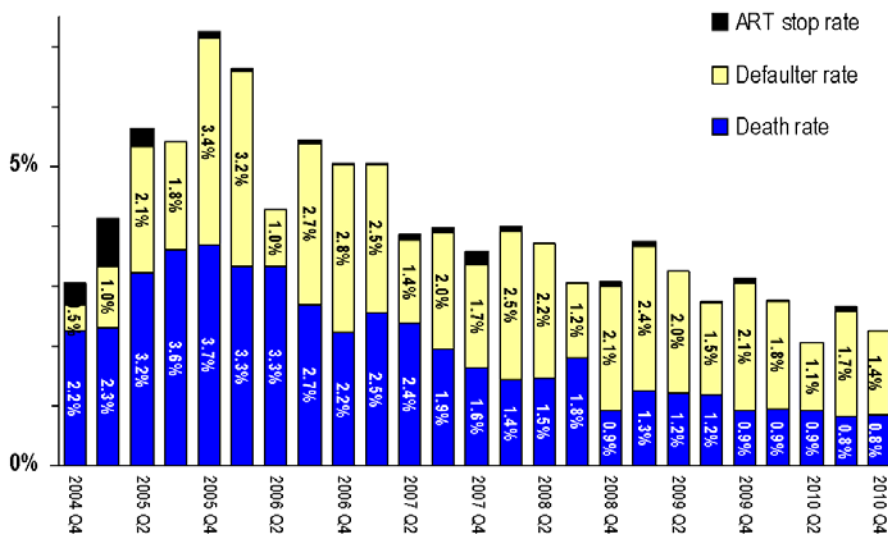
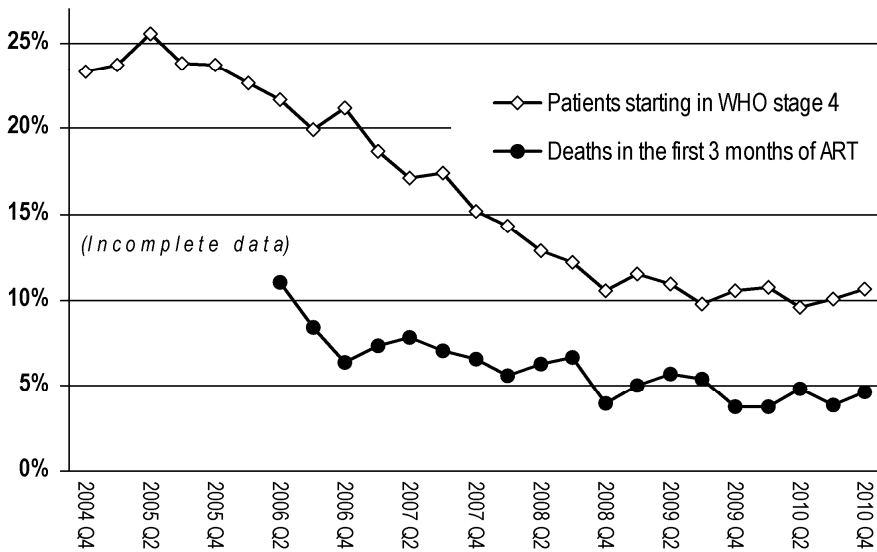


Figure 3 shows the general steady decrease of death and defaulter rates since the start of the national programme. During Q4 2010, there were 2,146 new deaths, 3,534 new defaulters, no new ART stops and 55 new ART re-initiations. This translates into a quarterly death rate of 0.8% and a defaulter rate of 1.4% among the patients alive and on treatment during this quarter. By end of December 2010, a cumulative 40,211 (12%) patients were known to have died, 53,281 (15%) were lost to follow-up, and

1,350 (<1%) were known to have stopped ART. Based on previous operational studies, about half of the patients classified as lost to follow-up are thought to have died. The misclassification of the outcome status of several hundred patients after introduction of the national electronic data system (EDS) at 3 large ART clinics (Kasungu and Machinga District Hospital, Zomba Central Hospital) has been rectified in quarter 4 leading to a relative reduction of number of defaulters compared to last quarter.

