

ART IN THE PUBLIC AND PRIVATE SECTORS IN MALAWI RESULTS UP TO 30th JUNE, 2007

Executive Summary:

Public sector:

By the end of June 2007, there were **109** facilities in Malawi in the public health sector delivering ART free of charge to HIV-positive eligible patients.

In the second quarter of 2007 (April to June), there were **14,799** new patients started on ART (38% were male and 10% were children). By the end of June 2007, there were **110,075** patients who had ever started on ART (39% were male and 8 % were children). Cumulative treatment outcomes by end of June were:- 69% alive and on ART at the site of registration, 12% dead, 10% lost to follow-up, 9% transferred out to another facility (and were presumably alive) and <1% stopped treatment. Of the 76,166 patients alive and on ART:- 96% were on the first line regimen, 4% were on an alternative first line regimen and a small number (246) were on a second line regimen.

Private sector:

By the end of June 2007, there were **37** facilities in Malawi in the public health sector delivering ART at a subsidised rate to HIV-positive eligible patients.

In the second quarter of 2007 (April to June), there were **444** new patients started on ART (50% were male and 4% were children). By the end of June 2007, there were **4,300** patients who had ever started on ART (52% were male and 4% were children). Cumulative treatment outcomes by end of June were:- 75% alive and on ART at the site of registration, 7% dead, 4% lost to follow-up, 13% transferred out to another facility (and were presumably alive) and <1% had stopped treatment. Of the 3,232 patients alive and on ART:- 93% were on the first line regimen, 6% were on an alternative first line regimen and 1% were on a second line regimen.

Resume from January 2003 to June 2007 in the public and private sector:

	By Dec 2003	By Dec 2004	By Dec 2005	By Dec 2006	By Jun 2007
<i>Public sector ART sites</i>	9	24	60	103	109
New patients started ART in year	No data	10,183	24,657	43,981	28,254
Cumulative patients started ART	3,000	13,183	37,840	81,821	110,075
Patients alive on ART	No data	10,761	28,110	57,356	76,166
<i>Private sector ART sites</i>	0	0	23	38	37
New patients started ART in year	0	0	977	2,370	953
Cumulative patients started ART	0	0	977	3,347	4,300
Patients alive on ART	0	0	977	2,624	3,232
<i>Public and Private ART sites</i>	9	24	83	141	146
New patients started ART in year	No data	10,183	25,634	46,351	29,207
Cumulative patients started ART	3,000	13,183	38,817	85,168	114,375
Patients alive on ART	No data	10,761	29,087	59,980	79,398

Introduction and Methodology:

This is a report on the status of antiretroviral therapy (ART) in Malawi up to June 30th 2007.

Public sector site visits: between July and September 2007, all 109 health facilities in the public sector earmarked for ART were visited. The visits were conducted by the Ministry of Health Clinical HIV Unit (Simon Makombe, Amon Nkhata, Erik Schouten and Anthony Harries), who were accompanied by their partners: Andreas Jahn from Lighthouse; Washington Oziti from KCH; Joseph Yu from the Taiwan Medical Mission; Olesi Pasulani from Thyolo-MSF; Janet Chikonda from Area 18 HC. Four ART supervisors, Dr Shibu Berhanu (Mzuzu Central Hospital), Dr Damas Ngoma (Lighthouse), Dr Tewdros Bizuwork (Zomba Central Hospital) and Dr William Katamba (QECH) also accompanied the Unit.

Each visit lasted half a day during which a structured supervision and a drug stock-level assessment were carried out, and this was followed by a monitoring and evaluation exercise. Data on ART parameters were collected from the patient master cards and the ARV Register. Much effort was made in ensuring that outcomes (particularly death and defaulter) were correct, and we believe that outcomes are accurately represented in this report. During the visits, certificates for excellent performance awarded at the last visit were presented to the clinic staff (see below).

Private sector site visits: between July and August 2007, all 37 ART sites in the private sector were visited by Stuart Chuka from MBCA, using the same core methodology as for the public sector.

Data collection in public / private sector, outcome status censored on 30th June 2007:-

The first data set is the status of new patients who were started on free ART in Malawi between April 1st and June 30th, 2007, **the “quarterly analysis”**. In the public sector only, data on ART clinics and staff complements, HIV-related diseases, and HIV counselling and testing were also collected for this 3-month period.

The second data set is the status of all patients who ever started on free ART in Malawi up to June 30th, 2007, **the “cumulative analysis”**.

The third data set collected only in the public sector is the **6-month, 12-month, 18-month and 24-month cohort outcome analysis**, with data collected on patients starting ART in Malawi in Q4 2006, Q2 2006, Q4 2005 and Q2 2005 respectively

Data collation and presentation for the years 2003 – June 2007:

Data on ART for the 4 years (2003 – June 2007) are collated and presented to show the progress made in both the public and private sector for ART.

