



Medicine Price Monitor

June-July 2007

Key Findings: Overall

1. Medicines were still more available in the Private sector health facilities than in the Public and Mission sectors. All surveyed medicines in all sectors were on the Essential Medicines List for Tanzania (EMLIT).
2. Prices of medicines in health facilities in the Private and Mission sectors were generally higher than in the Public sector.
3. ALU was found in all public health facilities
4. Antiretroviral (ARV) medicines continued to be more available in Public than in Private and Mission health facilities but overall availability dropped from 53% November 2006 to 31% June 2007.

1. INTRODUCTION

Price is one of the factors that hinders access to medicines in Tanzania (MOH/WHO, 2004). In this regard, the Ministry of Health and Social Welfare in collaboration with the World Health Organization (WHO) and Health Action International (HAI) Africa have been conducting surveys twice a year to monitor medicine prices. The first price monitoring survey was conducted in November – December 2006. The outcome of the survey showed a slight increase of availability of the medicines as compared to the results of the survey of the medicine prices in Tanzania conducted in 2004. The current report is a result of the price monitoring conducted in June – July 2007 highlighting availability as well as price variation in three sectors namely, the Public, Private and Mission sectors. Prices of forty key medicines found on the current National Essential Medicines List for Tanzania (NEMLIT) were monitored. The survey took place at 92 rural and urban health facilities in four regions namely Dar es Salaam, Mwanza, Mbeya and Mtwara. The health facilities surveyed included 30 facilities in the Public sector, 32 in the Private sector and 30 in the Mission sector.

2. AVAILABILITY OF MEDICINES

Key findings: Overall

In all the three sectors, medicines were relatively more available in health facilities in the urban areas as compared to the rural areas. However; when comparing the overall availability of medicines between November 2006 and June 2007, results showed a fall in availability in June 2007 in the public and mission sectors (Figure 1).

Availability of some key medicines showed some mixed results as follows:

1. The availability of ALU had improved compared to the previous survey. ALU was available in more than 75% of the Public sector facilities, an indication that distribution of ALU was reaching the remote Public health facilities. The availability of ALU in the Private and Mission sectors was 50% and 47% respectively.
2. The availability of ARVs had gone down. Of the ARVs surveyed, Stavudine/Lamivudine/Nevirapine (d4T/3TC/NVP) 30mg and 40mg / 150mg / 200mg were available in 31 % of the Public health facilities when compared to first monitoring survey in November 2006 which was 53%.
3. Sulphadoxine/Pyrimethamine (SP) was available in more than 50 % of health facilities in all the three sectors.

The overall, urban and rural availability of medicines in all the sectors are shown in figure 1 below. Generally, the availability of medicines was low in June 2007 in public and mission sectors.

Figure 1: Comparison of the availability of medicines in the Public, Private and Mission sectors between Nov 2006 and June 2007.

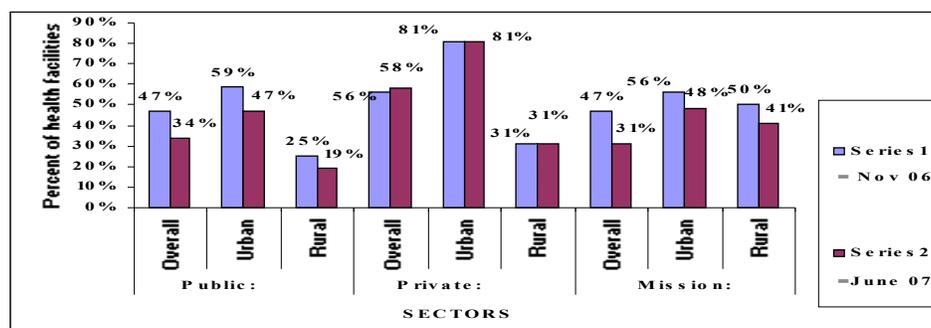
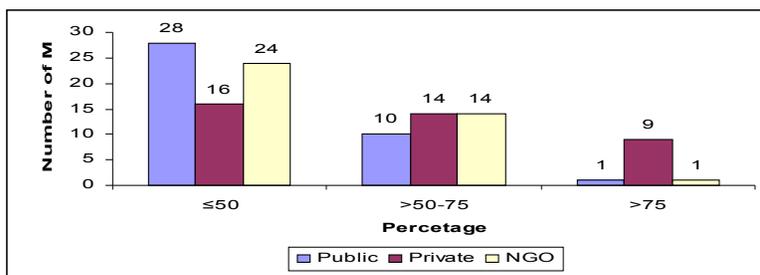


