



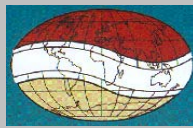
**The Republic of Uganda**

## **MINISTRY OF HEALTH**

# **FINAL REPORT ESSENTIAL MEDICINES AND HEALTH SUPPLIES TRACKING STUDY**

*Submitted to:*  
**Ministry of Health**  
P.O. Box 7272  
Kampala

*Submitted by:*



**REEV Consult International**  
APEX HOUSE NTINDA  
PLOT 897 KIRA ROAD  
P. O. BOX 28224  
Tel. 256-0414-287779, 077 2402609  
Kampala- Uganda  
E-mail: [reevconsult@infocom.co.ug](mailto:reevconsult@infocom.co.ug)  
Website: [www.reevconsult.co.ug](http://www.reevconsult.co.ug)

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## ACRONYMS

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AHSPR	Annual Health Sector Performance Report
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal care
ARVs	Anti Retro Virals
BTC	Belgian Technical Cooperation
CAO	Chief Administrative Officers
CBDAs	Community Based Distribution Agents
CBOs	Community Based Organizations
CCA	Common Country Assessment
CFO	Chief Finance Officer
CSOs	Civil Society Organizations
DANIDA	Danish International Development Agency
DfID	Department for International Development
DHO	District Health Officer
DMMP	District Medicines Management Programme
EMA	Essential Medicines Account
EMHS	Essential Medicines and Health Supplies
EMLU	Essential Medicines List for Uganda
FGD	Focus Group Discussion
FP	Family Planning
FY	Financial Year
GAVI	Global Alliance for Vaccines and Immunization
GFATM	Global Fund for AIDS, Tuberculosis and Malaria
GGH	General Government Hospital
GoU	Government of Uganda
HC	Health Centre
HCT	HIV Counseling and Testing
HDPs	Health Development Partners
HF	Health Facility
HIPS	Health Initiatives for Private Sector
HIV	Human Immuno-deficiency Virus
HSD	Health Sub-District
HSSP	Health Sector Strategic Plan
HU	Health Units
IDPs	Internally Displaced Persons
IEC	Information Education Communication
ITNs	Insecticide Treated Mosquito Nets
JCRC	Joint Clinical Research Centre
JMS	Joint Medical Stores
KI	Key Informant Interviews
LC	Local Council
MDG	Millennium Development Goals
MIS	Medicines Information Systems
MoFPED	Ministry of Finance Planning and Economic Development

MoGLSD	Ministry of Gender, Labour and Social Development
MoH	Ministry of Health
MoLG	Ministry of Local Government
MSH	Management Sciences for Health
MTC	Medicines Therapeutic Committees
NA	Not Available
NDA	National Drug Authority
NDP	National Drug Policy
NGOs	Non Governmental Organizations
NHP	National Health Policy
NMS	National Medical Stores
OPD	Out-Patient Department
ORS	Oral Rehydration Salts
PEAP	Poverty Eradication Action Plan
PEPFAR	President's Emergency Plan for AIDS Relief
PHC	Primary Health Care
PHC-NW	Primary Health Care Recurrent Non Wage Grant
PNC	Postnatal Care
PNFP	Private Not For Profit
PPDA	Public Procurement and Disposal of Public Assets
PPPP	Pharmacy Profession and Pharmacy Practice
PSOs	Private Sector Organisations
RH	Reproductive Health
RRH	Regional Referral Hospital
SIDA	Swedish International Development Agency
SOT	Stock Out Time
STI	Sexually Transmitted Infection
TBAs	Traditional Birth Attendants
TOR	Terms of References
UCG	Uganda Clinical Guidelines
UHMG	Uganda Health Marketing Group
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNF	Uganda National Formulary
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children's Education Fund
UNMHCP	Uganda National Minimum Health Care Package
USAID	United States Agency for International Development
VCT	Voluntary Counseling and Testing
VHT	Village Health Team

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## EXECUTIVE SUMMARY

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This report provides the findings of the Essential Medicines and Health Supplies (EMHS) Tracking Study which was carried out between February and March 2009 in 8 districts of Uganda. The selected districts were Masaka, Kiboga, Tororo, Butalejja, Moroto, Gulu, Kisoro and Kasese. The selection of the districts was based on a number of factors; which included: annual performance; EMHS budgetary allocation and location of the district. The study covered the FY 2007/2008. The objectives of the study were: to establish the impact of past interventions on achieving the EMHS related outcomes of HSSP-II; to track and determine procurement of and expenditure on EMHS from national to facility level; to establish availability, affordability and use of essential medicines and health supplies at community level; to provide a reliable source of information on the impact of national procurement planning at service provision levels and to identify and analyze problems in the areas of systems, processes and/or procedures relevant to the provision of EMHS to the people of Uganda in relation to HSSP-II objectives; and to propose feasible recommendations on addressing them. The study employed both qualitative and quantitative methods of data collection. The study methods included key informant Interviews, Focus Group Discussions with community people, health facility study and client exits.

### **A Overview of the Findings**

#### **A1: Impact of HSSP II Interventions on Availability and Management of EMHS in Health Facilities**

- The findings reveal that the Ministry of Health is supporting curriculum development for the Pharmacy and Pharmacy Technician Schools and is working with Makerere School of Pharmacy and Mulago Paramedical Training School to incorporate Commodity Management as a course. The Health Sector Programme Support (HSPS III) has supported construction of a new complex for the Makerere University School of Pharmacy.
- Recruitment of pharmacy staff for Health Sub-Districts, hospitals is on going as well as training of dispensers for HC IVs.
- There are glaring gaps in pharmaceutical management particularly at the lower HUs. Many key posts in pharmaceutical management remained vacant; and this has affected the ordering, procurement and distribution of Essential Medicines and Health Supplies.
- Credit line budget changes are not matched with increased population growth and inflation for over three years (2004/05 -2007/08), hence demand for EMHS progressively exceeds supply.
- There is minimal presence of Medicines and Therapeutic Committees; even where they are present, their activities are not consolidated enough to roll down to lower health facilities.

#### **A2: Tracking Procurement and Expenditure of EMHS**

- There was high utilization of credit line (CL) by districts. The average utilization of CL by districts sampled for this study was 88.5% in FY 2007/08. With the exception of Kiboga

district (60%), utilization by others was quite high: Kisoro (123.8%); Tororo (100.5%), Butalejja (97.3), Kasese (95.7%) and Masaka (85.8%). These figures are based on the records that the study team accessed at the study sites. Some districts posted percentages above 100% because credit line is a “rolling system” based on three cycles that overlap the accounting FY; hence funds not utilized in a given FY are carried forward to the next. However, the AHSPR 2007/08 indicates different figures: Kasese (81.7%), Kiboga (50.2%), Masaka (72.8%), Kisoro (106.8%), Butalejja (86%) and Tororo (90.1%); giving an average of 81.2%. The reason for the slight differences is that this study was based on a sample (two HSDs per district) while the AHSPR covered the entire country.

- The Primary Health Care Non-wage (PHC-NW) budget performances of all the sampled districts were less than 100% (i.e. disbursements were less than allocations). Kisoro received 95.2%, Tororo got 89.6%, Gulu, Kasese, Kiboga, Moroto and Butalejja each got 86.5%; and Masaka received 83.6%. The budget performance for the eight districts averaged 87.6%, implying that 12.4% of all funds allocated for PHC were not released.
- Comparing the released funds with the expenditure on EMHS (as defined by such expenditure at NMS/JMS), the results show that none of the districts spent the required 50% as per the guidelines. Kiboga spent 32.4%, Tororo 48%, and Gulu 28.9%. Masaka spent 28.7%, Kasese 38.2% and Moroto 17.3%. However, there was evidence that some districts spent some of their funds to procure from sources (PFPs) other than NMS/JMS. For example, besides the expenditure at NMS/JMS, Kisoro spent 1.5%, Butalejja 4.5%, Tororo 2.2% and Gulu 26.9% at PFPs. When these expenditures are considered, Tororo (50.2%) and Gulu (55.8%) comply with the guidelines.
- The proportion of PHC-NW release to hospitals spent on EMHS as measured by expenditure at NMS/JMS was assessed. Four of the six sampled GGHs spent 37.5% of their PHC allocation on buying EMHS. The data for Moroto and Kiboga were not complete. The results show that Kasese spent 23.8%, Butalejja 17.2%, Kiboga 25.9%, Kisoro 10.6%, Tororo 47.9% and Moroto 5.3%. If expenditure at PFPs were included, the figures would improve to give Kasese 30.7%, Butalejja 31.8%, Kiboga 35.1%, Kisoro 30.7%, and Tororo 59%. Even then, only Tororo reaches the 40% mark.
- Likewise, RRHs did not comply with procurement regulations of 40% expenditure on EMHS. The RRHs considered were two as the data for others was not complete. Masaka spent 18.9% and Fort Portal spent 5.9%. Records showed that besides expenditure at NMS/JMS, Masaka spent 25.3% and Fort Portal 23.1% together making an extra average expenditure of 24.2% at PFPs and bringing the total to 36.6%. This is still less than 40% recommended by the guidelines.

### **A3: Availability, Affordability and Use of EMHS at Community Level**

- The health facilities sampled for this study across the levels of health care stocked 93% of the EMHS items listed for this study and allowable at the respective HU levels in accordance with EMLU. The stocking rate was highest at the GGHs (99%) and lowest at

- Stock outs were more prevalent at lower HUs than at higher ones. All the sampled HC IIs at one time or the other during 2007/08 experienced stock out of each of the 20 (100%) listed items. At HC IIIs and HC IVs, 93% and 70% respectively of the items in this study were out of stock at one time or another. The stock out levels were lower (65%) for RRHs and GGHs.
- A big proportion (67%) of the 20 listed items was out of stock for more than 30 days. At HC IIIs, 50% of the items were out of stock for more than 30 days. At RRHs, it was 60% while at GGHs and HC IVs stock out was 49% and 40% respectively.
- At the higher levels of health care, the items that were frequently out of stock were: Depo Provera; Ferrous/Folic, Microgynon and Insulin. At the RRHs, Depo Provera was out of stock for 171 days, Ferrous/Folic for 110 days and Insulin 105 days. At the GGHs, Ferrous/Folic was out of stock for 157days, Microgynon 146 days, and Insulin 114 days while at HCIVs, Ferrous/Folic was out of stock for 134 days, Microgynon 122 days and Insulin for 116 days.
- At the lower levels of health care, examination gloves, Ferrous/Folic, Amoxycillin and Ibuprofen had the longest stock out periods. At HCIIIs, examination gloves were out of stock for 186 days, Ferrous/Folic 179 days, Amoxycillin 140 days and Ibuprofen 194 days while at HC IIs, Examination Gloves were out of stock for 238 days, Ferrous/Folic 201 days, Amoxycillin 218 days and Ibuprofen for 235 days.
- On reliability of Bin/stock card records, there were discrepancies between card balances and physical balances (after “on spot” physical counts) at all levels. HC IIs had the highest (40%) discrepancy between spot check physical count and Bin card balances. The average discrepancy at Regional Referral Hospitals was 31%; while at HC IV it was 30%. HC IIIs had the lowest discrepancy of 26%. Eighteen percent (18%) of the indicator items did not have stock cards at all. Fifty seven percent (57%) of the Bin/Stock cards were up-dated by the time of the visit to the health facilities. Given that RRHs generally had better trained staff, the discrepancies in stock card and physical count balances was probably due to laxity in supervision.
- On availability of medicines, clients were asked whether they had received from the health facility all the medicines as prescribed. A small majority (54.8%) of the clients interviewed as they exited the health facility had received all (100%) of the medicines that were prescribed for them from the health facility they visited. Analysis of the capacity of the sampled districts to dispense full prescription, based on the proportion of the prescribed medicines the clients received, showed an average of 80.3%. Moroto reported the highest (95%), followed by Kasese (89.3%); while lowest capacity was reported in Jinja (55%) and Kisoro (70.1%).
- Moroto and Kasese, the districts that reported the highest number of clients who received all the prescribed medicines, also reported the highest number of clients who claimed to have informally paid (under-the-counter) health workers in order to be given the

- On proper use of medicines by the community, 98% of the clients reported that they were advised on how to utilize the medicines given; while 45% were advised on the possible side effects of the medicines they received. Sixty three percent (63%) of the clients were advised on the best storage conditions for the medicines received.
- There was frivolous consumption of medicines. The majority (61.2%) of the clients interviewed admitted having ever sought treatment simply because they had heard that medicines had been delivered to their HU. The practice was commonly reported in Moroto (82%), Butalejja (80%) and Gulu (73.6%). This practice appeared to be less common in Jinja (7.7%) and Kabarole (16.7%).

