

‘Medicine Price Monitor’ is published by the Uganda Country Working Group (UCWG), a collaboration of:



Ministry of Health



World Health Organisation



HEPS Uganda Supported by:



HAI Africa

## 1. INTRODUCTION

The Ministry of Health, in collaboration with the World Health Organization (WHO) and Health Action International Africa (HAI-Africa) represented by the Coalition for Health Promotion and Social Development (HEPS-Uganda), conducts quarterly surveys on medicine prices and availability in the four major geographical regions of the country. This is part of monitoring the ongoing interventions by the Ministry of Health within the second Health Sector Strategic Plan (HSSP II) to increase access to essential medicines for all Ugandans.

This report summarises the findings for the survey conducted in the third quarter of 2008.

### KEY FINDINGS: OVERALL

- Overall, availability was highest in the Mission Sector and lowest in the Public Sector. There was an increase in medicine availability in the mission sector.
- Availability of Artemether-Lumefantrine, the first line antimalarial, was high in the Public and Mission Sector facilities while it remained low in the private sector facilities.
- Medicines in Private and Mission Sector facilities remained unaffordable for the lowest paid Government worker.

## 2. METHODOLOGY

The survey was conducted using the standardized WHO/HAI Medicine Prices Monitoring Tool<sup>1</sup>. Forty key (regularly prescribed and dispensed) medicines were selected for price and availability survey. The lowest-priced medicines were considered. The survey was carried out in the public, private and mission facilities. In the public facilities sections that provide medicines free of charge to patients were chosen and in mission facilities the survey was only carried out in facilities where medicine prices could be disaggregated. The data was collected from randomly sampled 90 facilities as shown in Table 1 below;

**Table 1: Distribution of the surveyed facilities**

	Northern	Eastern	Western	Central	Total	
Public Rural	3	4	7	3	17	29
Public urban	2	3	3	4	12	
Private rural	8	0	4	7	19	35
Private urban	3	5	4	4	16	
Mission rural	6	2	1	3	12	26
Mission urban	5	3	4	2	14	

<sup>1</sup> [www.haiweb.org/medicineprices](http://www.haiweb.org/medicineprices)

### 3. DISCUSSION OF RESULTS

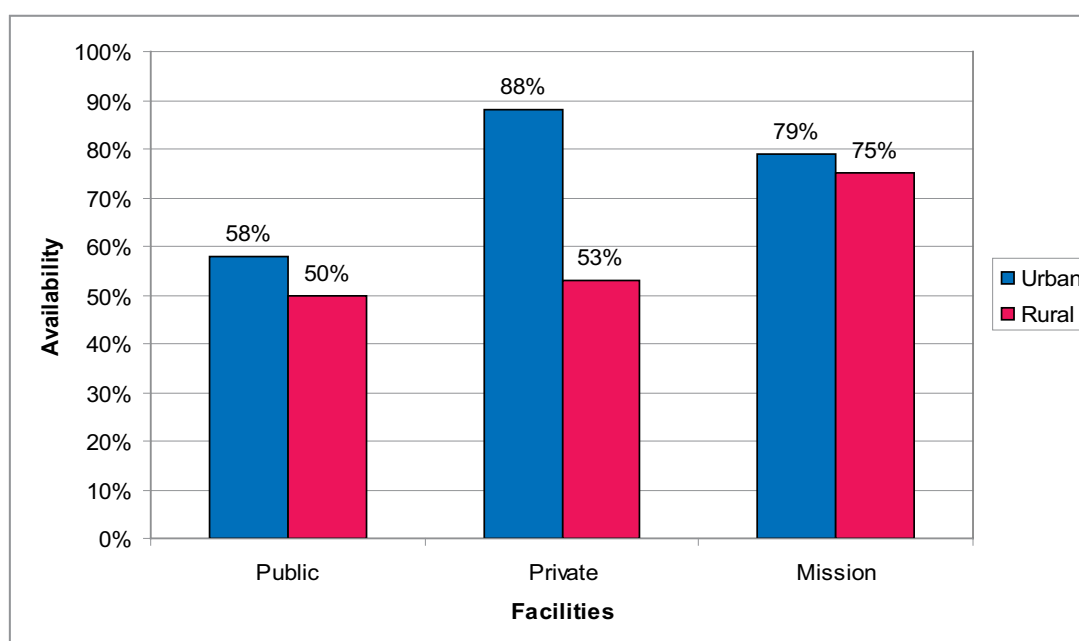
#### a) Key findings: Availability

**Table 2: Overall availability of medicines in the surveyed facilities**

Sector		No. of facilities	Median availability
Public	Overall	29	59%
	Urban	12	58%
	Rural	17	50%
Private	Overall	35	70%
	Urban	16	88%
	Rural	19	53%
Mission	Overall	26	77%
	Urban	14	79%
	Rural	12	75%

Overall, availability of studied medicines was highest in the Mission sector at 77%, and lowest in the Public sector at 59%. In the Private sector availability was 70%.