PUBLIC SECTOR RESULTS:

General:

By June 2007, 109 government and mission health facilities in the country had started patients on free ART. Since the last supervision, 3 more Health Centres had become ART initiation sites in Thyolo District, adding to the previous 106. Systems of referral to ART were working well. All the facilities were using the national monitoring tools.

ARV regimens: All facilities were using the recommended first line regimen (Stavudine + Lamivudine + Nevirapine) for the majority of their patients. There were 73,261 patients alive and on first line treatment, 2,659 patients alive and on alternative first line regimens (Zidovudine-based or Efavirenz-based) for patients with adverse drug reactions, and 246 patients alive and being treated with a second line regimen for failure of the first line therapy.

Qualitative assessment of sites: All 109 ART clinics were tidy and orderly, and the filing systems and record keeping were excellent. A qualitative assessment of the patient master cards and registers was carried out. The table, with pertinent results, compares the 109 facilities in Q2 2007 with the previous qualitative assessment of the same facilities in Q1 2007. The standards were generally good, and Q2-07 was similar in many respects to Q1-07. Most sites had done a quarterly and cumulative cohort analysis, and this time there was a slight improvement in accurate and reliable results.

Parameter	ART sites (%) Q1 2007 N=106	ART sites (%) Q2 2007 N=109
ARV Register:		
ARV Register numbers correct and match master cards	103 (97%)	107 (98%)
All columns in the ARV register always completed	105 (99%)	108 (99%)
Dates of all adverse outcomes recorded	94 (89%)	103 (94%)
All ARV outcomes updated every three months	88 (83%)	93 (85%)
Patient Master Card:		
Case finding data properly completed on each card	100 (94%)	107 (98%)
Regular record of weight done at each patient visit	104 (98%)	108 (99%)
In each monthly visit all outcome columns completed	103 (97%)	108 (99%)
Pill counts for adherence done according to directives	102 (96%)	106 (97%)
HIV-diseases always indicated on back of master card	98 (92%)	105 (96%)
Cohort Analysis:		
Quarterly cohort analysis done by the site before visit	103 (97%)	106 (97%)
Cumulative analysis done by the site before visit	99 (93%)	105 (96%)
Cohort outcomes correctly done	74/105 (70%)	82 (75%)

Certificates of excellence: Sites which show an excellent performance in completing ART registers and master cards and correctly doing cohort analyses are awarded a certificate of excellence, approved and signed by the Secretary for Health. Results for the last three quarters, including the current quarter are shown below:

January – March 2007: sites = 103 – Certificates awarded to 52 (50%)

April to June 2007: sites = 106 – Certificates awarded to 64 (60%)

July to September 2007: sites = 109 – Certificates awarded to 69 (63%)

ART Clinics and Staff: a record is made in all facilities of the number of days in a week that the ART clinic is open to see either new or follow-up patients plus the number of staff who operate the clinic when it is functioning. The total number of days in a week given for ART at all facilities in Q2 2007 was 335.5, translating into an average of 3.1 working days in a week when facilities operate an ART clinic. The table shows the number of staff days per week for clinicians (mainly clinical officers), nurses and clerks for each of the regions and for the country as a whole. The FTE parameters indicate the number of clinicians, nurses and clerks working full-time per week on ART. Thus, for the country as a whole, the equivalent of 91 clinicians was working full-time in ART delivery each week. The workload to man ART clinics is obviously increasing quarter by quarter (compare previous reports).

	Clinician days/week	Nurse days/week	Clerk days/week
North: 22 sites	46	44	52
Central: 39 sites	184	188	160
South: 45 sites	227	216	163
Total: 106 sites	457	447	374
FTEs	91	89	75

Quarterly Analysis for the period April 1st to June 30th, 2007:

1. New patients started on ART in public sector between April and June 2007:

The national data for new patients started on ART in these three months are shown in **Table 1** on quarterly analysis. The details of patients and their outcomes from each facility according to region are shown in the **Annexes**.

There were 14,799 new patients started on ART, with males representing 38% and females representing 62% of the total. Adults comprised 90% of patients and children (aged 14 years or less) comprised 10%. There were data on occupation in 14,582 patients, and the most common recorded occupations were subsistence farmer, housewife and small-scale business people (eg vendors). The majority of patients (68%) were started on ART because of being in WHO Stage III.

The number of patients started on ART because of TB was 1,813 (1,562 with PTB, 250 with EPTB and 1 unknown). This constitutes 12% of new patients started on ART and 27% of patients registered for TB (N=6,612) during the quarter.