**A4: Problems in the Areas of Systems, Processes and/or Procedures relevant to the provision of EMHS in relation to HSSP II Objectives**

- A number of problems explain failure by the MoH and the districts to establish effective pharmaceutical management structures through which they would fully implement the National Drug Policy. These include; inadequate numbers of Pharmacists and Pharmacy Technicians; poor remuneration of health workers; high turn over since most pharmacists prefer working in the private sector; and failure to attract staff to rural remote and hard-to-reach areas.
- Long processes in tendering and approvals (bureaucracy in government procedures) involving MoFPED, MoH, District and HSDs in financing of EMHS procurement; and logistical and distribution constraints faced by NMS caused tremendous delays in disbursement and requisitioning of funds, and procurement and Delivery of EMHS. The highest delays were within the NMS systems; from receiving orders to dispatch of deliveries.
- Lower HUs faced problems of poor human resource capacity to manage their units effectively. Personnel were inadequate and lacked skills to accurately quantify the HUs' needs. There were glaring gaps in ordering, receiving, managing EMHS and records control.
- There appeared to be general laxity and low morale amongst the health workers at all levels; and absenteeism by senior staff was rampant, which exacerbated the already existing problem of low capacity in human resources.
- There was non-compliance to the MoH guidelines by the MoH requiring hospitals (RRHs and GGHS) to spend 40%, and districts 50% of PHC-NW releases on procurement of EMHS. This non-compliance led to stockouts, as fewer funds were available to procure EMHS.

- There was evidence of irrational prescribing of medicines especially at HC IIs mainly because unqualified staff managed the HC IIs. The problem was aggravated by inadequate and /or lack of guidelines to treatment and inadequate diagnostic testing facilities, leaving the treatment of symptoms as the only alternative.

**B: Emerging Issues**

- There was high turnover of trained health workers especially in remote rural areas hence shortage of qualified personnel like Pharmacists and Pharmacy Technicians, which could partly explain the poor dispensing practices.
- The budgetary allocations and expenditure for EMHS were too low to satisfy the minimum health care needs of the country. This grossly affected service delivery at facility level and partly explained the chronic problem of stock outs of EMHS at most public HUs
- District Officials preferred to procure EMHS using PHC-NW funds from local PFPs rather than NMS or JMS as recommended by government. The requirement for more than one pre-qualified supplier was frequently ignored.
- The credit line was based on a rolling system with three cycles that overlapped the accounting FY. This made it appear as if HUs had unutilized credit at NMS at the close of the accounting period. Nonetheless, the beneficiary in the next FY could still access funds not utilized by the close of the FY.
- The requirement for all public HUs to procure EMHS exclusively from NMS exerted a lot of pressure and demand for service on NMS hence creating logistical and capacity problems for NMS, which prolonged the procurement lead-time.
- The MoU between NMS and MoH provides for NMS to deliver EMHS to the district headquarters. Distribution from district to HUs is the responsibility of the district. Lower HUs encountered financial constraints in collecting their EMHS consignments from the HSDs because there was no provision for this cost in their operational budgets.
- Record keeping at the HUs regarding funding and procurement of EMHS was very poor. Finances allocated, orders placed and deliveries made could not be tracked easily from the HUs.
- EMHS was more available at PNFPs (NGO HUs) than at public HUs; the explanation for this was that PNFPs charged a modest user-fee, which contributed towards procurement of medicines.
- Clients that failed to secure all the prescribed medicines at public HUs and could not afford them at private outlets turned to irrational means of treatment such as taking less than prescribed dosages. This has serious consequences on people's health.

- Monitoring of EMHS at public HUs was poor despite the existence of HUMC (Health Unit Management Committees). HUMCs did not go beyond witnessing the delivery of medicines to the health facility. The performance of HUMCs is reportedly constrained by lack of sustenance of their motivation since their work is purely voluntary.
- There was low human resource capacity at lower HUs, which affected EMHS management. The most affected were HC IIs, which were largely managed by Nursing Assistants.

### **C: Recommendations**

- The Ministry of Health should consider bonding health workers that have been sponsored for commodity management training. There is need to enforce work regulations and effective sanctions to reduce on absenteeism of health workers.
- The Government should improve the funding of EMHS and enhance transparency and accountability of the available funding and ensure that districts abide by guidelines governing central government grants including timely accountability of previous disbursements.
- Government must renew commitment to funding health towards meeting the Abuja Declaration (15% of national budget to go towards health).
- The MoH/MoFPED should check non-compliance to regulations by instituting sanctions specifically against districts/RRHs/GGHs that flout guidelines on PHC-NW expenditure. Penalties should include heavy sanctions on unscrupulous individuals diverting EMHS funds including prosecution, imprisonment and recovery of the diverted funds and other measures that make non-compliance a high-cost under-taking. The Anti-corruption Court (Division of the High Court) that was recently established can greatly facilitate this.
- MoH and MoFPED should carry out regular audits to track the use of funds released for procurement of EMHS; carry out pre-audits (Mid-Term) to ensure that districts buy EMHS from NMS unless a certificate of non-availability has been issued.
- After improving efficient use of the little funding that is presently available, (there are reports of rampant corruption in the country as reported in the media and in the last report of the National Integrity Survey, NIS III 2008), the proportion of credit line in the health budget (30%) should be progressively increased since credit line cannot be diverted to uses other than EMHS.
- Accounting officers (DHOs, Hospitals and HSDs) should fulfill accountability conditions early so as not to delay releases of grants for procurement of EMHS and avoid disrupting procurement plans.
- HUMCs should be strengthened to enable them demand for accountability from district officials. This will help in reducing leakages of EMHS between the district and the lower HUs.

- The total budget for EMHS should be increased, otherwise cost-sharing in health care as practiced by PNFPs, could be considered to augment the persistently meager healthcare funding
- NMS like other government entity should be granted autonomy in governance and management. Funds for credit line should be directly transferred to NMS account. This will improve efficiency and reduce on non availability of EMHS at NMS. However, this will require reasonable capitalization of NMS and MoH close supervision.
- NMS/JMS should improve their logistical efficiency, mobilize adequate capital to finance their operations and carry out their businesses effectively. This will minimize cases of non-availability of EMHS, delays in disbursements to districts among others.
- Capacity building especially at lower HUs is required to improve planning, forecasting, quantification and general EMHS management. Local Governments should ensure that qualified persons are employed to manage the HUs. This can be done by offering attractive remuneration to qualified personnel. MoH/NDA should ensure that both public HUs and Private outlets are managed by qualified personnel to avoid irrational use of medicines.

# **1 INTRODUCTION**

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## **1.1 Background**

The Government of the Republic of Uganda through the Ministry of Health is responsible for providing for the supply of Essential Medicine and Health Supplies (EMHS). One of the guiding principles of the Uganda National Health Policy (NHP, 1999) is the equitable distribution of health services country wide; with priority given to further decentralization of the health care delivery system.

Monitoring of health sector performance is part of the core functions of the Ministry of Health. Studies are expected to be conducted on the content and relative cost-effectiveness of delivering the Uganda National Minimum Health Care Package (UNMHCP). Specifically, it focuses on: effectiveness of National health financing, efficiency and equity in allocation and utilization of available resources; appropriate accountability and transparent use.

The National Drug Policy (NDP, 2002) aims to contribute to the attainment of good standard health by the population of Uganda through ensuring the availability, accessibility and affordability at all times of essential medicines of appropriate quality, safety and efficacy, and by promoting their rational use. One of the goals is to establish and maintain a secure, cost-effective medicines supply system in order to ensure that required essential medicines are available, affordable and accessible to the population and that quality is maintained up to the point of use. Another goal is to promote research which will contribute to the effective implementation of the NDP.

A core strategy for achieving maximum outcomes in the Second Health Sector Strategic Plan 2005/6- 2009/10 (HSSP-II) is the implementation of the UNMHCP. Procurement and management of EMHS are considered key elements in achieving the related objectives of HSSP-II. Objective 2 relates to ensuring the constant availability and accessibility of key items required for provision of core UNMHCP interventions at each level of the health system through a comprehensive, integrated and harmonized EMHS procurement, financing and logistics system (including any third party contributions).

## **1.2 Overview of HSSP-II**

The HSSP-II aimed at assuring availability of safe and efficacious EMHS and associated logistics required for the effective delivery of the UNMHCP nationwide. It also aimed at developing a harmonized, sustainable and efficient procurement and supplies management system. A comprehensive approach to medicines and health supplies that included drug policy development, coordinated selection and quantification of needs, procurement, storage and distribution, rational use, cost recovery, quality control and regulation was to be adopted.

The overall objective was to ensure the availability of adequate quantities of good quality essential medicines and health supplies required for the delivery of the UNMHCP at all levels of health care delivery.



The Ugandan Constitution (1995), the Local Authorities Act (1997), the 2001 Local Government Amendment Act, The Poverty Eradication Action Plan (PEAP) and the National Health Policy (NHP) provided the basis for the HSSP-II. The HSSP-II was developed to provide a common strategic framework to guide all interventions by all parties at all levels of the national health system. Based on the lessons learnt during implementation of the HSSP-I, the HSSP-II programme overview was adjusted to illustrate more clearly that implementing the UNMHCP is the main approach for achieving the sector programme and development goals. The overall development goal remains “the attainment of a good standard of health by all people in Uganda in order to promote a healthy and productive life. The HSSP-II provides for performance monitoring at sub-national levels including local governments (currently districts, but planned to extend to municipalities), and service delivery levels (currently hospitals, and HC IVs) through the District League Table (DLT) and Hospital/HC IV Performance Assessment (HPA).

### **1.3 Study Objectives**

#### **1.3.1 Main Objective**

The overall objective of the study was to conduct a second medicines tracking study with special focus on medicines and health supplies and community access and inform the next phase of implementation.

#### **1.3.2 Specific Objectives**

- i) To establish the impact of past interventions on achieving the EMHS related outcomes of HSSP-II.
- ii) To track and determine procurement of and expenditure on essential medicines and health supplies from national to facility level.
- iii) To establish availability, affordability and use of essential medicines and health supplies at community level.
- iv) To provide a reliable source of information on the impact of national procurement planning at service provision levels.
- v) To identify and analyze problems in the areas of systems, processes and/or procedures relevant to the provision of EMHS to the people of Uganda in relation to HSSP- II objectives and to propose feasible recommendations on addressing them.

### **1.4 Organization of the Report**

This report is organized into seven chapters. Chapter one presents the introduction, which comprises the background information and highlights the objectives of the study. Chapter two presents the methodological approach used in data collection and management. Chapters three to six present the findings. Chapter three presents findings on the impact of past interventions on achieving the EMHS related outcomes of HSSP-II. In Chapter four, tracking and expenditure on EMHS from national to facility level is analyzed. Discussed under this chapter is the flow of funds for EMHS; utilization of both credit line and PHC by the study districts, average financial and drug lead times and factors affecting per capita expenditure on EMHS. Chapter Five examines the availability, affordability and use of EMHS at community level. This chapter expounds on availability of and accessibility to key HSSP II indicator items and other items under this study; stock out period as well as affordability especially at alternative sources of EMHS. It also focuses

on the utilization practices of EMHS by the community. Chapter Six presents problems in the areas of systems, processes and or/ procedures relevant to the provision of EMHS. The report concludes with Chapter Seven which comprises of: Emerging Issues; Conclusions; and Recommendations that are broken down into short term and long term recommendations.

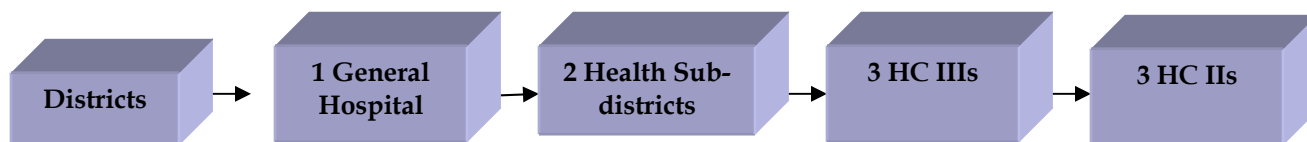
## 2 METHODOLOGY AND APPROACH TO THE TASK

### 2.1 Study Area

This study covered a total of 8 districts selected evenly amongst the four traditional regions of Uganda. The districts covered were: Masaka and Kiboga in the central region; Tororo and Butalejja in the Eastern region; Moroto and Gulu in the Northern; and Kisoro and Kasese in the Western region. The selection of districts was purposive, choosing one that had performed well and one that had not performed so well according to the Annual Health Sector Performance Report (AHSPR) of 2006/07 and 2007/08. In addition to the above, four (4) regional referral hospitals [RRHs] (one from each of Uganda's traditional regions) were included. In each of the sampled districts, 9 health units ranging from general hospitals to HC II were selected. This was expected to give a sample size of 76 health units of different levels. However, the eventual sample was 72 health units because of the following reasons:

- i. Butalejja district has only one HSD, housed at the General Hospital and has no HC IV. The sampled units were therefore 7 instead of 9.
- ii. Masaka Regional Referral doubled as a General Hospital. This reduced the sampled GHs by 1 unit.
- iii. Bokora HSD was accommodated at Moroto GH. This reduced sampled HC IVs by 1 unit for Moroto district.

The structure of the multi-stage sample selection process was as follows:



Health facilities were also purposively selected to include at least three (3) Private-Not-For -Profit (PNFP) health facilities per district. Selection of health facilities for the study was done in consultation with the respective District Health Officers (DHOs). The multi-stage purposive sample selection process results are presented in Table 2.1.