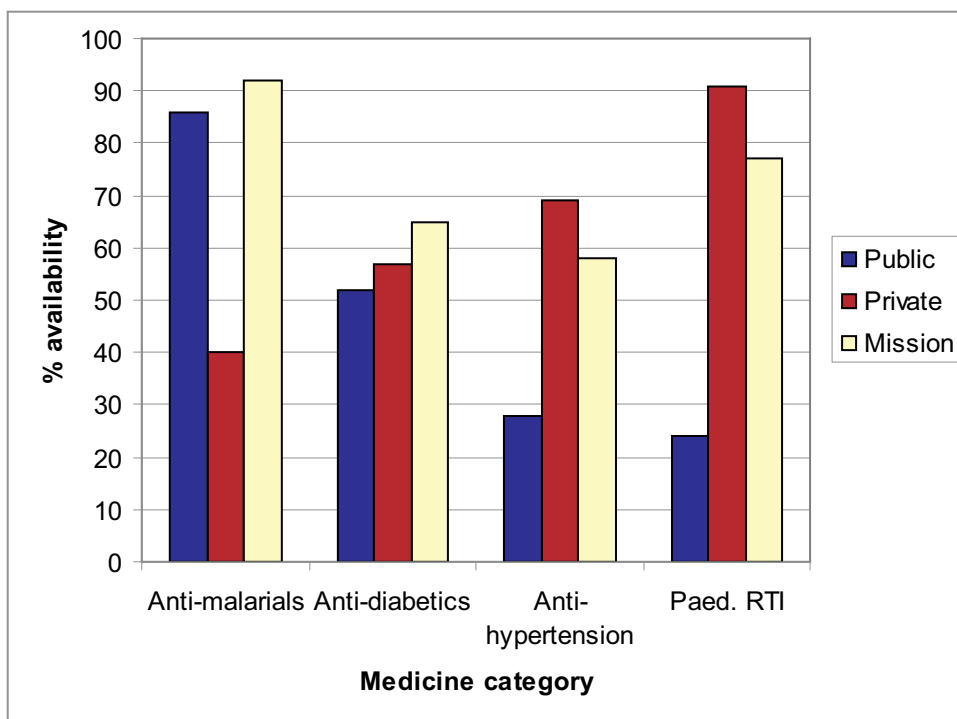
**Fig 1: Availability in Urban Versus Rural Facilities**



Generally, availability was better in the urban facilities compared to the rural and the difference was marked in the private sector. Availability in both urban and rural facilities was lowest in the Public sector at 58% and 50% respectively and highest in the urban private sector at 88%.

**Given that majority of Ugandans (about 85%) live in rural areas, the relatively lower availability of medicines in facilities in rural areas is a major limitation to access to medicines. Rural facilities should therefore be given special attention in procurement and supply management assistance**

**Fig 2: Comparison of availability of specific medicine categories across sectors**



*Note: Anti-malarials are represented by Artemether/Lumefantrine 20/120mg; Anti-diabetics by Glibenclamide 5mg; Anti-hypertensives by Nifedipine 20mg; and Paediatric Respiratory Tract infection by Amoxicillin Suspension 250mg/5ml*

Availability of Artemether/Lumefantrine tab 20/120mg (the first line antimalarial) was relatively high in the Public and Mission sector facilities – at 86% and 92% respectively.