Figure 2 shows the number of medicines found in the facilities. Of the 40 medicines surveyed, 28 (70%), 16 (40%), and 24 (60%) were available in up to 50% of Public, Private and Mission health facilities, respectively, while 10 (25%), 14 (35%) and 14 (35%) medicines were available in more than 50% to 75% of the Public, Private and Mission health facilities, respectively. Only 1 (2.5%), 9 (22.5%) and 1 (2.5%) medicines were available in more than 75% of the Public, Private and Mission health facilities respectively.

Figure 2: Percentage availability of 40 medicines in the three sectors.



3. MEDICINE PRICES

Key Findings:

1. Prices in urban Public health facilities were 10% higher than in the rural Public health facilities.
2. Prices in urban Private health facilities were the same as those in the rural Private health facilities. The same was observed when prices in rural Private and rural Mission health facilities were compared.
3. The prices in the urban Mission health facilities were 32% higher than those of rural Mission health facilities.
4. Prices in the urban Private health facilities were 30% higher than those in urban Public health facilities.
5. Prices in the rural Private health facilities were 32% higher than those of rural Public health facilities.

The medicine prices were higher in the urban than in the rural public and mission health facilities while for the private sector the prices were the same in both urban and rural. Table 1 shows a summary of the comparisons of medicine prices within and between the three sectors in both urban and rural health facilities.

Table 1: Median of Medicine Prices – comparisons between and within the sectors

Comparison	overall Private/ Public	overall Mission/ Public	Puburb/ Pubrur	Privurban/ Priv rur	Misurb/ Misrur	Privurb/ Misurb	Privrur/ Misrur	Privurb/Pu bUrban	PrivRur/ PubRur
No. of times more expensive	-	-	1.10	1.00	1.32	0.79	1.00	1.30	1.32
No. of pairs compared	27	28	14	19	30	30	19	25	12

During this survey, the medicine prices in some sectors remained constant for some products eg metformin 500mg and captopril 25 mg in private sector while in the public and mission sectors their prices increased. For amoxicillin 250 mg the prices remained constant in public health facilities, increased in private health facilities and in the mission health facilities they decreased. ALu price increased in the private and decreased in the mission sectors. Price fluctuations were observed more in the public and the mission sectors than in the private sector (Table 2).

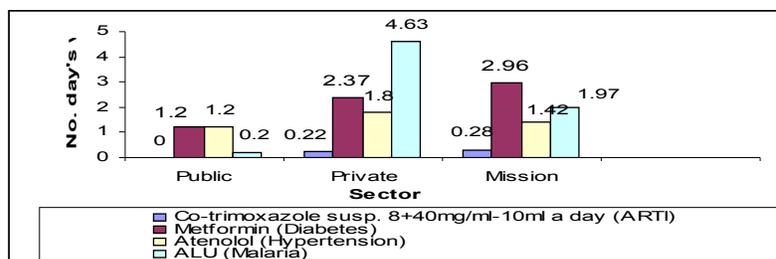
Table 2: Prices of selected medicines across all the sectors in unit price in T sh. For June 07 and November 06

	UNIT PRICE (TSHS)					
	June 07 PUBLIC (Nov 06)		June 07 PRIVATE (Nov 06)		June 07 MISSION (Nov 06)	
Amoxicillin 250mg	33.33	(33.33)	40.00	(33.33)	40.00	(47.50)
ALu (20 + 120)mg	20.83	(n/a)	488.46	(416.67)	208.33	(412.48)
Metformin 500mg	50.00	(37.50)	100.00	(100.00)	125.00	(100.00)
Glibenclamide 5mg		(n/a)	70.00	(50.00)	50.00	(30.00)
Captopril 25mg	100.00	(47.50)	100.00	(100.00)	100.00	(80.00)
Nifedipine retard 20mg	50.00	(30.00)	100.00	(100.00)	100.00	(50.00)