**Table 2.1 Sample Selection for EMHS Tracking**

Region	District							Population
		Regional Hospital	Referral	General Hospital	Government	Health District	Sub-HC IV	
Eastern	Jinja	Jinja			-	-	-	-
	Butaleja			Busolwe	-	-	-	-
				Bunyole			Mulagi HC III	-
						Nabiganda HC III	36,000	
						Butaleja HC III	-	
						Bingo HC II	-	
						Bubalya HC II	-	
			Naweyo HC II	-				
	Tororo			Tororo	-	-	-	-
					Tororo County	Mukuju	Merikit HC III	10,099
							True Vine HC III	-
							Apetai HC II	-
					West Budama South	Mulanda	Kiyei HC III	-
						Mwelo HC II	-	
			Sikiliza Leo HC II	-				
			Nyamalogo					
Northern	Gulu		St. Mary's Lacor*	-	-	-	1,000,000	
				Aswa	Awach	Cwero HC III	29,865	
						Labworomor HC III	7,946	
						Kal-Ali HC II	8,255	
				Omoro	Lalogi	Bobi HC III	19,737	
				Acet HC II	-			
				Coope HC II	14,000			
	Moroto			Moroto	-	-	-	-
					Matany	Matany	-	162,570
					Bokora		Nadunget HC III	12,100
						St.Pius Kidepo HC III	-	
						DHOs Clinic HC II	3,400	
				Matheniko		Iriiri HC III	-	
					Lorengchora HC II	11,000		
	Lopotuk HC II	11,600						

<b>Central</b>	<b>Masaka</b>	Masaka Regional Referral	-	-	-	-	-		
			Kalungu East	Bukulula	-	-	-	-	
					Lukaya HC III	-	-	-	
					Kalungi HC III	-	-	-	
					Kiti HCII	-	-	-	
			Bukoto West	Kyazanga	-	74,000	-	-	
	Munazamat HC III	-			-	-			
	<b>Kiboga</b>		Kiboga	-	-	-	304,008		
				Kiboga East	Bukomero	-	-	-	
						Nabwendo HC III	16,800	-	-
						Kyekumbya HCII	6,200	-	-
				Kiboga West	Ntwetwe	-	-	-	-
Butemba HC III						33,393	-	-	
Bukwiri HCII	20,100	-	-						
<b>Western</b>	<b>Kisoro</b>		Kisoro	-	-	-	-		
				Bufumbira East	Mutolere	-	-	-	-
						Gapfurizo HCII	4,000	-	-
						Kinanira HC III	2,801	-	-
				Bufumbira North	Rubuguri	-	-	-	-
						Bukimbiri HC III	-	-	-
	Gateriteri HC III	-	-			-			
	<b>Kasese</b>		Bwera	-	-	-	189,050		
				Bukonzo East	Bwera	-	-	-	189,050
						Kasanga HCIII	11,332	-	-
						Karambi HC III	116,000	-	-
						Kamasasa HCII	5,779	-	-
Busongora North				Rwesaande	-	-	-	-	
	Kyempara HCII	-	-		-				
Bugoye HCIII	Ibanda HCII	-	-	-	-				
		-	-	-	-				
		-	-	-	-				
<b>Kabarole</b>	Fort Portal Regional Referral	-	-	-	-	2,000,000			

Note: \* St. Mary's Lacor is a PNEP but not a Government General Hospital.

## **2.2 Study Methods**

The study collected data using various methods. These included: In-depth Interviews with Key-informants; Client Exit Interviews; Focus Group Discussions (FGDs); and Document Review.

### **2.2.1 In-depth Interviews**

In-depth interviews were the main source of information. The key informants were all those persons engaged in handling and management of EMHS. These included officials in various ministries comprising; MoH, MoFPED and MoLG. Development partners that contribute towards procurement of EMHS or support the health sector were also consulted including; DANIDA, SIDA, Irish Aid, Italian Cooperation, BTC, UNFPA, UNICEF, and African Development Bank. Civil Society Organizations (CSOs) consulted included: SCMS, MSH, JCRC, UHMG, Uganda Health Consumers Association, HEPS and HIPs. Also included were bodies that play key roles in procurement, supply and regulation of EMHS including: National Medical Stores (NMS); Joint Medical Stores (JMS); and National Drug Authority (NDA). Other key informants included; heads of relevant departments (Health, Accounts, Procurement and Administration) in the study districts, in-charges of health units and Medical Superintendents.

### **2.2.2 Client Exit Interviews**

During the field work, the study teams carried out client exit interviews. These involved asking clients who had received /sought a service from a health facility about various aspects of service delivery at that health facility. These were used to capture quantitative data to gauge the clients' satisfaction with the services provided. Twelve clients were interviewed at each health facility visited, making a total of 886.

### **2.2.3 FGDs**

The study conducted 2 FGDs per district visited (apart from Moroto district where only one FGD was conducted). The FGDs were organized in such a way that participants in one FGD included people involved in the management of a health facility the study team had visited. The second FGD comprised community members that were located far away from any health facility. While the first group provided insight into general management aspects of the HUs, the latter presented the challenges faced by communities in accessing EMHS.

### **2.2.4 Document Reviews**

The study involved reviewing of documents at every health facility. This pertained to documents related to procurement of and expenditure on EMHS. It included but not limited to: reviewing stock cards for the indicator items; requisitions; local purchase orders; delivery notes and invoices; certificates of non-availability; and vouchers. Other documents reviewed included; government health policies and frameworks. The distribution of respondents is indicated in Table 2.2.

**Table 2.2 Distribution of Respondents**

Category	Number
Client Exit Interviews	886
Focus Groups (8 people each)	128
Key informants	72

### 2.3 Indicator Items

The list of EMHS for Uganda (EMLU 2007) contains 538 unique medicines formulations. This study was guided by a list of 22 medicines and medical supplies as indicator items as agreed upon with the MoH. The list of indicator items for this study is presented in Table 2.3.

**Table 2.3 Study Indicator Items**

	Service	Item
1	Malaria	<ul style="list-style-type: none"> <li>• Coartem Yellow 20/120 mg Tab</li> <li>• Quinine 300mg/ml 2ml</li> </ul>
2	HIV Testing and Counseling	<ul style="list-style-type: none"> <li>• Determine i/ii kit</li> </ul>
3	Family Planning	<ul style="list-style-type: none"> <li>• Depo Provera Injections</li> </ul>
4	STI Diagnosis and Treatment	<ul style="list-style-type: none"> <li>• Cotrimoxazole 480mg/ 120 mg Tab</li> <li>• Amoxicillin 250mg Capsule</li> <li>• Metronidazole 200mg Tab</li> </ul>
5	Immunization	<ul style="list-style-type: none"> <li>• Measles Vaccine</li> </ul>
6	ANC/ PNC	<ul style="list-style-type: none"> <li>• Ferrous Sulphate/ Folic Acid Tab</li> <li>• Ibuprofen 200mg Tab</li> <li>• Paracetamol 500 mg Tab</li> </ul>
7	Hypertension	<ul style="list-style-type: none"> <li>• Propranolol 40mg Tab</li> <li>• Bendrofluazide 5mg Tab</li> </ul>
8	Diabetes	<ul style="list-style-type: none"> <li>• Glibenclamide 5mg Tab</li> <li>• Insulin Mixtard 30/70 IU 100 IU/ML</li> </ul>
9	Mental Health	<ul style="list-style-type: none"> <li>• Haloperidol 5mg Tab</li> <li>• Carbamazepine 200mg Tab</li> </ul>
10	Supplies	<ul style="list-style-type: none"> <li>• Examination Gloves</li> <li>• Syringes 2ml</li> </ul>

### 2.4 Data Management and Analysis

The data collected was analyzed and interpreted in relation to drug supply management. The findings were to help in recommending solutions to potential drug supply system or process problems and performance of indicator outputs. Data collection focused on two key aspects:

- Tracking the flow of funds for essential medicines and medical supplies from the Ministry of Finance, Planning and Economic Development to the Health Units and;
- Tracking the physical flow of essential medicines and medical supplies from procurement/allocation to the points of consumption.

Financial analysis was done using MS Excel to derive ratios and percentages to explain the stated drug supply management indicators and was appropriately interpreted in the context of the drug supply management indicators provided.

#### **2.4.1 Key Informant Interviews**

Data collected through key informant interviews and in-depth interviews was analyzed qualitatively using thematic analysis. The interviews targeted key persons at different levels i.e. national, district and health facility levels. The list of key informants is presented in Appendix 1. The data collected was analyzed and interpreted in relation to drug supply management and help to recommend solutions to potential drug supply system or process problems and performance of indicator outputs.

#### **2.4.2 Client Exit Interviews**

The data collected through client exit interviews was entered into the computer using EPINFO. This was after cleaning and editing all that data. Data analysis was then done using the SPSS program. Bivariate and Multivariate analyses were conducted in order to find out the clients' level of satisfaction with services offered by their HUs and their assessment of the trends in the health service sector in general.

#### **2.4.3 Focus Group Discussions (FGD)**

Focus Group data was analyzed using thematic procedures. The major issues of concern were analysed in relation to the itemized subjects and the corresponding answer categories classified by each item of a particular theme.

#### **2.4.4 Document Review**

A detailed review of relevant documents was undertaken in order to supplement and corroborate information gathered through the field study and other primary sources. Data from documents was analyzed using content analysis and appraised in reference to particular themes under investigation.

### **2.5 Limitations and Challenges of the Study**

The study encountered several limitations and challenges. However, the study concentrated on limitations specifically to EMHS supply management and financial management issues. These were considered the key concerns affecting EMHS availability at the different levels in EMHS procurement and management.

#### **2.5.1 EMHS Management**

- i. Poor record keeping at HU level made it difficult for the study team to access some relevant information. Most HUs did not have up-to-date information about orders made or deliveries received. The study team minimised this problem through corroborating all possible sources of data available at the district and/or HSD. Related data was obtained from NMS and JMS for comparison.
- ii. Suppliers (NMS and JMS) dealt with districts and HSDs. Therefore, data obtained from these suppliers (NMS and JMS) showed transactions up to the district and Health Sub-district. There were information gaps between districts/HSDs and the lower units. There were cases

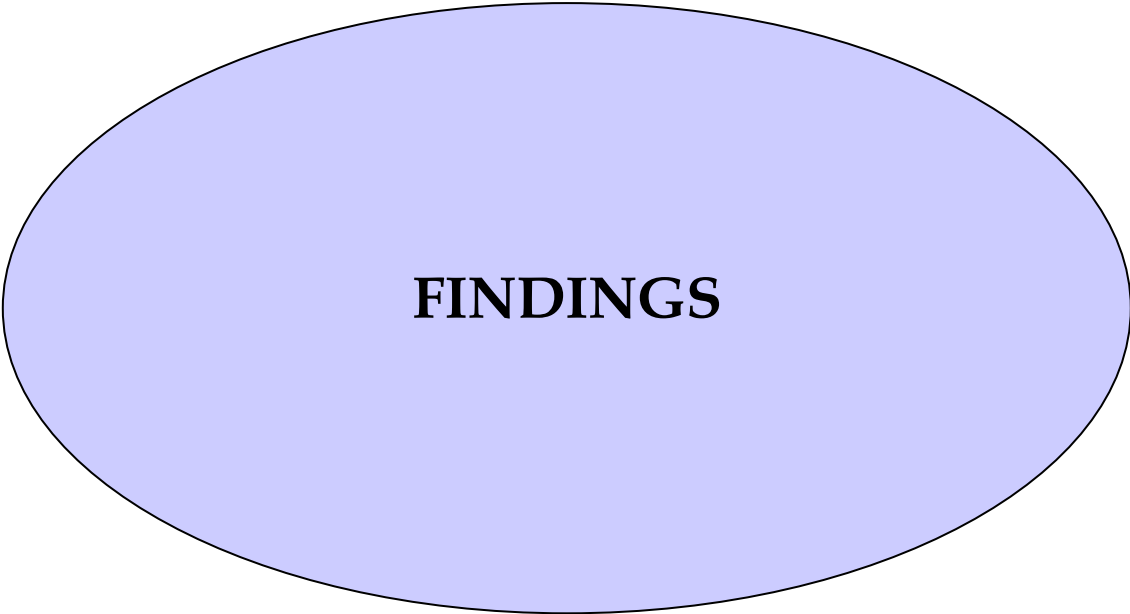


where quantities of supplies received and the applicable lead times could not be ascertained because of insufficient data.

- iii. Stock cards in some places were inadequate; some were not updated, were wrongly entered or were not used at all. The levels of EMHS stocks and stock outs could not be determined by the use of stock cards. This problem was addressed through cross-checking with different records.
- iv. Whereas there were some records at higher levels of the procurement chain( district, hospital, HSD), records showing supplies at lower level HUs were inadequate. It was not possible to ascertain quantities of supplies received at the various levels. This made it difficult to quantify values of all supplies and the applicable lead times.
- v. Districts or HSDs procured for the lower HUs. All records, including orders, could only be tracked up to either the district or the HSD where these transactions were conducted hence transactions of the lower HUs could not be accurately tracked.

### **2.5.2 Financial Management**

- i. Some NGO facilities especially HCIIIs lacked competent staff to keep meaningful books of accounts. Hence, accounts records were poorly kept. Information for financial tracking and expenditure on EMHS was therefore not always available.
- ii. Because of lack of capacity for lower HUs to manage their finances and maintain their own books of accounts, in most cases their books of accounts were kept by HSDs and yet, they (HSDs) themselves exhibited poor record keeping. This complicated the work at the HSDs, hence creating more confusion in financial records at the HSD.
- iii. The HUs did not seem to be in control of their operations. Districts and HSDs who controlled the finances and procurement made decisions on behalf of HUs, many times without consultations.
- iv. Whereas the financial records (budgets and quarterly reports) at the districts were relatively clear on allocations and releases, records about actual expenditure on EMHS were not as clear. This gap provided a loophole for pilferage.
- v. There seemed to be reluctance on the part of some district officials to avail the study team with all relevant information. Consequently, vital information like dates of release of funds from the MoFPED was difficult to ascertain. Failure to obtain this vital information left some gaps in the study, making it difficult for the team to track transactions comprehensively.