The number of women referred from PMTCT to start on ART was 328; 55 facilities had recorded PMTCT referrals in the ARV Register.

The three-month outcomes were good with 95% of patients being alive and on ART at the end of June. Other outcomes such as ambulatory status, work status, side effects and pill counts (where done) were very satisfactory.

The table below shows the recruitment of new patients to ART in Q2 2007 and Q1 2007, compared with what is expected in terms of ceilings and targets given to facilities. In quarter 2, 2007, there were 109 facilities (69 low burden, 28 medium burden, 6 medium/high burden, 2 high burden, 2 very high burden sites and 2 super high burden sites): these sites should have placed 15,675 new patients on ART and in the event placed 94%. This decrease compared with Q1 is due to sites being upgraded from the previous supervision.

In each quarter:	Q1 2007	Q2 2007
Number of facilities	106	109
Expected number of patients to start ART	13,575	15,675
Observed number (%) of patients started on ART	13,770 (101%)	14,799 (94%)

2. HIV testing, CD4 testing capability and HIV-related diseases: April to June 2007

HIV test data:

The data on HIV test results for patients tested in the 109 facilities between April 1st and June 30th, 2007 are shown below.

Parameter	North	Central	South	Total
Number HIV tested	21,133	47,491	66,078	134,702
Number (%) HIV positive	2,647 (13%)	8,200 (17%)	19,360 (29%)	30,207 (22%)
Number (%) referred to ART	2,422 (91%)	7,256 (88%)	14,442 (75%)	24,120 (80%)

Altogether, there were nearly 135,000 clients and patients tested in the 3-month period. Of those HIV-positive, 80% were referred for clinical assessment for ART – this is a good development, and one that is being encouraged by the HIV Unit of the Ministry of Health.

CD4 machines:

There were 17 facilities (16% of total) where there was CD4 count capability, unchanged from the previous report: 2 sites in the North (Mzuzu Central Hospital and Mzimba DH); 9 sites in the Central region (Kamuzu Central Hospital, Lilongwe SOS, Likuni Mission Hospital, Partners in Hope, St Gabriels MH, Kapiri MH, Dowa DH, Mtengwanthenga MH, Salima DH); 6 sites in the South (QECH, Blantyre Dream Site, Thyolo DH, Chiradzulu DH, Zomba Central Hospital, Machinga DH). No data were collected on this occasion on number of tests done or on functioning status of the machines.

HIV-related indicator diseases:

The number of patients with 4 key HIV-related indicator diseases, diagnosed and treated in the 109 facilities during the quarter, was recorded. TB numbers were obtained from the TB registers; Kaposi's Sarcoma (KS) numbers from the ART registers; numbers of those with cryptococcal meningitis and oesophageal candidiasis from the DIFLUCAN registers kept in the pharmacy or from master cards in those sites not participating in the DIFLUCAN programme. The data are shown in the table below: the data are very similar to data reported in previous quarters:-

HIV Disease	North	Central	South	Total
Tuberculosis (TB)	421	2,309	3,882	6,612
Kaposi's Sarcoma (KS)	30	135	323	488
Cryptococcal meningitis (CM)	175	253	280	708
Oesophageal candidiasis (OC)	202	461	700	1,363

Cumulative analysis for patients ever started on ART up to June 30th, 2007

The national data for all patients who ever started on ART up to the end of June 2007 are shown in **Table 2** on cumulative analysis. The details of patients and their outcomes from each facility according to region are shown in the **Annexes**.

There were 110,075 patients who had ever started on ART – this includes patients who transfer-in from other sites, and it is understood that these patients are counted twice. If we assume that all patients who transfer-out then transfer-in, then the number of new patients ever started on ART is 100,213. There were males representing 39% and females representing 61% of the total. The majority of patients were adults, and 8% were children aged 14 years or below.

There were data on occupation for 104,285 patients, and the most common occupations were housewife, farmer and small-scale business (e.g. vendor). The majority of patients (65%) were started on ART because of being in WHO Stage III.

The number of patients started on ART because of TB was 16,936 (14,436 with PTB, 2,366 with EPTB and 134 with type unknown). This constitutes 15% of all patients started on ART. The number of women ever started on ART as a result of referral from PMTCT was 1,801 (3% of all women), referred from within 78 ARV sites.

The cumulative primary treatment outcomes were as follows. There were 69% of patients being alive and on ART in the facility where they were first registered, and 9% transferred out to another facility and thought to be alive. Thus, 78% of patients (a proportion of whom is double counted) were probably alive. Date of death was known in all patients who died: 4,081 (31%) died in month 1; 2,917 (22%) died in month 2; 1,560 (12%) died in month 3 and 4,434 (34%) died at a later date. Default rates (i.e., patients lost to follow-up) were 10%. The number of patients stopping treatment was small at less than 1%. The cumulative secondary outcomes (ambulatory and work status, side effects and pill counts) were good.