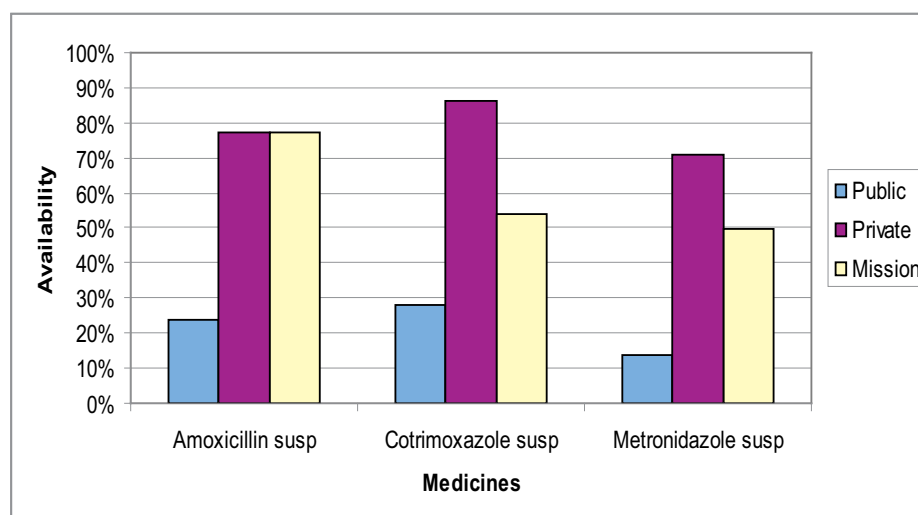
**High availability of this first-line malaria treatment should translate into improved management of one of the highest causes of morbidity in Uganda.**

It is also important to note that the availability of Pyrimethamine /Sulphadoxine (SP) tab 25/500mg, which is used for prophylaxis of malaria in especially the pregnant women, was also high in public facilities, at 86%. However, the percentage of the population that may not be in position to access anti-malarial treatment in the Public and Mission sectors, face limited access to such medicines in the Private sector, where availability is only 40%.

Availability of anti-diabetic medicines Glibenclamide 5mg tab and Metformin tab 500mg was respectively 52% and 24% in Public sector while it was 57% and 60% respectively in the private sector facilities. Medicines for hypertension, another leading cause of death, showed poor availability. Nifedipine was available in only 28% of Public sector facilities.

**The generally low availability of anti-diabetic and antihypertensive medicines in both Public and Private sectors is not a good reflection of management of diabetes and hypertension which have emerged as major chronic diseases in Uganda.**

**Fig 3: Availability of paediatric medicines across sectors**



The limited availability of Amoxicillin Suspension 250mg/5ml, Cotrimoxazole 8/40 mg/ml suspension and Metronidazole suspension 200mg/5ml in the Public sector points to poor management of infections, a leading cause of child deaths.

**Increased availability in private sector of medicines with low availability in public sector is probably due to the monetary benefit that comes along for the private facilities where patients end up**

## b). Key Findings: Medicine Prices

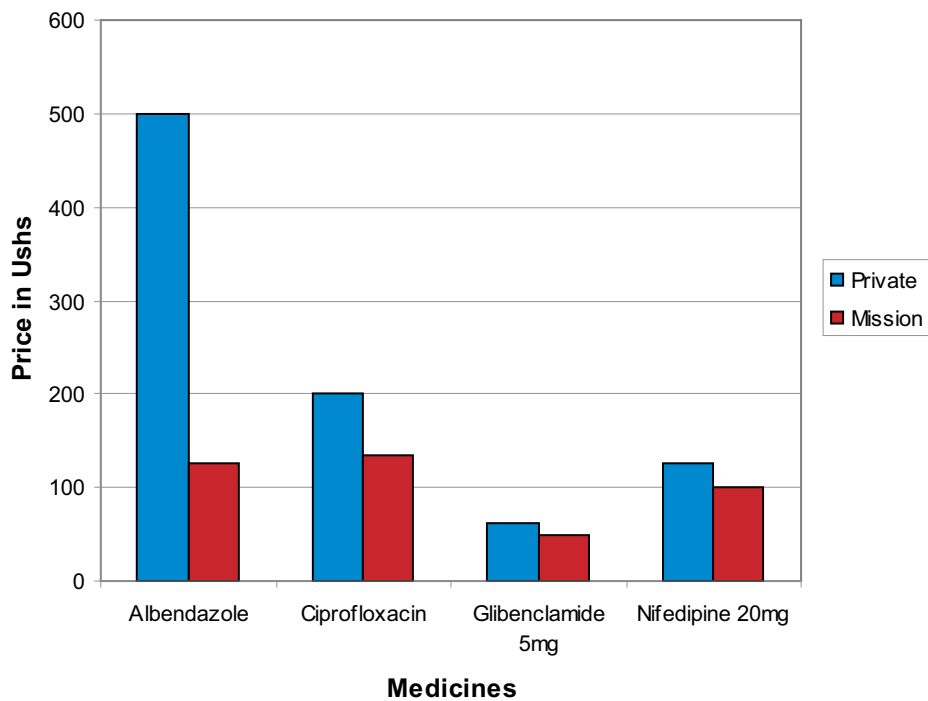
**Table 2: Comparison of medicine prices between private and mission sectors**

	Private Urban/ Private Rural	Mission Urban/ Mission Rural	Private Urban/ Mission Urban	Private Rural/ Mission Rural
No. of times more expensive	1.00	1.33	1.00	1.09
No. of Pairs Compared	28	34	31	32

In the urban facilities, the prices of medicines in private and mission sectors were comparable (ratio 1:1); while in the rural facilities, the difference in prices was about 10%. Prices in Private sector were comparable across urban and rural facilities.