**FINDINGS**

### **3 IMPACT OF HSSP II INTERVENTIONS ON ACHIEVING THE EMHS RELATED OUTCOMES**

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#### **3.1 Introduction**

Assessment of the impact of HSSP-II interventions on achieving the EMHS related outcomes in this report is based on the Ministry of Health's essential documents including the Mid-Term Review Report (MTR) of the Second Health Sector Strategic Plan (HSSP-II 2005/06-2009/10) of October 2008; the Report of the Fourth Technical Review Meeting (May 2007); The Annual Health Sector Performance Reports 2006/07 and 2007/08; and the primary data collected by the Consulting Team. The main purpose of the assessment was to examine the progress of the implementation and to identify and propose adjustments to HSSP-II including assessing the progress made in meeting the HSSP-II targets, appropriateness of outputs/outcomes, among others.

#### **3.2 Selected Objectives of HSSP II**

The objectives of HSSP-II were diverse. However, this study selected those that were more directly related to EMHS. Focus was placed on the following:

- 1: To ensure implementation of the National Drug Policy through an effective pharmaceutical management structure in the MoH headquarters and within the districts
- 2: To ensure the constant availability and accessibility of key items required for the provision of priority core UNMHCP interventions at each level of the health system through a comprehensive, integrated and harmonized EMHS procurement, financing and logistics system (including any third party contributions)
- 3: To ensure the required quality and safety of EMHS (including herbal medicines) and standards of pharmaceutical practices by strengthening the national pharmaceutical regulatory system
- 4: To promote the appropriate use of EMHS by health professionals, patients and the general public through the implementation of effective interventions including provision of appropriate information on medicines to the community

The proposed targets under HSSP-II that specifically related to these objectives were:

- i. Double annual output of pharmacists and pharmacy technicians by training institutions through new integrated training programmes and appropriate review and revision of training curricula to meet health sector technical and skills needs
- ii. Department of pharmaceutical services and health supplies established at MoH and the vacant posts in district hospitals and lower level facilities filled to facilitate optimal management services at the MoH
- iii. Achieve an overall per capita budget of at least US\$ (2.40) excluding 'additive' funding from global initiatives by 2009/10
- iv. Zero stock outs of HSSP indicator items (to be redefined)
- v. <10% stock out of other core EMHS in the credit line and

- vi. <20% stock out of other items required for delivery of the UNMHCP achieved
- vii. All third party contributions (including new initiatives such as GFATM) executed according to an agreed national procurement plan.
- viii. Third party procurement for all centrally procured items for nationwide distribution stopped and contributions channeled through the credit line facility
- ix. Complete and promulgate the new pharmacy profession and practice bill and Uganda Medicines Control Authority Bill
- x. PPDA to recognize the specialized nature of EMHS procurement to ensure maximum flexibility and responsiveness to meet public sector needs
- xi. Have in place Functional MTCs at all Districts, HSD, Regional/District/General Hospitals
- xii. EMLU updated every 3 yrs
- xiii. Uganda Clinical Guidelines (UCG) and Uganda National Formulary (UNF) reviewed and revised at least once every five years or more frequently as appropriate

### 3.3 Key Interventions Related to EMHS under HSSP-II

The MTR of health sector performance was particularly interested in those interventions that targeted EMHS related outcomes. The main interventions were:

- Creation of the Essential Medicines Account (EMA)
- The Fourth Technical Review Meeting
- Development of the 3-year Rolling Procurement Plan
- Push system replaced with Pull
- Task force on National Medical Stores (NMS)

#### i) Creation of the Essential Medicines Account (EMA)

An account for essential medicines was established at the MoH where funds earmarked for procurement of EMHS were to be deposited. The deposits included both GoU contributions and contributions by development partners. Prior to the creation of EMA, the funding sources for Medicines and Health Supplies were multiple, creating predictability problems as well as challenges in mainstreaming them into existing functional financing mechanisms (Annual Health Sector Performance Report (MoH 2008). However, EMA is under-funded, which puts the provision of EMHS at risk. While in FY 2007/08 DANIDA contributed 100% to the credit line, the GoU contributed 76% of their budgeted amount (UGX 8.5b out of UGX 11.2b). Over the past 3 financial years (2005/06 - 2007/08) the actual GoU contributions to the Essential Medicines Account (EMA) as a percentage of their credit line budgets shows a declining trend (95% in FY 05/06, 80% in FY 06/07 and 76% FY 07/08).

#### ii) The Fourth Technical Review Meeting

The Fourth Technical Review Meeting was held in Kampala between 26<sup>th</sup> and 27<sup>th</sup> April 2007. The overall objective was to improve efficiency in management of medicines and health supplies through detailed and in-depth discussions of current achievements and challenges. The specific objectives were to:

1. Review current arrangements with the view to support /propose efficient and sustainable mechanisms for medicines and health supplies financing
2. Review the procurement requirements for medicines and health supplies and make recommendations to harmonize them with the PPDA Act

3. Review and make recommendations on in-country arrangements for storage, distribution and disposal of medicines and health supplies.

The Technical Review Meeting made several recommendations including;

- reviewing the NMS, NDA and LG laws to remove inconsistencies and ambiguities;
- strengthen pharmacy practice; rationalize technical assistance;
- increase level of GoU funding of the health sector;
- integrate all financing into the existing mainstream financing mechanisms (budget support, PHC, CL);
- improve the financial viability of NMS and JMS

### **iii) Development of the 3-Year Rolling Procurement Plan**

A 3-Year Rolling Procurement Plan for EMHS was developed aiming at integration and harmonization of procurement for EMHS with the intention of improving efficiency and procurement planning to ensure value for money. It was to harmonize parallel procurements that lacked adequate information and appropriate monitoring systems. All third party procurement is being channeled through NMS and has been integrated in the existing national procurement systems. However, the pharmacy division faces challenges in maintaining planning cycles, hence compromising effective overview of requirements, commitments, gaps and effective management.

### **iv) Push System Replaced with Pull**

The system of supplying EMHS to health facilities was changed from "Push" to "Pull". The Pull system is a demand/"order"-based system. The Supplier will supply only those items that the client has ordered. The aim is to reduce on wastage emanating from supplying items that have no demand.

### **v) Task Force on National Medical Stores (NMS)**

On 17th April 2007, a Task Force was set up to study the challenges faced by NMS in terms of procurement of medicines and medical supplies, storage and financing. Its aim was to streamline the role of NMS in health service delivery. The findings were generated and recommendations made. Among the main findings was that the operations of NMS were constrained by late payments for services offered, the need to harmonize handling of third party procurements, infrastructure deficiency and lack of a reliable management information system (MIS).

## **3.4 EMHS Related Outcomes of HSSP II Interventions**

The MTR 2008 noted that some areas targeted by HSSP-II registered progress. For example, among its diverse objectives, the HSSP-II had targeted to double the annual output of Pharmacists and Pharmacy Technicians by training institutions through integrated training programmes and appropriate review of training curricula to meet the health sector needs. The MTR noted that although the number of pharmacists may not have been doubled, the Pharmacy and Pharmacy Technicians Schools Curriculum had been reviewed and support provided for implementation. In addition, the Ministry of Health was carrying out centralized regional training and on-the-job training of health workers up to HSD level. The National Drug Policy (NDP) was reviewed and a Five-year National Pharmaceutical Sector Strategic Plan (NPSSP) to implement it had been prepared. A strategy for rational medicines use was also developed. The Pharmaceutical Section at the MoH was up-graded to a Division, for effective pharmaceutical

management through coordinated supervision and support to the sub-sector activities in the areas of EMHS management at all levels of health care. A district-focused District Medicines Management Programme (DMMP) to guide the process of harmonization of procurement and strengthening of EMHS management had been established within the pharmaceuticals division at the MoH. Recruitment to fill key vacant posts in district hospitals and lower level facilities was ongoing to augment optimal management of pharmaceutical services.

However, despite these gains, the performance of the health sector has slowed down. The proportion of health facilities without stock outs of tracer medicines has stagnated, declined or shown minimal improvement. For example, the proportion of health facilities without stock outs of tracer items in the medium term had oscillated from 35% in 2004/05; 27% in 2005/06; 35% in 2006/07 and 28% in 2007/08. The HSSP-II target for this period was 80% availability (or maximum 20% stock out).

Stagnation and poor performance were attributed to a number of factors and these are:

- a) Lack of significant increase in the government budget to health
- b) Stagnant/declining funding to the service delivery levels including district health services and PNFP health facilities
- c) Challenges in management at the various levels of the sector relating to inefficient utilization of available resources. This included failure to absorb available funds and at local government level, marked delays in recruitment and the sub-optimal use of medicines funding.

### **3.5 Impact of HSSP II Interventions on Availability and Management of EMHS at Health Facilities**

The MTR appreciates that progress had been registered towards achieving the set objectives. However, it points out that those gains have had very little impact on availability and management of EMHS at health facilities. There were glaring gaps in pharmaceutical management particularly at the local government levels. Many key posts in pharmaceutical management remained vacant, yet the HSSP-II ends in FY 2009/10. Levels of stock -outs of EMHS at health facilities is on the rise. The MTR concluded that the challenges to the health system affected the quantity and quality of service delivery at both the government and PNFP health facilities. It notes that the health system at all levels especially service delivery level was under-funded leading to failure to fully implement the HSSP-II interventions.

Some progress had been registered towards achieving the set objectives of HSSP-II. However, the gains have not had significant impact on availability and management of EMHS

Table 3.1 shows the impact of past interventions on achieving the EMHS related outcomes of HSSP-II.

**Table 3.1 Matrix for the Impact of Past Interventions on Achieving the EMHS Related Outcomes of HSSP-II**

<b>Objective 1: To ensure implementation of the National Drug Policy through an effective pharmaceutical management structure in the MoH headquarters and within the districts</b>		
<b>Activity</b>	<b>Achievements/impact</b>	<b>Emerging Issues/Recommendation</b>
Doubled annual output of pharmacists and pharmacy technicians by training institutions through new integrated training programme and appropriate review and revision of training curricula to meet health sector technical and skills needs.	MoH has supported Curriculum development for the Pharmacy and Pharmacy technician schools to enable increase in the output from these schools. Construction of a new complex for the Makerere University School of Pharmacy has commenced. The Ministry is trying to work with Mulago Paramedical Training School to incorporate commodity management as a course.	Retention of health workers is a challenge. People are trained but they go to work elsewhere. The Ministry should consider bonding health workers trained under the collaboration for some years and provide incentives for them to continue working for MoH/GoU.
Department of pharmaceutical services and health supplies established at MoH and the vacant posts in district hospitals and lower level facilities filled to facilitate optimal management services at the MoH	The pharmacy section at MoH headquarters was upgraded to a division, but is yet to be upgraded to a department. Recruitment of pharmacy staff for HSDs and hospitals is still on going. Currently pharmacists are available at Regional Referral Hospitals only. The position of dispensers has been established at HCIV but positions are not yet filled.	Due to this grave lack of personnel, the selection and quantification exercise, procurement (ordering), Receiving, Storage, Distribution and records control leaves a lot to be desired. The Ministry should make recruitment of pharmacists and dispensers a priority to manage pharmaceutical supplies and reduce on wastage of resources that is linked to irrational prescribing.
<b>Objective 2: To ensure the constant availability and accessibility of key items required for the provision of priority core UNMHCP interventions at each level of the health system through a comprehensive, integrated and harmonized EMHS procurement, financing and logistics system (including any third party contributions)</b>		
Achieve a per capita EMHS budget of US\$ 2.40 by 2009/10, excluding 'additive' funding from global initiatives	No major achievements established in funding of medicines and medical supplies	Credit Line budgets have remained unchanged over three years despite population growth and inflation. However, as the government mobilizes more funds, there is need to increase transparency and accountability of the limited available funding.
Zero stock outs of HSSP-II indicator items (to be redefined), <10% stock out of other core EMHS in the credit line and <20% stock out of other items required for the delivery of the UNMHCP achieved	72% of health units reported monthly stock outs of tracer items during FY 07/08.	There is poor medicines management at the health facility level especially HCII, under-spending by districts on the PHC accounts, and non availability of EMHS at NMS.