**Figure 4:** 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)

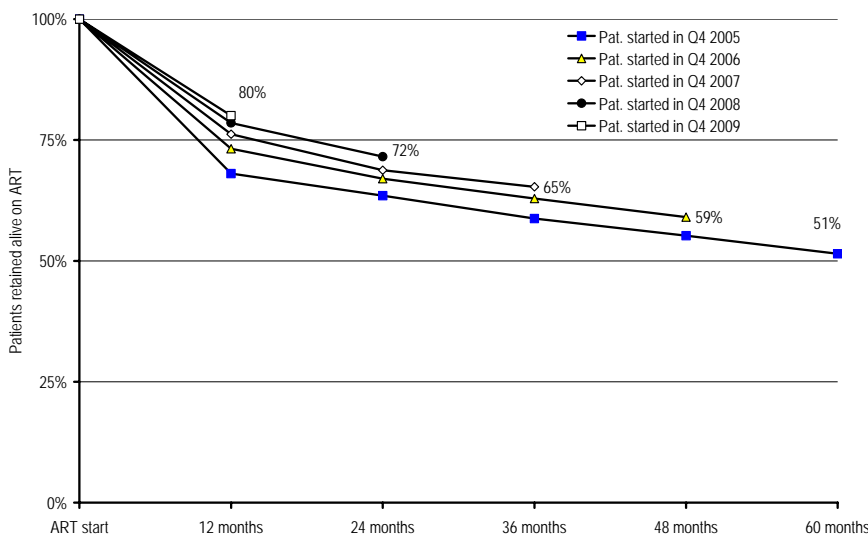


**Early mortality** has declined considerably (Figure 4). In 2006 Q2, 11% of new patients died within the first 3 months after ART initiation. Early mortality has declined to less than 5% in Q4 2010. This correlates well with the decline in the proportion of patients starting ART in WHO clinical stage 4 from 25% in 2005 Q2 to about 10% in Q4 2010. 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). The new 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 women and children under 2 years).

### Cohort Survival Analysis

**Figure 5:** 'Cohort survival analysis' 12, 24, 36, 48 and 60 months after ART initiation



A 12, 24, 36, 48, and 60 - month 'cohort outcome survival analysis' was conducted for patients registered in Q4 2009, Q4 2008, Q4 2007, Q4 2006, and Q4 2005, respectively. A separate 12-month cohort outcome analysis was conducted for children who were under 15 years at the time of ART initiation and who registered for ART in Q4 2009. **80% of adults and 75% of children** (an increase from 78% in adults and 74% in children from last Quarter) were retained

alive on ART after 12 months on treatment: Figure 5 shows the continuous improvement of long-term treatment outcomes over time. However, the current '12-month survival rate' is still below the WHO target of 85%.

### Secondary outcomes of patients retained on ART

Secondary outcomes are available for the **247,160** patients alive on ART who remained at their sites at end of the quarter. Secondary outcomes are not available for **3,827** patients *in transit*.



## ART Regimens

91% were on the first line, 8% were on alternative first line and less than <1% were on second line regimen while 1% were on a non-standard ART regimen. 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.

## Adherence

192,390 (90%) out of 212,950 with data on the number of doses missed were classified as >95% adherent in Q4. Manual estimation of adherence from pill counts is practically difficult and classification can be misleading. To improve on accuracy of data on adherence, the ART program has switched to a direct evaluation of doses missed in 2010. In Q4 of 2010, most ART sites were recording this new measure consistently and adherence data was now available for 85% (77% in Q3) of patients alive on treatment.

## Side Effects

5,930 (2%) of patients on ART had documented drug side effects at their last clinic visit up to end December 2010. This is probably an under-ascertainment of the true rate of drug side effects (we assume 20-25% of patients develop at least mild side effects from Triomune). Malawi will increase access to an alternative first line regimen (TDF/3TC/EFV) with fewer side effects for prioritized patient groups (pregnant women, TB patients and patients with lipodystrophy) from July 2011.

## Current TB Status

The revised ART patient master cards include routine screening for TB at every ART visit. This was introduced to address the suspected burden of undetected TB among patients on ART, believed to be responsible for a considerable proportion of early deaths. 228,224 (91%) of patients alive on ART were screened for TB at their last visit before end of December 2010. Out of these, 893 were new TB suspects and 3,126 had confirmed current TB. As of the last visit before the end of December 2010, 2,061 (66%) of these were on current TB treatment while 1,065 (44%) were not (yet) on TB treatment.