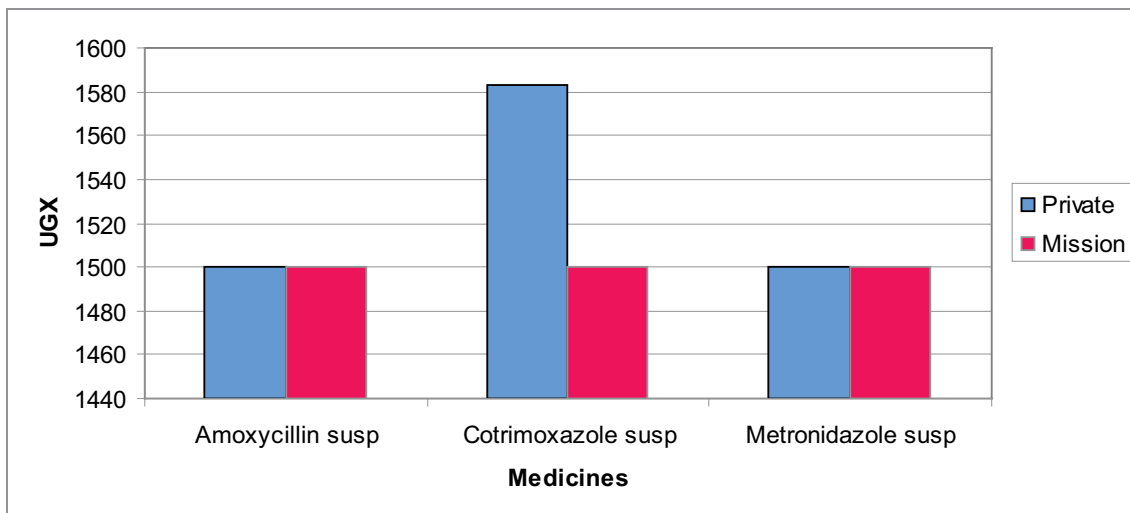
In the mission sector however, prices in urban facilities were 33% higher than those in rural facilities.

**Fig 4: Price Comparison of 4 Medicines across Private and Mission Sector**



Overall, the prices of the 4 medicines were higher in the private sector compared to the mission sector. In some cases there were marked price differences across the two sectors. For instance, Albendazole 200mg tablet was 200% higher in private compared to mission facilities. Nifedipine Retard 20mg was 25% higher in the private than in the mission sector, while Glibenclamide tab 5mg was 12.5% higher in private than mission sector facilities.

**Fig 5: Comparison of Median prices of paediatric formulations in Private and Mission**



The prices of both Amoxicillin and Metronidazole suspensions were similar in both the Private sector and Mission sector facilities. The price of Cotrimoxazole suspension was lower in mission than private facilities.

## c) Key findings: Affordability

**Table 3: Prices of selected medicines in the Private and Mission facilities**

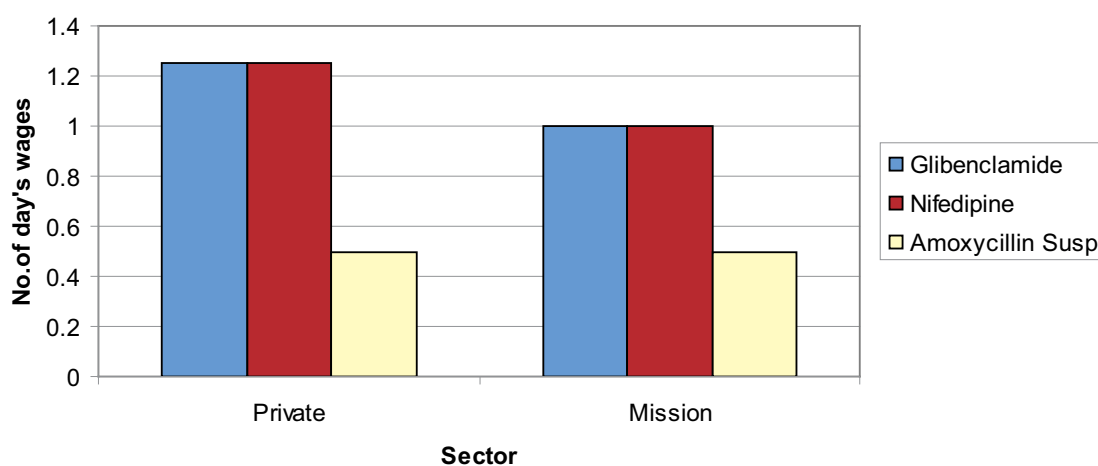
MEDICINE	Private sector facilities Price (UShs)	Mission facilities Price (UShs)
Artemether/Lumefantrine 20/120mg tab	458.3	-
Metformin tab 500mg	100	100
Glibenclamide 5mg tab	62.5	50
Nifedipine retard 20mg	125	100
Cotrimoxazole susp 8/40 mg/ml, 100ml	1,583	1,333
Amoxicillin paed susp 125mg/5ml, 100ml	1,500	1,500