<p>All third party contributions (including new initiatives such as GFATM) executed according to an agreed national procurement plan. Third party procurement for all centrally procured items i.e cotrimoxazole for nationwide distribution stopped and contributions channeled through the credit line facility</p>	<p>Third party procurement is being channeled through NMS and integrated in the existing national procurement systems.</p> <p>Effective procurement planning process is compromised by limited pharmaceutical division capacity and process management. Only one pharmaceutical plan of FY 06/07 has so far been published.</p>	<p>Global funds were mismanaged which called for their suspension for some time. Reported expiries mostly for third party items like TB drugs and Coartem that were not properly planned and there is a lot of bureaucracy involved with third party procurement.</p> <p>Need for commitment to procurement planning process with annual publishing of plans and proper management of the process</p>
<p><b>Objective 3 To ensure the required quality and safety of EMHS (including herbal medicines) and standards of pharmaceutical practice by strengthening the national pharmaceutical regulatory system</b></p>		
<p>The new pharmacy profession and practice bill and Uganda Medicines Control Authority Bill completed and promulgated</p>	<p>Process initiated and on going.</p>	<p>The bill is not yet promulgated because it is still in discussion with parliamentary sectoral committee for social services. Need for urgent review of NDA statute to improve on monitoring the safety of medicines.</p>
<p>NMS Statute (1993) updated to meet the demands of the current national regulatory settings as well as the special nature of pharmaceutical procurement</p>	<p>Statute formulated in 1993, became an Act in 2000 but has never been revised.</p>	<p>No attempts to review the NMS statute to meet the demands of the current national regulatory settings as well as special nature of EMHS procurement. Some of the clauses are rigid which makes procurement bureaucratic. The NMS statute should be reviewed urgently.</p>
<p>PPDA to recognize the specialized nature of EMHS procurement to ensure maximum flexibility and responsiveness to meet public sector needs</p>	<p>No major achievement has been realized.</p>	<p>PPDA Act (2003) not flexible and responsive enough to EMHS procurement. It encourages bureaucracy and is restrictive as regards purchasing medicines at a minimal cost as it provides for open bidding with its bureaucratic procedures. Need for revision of the PPDA to reduce on high procurement costs.</p>
<p><b>Objective 4 To promote the appropriate use of EMHS by health professionals, patients and the general public through the implementation of effective interventions including provision of appropriate information on medicines to the community</b></p>		
<p>Functional MTCs in place at all Districts, HSD, regional/District/general hospitals</p>	<p>MTCs were found in place at district hospitals and these participate in quantification of needs but they are not involved in bottom-up management of the EMHS. There are efforts by the Pharmacy Division of the MoH to</p>	<p>The aim of MTCs was to form a consolidated team in districts focusing on issues of commodity management and diagnostics but MTCs did not roll down to lower health facilities. MTCs should be</p>



	revive MTCs.	supported to build capacity at the lower HUs.
EMLU updated every 3 yrs	The EMLU was developed and updated in 2007. However, most health facilities including hospitals reported that they didn't have the current (2007) version	Need to improve on dissemination of the EMLU. The Ministry can utilize various distribution channels like NMS and JMS. These are better positioned to distribute the books along side medicines.
Uganda Clinical Guidelines (UCG) and Uganda National Formulary (UNF) reviewed and revised at least once every five years or more frequently as appropriate	Uganda Clinical Guidelines revision being finalized, just waiting for printing.  MoH never pursued the printing of a UNF which is therefore non existent.	Urgently print and effectively disseminate UCG.  MoH should reconsider the need for a UNF and prepare the document as a credible source of information on medicines.

*Source: EMHS Field Data, 2009*

### 3.6 Key Learning Points

The MoH has supported curriculum development for the Pharmacy and Pharmacy Technician schools to enable increase in the output from schools. Under this support construction of a new complex for the Makerere University School of Pharmacy has commenced. The Ministry is also working with Mulago Paramedical Training School to incorporate commodity management as a course. This support will hopefully enhance the availability of trained Pharmacists and Pharmacy Technicians and hence address the dire need for skills in pharmaceutical management.

The MoH has embarked on recruitment of pharmacy staff for HSDs and hospitals and has established the position of Dispenser at HC IV. This will address the critical shortage of technical skills in pharmaceutical management at these levels in the short run. In the long run the lower HUs should also have trained Dispensers.

The HSSP-II targeted to reduce stock out levels of tracer items at HUs to 20% (or 80% availability) by 2009/10. This is unlikely to be achieved as 72% of health units reported stock outs of any of the tracer items during FY 07/08.

Procurement of EMHS has been streamlined to respond to need. All third party procurement is being channeled through NMS and has been integrated in the existing national procurement systems. This action has checked un-coordinated procurement which used to be the cause of high expiries of EMHS

General hospitals had MTCs in place and these participated in quantification of needs but they were not involved in bottom-up management of the EMHS. There is need to equip MTCs with capacity to effectively monitor and ensure proper use of EMHS.

Revision of the UCG was not yet finalized (by the time of this study). This means that health workers were prescribing medicines without proper guidance. This is more critical with new diseases which may not be addressed by the old UCG version. A situation like this is recipe for irrational prescription of medicines.

## 4 TRACKING PROCUREMENT AND EXPENDITURE ON EMHS

### 4.1 Health Sector Funding

Expenditure on EMHS largely depends on the size of the health sector budget from which funds to procure EMHS are provided. Table 4.1 presents the trend of funding to the health sector from FY 2004/05 (start of HSSP-II) to 2007/08 (date of this EMHS Tracking study).

**Table 4.1 Public Expenditure on Health over the HSSP-II Period**

FY	GoU funding (Ug.Shs bn)	Donor contributions (Ug.Shs bn)	Total (Ug.Shs bn)	Per capita expenditure (Ug.Shs)	GoU expenditure on health as % of total expenditure (%)	GoU Budget Performance (%)
2004/05	219.56	254.85	474.41	17,437	9.7	92.8
2005/06	229.86	268.38	498.24	18,213	8.9	95.7
2006/07	242.63	139.23	381.86	13,518	9.6	95.6
2007/08	277.36	141.12	418.48	13,949	9.6	98

*Source: Annual Health Sector Performance Reports for Financial Years 2006/07 and 2007/08 (MoH)*

Table 4.1 shows that the GoU total funding to the health sector has been modest, oscillating between 8.9% and 9.7% over the last 4 years, averaging 9.4% of the national budget. It is important to note that the trend of funding is downward as it started at 9.7% of the national budget declining to 9.6% in 2007/08. The estimates for 2008/09 showed a slight increase to 10.7% but this has declined to 10.4% in the estimates for FY 2009/10 (Background to the Budget 2009/2010). This falls short of the Abuja Declaration, which recommended 15% of the national budget. The per capita expenditure is declining even faster, falling from Ug.Shs. 17,437 in 2004/05 to Ug.Shs.13, 949 in 2007/08 given a high population growth rate of (3.2%) per annum (UBOS 2006). Although the proportion of GoU contributions towards total public expenditure on health has improved from 46.2% in 2004/05 to 66.2% in 2007/08 ( Ug.Shs. 219.56 bn to Ug.Shs. 277.36), total funding has shrank by 11.8% from Ug.Shs.474.41 bn. in 2004/05 to 418.48 bn in 2007/08 regardless of the growing population and therefore increasing health needs. MoH projections indicate that the demands of the health sector in FY (2008/09) required funding in the region of Ug.Shs 252bn. However, only Shs.144 bn. was provided in the national budget leaving a shortfall of Shs.108bn (Ministry of Health Planning Department).

With HSSP-II the MoH changed the supply system for EMHS from “push” to “pull” (order-based) system. An Essential Medicines Account (EMA) was established at the MoH, where funds earmarked for procurement of EMHS are deposited to service credit lines at NMS and JMS. This is to serve as a mechanism to channel and integrate centralized funds at MoH for public sector and PNFP EMHS procurement. The main contributors to EMA are GoU and DANIDA. HSSP-II represents a consolidation and extension of the achievements of HSSP-I. Among the salient achievements of HSSP-I was increased funding for EMHS from a baseline of < \$0.80 per capita

expenditure to \$1.50 by FY 03/04. Figure 4.1 illustrates the trend of credit line funding for the period 2004/ 05 to 2007/08.

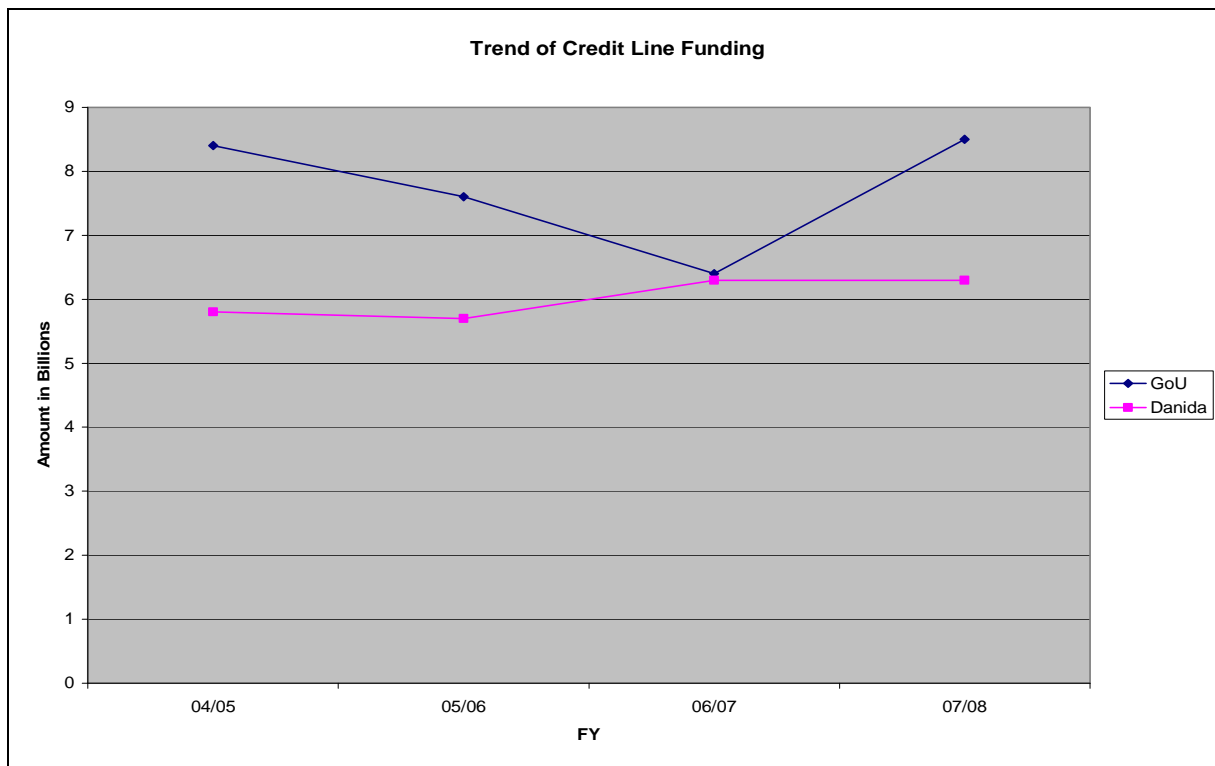
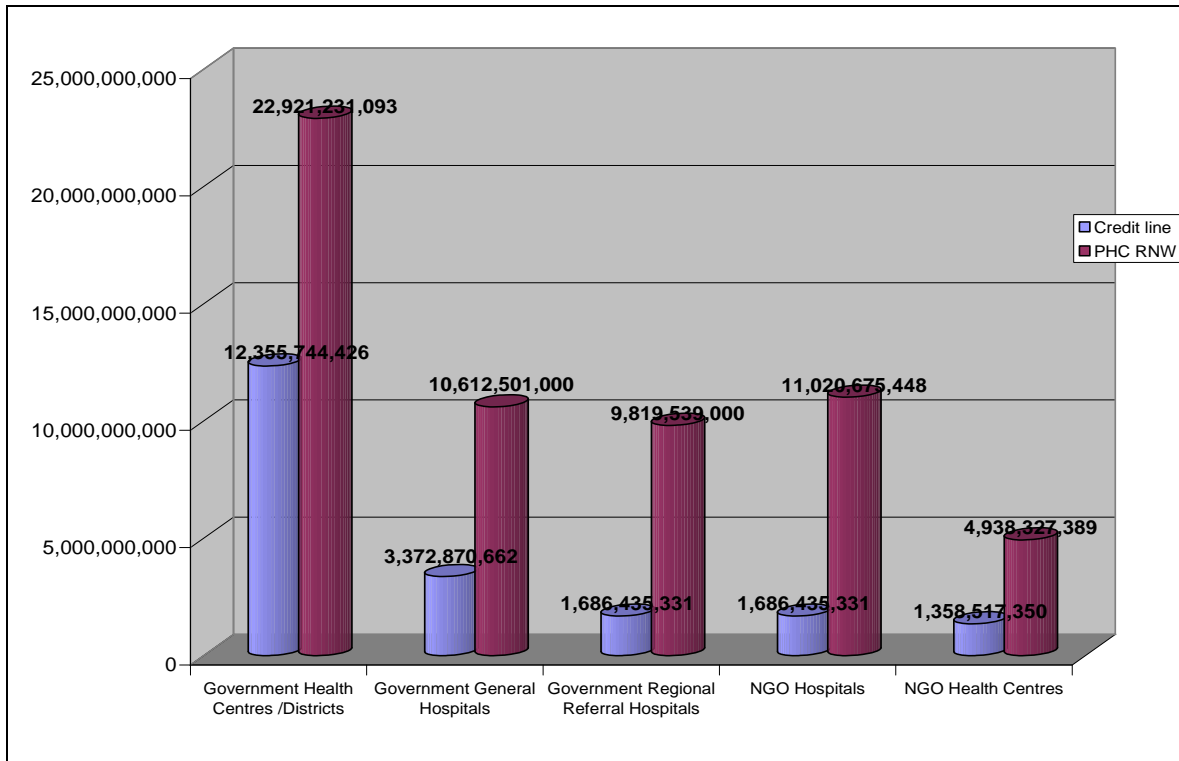


Fig 4.1: Trend of Credit Line Funding between FY 2004/05-FY2007/08  
 Source: Annual Health Sector Performance Reports FY 2006/07 and 2007/08

#### 4.2 Tracking Procurement and Expenditure on EMHS through National, District, HSD and Health Unit Levels

Procurement of EMHS is effected through two lines of financing. These are credit line and PHC Recurrent Non-wage/Delegated funds. PHC is a government grant to local governments to support devolved health services and is remitted to the districts. NGO health facilities also benefit from the PHC grants. Guidelines on expenditure of PHC funds provide that RRHs and GGHS spend at least 40% of the released PHC-NW on procurement of EMHS while the districts (lower HUs) spend at least 50%. NGO health facilities are not bound by this guideline. Credit line is a basket of funds including contributions by government and development partners towards procurement of EMHS. The contributions are collected into an Essential Medicines Account (EMA) controlled by the MoH. At the time of this study, DANIDA was the only contributing development partner to EMA. Both public HUs and NGO health facilities benefit from credit line but only access it in form of supplies not cash. Fig 4.2 shows the amounts of funds, both in credit line and PHC that government allocated for the FY 2007/08.