## Cotrimoxazole Preventive Therapy (CPT)

As of the end of December 2010, 95% of ART patients were on CPT. A cumulative total of 338,609 patients (pre-ART and ART) had been entered in CPT registers. CPT registers have not been used consistently by all sites.

## HIV-related indicator diseases

Table 3 shows the number of ART patients treated for 4 key HIV-related indicator diseases (data from TB, ART and Diflucan registers or ART treatment cards). Oesophageal candidiasis (OC) and cryptococcal meningitis (CM) cases decreased from the previous quarter, probably due to unavailability of fluconazole at some sites. The number of new TB cases decreased considerably. Of the 89% (Q3: 85%) TB patients who were tested for HIV, 65% were HIV positive and 40% of positives were already on ART when starting TB treatment.

**Table 3: HIV-related indicator diseases**

	TB cases	TB HIV tested	TB HIV pos	TB already on ART	OC	CM	KS		
2010 Q1	5,655	4,853	86%	2,752 57%	1,018	37%	1,101	593	471
2010 Q2	5,586	4,895	88%	2,934 60%	1,077	37%	1,128	459	517
2010 Q3	6,155	5,229	85%	3,095 59%	1,450	47%	1,309	613	575
2010 Q4	5,209	4,617	89%	3,000 65%	1,190	40%	834	374	546

## TB / HIV

Approximately **82%** of HIV infected TB patients were receiving ART in Q4 2010. This estimate is based on the following triangulation of TB and ART program data:

*TB Program Data:* A total of **5,209** TB patients were registered during Q4 2010. Assuming an average HIV prevalence of 66% among TB patients, **3,438** of TB patients were estimated to be HIV positive and therefore in need of ART. Given that **1,190** TB patients registered were already on ART at the time of starting TB treatment,  $3,438 - 1,190 = 2,248$  TB patients needed to initiate ART.

*ART Program Data:* An estimated **1,615** patients<sup>2</sup> started ART with a current or recent episode of TB during Q4 2010, which is **72%** (1,615 of 2,248) of the TB patients who needed to start ART in Q4 2010. This means that a total of  $1,190 + 1,615 = 2,805$  (**82%**) of the estimated 3,438 HIV infected TB patients were receiving ART in Q4 2010.

### Certificates of excellence

Sites with excellent performance in patient and clinic management, including completion of ART registers and master cards and correct cohort analysis are awarded a certificate of excellence: **140 (59%)** sites in the public sector received a certificate of excellence. This is an improvement from the last quarter.

### ART workload and staffing

By the end of December 2010 there were **182** static sites with fewer than 1,000 patients, **42** sites with 1,001–2,000 patients, **40** sites with 2,001–5,000 and **17** sites with over 5,000 patients registered. The number of sites with over 5,000 patients has increased from **14** to **17**, reflecting the ever-increasing workload.

For 223 of all clinics visited, the supervision team recorded the number of scheduled clinic days per week and the average number of clinicians, nurses and clerks working during clinic days. The total number of days in a week given for ART at these facilities in Q4 2010 was 579, translating into an average of 2.6 working days per facility per week.

**Table 4** shows the total number of staff days per week by cadre and zone. The full-time equivalents (FTEs) indicate the equivalent of full-time ART clinicians, nurses and clerks. Thus, for the country as a whole, assuming clinicians work for an average of 200 days per year, the equivalent of **193** clinicians was working full-time in ART delivery each week. The workload per staff in ART clinics is obviously increasing quarter by quarter (compare previous reports).

**Table 4: Total average staffing of ART services by zone (public sector)**

Zone	Sites	ART Clinic days/ wk.	Clinician days/ wk.	Nurse days/ week	Clerk days/ week
N	43	89	94	110	109
CW	42	125	189	253	164
CE	37	97	105	135	103
SW	52	154	201	271	272
SE	49	114	155	215	196
Total	223	579	744	984	844
FTE		2.6	193	256	219

<sup>2</sup> 20% of the 2,091 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.