4. AFFORDABILITY

Affordability is calculated in terms of the days the lowest paid civil servant would have to work to pay for one treatment course of an acute condition or one month's treatment of a chronic condition. The daily wage of the lowest paid civil servant was Tshs. 2,532.67 during the price survey. The cost of treatment of malaria with the currently introduced first-line antimalarial medicine ALu was 4.63 days' wages in Private and 1.97 days' wage in Mission sectors. In the Public sector where ALu is subsidized, it costs a 0.2 days' wage.

Figure 2: Affordability of treatment for chronic diseases, adult hypertension, and diabetes and a child with acute respiratory tract infection.



When using an example of a family with a father having diabetes and hypertension and a child having acute respiratory tract infection it will take 2.4 days wage in the Public sector, 4.39 days wages in the Private sector and 4.66 days wages in the Mission sector for the family to afford to buy the required medicines. Therefore, prices in the both Private and Mission sectors are still high and hence unaffordable for most of the Tanzanians especially those with low incomes. The family will experience a greater burden as shown by the cost of 2.6, 9.02 and 6.63 days wages in the Public, Private and Mission respectively, if another adult suffers from malaria.

5. DISCUSSION:

Availability

Overall the availability of medicines in June 2007 was lower in the public and mission health facilities than that found in November 2006 while in the private sector this remained constant as shown in figure 1. Reasons for this low availability of medicines in the public and mission sectors in the second price monitoring survey could be as follows. Firstly, during the month of June, the MSD conducts stock taking thus closing the stores except for emergencies. Secondly, June is the end of the Government financial year, and during this period MSD has limited funds to purchase enough medicines for all facilities (public and majority of mission) which purchase most of their medicines from MSD. Thirdly, during the months of June to August 2007, the MSD was in the process of strengthening its systems to be able to handle the increased facilities phasing out the push system and entering the PULL system (Integrated Logistics System/Indent System). The process took time and the services at MSD stabilized in December 2007. In the November-December 2006 monitoring survey 55% (22/40) of medicines were available in up to 50% of the Public health facilities while in the June- July 2007, about 70% (28/40) of the medicines surveyed were available in the 50% of the facilities. This is probably due to replacement of the PUSH system with the PULL system (Integrated Logistics System/Indent System) in majority of the health facilities. Under the PULL system, the health facilities place their orders with MSD according to their needs and budget allocation therefore could afford more medicines as opposed to the fixed quantities of the push system.

ALu as first line treatment for malaria was found in more than 75% of the health facilities in the Public sector in the June-July 2007; a trend also observed in Kenya³ and Uganda⁴. The distribution of the ALU to all Public sector health facilities especially for the rural areas was completed when this second monitoring survey was being conducted while there was no ALU during the November 2006 survey. Although, SP is no longer the first line medicine for malaria treatment, it remains the medicine of choice for intermittent preventive treatment (IPT) for pregnant women. Its availability went down from 80% in November 2006 to 53% and 56% in June 2007 for the Public and Mission sectors, respectively. Since SP is a medicine of choice for IPT, the medicine should be available in all health facilities all the time. In the Private sector, there was no change as SP was at around 80% in both surveys of November 2006 and June 2007. The same scenario was observed In Kenya³ and Uganda⁴.

ARVs were found in less health facilities in the public sector in June 2007 than in the first monitoring survey in November 2006. The availability dropped from 53% to 31%. Reasons given are that in Mbeya region four health faculties with HIV treatment centers had ARVs out of stock on the day of the survey. In Mtwara region, some facilities did not stock ARVs but the Regional Management provided outreach services whereby some facilities were visited according to a program set up by the regional hospital. The day of survey two facilities in this program had no HIV clinics in operation and so medicines could not be verified.