**Fig 4.2** Allocations of Credit Line and PHC Recurrent Non-Wage for the FY 2007/08  
**Source:** FY 2007/08 District Transfers for Health Services (MoH 2007)

### 4.3 Flow of Funds for EMHS Procurements

Credit Line and PHC-NW are the main sources of funding for EMHS. PHC funds are central government grants to local governments to support devolved health services and is remitted to the districts. Credit Line is a collection of funds for procurement of medicines contributed by the central government and development partners. These contributions are collected into the Essential Medicines Account. Districts access credit line in form of EMHS supplied by NMS for public HUs and JMS for NGO HUs. Thus, the two funds have different centres of control: credit line is controlled from the centre (MoH) while the local governments (districts) control PHC-NW.

#### a) Credit line

The ministry (MoH) runs a 3-tier annual procurement cycle system under which it notifies NMS/JMS of amounts of funds the ministry has committed for supply of EMHS to public HUs in each district for that cycle (period). Each cycle covers a period of 4 months i.e May to August; September to December; and January to April. NMS/JMS supplies medicines to the beneficiaries according to the level of the commitment (amount of funds) indicated in the cycle. NMS/JMS raises invoices to the MoH for payment after delivering the medicines. The payments and all financial correspondences on credit line are between MoH and the suppliers. NMS/JMS keep credit line beneficiaries informed on their credit line balances regularly (in the newspapers) and ideally after each delivery. According to the MoH guidelines, public HUs must procure from NMS while NGO HUs must procure from JMS. However, it should be noted that the system is a “rolling” one i.e. cash balances not used in one FY are carried forward to the next. The flow of credit line funds is shown in Fig 4.3.

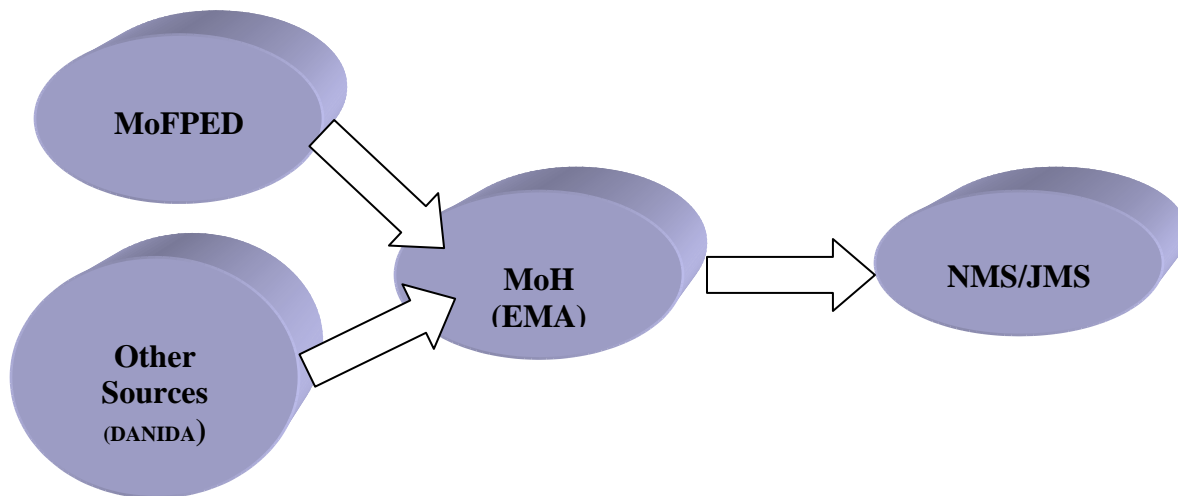


Fig. 4.3: Flow of Credit Line Funds  
 Source: Field Data EMHS Tracking Study, 2009

**b) Primary Health Care Recurrent Non-wage Grants**

The PHC recurrent non-wage grants are devolved to the districts to cater for decentralized health services including procurement of EMHS. These funds are controlled by the DHO who expend it with authorization of the CAO. The MoH guidelines provide that the districts must spend at least 50% of the grant on procurement of EMHS. The flow of funds for procurement depended on the system of procurement the district uses; whether it is the DHO or the HSDs that procures the EMHS.

**(i) Flow of Primary Health Care Funds for Bulk Procurement**

“Bulk Procurement” refers to the system where procurement of EMHS is done by the district (DHO) on behalf of all HUs. Under this system, all funds for EMHS are controlled by the DHO at the district. Each HSD and the lower HUs are allocated their share of the funds but those funds are controlled by the DHO. When need for procuring EMHS arises, the lower HUs submit their orders to the DHO through their respective HSDs. Therefore, the flow of funds is MoFPED to the District General Fund Account to DHO. This system was operating in Tororo, Butalejja, Moroto, Gulu, Masaka and Kisoro.

**(ii) Flow of Primary Health Care Funds for Procurements by the HSDs**

In the districts where procurement of EMHS was done by the HSDs, the EMHS funds flowed up to the HSDs. When the DHO receives the delegated funds, the funds are transferred to the operational accounts of the various HSDs and DHO cedes control of those accounts to the HSDs. At the HSD, each lower HU is allocated its own funds, but control remains with the HSDs who bear the responsibility to procure EMHS for the lower HUs. This was the method used in Kasese and Kiboga. Under this system, the flow of funds is from MoFPED to District General Fund Account to District Health Account to HSD Account.

**(iii) Flow of Primary Health Care Funds for Government General Hospitals (GGHs)**

PHC funds for GGHs are remitted through the District General Fund Account but are clearly earmarked for the GGH. In the study, the sampled GGHs included: Kiboga, Kisoro, Bwera (Kasese), Busolwe (Butalejja) Tororo and Moroto. On receiving the grants the CAO's office passes on the funds to the control of the GGH where the Medical Superintendent is the Accounting Officer. The flow of GGH funds therefore is: MoFPED to District General Fund Account to GGH Account.

**(iv) Flow of Primary Health Care Funds for Regional Referral Hospitals (RRHs)**

Regional Referral Hospitals (RRHs) hold votes and are self-accounting. The RRHs included in the sample were Jinja, Masaka and Fort Portal in Kabarole. Their funds are released directly to them. The respective Medical Superintendents are the accounting officers. The flow is therefore from MoFPED to the RRH Account.

**(v) Flow of Primary Health Care-NGO Funds for NGO Health Facilities**

PHC support for NGO HFs is remitted through the District General Fund Account but districts had no control over them. The CAO's office transfers the funds to the District Health Account which are then transferred to the beneficiaries' accounts. These funds are administered by the controlling authorities of the beneficiary health facilities. The sampled NGO HUs were controlled by faith-based (COU, Catholic Church and Muslim) Medical Bureau. The PHC funds for NGOs therefore flowed from MoFPED to District General Account to DHO to beneficiary NGO/authority.

#### **4.4 Average Financial Lead Times**

Financial lead time refers to the times that the various processes of releasing funds for procurement of EMHS takes within and between the various offices/organizations that have a role to play in the procurement of EMHS.

**a) Credit line Financial Lead Times**

The process of releasing GoU contributions to credit line funds starts from MoFPED. MoFPED releases funds to MoH and MoH deposits the credit line funds on the EMA. Likewise, other contributors (DANIDA) remit their contributions to the EMA. When the EMA has been credited, the MoH notifies NMS/JMS of the funds committed for a given cycle for each beneficiary. The suppliers consult with the MoH to agree on the pricing of EMHS for that cycle. NMS /JMS supply the beneficiaries according to the commitments made by MoH and orders placed by the beneficiaries after which they (suppliers) raise invoices to MoH requesting for payment. These consultations between the MoH and the supplier take on average 10 days.

**b) PHC Financial Lead Times**

The flow of PHC funds starts from the MoFPED which releases the funds to the districts and then the districts release them to DHOs, to GGHs and HSDs and NGO HFs. Funds are normally earmarked and figures properly categorized. The importance of this indicator is to identify process inefficiencies that may delay the entire procurement process contributing to the long spells of stock outs of EMHS. The study therefore sought to find out how much time was spent at each level of the

funds release stages and therefore how long it took for the funds to be finally accessed to procure EMHS.

**(i) Between MoFPED and District (CAO's Office)**

The lead time is measured as the time between the communication of releases from MoFPED to the districts and the time the funds are remitted to the District General Fund Account (DGFA). Prior to releasing funds, MoFPED communicates to the districts advising them of the funds that will be released for earmarked activities. The average time was found to be 12 days. This only applied to those districts which had complied with all other financial pre-requisites. Those who do not comply are delayed to the next releases. Releases are effected monthly. Compliance requires submission of accountability for the past release, work plan, signed memorandum of understanding and budget request for the current period (quarter).

**(ii) Within CAO's Office**

Central Government grants to districts are delivered consolidated but earmarked for different purposes. For example, the PHC grant alone includes PHC Recurrent Non-wage; PHC Development; PHC Wage; etc. The consolidated package is delivered to the District General Fund Account. The CAO's office transfers the funds to their respective Departmental Accounts. The figures are clearly known. Time taken to complete the transfers affects the time taken to access those funds. This study was interested in finding out how much time it took before funds to procure EMHS could be accessed. The importance of this indicator was to identify process inefficiencies that could contribute to the long stock out periods of essential EMHS. The study team asked the CAOs/CFOs of the sampled districts how long their offices took to process these grants. On average, the districts reported 10 days, with some districts like Masaka, Kasese, Tororo and Moroto reporting two weeks while Butalejja and Kisoro reported 1 week.

On average, the districts reported 10 days of processing PHC funds to transfer central government grants to departmental accounts with some districts like Masaka, Kasese, Tororo and Moroto reporting two weeks while Butalejja and Kisoro reported 1 week.

**(iii) DHO's Office to HSD and NGO HFs**

In districts, where procurement of EMHS was done by the HSDs, DHOs further transferred PHC funds from the district Health Account to the accounts of the various HSDs and the NGO HFs. DHOs ceded control of those funds to the HSDs and the authorities that controlled the beneficiary NGO HFs. It was yet another process with time implications. Kiboga and Kasese were the only sampled districts that used this system. The sampled HSDs reported different times within which funds from the DHO's office reached the HSD Account. In Kiboga district, the sampled HSDs were Kiboga East and Kiboga West. Kiboga East reported 10 days while Kiboga West reported 14 days (2 weeks). In Kasese district, Bukonjo East reported 3 days while Busongora North reported 7 days (1 week) averaging 5 days. The study team did not visit the bureau that controlled NGO HF accounts to establish how long this process took for NGO health facilities.

**(iv) Lead Times for GGH**

The allocations for GGHs are known and clearly marked from the centre. The Hospital Superintendents control and account for the funds. However, the funds also come through the District General Fund Account. The CAO's office transfers the funds to the Health Account and the DHO transfers it to the GGH account. The Medical Superintendents and Administrators of the



sampled GGHs were asked how long the process took. They reported different times: Kiboga hospital reported 10 days, Kisoro reported 7 days while Kasese reported 14 days. Moroto reported 14 days, Butalejja 7 days, Tororo 7 days, and Gulu 10 days. The average is 8 days.

**(iv) Lead Times for RRHs**

The sampled RRHs were Jinja, Masaka, and Fort Portal in Kabarole. Regional Referral Hospitals (RRHs) are vote holders. The Medical Superintendents control and account for the funds. The RRHs received their releases directly and were therefore not affected by the red tape in the procedures at the district. The only financial lead time was that between the MoFPED and the RRH. This was measured in the same way as remittances from MoFPED to the districts.

The average lead time for the flow of PHC funds from MoFPED through MoH to Districts and lower level units is indicated in Fig 4.4.