## Stocks of ARV drugs and drug for HIV-diseases

Physical stock counts for ARVs and drugs for HIV-related diseases were performed at all sites at the time of the supervision visit (Jan/Feb 2011). Table 5 shows the total national drug stocks found at facilities with ART clinics. There were enough first line ARV starter packs to start about 55,000 new patients on ART, estimated to last for at least 9 months at current rates of recruitment. The 894,972 tins of first line regimen (T30) were sufficient to keep the current 250,987 patients plus the new patients starting on treatment for about 3 months (up to end March 2011). Stocks of alternative first line ARVs (AZT 121,357 tins) were sufficient to last for about 8 months (up to August 2011) and stocks of EFV (66,204 tins) for more than 10 months. An order of 97,000 tins of TDF/3TC/EFV (first line regimen for HIV infected pregnant women) is due to arrive by May/June 2011 for PMTCT B+ in the phased implementation of the new guidelines scheduled to commence in July 2011. 171 (62%) of facilities visited had any stocks of ARVs for maternal PMTCT prophylaxis and 177 (64%) had ARVs for infant PMTCT prophylaxis (single dose nevirapine or AZT combination regimen). This represents an improvement of the availability of PMTCT drugs compared with the previous quarter.

**Table 5: Drug stocks at all facilities with ART clinics as of December 2010**

Drug	Unit	North	Central	South	Total national stock	Sites with any stock
Lamivir Baby	14	151	1,024	5,342	6,517	67%
d4T 30mg / 3TC	15	5,241	16,521	33,980	55,742	95%
d4T 30mg / 3TC / NVP	15	5,600	17,126	35,547	58,273	96%
Triomune Baby	30	1,891	13,736	38,004	53,631	68%
d4T 30mg / 3TC / NVP	60	113,218	277,332	504,422	894,972	99%
AZT 3TC NVP	60	7,462	49,115	64,780	121,357	95%
AZT / 3TC	60	1,188	8,498	16,991	26,677	81%
NVP	60	1,938	6,427	11,141	19,506	26%
d4T 30mg / 3TC	60	6,782	18,415	42,160	67,357	94%
EFV	30	7,619	27,375	57,708	92,702	95%
TDF	30	292	2,988	8,893	12,173	100% <sup>3</sup>
ABC	60	402	533	1,344	2,279	100% <sup>3</sup>
ddl	30	167	1,449	2,517	4,133	100% <sup>3</sup>
LPV/r	120	381	1,539	4,548	6,468	100% <sup>3</sup>
CPT	60	7,274	98,473	161,480	267,227	52%
Cotrimoxazole	1	3,128,500	7,399,040	8,378,098	18,905,638	90%
Fluconazole	1	198,508	228,873	212,426	639,807	31%
Ceftriaxone	1	25,812	58,034	47,648	131,494	36%
Acyclovir	1	144,430	798,127	663,561	1,606,118	58%
Ciprofloxacin	1	127,160	199,906	326,609	653,675	54%
Vincristine	1	2,173	2,520	4,325	9,018	21%
Morphine	1	4,874	3,087,058	101,027	3,192,959	10%
Amitriptyline	1	356,630	498,543	740,943	1,596,116	58%
NVP (PMTCT)	1	23,984	19,465	385,887	429,336	42%
NVP syrup (PMTCT)	1	3,926	1,097	1,952	6,975	51%
AZT (PMTCT)	1	16,281	153,578	577,754	747,613	54%
AZT syrup (PMTCT)	1	21,230	2,361	10,953	34,544	54%

<sup>3</sup> Second line treatment is initiated at 10 centres of excellence. All of these had stocks of these regimens.

## Post Exposure Prophylaxis (PEP)

353 clients received PEP in Q4 of 2010. This is the highest number of PEP cases ever recorded per quarter.

## Availability of CD4 counts

A total of 60 facilities had CD4 count machines installed and 53 of these produced any results during Q4 2010 as compared to 54 in Q3 2010. The total quarterly output of CD4 results remained very similar (45,833 in Q3 and 45,778 in Q4).

**Table 6: CD4 counts performed by quarter**

	Total CD4 machines	Functional CD4 machines	CD4 samples processed
2010 Q1	53	42	43,343
2010 Q2	52	41	44,841
2010 Q3	58	54	45,833
2010 Q4	60	53	45,778

## Trainings

ART trainings have been suspended until implementation of the new integrated PMTCT/ART curriculum in the first half of 2011. Some districts that were experiencing acute ART staffing shortages such as Ntcheu and Lighthouse/COM were allowed to carry out limited trainings to avoid disruption of services in Q4 2010. There was no training in the private sector due to problems with MBCA securing funding. The cumulative number of HCW trained since the start of the national program remained above the target.