Treatment outcomes of cohorts at 6-, 12-, 18- and 24-months

Treatment outcomes of cohorts were performed at 6-months, 12-months, 18-months and 24-months. The 6-months survival was from patients registered for free ART between October and December 2006 and censored on 30th June 2007 (102 facilities). The 12- months survival was from patients registered for free ART between April and June 2006 and censored on 30th June 2007 (94 facilities). The 18-months survival was from patients registered for free ART between October and December 2005 and censored on 30th June 2007 (61 facilities). The 24-months survival was from patients registered for free ART between April and June 2005 and censored on 30th June 2007 (48 facilities). Results are shown in the table.

	6-months Survival	12-months Survival	18-months survival	24-months Survival
Number started on ART:	12,557	10,688	7,609	5,435
“Presumed Alive”	10,096 (80%)	8,205 (78%)	5,359 (70%)	3,817 (70%)
<i>Alive and on ART</i>	9,323 (74%)	7,167 (67%)	4,356 (57%)	2,871 (53%)
<i>Transferred out</i>	773 (6%)	1,038 (11%)	1,003 (13%)	946 (17%)
Dead	1,287 (10%)	1,387 (12%)	1,276 (17%)	968 (18%)
Lost to follow up	1,132 (9%)	1,070 (10%)	944 (12%)	625 (11%)
Stopped treatment	42 (1%)	26 (<1%)	30 (1%)	25 (1%)

The 6-month survival analysis indicated that 80% of patients were alive (74% alive and on ART + 7% transferred out and presumed alive). The 12-month survival indicated that 78% were alive while the 18-month and 24-month survival analyses indicated that about 70% of patients were alive (alive and on ART + transferred out and presumed alive). What is apparent over the 4 six-month periods is that the percentage alive and on ART declines and the transfer-outs increase.

Stocks of ARV drugs and drug for HIV-diseases as of July and September 2007

In each public sector facility a stock count was performed of ARV drugs and certain specific drugs for HIV-related diseases.

ARV Drugs:

Stocks of ARV drugs (first line and alternative first line and second line) are shown below in tabular form. UNICEF replenished stocks of ART drugs in June 2007. According to the stocks at the time of the assessment, there were enough First line ARV drugs to start about 50,000 new patients on therapy (this lasts for 9-12 months at current rates of recruitment) and enough “Continuation packs” to keep the current 76,000 patients plus the new patients starting on treatment for about 7-9 months.

First line ARV drugs + Duovir	North	Central	South	Total
	Number of tins of tablets (either 15 or 60 in each tin)			
Lamivir-30 – SP (15 tab tins)	6,838	14,314	11,902	33,054
Lamivir-40 – SP (15 tab tins)	3,091	6,504	6,843	16,438
Triomune-30- SP (15 tab tins)	7,073	14,192	12,024	33,289
Triomune-40 – SP (15 tab tins)	3,141	6,487	6,693	16,321
Triomune-30- CP (60 tab tins)	111,220	202,916	227,276	541,412
Triomune-40 – CP (60 tab tins)	26,099	60,397	90,999	177,495
Duovir for PEP (60 tab tins)	See next row - combined with zidovidine and lamivudine			
First line alternative ARV drugs at central hospitals	North	Central	South	Total
	Number of tins of tablets (60 or 30 in each tin)			
Zidovudine-Lamivudine (60 tab)	1,905	7,667	8,834	18,406
Nevirapine (60 tab)	1,524	6,162	11,784	19,470
Lamivir 30 (60 tab)	608	1,987	2,305	4,900
Lamivir 40 (60 tab)	453	2,733	1,695	4,881
Efavirenz (30 tab)	863	2,996	4,770	8,629
Second line drugs at central hospitals	North	Central	South	Total
	Number of tins of tablets (180 or 30 in each tin)			
Tenofovir (30 tab)	377	1,957	1,165	3,499
Lopinavir/ritonavir (180 caps)	240	2,161	897	3,298

Drugs for HIV-related diseases

Pill counts and stock outs for drugs for key HIV-related diseases are shown below.