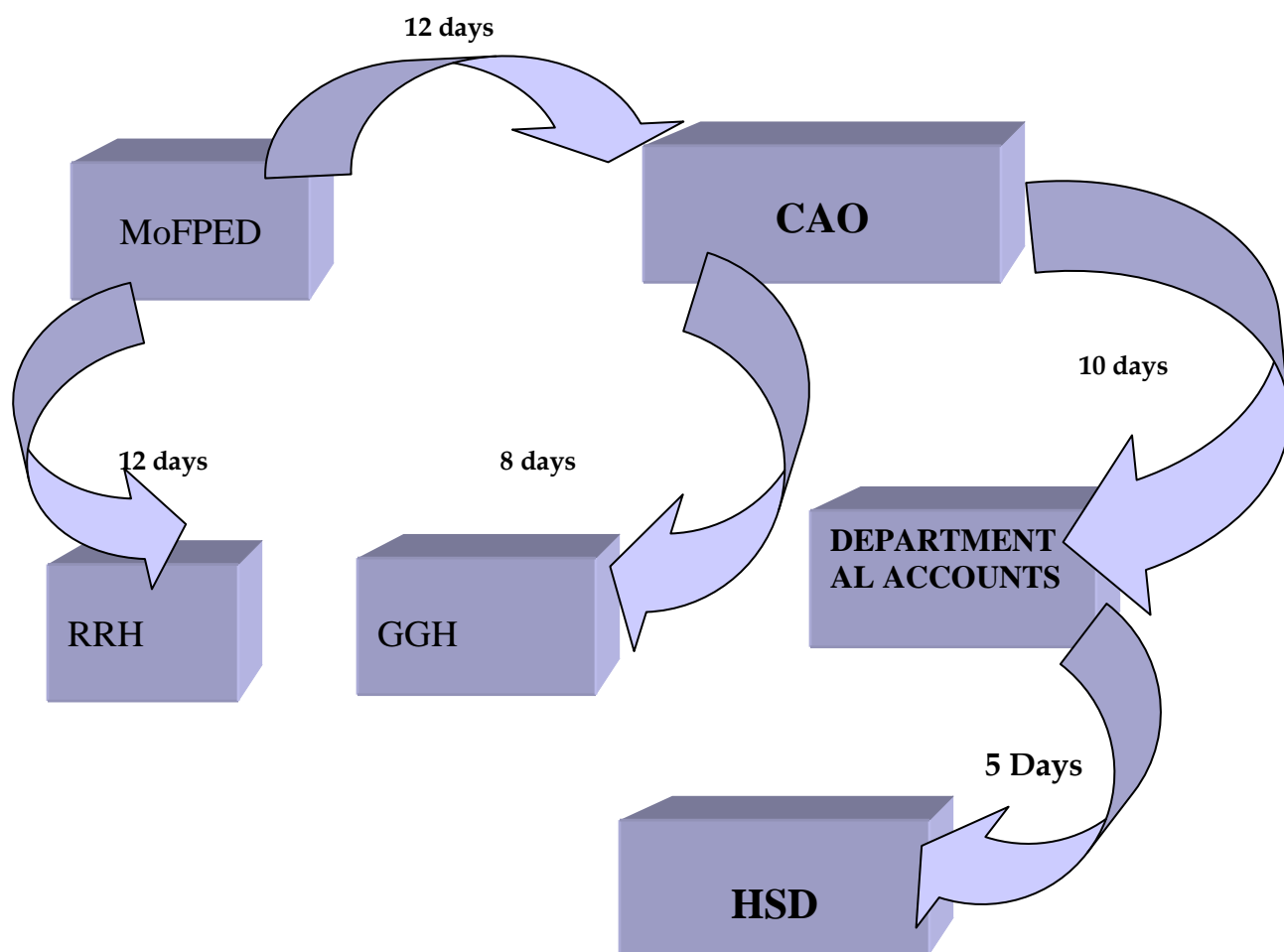


Fig 4.4: Lead Time for the Flow of PHC Funds  
 Source: Field Data EMHS Tracking, 2009

According to the findings in Fig. 4.4, it is evident that there were more delays in the CAOs office where on average, it took over 10 days to process and remit the funds to departmental accounts.

When asked why it takes up to 10 days to process the funds to departmental accounts, most CAOs argued that the funds to the districts are disbursed in consolidated amounts. Hence, it required time to disaggregate and transfer the funds to the different accounts and budget lines. This argument was not convincing since the grants were already earmarked and figures clearly known. The study team was of the view that 3-4 days would be adequate.

#### 4.5 Procurement Lead time

An order placed by the HU passes through a number of stages: the in-charge compiles the order, which he submits to the HSD; the HSD submits it to the DHO for approval and the DHO requisitions for funds from the CAO before submitting the order to NMS/JMS. In most cases, data at the sampled HUs was insufficient to establish the exact periods the process took at each stage. However, Table 4.2 presents randomly selected examples of the period processing the orders took at some of the sampled HFs.

**Table 4.2 Average Process Lead Time between HU and Submission to NMS/JMS**

Order Number	Requisition Date	Date of DDHS Approval	Date of CAOs Approval	Total Number of days
05/07	13/8/07	16/8/07	16/8/07	4
06/07	25/10/07	31/10/07	31/10/07	7
05/07	13/08/07	16/8/07	16/8/07	4
05/07	13/08/07	16/08/07	16/08/07	4
06/07	8/10/07	31/10/10	31/10/10	24
01/08	5/2/08	12/2/08	13/002/08	9
03/08	28/3/08	10/3/08	11/03/08	15
04/08	21/4/08	6/5/08	7/05/08	17
02/08	10/3/08	13/3/08	14/03/08	4
01/08	21/01/08	12/2/08	13/02/08	24
<b>Average</b>				<b>11.2</b>

Source: EMHS Field Data, 2009

The results show that the average lead-time to process an order from the HU to submission to the suppliers (NMS/JMS) was 11.2 days. A number of limitations can be identified in this system. The approvals depended on the availability of the approving officer. It was noted that several officers were required to fully approve an order. For example for a hospital (GGH), the signatories to a requisition included the Medical Superintendent, the DMO, CAO, Internal Auditor, Chief Finance Officer, and Vote-book Controller. This manifests bureaucracy, which prolongs the lead-time. Secondly, transport and other logistical constraints seemed to delay the movement of the orders from the HF to the DMO. Thirdly, though collective ordering is ideal, it prolongs the lead-time in that those HUs that place their orders to the HSD early have to wait for others before their orders are forwarded to the next stages.

The second stage of the procurement process comprises the activities at NMS. The lead-time at NMS considered all activities between the supplier receiving the order and the time the supplies reach the HU. There is a working arrangement (MoU) between the MoH and NMS that NMS deliver supplies up to the district headquarters. The district and the HSDs arrange the distribution from the district headquarters to the HUs differently. The system at JMS is different in that JMS does not deliver. The clients collect their consignments from JMS. Table 4.3 presents the procurement lead times for the sampled districts compiled by the study team from field data.

**Table 4.3 Procurement Lead-time at NMS by the Sampled Districts (in days)**

Lead time between	Gulu	Tororo	Butalejja	Moroto	Jinja	Masaka	Kiboga	Kisoro	Kasese	Kabarole	Average
Received order & Posting	34	34	24	14	19	38	27	33	13	25	26.1
Posting & Dispatch	24	8	12	9	12	13	9	6	11	9	11.3
Dispatch & delivery (to district)	2	1	4	4	1	2	2	4	4	2	2.6
<b>Sub-total (NMS)</b>	<b>60</b>	<b>43</b>	<b>40</b>	<b>27</b>	<b>32</b>	<b>53</b>	<b>35</b>	<b>43</b>	<b>28</b>	<b>36</b>	<b>39.7</b>
District to HSD	3	1	0*	2	-	3	2	-	5	-	2.3
HSD to HF	4	3	4	3	-	3	3	6	6	-	4
<b>Sub-total (district)</b>	<b>7</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>-</b>	<b>6</b>	<b>5</b>	<b>6</b>	<b>11</b>	<b>-</b>	<b>6</b>
<b>TOTAL District</b>	<b>67</b>	<b>47</b>	<b>44</b>	<b>32</b>	<b>32**</b>	<b>59</b>	<b>42</b>	<b>49</b>	<b>32</b>	<b>36**</b>	<b>45.7</b>

Source: EMHS Field Data, National Medical Stores

\* Butalejja has no district store; NMS delivers directly to the HSD store at the district hospital

\*\* Jinja and Kabarole only RRHs were sampled.

Table 4.3 shows big differences in procurement lead times by the sampled districts. The first stage is under the control of NMS; delivering up to district headquarters. The second stage is arranged differently by the respective districts with their HSDs. The biggest variations were at the stages of receiving and posting orders. Masaka (38) recorded the highest number of days while Kasese (13 days) and Moroto (14 days) reported the shortest. The average lead time for the sampled districts was 26.1 days. The explanation for the large variations at this stage was that districts continuously sent in their orders and yet NMS made deliveries according to a pre-set schedule<sup>1</sup>. Orders that arrived at NMS early therefore stayed longer at NMS and consequently recorded longer procurement lead times than those which came late, but in time for the same scheduled delivery. Districts close to each other (like Butalejja and Tororo) would be expected to have close delivery dates yet, Table 4.3 shows wide gaps (4 days). The explanation given was that verification of deliveries (carton by carton and at times opening the cartons) often took long when orders were large. Drive time and the route chosen by the truck driver could also affect the delivery times. In stage one, Gulu experienced the longest lead-time (60 days), followed by Masaka (53 days) and Kisoro (43 days). Moroto (27 days) and Kasese (28 days) experienced the shortest lead-time. On

<sup>1</sup> NMS regularly draws out and circulates (in Newspapers) a schedule showing when it (NMS) will be delivering ordered supplies per region. The schedule shows the districts and the dates when NMS will deliver to the respective districts. In 2007/08 NMS visited each district once every two months. This FY (2008/09) the schedules are monthly i.e. they plan to reach each district once every month.

average the sampled districts experienced a procurement lead-time of 40 days (39.7days) in stage one. The next stage is distributing the supplies from the district to the HSDs and from HSDs to the HUs. Kasese took the longest (11 days) followed by Gulu (7 days). Tororo and Butalejja took the shortest (4 days each) followed by Moroto and Kiboga (6 days each). Overall, Gulu experienced the longest procurement lead-time (67 days), followed by Masaka (59 days) and Kisoro (49 days). Moroto, Jinja and Kasese experienced the shortest lead-time with 32 days each.

On average, the sampled districts experienced a procurement lead-time of 45.7days. This accounts for the time NMS receives the order to the time the HF receives deliveries. However, additional time is spent between the HF compiling the order and the CAO authorizing expenditure as shown in the example in Table 4.2. Figure 4.5 is a diagrammatic illustration of the trend of lead-times for the sampled districts:

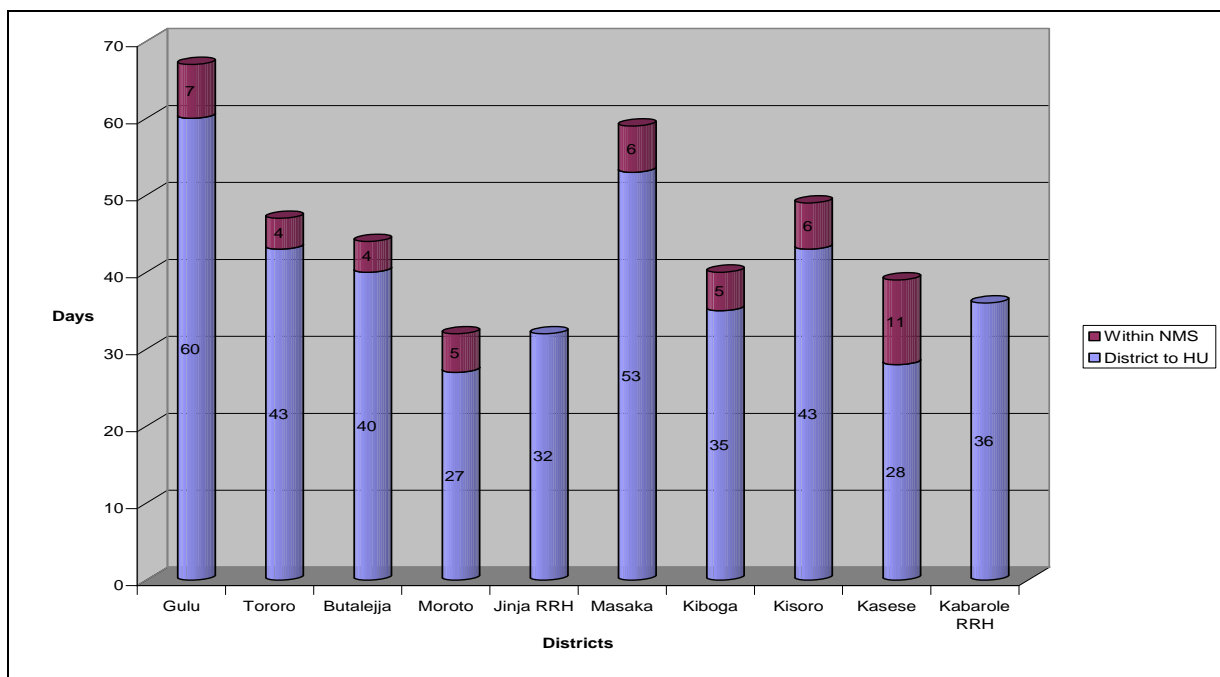


Fig 4.5: Procurement Lead Time:  
Source: EMHS Field Data, National Medical Stores

The high lead times for Gulu and Kisoro can be attributed to the long distances and difficulties in accessibility to these districts. Moroto district which has similar distance and accessibility circumstances as Gulu had the lowest lead-time of 27 days; yet Masaka district, which is nearer to the supplier, more accessible, experienced a lead-time of 53 days! This shows that besides the time the order is placed with NMS (late or early for the same scheduled delivery), there are several other factors at play like the truck driver deciding where to start delivering from (whether to start with the nearest or the farthest) and the conditions of the roads. On average, the lead-time between the district and the HSD was 2.3 days. The delay in distributing the supplies from the district to the HSDs is attributed to lack of transport and poor communication (information flow). The lead-time between the HSD and the HU was longer (averaging 4 days) because of lack of transport and communication. The HUs did not have a budget for transporting supplies and many of them are in remote areas where communication is very poor. Fig 4.6 presents a summary of the complete procurement chain of activities and periods taken at each stage.