Affordability is calculated in terms of the number of days the lowest paid government worker 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 government worker is at UShs 3,000 (1.714 US\$) as per the 2006/07 Government of Uganda salary structure.

**Using this measure, medicines in Private Sector and Mission facilities remained unaffordable for the lowest paid Government worker.**

An illustrative example is of a family having a diabetic father on Glibenclamide 5mg, a hypertensive mother on Nifedipine 20mg and a child with an acute respiratory tract infection on Amoxicillin 125mg/5ml suspension shown in figure below.

**Fig 6: Affordability of treatment for adult diabetes, adult hypertension and paediatric acute respiratory tract infection**



For this family, it would require almost two and half day's wages for treatment in a mission facility while treatment from the private facility would require three days' wages. The treatment would be unaffordable in these facilities. Many live on much less, so affordability is even worse for that such population.

## 4. CONCLUSION

The surveys carried out indicate that availability of medicines is still a major hindrance to access to essential medicines in the Public sector facilities yet in the Mission and Private sector facilities, the prices charged are high.

*This survey has been made possible by the collaboration between the Ministry of Health, World Health Organisation, Health Action International (HAI-Africa) represented by the Coalition Health Promotion and Social Development (HEPS-Uganda).*

## ANNEX I: MEDIAN PRICES (UG SHS) OF MEDICINES IN THE PRIVATE AND MISSION SECTORS

	PRIVATE		MISSION	
	MEDIAN UNIT PRICE	% CHANGE OF MEDIAN PRICE	MEDIAN UNIT PRICE	% CHANGE OF MEDIAN PRICE
Acyclovir tab 200mg	450	11%	250	-8%
Albendazole tab 200mg	500	0%	125	-38%
Amitriptylline tab 25mg	50	100%	50	0%
Amoxicillin tab 250mg	100	0%	70	70%
Amoxacillin susp 125mg/5ml, 100ml	1500	0%	1500	0%
Artemether/Lumefantrine tab 20/120mg	458.33	3%	-	-
Bendrofluazide tab5mg	50	0%	20	33%
Betamethasone cream/ointment 1%w/v, 20g	2000	0%	2000	0%
Carbamazepine tab 200mg	100	0%	90	5%
Ceftriaxone 1g powder for inj	3500	-13%	5000	0%
Cimetidine tab 400mg	100	0%	100	0%
Ciprofloxacin tab 500mg	200	0%	135	0%
Co-trimoxazole suspension 8/40 mg/ml, 100ml	1583	11%	1333	50%
Co-trimazole tab 400+80mg	30	36%	30	67%
Dextrose inj 5% 500ml	1500	0%	1500	0%
Diazepam tab 5mg	25	-20%	20	20%
Diclofenac tab 50mg	50	0%	50	67%
Doxycycline cap/tab 100mg	100	0%	90	100%
Erythromycin tab 250mg	100	0%	100	0%
Fluconazole tab /cap 200mg		43%	850	
Furosemide tab 40mg	22.5	0%	25	-25%
Gentamycin inj 40mg/ml	500	-10%	500	0%
Glibenclamide tab 5mg	62.5	17%	50	0%
Mebendazole tab 100mg	25	-13%	30	0%
Metformin tab 500mg	100	0%	100	0%
MethylErgometrine inj 200ug/ml, Amp	600	-18%	500	20%
Metronidazole susp 200mg/5ml, 100ml	1500	0%	1500	-11%
Metronidazole tab 200mg	25	20%	30	0%
Nifedipine retard tab 20mg	125	0%	100	0%
Nystatin pessaries	166.68	12%	100	0%
Omeprazole cap 20mg	200	0%	150	33%
ORS 1pkt/lt	225	0%	200	33%
Paracetamol tab 500mg	15	-25%	20	0%
Phenytoin tab 100mg	30	0%	27.5	-25%
Prednisolone tab 5mg	30	33%	30	0%
Pyrimethamine /Sulphadoxine (SP) tab 25/500mg	200	0%	300	80%
Propranolol tab 40mg	25	0%	30	80%
Quinine inj 300mg/5ml	650	9%	700	100%
Salbutamol inhaler 0.1mg (100mcg)/dose, 200doses	5000	0%	5000	30%
Tetracycline eye ointment 1%w/v 3.5g	500	0%	500	0%