Stock out of ARVs is not acceptable because it encourages resistance of virus to the ARVs. According to the National AIDS Control Programme, the stock out in Mbeya was probably because during that period ARVs stock levels in the country were low due to delays from the international suppliers leading to stock out in some health facilities. Normally, facilities are supposed to have a one month buffer stock only to prevent stock outs while waiting for re-fills of their orders from the MSD. There is therefore a need for closer monitoring/supervision of health facilities and updating the procurement and supply management procedures to prevent stock outs. Finally, it was noted that the medicines for asthma, beclomethasone and salbutamol inhaler were not available in the health facilities during the two surveys. These medicines are life saving therefore should be readily available as they are listed in the current NEMLIT, 2007.

Price and Affordability

ALu is subsidized in the Public sector making it affordable to the majority of the patients; however, a patient has to work for 0.2 days' to get a course of ALu. As for the Private and Mission sectors the availability was 50 % and 47 % respectively. ALu is not affordable in these sectors as it takes 4.63 and 1.97 days' wage respectively to pay for a treatment. During this survey, the prices in the Private sector increased by 17% while in the Mission sector decreased by 49%. The drop of price in Mission hospitals may be because they are getting ALu from MSD. Medicines were still more expensive in the private and mission sector therefore not affordable. Considering affordability as a criterion for accessibility, it must be noted that about 30% and 50% of Tanzanians in urban and rural areas, respectively live on less than one US dollar a day thus highlighting the barrier of the price on access to medicines.

6. Conclusions:

The low availability of medicines in the public health facilities, suggests that, a large population seeking treatment has to purchase their medicines from the private and mission sectors where they are available but expensive.

7. Recommendations: The government should observe that:

- Funds to the MSD should be remitted in time to allow good availability for the health facilities.
- Essential medicines should always be available.
- Medicines stock control especially at health facilities should improve
- Systems for supervision and monitoring of medicines at the district and regional levels are put in place
- ARVs availability should constantly be monitored, supervised and be available in all centers.
- Prices should be monitored regularly and policies which lead to the reduction in prices should be put in place so as to improve affordability.
- Distribution of medicines is smooth.
- SP should always be available in all health facilities for IPT.

ANNEXES

Annex 1: Characteristics Facilities included in the survey

Public sector	Private Sector	Mission Sector
Teaching Hospital (3) Regional Hospitals (3) District Hospitals (7) Sub-district hospitals (4) Health Centers (8) Dispensaries (7)	Retail Pharmacies (16) Medical store - Duka la Dawa Baridi (16)	Teaching Hospitals (2) Hospitals (11) Health centers (8) Dispensaries (9)

Annex 2: Availability of Medicines in the Public sector

Percentage Availability	Medicines	
28 medicines were found in 50% or less of Facilities	Aciclovir tab 200 mg Albendazole tab 200mg Amitriptyline tab 25 mg Amodiaquine paed syr Artesunate 100 mg tab Atenolol tab 50 mg Captopril tab 25 mg Carbamazepine tab 200 mg Chloramphenical 0.5 % eye drops Co-trimoxazole paed susp. (8+40) mg/mL Diazepam tab 5 mg Diclofenac tab 50mg Erythromycin tab 250 mg Sulbutamol inhaler 0.1 mg(100 mcg/dose)	Ferrous sulphate 200 mg tab Fluconazole cap / tab 150mg Furosemide tab 40mg Gentamycin inj 80mg/ml Gentamycin eye/ear drops 1% Glibenclamide tab 5 mg Griseofulvin tab 500mg Metformin tab 500 mg Niverapine/Lamivudine/Stavudine 30 Niverapine/Lamivudine/Stavudine 40 Nifedipine retard 20mg Omeprazole caps 20 mg Phenytoin 100 mg Ranitidine tab 150 mg
10 medicines were found in 50 - 75% of facilities	Amoxicillin caps/tab 250 mg Benzyl penicillin 5mega units Ceftriaxone inj 1 g powder Ciprofloxacin tab 500 mg Doxycycline cap 100mg	Folic acid 5 mg tab Metronidazole tab 250mg Prazequantel 600 mg tab Pyrimethamine with sulfadoxine (25+500) mg Quinine inj 300mg/ml
1 medicine was found in over 75% of the Facilities	Arthemether +Lumefantrine tab 20+120mg	