Drugs for HIV-diseases	North 22 sites	Central 39 sites	South 48 sites	Total 109 sites
	Number of tablets or vials in facilities in each region			
Fluconazole tablets	18,318	50,729	41,710	110,757
Cotrimoxazole tablets	1,745,000	2,014,936	2,412,972	6,172,908
Acyclovir tablets	22,125	127,076	49,110	198,311
Ceftriaxone vials	1,588	3,642	5,420	10,650
Ciprofloxacin tablets	58,800	132,080	190,812	381,692
Vincristine vials	1,300	1,347	349	2,996
Morphine tablets	6,079	8,072	6,746	20,897
Amitryptiline	673,280	925,290	202,691	1,801,261

Drugs for HIV-diseases	North 22 sites	Central 39 sites	South 48 sites	Total 109 sites
	Number of ART facilities with NO DRUGS in stock			
Fluconazole tablets	11	10	20	41 (38%)
Cotrimoxazole tablets	2	3	8	13 (12%)
Acyclovir tablets	10	10	26	46 (42%)
Ceftriaxone vials	17	23	28	68 (62%)
Ciprofloxacin tablets	9	9	14	32 (29%)
Vincristine vials	15	19	31	65 (60%)
Morphine tablets	17	19	37	73 (67%)
Amitryptiline	5	5	16	26 (24%)

Although the number of tablets of certain drugs appears reasonable, about 40% of facilities had stock-outs of fluconazole and acyclovir, while over 60% of facilities had no vincristine or morphine.

An audit was conducted on all sites to see if they had 3 of the key drugs needed for good quality OI care. The three drugs chosen were cotrimoxazole, vincristine and morphine. There were 23 (21%) facilities that had all three drugs present in the pharmacy.

An audit was carried out on cotrimoxazole preventive therapy (CPT). In the ART clinic, patients on CPT are indicated in master cards, and at the moment, this is the only data available for CPT usage. Thus, the number of ART patients taking CPT was documented. There were 73 sites providing CPT to ART patients, and in the second quarter of 2007, there were 50,971 patients receiving ART and CPT together.

District ART Training:

District ART Training manuals had been distributed to all ART sites at the beginning of last year, and ART clinic staff were asked to run regular trainings for hospital and health centre staff. The amount of ART training done is shown in tabular form below. It is apparent that the trainings have almost ceased to occur.

Quarter and Year	Number of Sites doing Training	Number of staff trained
Q2- 2006	30	1,392
Q3-2006	38	1,444
Q4-2006	21	1,038
Q1-2007	16	1,246
Q2-2007	3	230

PRIVATE SECTOR RESULTS:

The results of the private sector are shown in Tabular Form in **Table 3** and **Table 4**. There were 37 sites providing ART in the private sector.

For the quarterly analysis (**Table 3**), there were 444 new patients started on ART, 50% of whom were male and 4% were children. Of those starting, 42% started due to Stage 3, 19% due to Stage 4 and 39% based on a low CD4 count in Stage 1 or Stage 2. There were 37 patients started on ART due to TB. Of the 444 patients started on ART, 93% were alive and on ART by end of June, 4% were dead and 3% transferred out.

For the cumulative analysis (**Table 4**), there were 4,300 patients ever started on ART, 52% of whom were male and 4% were children. Of those starting, 43% started due to Stage 3, 22% due to Stage 4 and 35% based on a low CD4 count in Stage 1 or Stage 2. There were 344 patients started on ART due to TB. Of the 4,300 patients started on ART, 75% were alive and on ART by end of June, 7% were dead, 4% were lost to follow-up and 13% were transferred out.

PUBLIC AND PRIVATE SECTOR RESULTS COMBINED:

The results of the public and private sector together are shown in Tabular Form in **Table 5** and **Table 6**. There were 146 sites altogether providing ART in Malawi, using national systems

For the quarterly analysis (**Table 5**), there were 15,243 new patients started on ART, 39% of whom were male and 10% were children. Of those starting, 67% started due to Stage 3, 17% due to Stage 4 and 16% based on a low CD4 count in Stage 1 or Stage 2. There were 1,840 patients started on ART due to TB. Of the 15,243 patients started on ART, 95% were alive and on ART by end of June, 4% were dead and 1% transferred out.

For the cumulative analysis (**Table 6**), there were 114,375 patients ever started on ART, 39% of whom were male and 8% were children. Of those starting, 64% started due to Stage 3, 22% due to Stage 4 and 14% based on a low CD4 count in Stage 1 or Stage 2. There were 17,280 patients started on ART due to TB. Of the 114,375 patients started on ART, 69% were alive and on ART by end of June, 12% were dead, 10% were lost to follow-up and 9% were transferred out.

COMMENT

ART scale up in Malawi continues to progress well. Sites are doing well, despite the increasing burden of work. The majority are taking the initiative of doing quarterly and cumulative cohort analysis, and outcome results are beginning to improve. However, this will require continued and regular vigilance and supervision. The treatment outcomes for ART are reasonable. Early death rates are still a problem, and defaults still constitute a significant proportion of the outcomes.

ARV drug stocks were again assessed, and nationally drugs stocks are adequate. Some drugs for HIV-related diseases are still in short supply in some facilities.