**Table 7: ART training by end September 2010**

Sector	Target	Achievement
Public sector providers trained in Q4 2010	100	33
Private sector providers trained in Q 2010	25	0
Public sector providers trained (cumulative)	2,700	3,280
Private sector providers trained (cumulative)	500	581

## Way Forward

### Coverage

ART coverage was lowest in the SE zone that has the highest estimated HIV burden. MOH are addressing this situation by accelerating the opening of new ART sites in this zone and by assessing other potential factors such as access to HTC. The MOH is preparing the roll-out of integrated PMTCT/ART and Family planning services nationally, including Pre-ART care. This will entail expanding services to all the ANC sites in country as well as ANC outreach sites. It is anticipated that this will accelerate coverage as sites delivering the integrated services will increase from the current 295 static sites to around 700 by the end of 2011.

### New Integrated PMTCT / ART Guidelines

The Department for HIV and AIDS has revised the national PMTCT, ART, paediatric ART and infant feeding guidelines with support from development partners following the adaptation of the new WHO recommendations by MOH. A new integrated scale-up plan for PMTCT/Pre-ART/ART/FP 2010-2013 is being developed.

The following steps are in progress:

- Finalization of integrated ART/PMTCT/Pre-ART guidelines and scale up plans
- Development and implementation of integrated training curriculum
- Global Fund RCC grant budget phase 1 & phase 2 has been reprogrammed to accommodate the implementation of the new guidelines

### **Electronic data system (EDS)**

The electronic data system has now been rolled out to 16 sites and a further 8 sites are planned before July 2011. The migration of data from paper records to electronic data during the initial deployment of the EDS has once more proven a time-consuming and challenging exercise. Missed ART dispensing visits have probably resulted in an under-estimation of patients alive on ART and an over-estimation of patients lost to follow-up in the initial cohort reports from the new EDS sites. However, the systematic cleaning of paper-based data has resulted in more accurate cohort reports from new EDS sites in this quarter.

### **TB/HIV integration**

Joint TB/HIV supervision has continued in Q4 of 2010. Joint TB/ART supervision is considered useful and should continue and logistics and funding for the TB team need to be further worked out. A final draft of TB/HIV guidelines has been developed by the TB/HIV Technical Working group in line with the TB/HIV operational framework. Operational research is being conducted by the TB team on INH prophylaxis with an aim to the roll out of INH prophylaxis in 2011. Standard Operating Procedures for providing ART in TB clinics are being developed. Further TB/HIV integration will be achieved by training TB clinicians in ART initiation and management, while decentralization of TB registration sites is taking place to ensure wider coverage. As of December 2010, 7 sites have been decentralised as TB treatment registration sites and plans are in progress to decentralise additional 100 sites. 219,681 (91%) of patients alive on ART were screened for TB at their last visit before end of December 2010 compared to 89% in last quarter using WHO recommended screening tool.

### **Participants in Q4 2010 ART Supervision**

Knox Banda	Henry Kamwetsa	Mapay Ngalala	<u>Report compiled by</u> Frank Chimbwandira Austin Mnthambala Eustice Mhango Simon Makombe Joseph Njala Lyson Tenthani Andreas Jahn Zengani Chirwa
Thom Chaweza	Joseph Kasola	Stanley Ngoma	
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L Chisuwo	Gabriel Mateyu	Mark Suzumire	
Stuart Chuka	Hannock Matupi	Evalista Tchuba	
Peter Donda	Benjamin Mazalo	Cecelia Tenesi	
Suleiman Ibrahim	Andraida Mtoseni	Lyson Tenthani	
Agnes Kalitsiro	Ekwala Mubiala	Batoni Upindi	
Mary Kamiza	H Mwenelupembe		

We finally thank all staff at the facilities for their sincere welcome and co-operation with the HIV Department and its partners during these supportive visits, and we congratulate the staff in these facilities for their excellent work.