Annex 3 Availability in Private sector

Percentage availability	Medicines	
16 medicines were found in 50% or less of Facilities	Amitriptyline tab 25 mg Arthemether +Lumefantrine tab 20+120mg Atenolol tab 50 mg Captopril tab 25 mg Carbamazepine tab 200 mg Ferrous sulphate 200 mg tab Folic acid 5 mg tab Glibenclamide tab 5 mg	Metformin tab 500 mg Nevirapine/Lamivudine/Stavudine 30 Nevirapine/Lamivudine/Stavudine 40 Nifedipine retard 20mg Phenytoin 100 mg Prazequantel 600 mg tab Ranitidine tab 150 mg Gentamycin inj 80mg/ml
13 medicines were found in over 50 - 75% of facilities	Aciclovir tab 200 mg Benzyl penicillin 5mega units Ceftriaxone inj 1 g powder Co-trimoxazole paed susp. (8+40) mg/mL Diazepam tab 5 mg Doxycycline cap 100mg Erythromycin tab 250 mg	Fluconazole cap / tab 150mg Furosemide tab 40mg Gentamycin eye/ear drops 1% Griseofulvin tab 500mg Metronidazole tab 250mg Quinine inj 300mg/ml
9 medicines were found in over 75% of facilities	Albendazole tab 200mg Amodiaquine paed syr Amoxicillin caps/tab 250 mg Artesunate 100 mg tab Chloramphenical 0.5 % eye drops	Ciprofloxacin tab 500 mg Diclofenac tab 50mg Omeprazole caps 20 mg Pyrimethamine with sulfadoxine (25+500) mg

Annex 4 Availability in Mission sector

Percentage availability	Medicines	
23 medicines were found in 50% or less of Facilities	Aciclovir tab 200 mg Amitriptyline tab 25 mg Arthemether +Lumefantrine tab 20+120mg Artesunate 100 mg tab Atenolol tab 50 mg Captopril tab 25 mg Carbamazepine tab 200 mg Chloramphenical 0.5 % eye drops Co-trimoxazole paed susp. (8+40) mg/mL Ferrous sulphate 200 mg tab Ferrous sulphate 200 mg tab Folic acid 5 mg tab	Fluconazole cap / tab 150mg Gentamycin eye/ear drops 1% Glibenclamide tab 5 mg Metformin tab 500 mg Nevirapine/Lamivudine/Stavudine 30 Nevirapine/Lamivudine/Stavudine 40 Nifedipine retard 20mg Omeprazole caps 20 mg Phenytoin 100 mg Praziquantel 600 mg tab Ranitidine tab 150 mg
14 medicines were found in 50 - 75% of facilities	Albendazole tab 200mg Amoxicillin caps/tab 250 mg Benzyl penicillin 5mega units Ceftriaxone inj 1 g powder Ciprofloxacin tab 500 mg Diazepam tab 5 mg Diclofenac tab 50mg	Doxycycline cap 100mg Erythromycin tab 250 mg Furosemide tab 40mg Gentamycin inj 80mg/ml Griseofulvin tab 500mg Pyrimethamine /sulfadoxine (25+500) mg Quinine inj 300mg/ml
1 medicine was found in over 75% of facilities	Metronidazole tab 250mg	