## ANNEX II. AVAILABILITY OF MEDICINES IN THE THREE SECTORS

AVAILABILITY IN THE PUBLIC SECTOR		
Percentage Availability	Medicines	
16 medicines were found in less than 50% of the facilities	Acyclovir tab 200mg	Furosemide tab 40mg
	Amoxicillin susp 125mg/5ml	Metformin tab 500mg
	Bendrofluazide tab 5mg	Metronidazole susp 200mg/5ml
	Betamethasone cream 1%w/v	Nifedipine retard tab 20mg
	Ceftriaxone inj 1g vial	Nystatin pessaries 100000iu
	Cimetidine tab 400mg	Omeprazole cap 20mg
	Cotrimoxazole paed susp 8+40mg/ml	Prednisolone tab 5mg
	Diclofenac tab 50mg	Salbutamol inhaler 0.1mg/dose
12 medicines were found in 50-75% of the facilities	Albendazole tab 200mg	Fluconazole cap/tab 200mg
	Amitriptylline tab 25mg	Gentamycin inj 80mg/ml
	Carbamazepine tab 200mg	Glibenclamide 5mg
	Dextrose 5% injection	Methlyergometrine inj 200ug/ml
	Diazepam tab 5mg	Propranolol tab 40mg
	Erythromycin tab 250mg	Tetracycline eye ointment 1%
12 medicines were found in over 75% of the facilities	Amoxicillin cap 250mg	Metronidazole tab 200mg
	Artemether/Lumefantrine tab 20+120mg	Oral Rehydration Salt (ORS)
	Ciprofloxacin 500mg	Paracetamol tab 500mg
	Cotrimoxazole tab 80+400mg	Phenytoin 100mg
	Doxycycline caps/ tab 100mg	Pyrimethamine/ Sulphadoxine tab 25+500mg
	Mebendazole tab 100mg	Quinine inj 300/5ml
AVAILABILITY IN THE PRIVATE SECTOR		
Percentage Availability	Medicines	
8 medicines were found in less than 50% of the facilities	Artemether/Lumefantrine tab 20+120mg	Fluconazole cap/tab 200mg
	Bendrofluazide tab 5mg	MethylErgometrine inj 200ug/ml
	Betamethasone cream 1%w/v	Phenytoin tab 100mg
	Ceftriaxone inj 1g	Salbutamol inhaler 100mcg/dose
15 medicines were found in 50-75 % of the facilities	Acyclovir tab 200mg	Gentamycin inj 80mg/ml
	Albendazole tab 200mg	Glibenclamide tab 5mg
	Amitriptylline 25mg tab	Metformin tab 500mg
	Carbamazepine tab 200mg	Metronidazole susp 200mg/5ml
		Nifedipine retard tab 20mg
	Dextrose 5% inj 500ml	Nystatin pessaries 100,000iu
	Erythromycin tab 250mg	Propranolol 40mg tab
	Furosemide tab 40mg	Quinine inj 300mg/5ml



17 medicines were found in more than 75% of the facilities		
	Amoxicillin cap 250mg	Mebendazole tab 100mg
	Amoxicillin susp 250mg/5ml	Metronidazole susp 200mg/5ml
		Metronidazole tab 200mg
		Omeprazole cap 20mg
	Ciprofloxacin tab 500mg	Oral Rehydration Salt (ORS)
	Cotrimoxazole susp 80+400mg/5ml	Paracetamol tab 500mg
	Cotrimoxazole tab 400+80 mg	Prednisolone tab 5mg
	Diazepam tab 5mg	Pyrimethamine/ Sulphadoxine tab 25+500mg
	Diclofenac tab 50mg	
Doxycycline cap 100mg	Tetracycline eye ointment 1%	