Challenges and potential solutions:

As in previous reports, some important challenges emerging from ART scale up are highlighted for discussion and action. Progress or otherwise in these areas by June 30th 2007 is discussed below in bullet point style, and action points are in bold:-

- Human resources. There is still a dire shortage of staff at all facilities and at the central unit. Formal ART training (and funding) for peripheral staff was decentralised to districts at the beginning of the year. As of the end of June 2007, there has been no training of staff at any of the Round 1 or Round 2 sites. This is a source of concern, as continued training is important

- Infrastructure. ART clinic rooms and pharmacies are now becoming too small to handle patient numbers and drugs. Despite raising this issue every quarter, there is still no progress or plans being made. **It is suggested that the PAM unit of MOH starts the process of inspecting rooms and pharmacies with a view to recommending extensions and new building**
- Pharmacy management. In general there is good pharmacy management of ARV drugs and OI drugs. **However, pharmacies would benefit from CMS supervision**
- Drugs for HIV-related diseases. All ART sites have now been briefed about Cotrimoxazole Preventive Therapy (CPT). Unfortunately, the CPT procurement is delayed and will not arrive in country until September.
- Cohort analysis. The supervision teams have learnt to be time –effective with the manual system of doing cohort analysis, and are coping with ART sites having 1500+ patients. These techniques have been passed on to the peripheral sites. However, a computer records system should make this easier. A pilot computer study has started in 4 sites: 2 in the North (Rumphi and Nkhata Bay) and two in the Central region (Salima and Dedza)
- Data quality and supervision. Although many sites are maintaining good records and doing cohort analysis, about 25% of sites are still unable to generate accurate cohort analyses. Supervision visits continue to be a critical mechanism to ensure that complete and accurate facility (and national) level data are available for monitoring and drug forecasting needs
- Access to services and follow-up of patients. One clinician and one nurse from all 55 Round 3 sites have been trained, and many of them have also completed the clinical attachments. During Q3, 2007, the process of site accreditation has taken place and is still on-going. It is hoped that drugs will arrive in Malawi by December and sites can start putting patients on treatment.
- Clinical supervision. The 4 ART supervisors, at Mzuzu Central Hospital, Kamuzu Central Hospital, QECH and Zomba Central Hospital, are doing a good job and assist greatly with the national monitoring exercise as well. However, during this last quarter there have been problems in the Central and South with the ART supervisors accessing funds for fuel and for allowances – as a result 2 supervisors have been unable to conduct any independent supervision. **HIV Unit to rectify bureaucratic delays for funding ART supervisors**
- High early death rates. Still, two thirds of the ART deaths occur in the first three months of treatment. Cotrimoxazole preventive therapy (CPT) has been shown in an operational audit to reduce these deaths by about 40%. Regular CPT will hopefully start in all sites from September this year
- Rewarding good performance in ARV clinics. The quarterly issuing of certificates for excellent performance continues to be a popular and cheap way to motivate staff

- A retrospective monitoring of viral load suppression and viral drug resistance has now been completed in four sites under the guidance of MOH, CDC and WHO, and this will inform about the efficacy or otherwise of the first line regimen. Preliminary results show that in patients on ART for 12 months, 95% had viral suppression with viral loads < 400.

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

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8th September 2007

TABLE 1: PUBLIC SECTOR: New patients started on ART in Quarter 2, 2007

Total Started	Number of patients started on ART in the 3 months	14,799	
Sex	Number (%) males	5683	38%
	Number (%) females	9116	62%
Age	Number (%) adults aged 15 years and above	13302	90%
	Number (%) children aged 14 years and below	1497	10%
Occupation:	Housewife	3064	21%
	Farmer	4756	33%
	Forces	101	1%
	Teacher	339	2%
	Business	1919	13%
	HCW	151	1%
	Student	789	5%
	Other	3463	24%
	Occupation Not Known	217	
Reasons for starting ART:	Number (%) with Stage III	10068	68%
	Number (%) with Stage IV	2542	17%
	Number (%) with low CD4 count	2189	15%
	Number (%) with TB	1813	12%
	Number of patients registered with TB in the quarter	6612	
Patient Outcomes	Number of patients started on ART in the 3 months	14799	
	Number (%) alive and on ART	13997	95%
	Number (%) dead	534	4%
	Number (%) defaulted	0	0%
	Number (%) stopped treatment	37	0%
	Number (%) transferred out permanently to another site	231	2%
ART Regimen	Of those alive and on ART:-	13997	
	Number (%) on first line regimen	13729	98%
	Number (%) on alternative first line regimen	251	2%
	Number (%) on second line regimen	17	0%
Ambulatory Status	Number with ambulatory status known	13997	
	Number (%) ambulatory	13647	97%
Work Status	Number with work status known	13898	
	Number (%) at work	13228	95%
Side Effects	Number with side effects counted	13197	
	Number (%) with significant side effects	401	3%
Adherence	Number where pill count has been done	10171	
	Number (%) with pill count showing 95% adherence	9620	95%