**18<sup>th</sup> March 2011**

**New patients registered for ART  
between 01/10/2010 and 31/12/2010**

		Public Sector		Private Sector		National Total	
Total registrations		22,016		819		22,835	
Registration type	New ART initiations (Patients)	17,774	81%	592	72%	18,366	80%
	ART Re-initiations	39	0%	16	2%	55	0%
	Transfers in	4,203	19%	211	26%	4,414	19%
Sex	Males	8,649	39%	388	47%	9,037	40%
	Total females	13,367	61%	431	53%	13,798	60%
	Females non-pregnant	12,154	55%	402	49%	12,556	55%
	Females pregnant	1,213	6%	29	4%	1,242	5%
Age	Adults	19,846	90%	765	93%	20,611	90%
	Total children	2,170	10%	54	7%	2,224	10%
	Children 18m-14yrs	1,747	8%	43	5%	1,790	8%
	Children 0-17 months	423	2%	11	1%	434	2%
Reason for ART	Presumed sev. HIV <18mths	156	1%	9	1%	165	1%
	Confirmed HIV infants	141	1%	0	0%	141	1%
	WHO 1/2, CD4 <threshold	7,409	34%	281	34%	7,690	34%
	WHO 2, TLC <threshold	10	0%	3	0%	13	0%
	WHO stage 3	11,657	53%	370	45%	12,027	53%
	WHO stage 4	2,294	10%	140	17%	2,434	11%
	Reason unspecified	349	2%	16	2%	365	2%
	Total TB	1,963	9%	56	7%	2,019	9%
	TB in last 2 years	899	4%	33	4%	932	4%
	Current TB	1,064	5%	23	3%	1,087	5%
	KS	531	2%	15	2%	546	2%

## Cumulative patients registered for ART up to end 31/12/2010

		Public Sector		Private Sector		National Total	
Total registrations		390,770		15,683		406,453	
Registration type	New ART initiations (Patients)	332,530	85%	13,068	83%	345,598	85%
	ART Re-initiations	187	0%	44	0%	231	0%
	Transfers in	58,053	15%	2,571	16%	60,624	15%
Sex	Males	151,564	39%	7,568	48%	159,132	39%
	Total females	239,206	61%	8,115	52%	247,321	61%
	Females non-pregnant	227,020	58%	7,753	49%	234,773	58%
	Females pregnant	12,186	3%	362	2%	12,548	3%
Age	Adults	355,043	91%	14,959	95%	370,002	91%
	Total children	35,727	9%	724	5%	36,451	9%
	Children 18m-14yrs	30,496	8%	676	4%	31,172	8%
	Children 0-17 months	5,231	1%	48	0%	5,279	1%
Reason for ART	Presumed sev. HIV <18mths	1,206	0%	18	0%	1,224	0%
	Confirmed HIV infants	1,132	0%	0	0%	1,132	0%
	WHO 1/2, CD4 <threshold	94,273	24%	5,877	37%	100,150	25%
	WHO 2, TLC <threshold	88	0%	7	0%	95	0%
	WHO stage 3	228,969	59%	6,991	45%	235,960	58%
	WHO stage 4	56,860	15%	2,596	17%	59,456	15%
	Reason unspecified	8,242	2%	194	1%	8,436	2%
	Total TB	42,510	11%	1,179	8%	43,689	11%
	TB in last 2 years	31,274	8%	1,042	7%	32,316	8%
	Current TB	11,236	3%	137	1%	11,373	3%
	KS	12,126	3%	343	2%	12,469	3%
Primary outcomes	Alive on ART (1)	241,715	73%	9,272	71%	250,987	73%
	Defaults	50,777	15%	2,504	19%	53,281	15%
	ART stops	1,303	0%	47	0%	1,350	0%
	Deaths total	38,922	12%	1,289	10%	40,211	12%
	Month 1	10,986	28%	420	33%	11,406	28%
	Month 2	7,516	19%	194	15%	7,710	19%
	Month 3	4,098	11%	118	9%	4,216	10%
	After month 3	16,322	42%	557	43%	16,879	42%
Transfers out	61,161		3,290		64,451		
ARV regimens (2)	Start	217,342	91%	6,666	78%	224,008	91%
	Alternative 1st line total	17,561	7%	1,584	19%	19,145	8%
	AZT	11,816	67%	1,237	78%	13,053	68%
	EFV	4,819	27%	180	11%	4,999	26%
	AZT+EFV	926	5%	167	11%	1,093	6%
	Second line total	960	0%	170	2%	1,130	0%
	Second line adult	769	80%	164	96%	933	83%
	Second line children	191	20%	6	4%	197	17%
Other / Non-standard	2,744	1%	133	2%	2,877	1%	
Side effects	Side effects counted	238,607	99%	7,976	86%	246,583	98%
	With side effects	5,551	2%	379	5%	5,930	2%
Adherence	Adherence recorded	206,291	85%	6,659	72%	212,950	85%
	>95% adherent	186,480	90%	5,910	89%	192,390	90%
Current TB status	Status recorded	219,681	91%	8,543	92%	228,224	91%
	TB suspected	205	0%	688	8%	893	0%
	TB confirmed, not on Rx	1,065	0%	0	0%	1,065	0%
	TB confirmed, on Rx	2,010	1%	51	1%	2,061	1%