### AVAILABILITY IN THE MISSION SECTOR

Percentage Availability	Medicines	
3 medicines were found in less than 50% of the facilities	Betamethasone cream/ Oint 1%w/v 15g	Fluconazole cap/tab 200mg
	Fluconazole cap/tab 200mg	
15 medicines were found in 50-75% of the facilities		
	Albendazole tab 200mg	Metformin tab 500mg
	Amitriptylline 25mg tab	Metronidazole susp 200mg/5ml
	Bendrofluazide tab 5mg	Nifedipine retard tab 20mg
		Nystatin pessaries 100,000iu
	Ceftriaxone 1g powder for inj	Omeprazole cap 20mg
		Phenytoin tab 200mg
	Co-trimoxazole suspension 8/40 mg/ml	
	Glibenclamide tab 5mg	Propranolol 40mg tab
MethylErgometrine inj 200ug/ml	Salbutamol inhaler 0.1mg/dose	
15 medicines were found in over 75% of the facilities	Acyclovir 200mg	
	Amoxicillin tab 250mg	
	Amoxicillin susp 250mg/5ml	Mebendazole tab 100mg
	Artemether+ Lumefantrine tab 20/120mg	Metronidazole tab 200mg
	Carbamazepine tab 200mg	
	Ciprofloxacin tab 200mg	Oral Rehydration salt (ORS)
	Co-trimoxazole tab 400+80mg	Paracetamol tab 500mg
	Dextrose inj 5% 500ml	Prednisolone tab 5mg
	Diazepam tab 5mg	
	Diclofenac tab 50mg	
	Doxycycline cap/tab 100mg	Pyrimethamine with Sulphadoxine tab 25+500mg
	Erythromycin tab 250mg	Quinine inj 300mg/ml
Frusemide tab 40mg	Tetracycline eye ointment 1%	
Gentamycin inj 40mg/ml		

## ANNEX III: AFFORDABILITY: DAILY WAGE OF LOWEST GOVERNMENT WORKER IS USHS 3000

Asthma		Public Sector				Private Sector				NGO			
Select Medicine Name	Medicine Strength	Dosage Form	Treatment duration	Total units/ treatment	Product Type	MTP	Days' Wages	MTP	Days' Wages	MTP	Days' Wages	MTP	Days' Wages
Salbutamol inhaler	100 mcg/dose	dose	as needed	200	Brand					5000.00	1.7	5350.00	1.8
					Lowest Price								

Diabetes		Public Sector				Private Sector				NGO			
Select Medicine Name	Medicine Strength	Dosage Form	Treatment duration	Total units/ treatment	Product Type	MTP	Days' Wages	MTP	Days' Wages	MTP	Days' Wages	MTP	Days' Wages
Glibenclamide	5 mg	cap/tab	30 days	60	Brand					3750.00	1.3	3000.00	1.0
					Lowest Price								

Depression		Public Sector				Private Sector				NGO			
Select Medicine Name	Medicine Strength	Dosage Form	Treatment Duration	Total units/ treatment	Product Type	MTP	Days' Wages	MTP	Days' Wages	MTP	Days' Wages	MTP	Days' Wages
Amitriptyline	25 mg	cap/tab	30 days	90	Brand					4500.00	1.5	6300.00	2.1
					Lowest Price								

Adult respiratory infection		Public Sector				Private Sector				NGO			
Select Medicine Name	Medicine Strength	Dosage Form	Treatment Duration	Total units/ treatment	Product Type	MTP	Days' Wages	MTP	Days' Wages	MTP	Days' Wages	MTP	Days' Wages
Ciprofloxacin	500 mg	cap/tab	7 days	14	Brand					2800.00	0.9	1890.00	0.6
					Lowest Price								