TABLE 2: PUBLIC SECTOR: Cumulative patients started on ART up to June 30th, 2007				
Total Started	Total number of patients started on ART		110,075	
Sex	Number (%) males		42637	39%
	Number (%) females		67438	61%
Age	Number (%) adults aged 15 years and above		101348	92%
	Number (%) children aged 14 years and below		8727	8%
Occupation	Housewife		21748	21%
	Farmer		28425	27%
	Forces		1371	1%
	Teacher		3560	3%
	Business		13731	13%
	HCW		1594	2%
	Student		4937	5%
	Other		28919	28%
	Occupation Unknown		5790	
Reasons for starting ART:	Number (%) with Stage III		71483	65%
	Number (%) with Stage IV		24296	22%
	Number (%) with low CD4 count		14296	13%
	Number (%) of patients started on ART due to TB		16936	15%
Patient Outcomes	Total number of patients started on ART		110075	
	Number (%) alive and on ART		76166	69%
	Number (%) dead		12992	12%
	Number (%) defaulted		10583	10%
	Number (%) stopped treatment		472	0%
	Number (%) transferred out permanently to another site		9862	9%
ART Regimen	Of those alive and on ART:-		76166	
	Number (%) on first line regimen		73261	96%
	Number (%) on alternative first line regimen		2659	4%
	Number (%) on second line regimen		246	0%
Ambulatory Status	Number with ambulatory status known		76166	
	Number (%) ambulatory		73856	97%
Work Status	Number with work status known		75516	
	Number (%) at work		72430	96%
Side Effects	Number with side effects counted		71494	
	Number (%) with significant side effects		3323	5%
Adherence	Number where pill count has been done		53167	
	Number (%) with pill count showing 95% adherence		49964	94%
Death	Of those who died with Date of death recorded		12992	
	Number (%) dying in the first month		4081	32%
	Number (%) dying in the second month		2917	22%
	Number (%) dying in the third month		1560	12%
	Number (%) dying after the third month		4434	34%

TABLE 3: PRIVATE SECTOR: New patients started on ART in Quarter 2, 2007

Total Started	Number of patients started on ART in the 3 months	444	
Sex	Number (%) males	224	50%
	Number (%) females	220	50%
Age	Number (%) adults aged 15 years and above	425	96%
	Number (%) children aged 14 years and below	19	4%
Occupation:	Housewife	68	15%
	Farmer	13	3%
	Forces	4	1%
	Teacher	28	6%
	Business	77	17%
	HCW	8	2%
	Student	34	8%
	Other	212	48%
	Occupation Not Known	0	
Reasons for starting ART:	Number (%) with Stage III	186	42%
	Number (%) with Stage IV	86	19%
	Number (%) with low CD4 count	172	39%
	Number (%) with TB	37	82%
Patient Outcomes	Number of patients started on ART in the 3 months	444	
	Number (%) alive and on ART	412	93%
	Number (%) dead	18	4%
	Number (%) defaulted	0	0%
	Number (%) stopped treatment	0	0%
	Number (%) transferred out permanently to another site	14	3%
ART Regimen	Of those alive and on ART:-	412	
	Number (%) on first line regimen	398	97%
	Number (%) on alternative first line regimen	10	2%
	Number (%) on second line regimen	4	1%
Ambulatory Status	Number with ambulatory status known	412	
	Number (%) ambulatory	405	98%
Work Status	Number with work status known	412	
	Number (%) at work	403	98%
Side Effects	Number with side effects counted	8	
	Number (%) with significant side effects	6	75%
Adherence	Number where pill count has been done	194	
	Number (%) with pill count showing 95% adherence	190	98%