Annex 5. Median Prices (Tsh) of Medicines in All Sectors

Medicine	Overall Public	Public Urban	Public Rural	Overall Private	Private Urban	Private Rural	Overall Mission	Mission Urban	Mission Rural
Aciclovir tab 200 mg	125.00	125.00		200.00	200.00	150.00	250.00	288.00	
Albendazole tab 200mg	200.00	200.00	200.00	250.00	250.00	250.00	200.00	287.50	
Amitriptyline tab 25 mg	10.00			50.00			20.00		
Amodiaquine paed syr	5.73			13.33	11.67	13.33	13.33	15.00	
Amoxicillin caps/tab 250 mg	33.33	33.33	33.33	40.00	50.00	40.00	40.00	47.50	
Arthemether +Lumefantrine tab 20 +120mg	20.83	20.83	20.83	488.96	500.00		208.33	468.75	
Artesunate 100 mg tab	833.33			666.70	666.68	833.33	833.33	666.67	
Atenolol tab 50 mg	50.00	75.00		75.00	87.50		60.00	50.00	
Benzyl penicillin 5mega units		400.00	450.00	500.00	500.00		500.00	700.00	
Captopril tab 25 mg	100.00	100.00		100.00	100.00		100.00	100.00	
Carbamazepine tab 200 mg	30.00			100.00			100.00	300.00	
Ceftriaxone inj 1 g powder	1400.00	1750.00	900.00	2050.00	2275.00		2700.00	4750.00	
Chloramphenical 0.5 % eye drops	600.00	600.00		700.00	750.00	600.00	750.00	600.00	
Ciprofloxacin tab 500 mg	100.00	100.00	67.50	150.00	150.00	100.00	100.00	100.00	
Co-trimoxazole paed susp. (8+40) mg/ML	5.00		5.00	8.00	8.00	8.00	10.00	10.00	
Diazepam tab 5 mg	10.00	10.00	20.00	20.00	20.00	20.00	20.00	17.50	
Diclofenac tab 50mg	20.00	30.00	20.00	30.00	30.00	30.00	27.00	50.00	
Doxycycline cap 100mg	30.00	50.00	30.00	50.00	50.00	50.00	50.00	105.00	
Erythromycin tab 250 mg	40.00	40.00	33.33	50.00	50.00	50.00	50.00	50.00	
Ferrous sulphate 200 mg tab	5.00	5.00		10.00	20.00		20.00	40.00	
Folic acid 5 mg tab	7.14	5.84	7.15	10.00	10.00	10.00	10.00	31.67	
Fluconazole cap / tab 150mg	750.00	1000.00		1000.00	700.00		1000.00	1000.00	
Furosemide tab 40mg		10.00		20.00	20.00	20.00	10.00	13.50	
Gentamycin inj 80mg/ml	100.00	100.00		200.00	250.00		400.00	500.00	
Gentamycin eye/ear drops 1%				700.00	650.00	650.00	750.00	900.00	

Glibenclamide tab 5 mg				70.00	80.00		50.00	50.00	
Griseofulvin tab 500mg	100.00	75.00	100.00	100.00	100.00	100.00	100.00	100.00	
Metformin tab 500 mg	50.00	50.00		100.00	100.00		125.00	200.00	
Metronidazole tab 250mg	16.67	16.67	13.33	16.00	15.00	16.33	20.00	20.00	
Nevirapine/Lamivudine/Stavudine 30									
Nevirapine/Lamivudine/Stavudine 40									
Nifedipine retard 20mg	50.00	58.34		100.00	100.00		100.00	166.00	
Omeprazole caps 20 mg	100.00	100.00		100.00	100.00	90.00	100.00	100.00	
Phenytoin 100 mg	11.11				350.00		10.00		
Prazequantel 600 mg tab		283.33	200.00	325.00	350.00	183.33	450.00	500.00	
Pyrimethamine with sulfadoxine (25+500) mg									
Quinine inj 300mg/ml									
Ranitidine tab 150 mg									
Sulbutamol inhaler 0.1 mg(100 mcg/dose									

Survey Manager

Prof Mary Justin-Temu

School of Pharmacy, Muhimbili University of Health & Allied Sciences

Medicine Price Monitoring Advisory Group Members

Dr. Zacharia A. Berege	Director, Hospital Services	Ministry of Health and Social Welfare
Mr. Joseph S. Muhume	Asst. Dir. Pharm. Services	Ministry of Health and Social Welfare
Prof. Olipa D. Ngassapa	Dean, School of Pharmacy	Muhimbili University of Health & Allied Sciences
Ms. Zarina Madabida	Director	Tanzania Pharmaceutical Industry
Dr. Simon Haule	Technical Support Services Officer (H)	Christian Social Service Commission
Ms. Rose Shija	National Professional Officer, Essential Medicines	WHO Country Office, Tanzania

References: ¹MOHSW, Survey of the medicine Prices in Tanzania, 2004

²MOHSW, The EMLIT (2007) is the most current national EML **in print.**

³ The Medicine price monitor for Kenya

⁴ The Medicine price monitor for Uganda