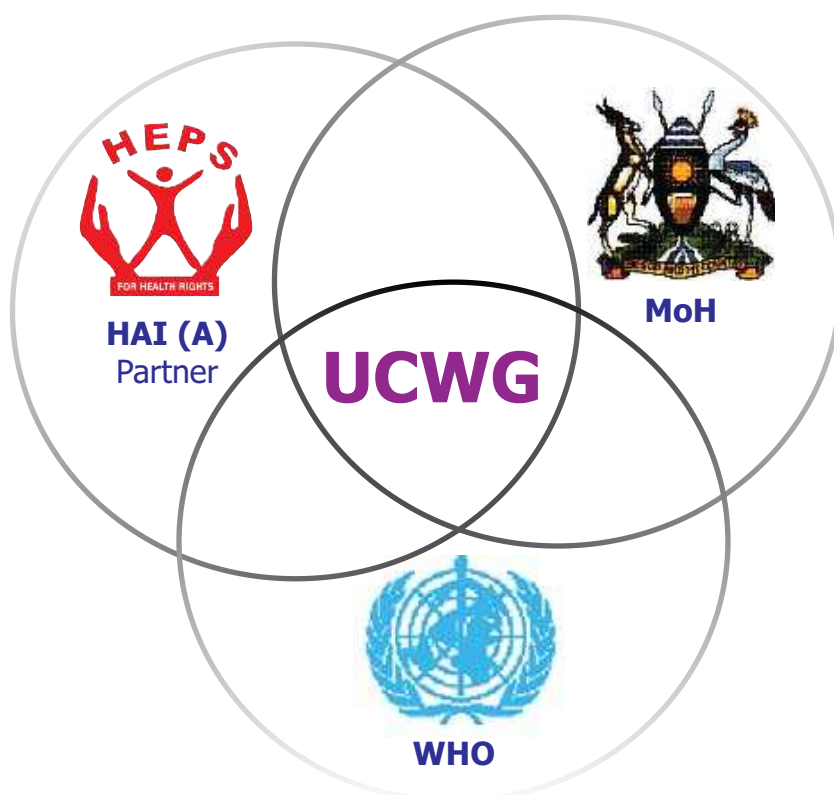
Paediatric respiratory infection		Public Sector				Private Sector				NGO			
Select Medicine Name	Medicine Strength	Dosage Form	Treatment Duration	Total units/ treatment	Product Type	MTP	Days' Wages	MTP	Days' Wages	MTP	Days' Wages	MTP	Days' Wages
Co-trimoxazole suspension	8+40 mg/ml	millilitre	7 days	70	Brand					1583.00	0.5	1333.00	0.4
					Lowest Price								

Adult respiratory infection		Public Sector				Private Sector				NGO			
Select Medicine Name	Medicine Strength	Dosage Form	Treatment duration	Total units/ treatment	Product Type	MTP	Days' Wages	MTP	Days' Wages	MTP	Days' Wages	MTP	Days' Wages

Amoxicillin	250mg	cap/tab	7 days	42	Brand Lowest Price				4200.00	1.4	2940.00	1.0
Anxiety												
Select Medicine Name	Medicine Strength	Dosage Form	Treatment duration	Total units/treatment	Product Type	MTP	Days' Wages	MTP	Days' Wages	MTP	Days' Wages	NGO
Diazepam	5 mg	cap/tab	7 days	7	Brand							
					Lowest Price			175.00		0.1	140.00	0.0
Arthritis												
Select Medicine Name	Medicine Strength	Dosage Form	Treatment duration	Total units/treatment	Product Type	MTP	Days' Wages	MTP	Days' Wages	MTP	Days' Wages	NGO
Diclofenac	50 mg	cap/tab	30 days	60	Brand							
					Lowest Price			3000.00		1.0	3000.00	1.0
Ulcer												
Select Medicine Name	Medicine Strength	Dosage Form	Treatment duration	Total units/treatment	Product Type	MTP	Days' Wages	MTP	Days' Wages	MTP	Days' Wages	NGO
Omeprazole	20 mg	cap/tab	30 days	30	Brand							
					Lowest Price			6000.00		2.0	4500.00	1.5
Adult uncomplicated malaria												
Select Medicine Name	Medicine Strength	Dosage Form	Treatment duration	Total units/treatment	Product Type	MTP	Days' Wages	MTP	Days' Wages	MTP	Days' Wages	NGO
Artemether+lumefantrine	20+120 mg	cap/tab	3 days	24	Brand							
					Lowest Price		0.0	11000.00		3.7		
Paediatric uncomplicated malaria												
Select Medicine Name	Medicine Strength	Dosage Form	Treatment duration	Total units/treatment	Product Type	MTP	Days' Wages	MTP	Days' Wages	MTP	Days' Wages	NGO
Artemether+lumefantrine	20+120 mg	cap/tab	3 days	6	Brand							
					Lowest Price			2750.00		0.9		

MTP= Median Treatment Price

# Uganda Country Working Group (UCWG)



## The Rationale for the Collaboration

- Complementary mandates & approaches
- Enhance broad stakeholder participation in policy development and implementation
- Empower CSO & build capacity in the medicines field
- Links between consumers, MOH & WHO, shared expertise, greater impact
- Improve coordination and efficient use of resources
- Build ownership of process & products

## Goal of the Collaboration

Improved equitable and sustainable access to medicines

### Acknowledgements

UCWG wishes to thank members of the advisory group for their guidance.

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