(1) Includes 3,827 patients in transit (transferred out but not yet transferred in at the new site).

(2) Excludes patients in transit

# MALAWI STI TREATMENT PROGRAMME QUARTERLY REPORT

## OCTOBER TO DECEMBER 2010

### 1 Access to STI treatment and coverage

Between October and December 2010, **38,809** STI clients were served at health facilities in Malawi, representing **39%** of the **98,600** expected quarterly STI cases in the population<sup>1</sup>. Out of all clients, **16,025 (41%)** were male and **22,784 (59%)** were female. **2,984 (13%)** of female STI clients were pregnant. **24,649** clients (**64%**) were 25 years and above, **10,276 (26%)** were 20-24 years and **3,884 (10%)** were under 20 years old. Considering the estimated STI case burden in the population <sup>1</sup>, access to STI clinics was particularly low among under 20 year olds: 3,884 (**22%**) of the expected 17,323 STI cases in this age group were seen at the health facilities during this quarter.

### 2 Client Type and STI History

**30,361 (78%)** of clients were index cases and **8,438 (22%)** were partners of index cases. **5,109 (61%)** of partners were asymptomatic. Considering that a total of **23,193** partner notification slips were issued, only **36%** of those notified presented to the clinic. **27,667 (71%)** of clients presented with their first lifetime episode of STI, **7,730 (20%)** clients reported to have had an STI in over three months ago and **3,412 (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. The proportion of STI clients with a renewed episode (**20%**) was lower than in the previous quarter (**31%**). This may be an indication for a gradual risk reduction among previous STI clients.

### 3 HIV Status

HIV status was ascertained for **20,077 (52%)** clients and **5,779 (29%)** of these were HIV positive. **1,959 (34%)** of positives were identified through a new test initiated at the STI clinic, while **3,820 (66%)** presented with a documented previous positive HIV test result.<sup>2</sup> **1,965 (51%)** of clients with a previous positive HIV test result were on ART.

The rate of HIV status ascertainment is still 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.

### 4 STI Syndromes

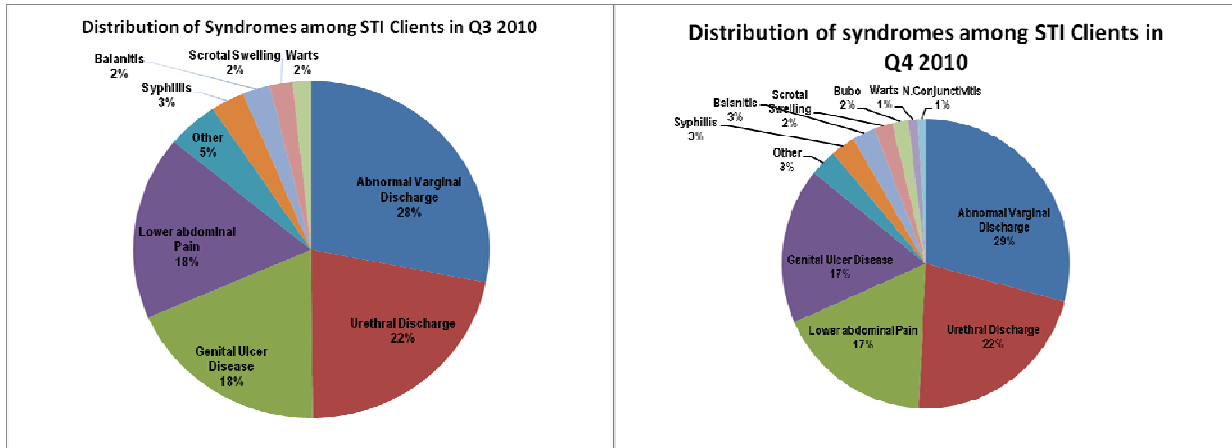
Figures 1 and 2 show the distribution of STI syndromes among the 46,917 and 38,809 cases presenting to STI clinics in the Q3 and Q4 respectively. Similar to the last quarter, the most common syndrome was abnormal vaginal discharge (AVD) with **12,629 (29%)** cases. Similar to the previous quarter, balanitis, bubo, warts and neonatal conjunctivitis each accounted for 1 – 3% of cases.