TABLE 4: PRIVATE SECTOR: Cumulative patients started on ART up to June 30th, 2007				
Total Started	Total number of patients started on ART		4,300	
Sex	Number (%) males		2221	52%
	Number (%) females		2079	48%
Age	Number (%) adults aged 15 years and above		4111	96%
	Number (%) children aged 14 years and below		189	4%
Occupation	Housewife		648	15%
	Farmer		72	2%
	Forces		48	1%
	Teacher		208	5%
	Business		659	15%
	HCW		104	2%
	Student		282	7%
	Other		2279	53%
	Occupation Unknown		0	
Reasons for starting ART:	Number (%) with Stage III		1860	43%
	Number (%) with Stage IV		932	22%
	Number (%) with low CD4 count		1508	35%
	Number (%) of patients started on ART due to TB		344	8%
Patient Outcomes	Total number of patients started on ART		4300	
	Number (%) alive and on ART		3232	75%
	Number (%) dead		309	7%
	Number (%) defaulted		184	4%
	Number (%) stopped treatment		7	0%
	Number (%) transferred out permanently to another site		568	13%
ART Regimen	Of those alive and on ART:-		3232	
	Number (%) on first line regimen		3013	93%
	Number (%) on alternative first line regimen		200	6%
	Number (%) on second line regimen		19	1%
Ambulatory Status	Number with ambulatory status known		3232	
	Number (%) ambulatory		3224	100%
Work Status	Number with work status known		3232	
	Number (%) at work		3215	99%
Side Effects	Number with side effects counted		55	
	Number (%) with significant side effects		8	15%
Adherence	Number where pill count has been done		762	
	Number (%) with pill count showing 95% adherence		762	100%
Death	Of those who died with Date of death recorded		309	
	Number (%) dying in the first month		129	42%
	Number (%) dying in the second month		50	16%
	Number (%) dying in the third month		33	11%
	Number (%) dying after the third month		97	31%

Total Started	Number of patients started on ART in the 3 months		15,243	
Sex	Number (%) males		5907	39%
	Number (%) females		9336	61%
Age	Number (%) adults aged 15 years and above		13727	90%
	Number (%) children aged 14 years and below		1516	10%
Occupation:	Housewife		3132	21%
	Farmer		4769	33%
	Forces		105	1%
	Teacher		367	2%
	Business		1996	13%
	HCW		159	1%
	Student		823	5%
	Other		3675	24%
	Occupation Not Known		217	
Reasons for starting ART:	Number (%) with Stage III		10254	67%
	Number (%) with Stage IV		2628	18%
	Number (%) with low CD4 count		2361	15%
	Number (%) with TB		1850	12%
	Number of patients registered with TB in the quarter		6612	
Patient Outcomes	Number of patients started on ART in the 3 months		15243	
	Number (%) alive and on ART		14409	95%
	Number (%) dead		552	4%
	Number (%) defaulted		0	0%
	Number (%) stopped treatment		37	0%
	Number (%) transferred out permanently to another site		245	1%
ART Regimen	Of those alive and on ART:-		14409	
	Number (%) on first line regimen		14127	98%
	Number (%) on alternative first line regimen		261	2%
	Number (%) on second line regimen		21	0%
Ambulatory Status	Number with ambulatory status known		14409	
	Number (%) ambulatory		14059	98%
Work Status	Number with work status known		14310	
	Number (%) at work		13631	97%
Side Effects	Number with side effects counted		13205	
	Number (%) with significant side effects		407	3%
Adherence	Number where pill count has been done		10365	
	Number (%) with pill count showing 95% adherence		9810	95%

TABLE 6: PUBLIC AND PRIVATE SECTOR: Cumulative patients on ART by June 30, 2007				
Total Started	Total number of patients started on ART		114,375	
Sex	Number (%) males		44858	39%
	Number (%) females		69517	61%
Age	Number (%) adults aged 15 years and above		105459	92%
	Number (%) children aged 14 years and below		8916	8%
Occupation	Housewife		22396	21%
	Farmer		28497	27%
	Forces		1419	1%
	Teacher		3768	3%
	Business		14390	13%
	HCW		1698	2%
	Student		5219	5%
	Other		31198	28%
	Occupation Unknown		5790	
Reasons for starting ART:	Number (%) with Stage III		73343	64%
	Number (%) with Stage IV		25228	22%
	Number (%) with low CD4 count		15804	14%
	Number (%) of patients started on ART due to TB		17280	15%
Patient Outcomes	Total number of patients started on ART		114375	
	Number (%) alive and on ART		79398	69%
	Number (%) dead		13301	12%
	Number (%) defaulted		10767	10%
	Number (%) stopped treatment		479	0%
	Number (%) transferred out permanently to another site		10430	9%
ART Regimen	Of those alive and on ART:-		79398	
	Number (%) on first line regimen		76274	96%
	Number (%) on alternative first line regimen		2859	4%
	Number (%) on second line regimen		265	0%
Ambulatory Status	Number with ambulatory status known		79398	
	Number (%) ambulatory		77080	97%
Work Status	Number with work status known		78748	
	Number (%) at work		75645	96%
Side Effects	Number with side effects counted		71549	
	Number (%) with significant side effects		3331	5%
Adherence	Number where pill count has been done		53929	
	Number (%) with pill count showing 95% adherence		50726	94%
Death	Of those who died with Date of death recorded		13301	
	Number (%) dying in the first month		4210	32%
	Number (%) dying in the second month		2967	22%
	Number (%) dying in the third month		1593	12%
	Number (%) dying after the third month		4531	34%