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<sup>1</sup> STI case burden in the population is estimated by applying the age-specific rates of STIs from the 2004 Malawi DHS to the projected population.

<sup>2</sup> Due to the high risk of recent HIV infection among STI clients, previous negative test results are not considered valid and new HIV tests should be performed in all of these cases.





Figures 1 and 2: Distribution of Syndromes of the 44,814 STI clients in Q3 and 46,917 clients in Q4 of 2010

## 5 Referrals

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. Only 9,353 (28%) of the 32,919 STI clients with unknown or new negative test result were referred for repeat HTC. 1,468 (75%) of 1,959 clients who were newly tested HIV positive were referred for ART eligibility assessment. This is similar to last quarter (73%), and remains below target.

## 6 Trainings

A total of 40 health workers from the Malawi Defence Force were trained in STI syndromic case management during Q4 2010. These trainings were funded through NAC from the Global Fund RCC grant. Further district level trainings were pending and awaiting disbursement of funding from NAC.

## 7 STI Commodities Supply

STI drug supply has been satisfactory during Q4 2010 and most facilities had adequate stocks of STI commodities during this quarter.

# 2010 Q4 STI Report

## National coverage

Population denominator

<b>Total Number of Clients</b>	<b>38,809</b>		98,604	39%
<b>Gender and Pregnancy</b>				
Males	16,025	41%	37,993	42%
Females	22,784	59%	60,612	38%
Females Non Pregnant	19,800	87%		
Females Pregnant	2,984	13%		
<b>Age</b>				
Age A (<20 years)	3,884	10%	17,323	22%
Age B (20 - 24 years)	10,276	26%	24,952	41%
Age C (25 years and above)	24,649	64%	56,799	43%
<b>Type</b>				
Index cases	30,361	78%		
Partners	8,438	22%		
Asymptomatic	5,109	61%		
Symptomatic	3,329	39%		
<b>Partner Notification</b>				
Partner Slips issued	23,193			
Partners	8,438	36%		
<b>STI History</b>				
Never	27,667	71%		
Old (previous STI >3months ago)	7,730	20%		
Recent (previous STI <3months ago)	3,412	9%		
<b>HIV Status</b>				
HIV status unknown	18,621	48%		
HIV Status ascertained	20,077	52%		
Total HIV negative (new test)	14,298	71%		
Total HIV positive	5,779	29%		
Total new HIV positive	1,959	34%		
Total previous HIV positive	3,820	66%		
Not on ART	1,855	49%		
On ART	1,965	51%		
<b>Syndromes</b>				
<b>Total Syndromes*</b>	<b>43,185</b>			
Abnormal Varginal Discharge Total	12,629	29%		
Low Risk	4,553	36%		
High Risk	8,076	64%		
Genital Ulcer Disease	7,538	17%		
Urethral Discharge	9,314	22%		
Lower abdominal Pain	7,575	18%		
Scrotal Swelling	897	2%		
Bubo	761	2%		
Balanitis	1,131	3%		
Neonatal Conjunctivitis	391	1%		
Warts	461	1%		
Syphillis	1,183	3%		
Other	1,305	3%		
<b>Referrals (multiple possible)</b>				
Repeat HTC <sup>&amp;</sup>	9,353	28%		
ART	1,468			
Lab	887			
PMTCT	325			
Gynae	391			
Surgical	304			
Other	1,305			

\* Syndromes add up to more than total clients due clients with multiple syndromes

<sup>&</sup> All patients with a negative test and unknown status were supposed to have been referred for repeat HTC