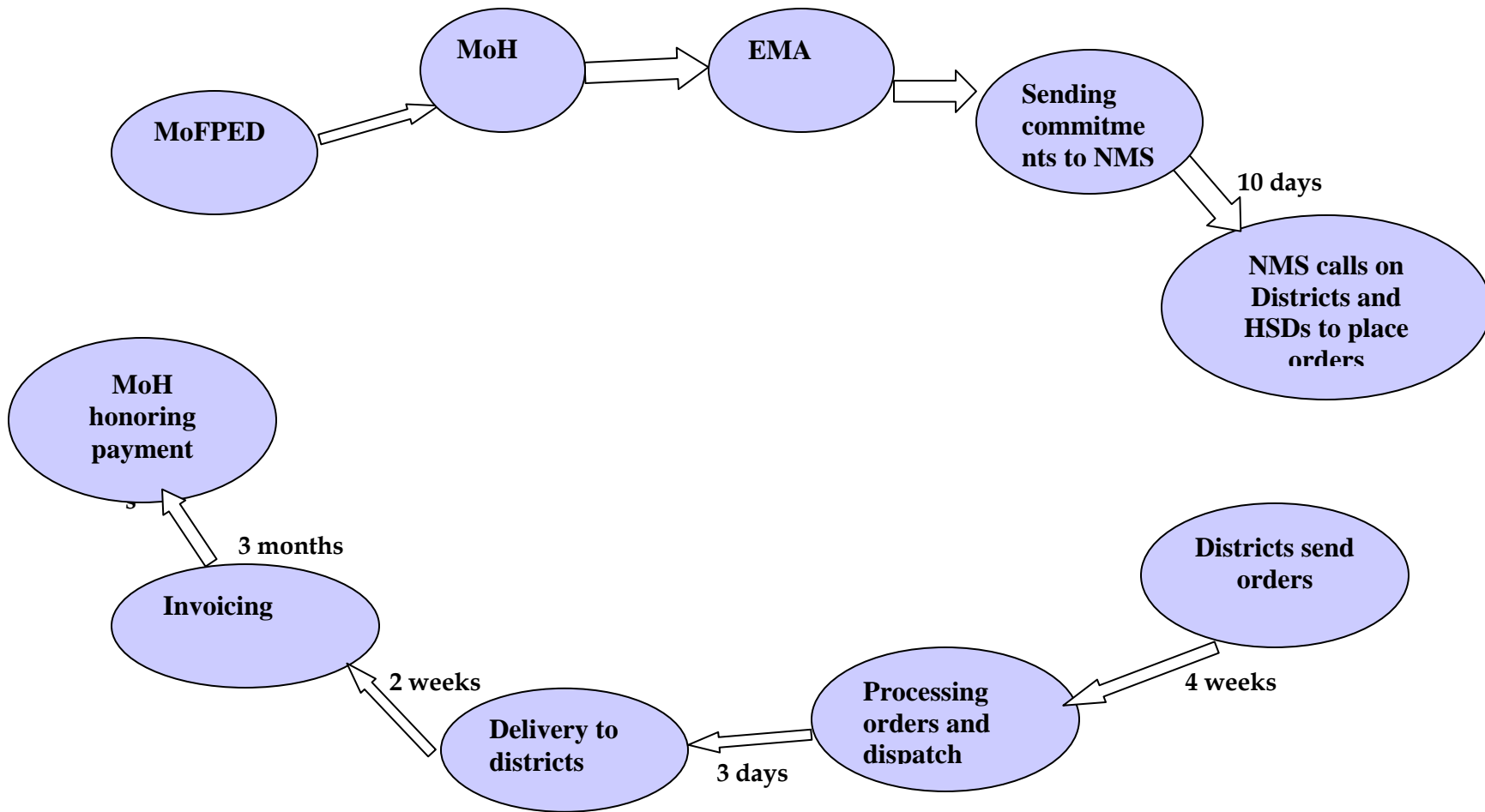


Fig. 4.6: Credit Line Lead Times as Described by Processes at NMS, 2009

#### 4.6 Utilization of Funds Allocated for EMHS.

##### (i) Credit line

According to the "FY 2007/08 District Transfers for Health Services (MoH 2007), GoU budgeted contribution to the credit line funding for procurement of EMHS for public health facilities was Ug.Shs. 12,355,744,426 for the FY 2007/08. This amount was later reduced to cater for UNEPI's operational expenses (Annual Health Sector Performance Report 2007/08). UNEPI needed Ug.Shs. 1.49bn but had only Ug.Shs. 147 million on its account (MoH Officials). The balance of Shs. 1.343bn was deducted from the credit line allocation for EMHS. The total contributions to the EMA funding came from DANIDA (Ug.Shs. 6.32bn) and the GoU (Ug.Shs. 8,541,130,356). GoU contributions were 76% of the budgeted contribution. Unlike delegated funds, credit line is not accessed by the local governments in cash. They can only receive it in form of EMHS and other medical supplies. Public HUs procure from NMS while NGO HFs procure from JMS. Beneficiaries make orders to the suppliers and upon invoicing for delivered supplies against agreed unit prices, the suppliers receive their payments from the EMA (CL) at MoH. Table 4.4 shows how the sampled HSDs, GGHs and RRHs utilized their credit line during FY 2007/08.

**Table 4.4 Credit Line Allocation and Utilization for sampled RRHs, GGHs and HSDs at NMS**

District	HSD/RH/GH	Opening Balance	Credit line Allocation	Closing Balance	Utilization in 2007/08	% Utilization
<b>RRHs</b>						
Jinja	Referral	65,392,170.33	213,210,000	693,070	277,909,100.33	130.3
Kabarole	Referral	30,572,604.13	143,493,210	25,939,163	148,126,651.13	103.2
Masaka	Referral	19,098,774.77	174,697,660	29,615,341	164,181,093.77	94.0
<b>RRH Average</b>						<b>109.2</b>
<b>GGHs</b>						
Moroto	General	3,133,242.04	74,445,327	10,601,107	66,977,462.04	90.0
Tororo	General	16,382,371.53	165,307,673	45,510,038	136,180,006.53	82.4
Butalejja	General	49,704.08	78,088,821	2,050,462	76,088,063.08	97.4
Kasese	General	1,797,685.79	81,498,082	30,897,645	52,398,122.79	64.3
Kiboga	General	15,177,125.72	78,089,139	7,743,244	85,523,020.72	109.5
Kisoro	General	5,168,743.95	84,475,743	12,185,540	77,458,946.95	91.7
<b>GGH Average</b>						<b>89.2</b>
<b>HSDs</b>						
Gulu	Omoro	3,787,642.07	56,253,556	2,964,240	57,076,958.07	101.5
	Aswa	1,190,978.06	38,919,855	12,232,539	27,878,294.06	71.6
Moroto	Bokora	18,153,614.88	60,801,283	37,766,637	41,188,260.88	67.7
	Matheniko	1,833,742.03	40,561,343	19,175,478	23,219,607.03	57.2
Tororo	Tororo County	6,927,440.75	68,001,877	1,882,179	73,047,138.75	107.4
	Kisoko South	2,331,068.36	51,570,620	5,626,489	48,275,199.36	93.6
Butalejja	Bunyole	16,901,221.72	83,201,092	19,181,377	80,920,936.72	97.3
Masaka	Kalungu East	8,627,773.87	41,627,215	18,684,823	31,570,165.87	75.8
	Bukoto West	9,643,281.85	38,719,941	11,283,197	37,080,025.85	95.8
Kasese	Bukonjo East	23,147,392.10	63,938,148	40,784,242	46,301,298.10	72.4
	Busongora North	10,034,164.76	50,567,538	451,126	60,150,576.76	119.0
Kiboga	Kiboga East	354,595.13	79,067,578	31,377,146	48,045,027.13	60.8
	Kiboga West	10,003,706.06	44,888,019	28,377,495	26,514,230.06	59.1
Kisoro	Bufumbira East	15,896,782.60	41,335,761	7,231,946	50,000,597.6	121.0
	Bufumbira North	11,764,990.57	32,482,542	3,139,995	41,107,537.57	126.6
<b>HSD Average</b>						<b>88.5</b>

Source: Field Data EMHS Tracking Study, 2009  
NMS Records

The supply of EMHS against Credit line works on a “Rolling System” i.e. the beneficiaries can roll over their balances at NMS from one FY to the next. This is the reason some beneficiaries reflected utilization levels exceeding 100% of their annual allocations. The cases in point are: Jinja RRH (130.3%), Fort Portal RRH (103.2%), Kiboga GGH (109.5%), Omoro (101.5%), Tororo County (107.4%) and Busongora North (119.0%) HSDs.

Utilization of credit line by RRHs averaged 109.2% while that for GGHs averaged 89.2%. The percentage utilization for HSDs averaged 88.5%. These results show that RRHS utilized their credit more than GGHs and HSDs. These field findings were compared with findings reported by the Annual Health Sector Performance Report -AHSPR 2007/08 (Table 4.5) and the two sets of findings reflected a similar trend. The RRHS recorded the highest utilization level (105%) followed by the GGHs (100%). The utilization level for lower HUs (Districts/HSDs) was lowest at 77%. The average credit line utilization for the whole country for the FY 2007/08 was 84.5%. The slight differences in the results of this study and those of the AHSPR are due to the fact that the results in the study are based on a sample while results in AHSPR covered the entire country.

**Table 4.5 Comparison of Credit Line Allocations and Utilization (2007/08) by Public Sector**

Level of Care	EMHS Allocation (bn)	Expenditure on EMHS	
		NMS/JMS (bn)	% Utilization
Districts	12.336	9.560	77
GGHs	3.373	3.376	100
RRHs	1.686	1.777	105
<b>Total</b>	<b>17.395</b>	<b>14.713</b>	<b>84.5</b>

*Source: Annual Health Sector Performance Report for Financial Year 2007/08 (MoH 2008)*

Better utilization of credit line at RRHs and GGHs could be attributed largely to better human resource capacity. The RRHs and GGHs have better trained staff who can plan, forecast, track their accounts and make appropriate and timely orders. They have the competence to manage their units.

It is noted that all the three levels of health care left a lot of unutilized balances at the close of the FY. For example the field results show that Fort Portal RRH left over 25 million of unutilized funds (18% of FY 2007/08 allocation) while Masaka left over 29 million (17% of allocation) at the end of FY 2007/08. Tororo GGH left over 45 million (27.5%) while Kasese left over 30 million (37.9%). Likewise the HSDs left large balances un-utilized: Bukonjo East did not utilize 40 million (63.7%); Bokora 37 million (62.1%); and Kiboga East 31 million (39.6%).

The main reason for the high balance is that the credit line operations run on a “rolling” system based on 3- cycles per year vis-à-vis the accounting FY which begins in July and ends in June. This means that when the FY closes at the end of June, the EMA is still running which ensures constant availability of funds to procure EMHS. The other reasons explaining the un-utilized balances varied between the different levels of health care: RRHs and GGHs attributed the balances to unavailability of their ordered items at NMS while the HSDs attributed the balances to inadequate human resource capacity to quantify their needs and ably track their accounts at NMS. Nonetheless, the average credit utilization (88.5% in this study) could be considered satisfactory taking into account the long procurement lead times and logistical impediments in the delivery of EMHS.

ii) **Delegated Funds**

a) **Comparison of Approved Allocations, Cash Releases and Expenditure on EMHS**



Utilization of delegated funds (also known as PHC-NW) can be analyzed at three levels namely: allocations, releases and actual expenditures on EMHS. Allocations are the amounts budgeted as PHC-Non wage from which funds for procurement of EMHS come; releases are the funds actually made available (released) to procure EMHS and actual expenditures are the funds that were actually spent to procure EMHS. Records available indicated that although funds for EMHS were approved and allocated by the Central Government, not all approved allocations were fully disbursed to the beneficiaries; only a proportion (referred to as budget performance) was released. Secondly, not all cash released purportedly to purchase EMHS was always fully spent on EMHS. This state of affairs (availing less than budgeted funds and spending less on EMHS than purported) constrained EMHS procurement planning.

As indicated in earlier sections, the MoH guidelines on use of PHC (recurrent non-wage) funds provide that at least 50% of the released funds for lower public HUs (through the districts) must be spent on EMHS. Regional (RRHs) and General Hospitals (GGHs) are required to spend at least 40%. NGO health facilities enjoy discretion over (are not bound by) this guideline. The study therefore sought to establish the approved allocations, the proportions of the approved allocations that were released and the proportion of the released funds that was actually used to buy EMHS at NMS/JMS and at PFPs. Table 4.6 presents the comparison of approved allocations, cash releases and expenditure on EMHS for the sampled districts.

**Table 4.6 Comparison of Approved Allocations, Cash Releases and Actual Expenditure on EMHS**

District	PHC-NW Allocations As per District Transfers [MoH2007] (Ug.Shs)	Releases According to the districts (Ug.Shs)	Budget Performance (%)	Proportion of PHC-NW Releases Spent on EMHS		
				NMS/JMS (%)	PFP (%)	Total Expenditure on EMHS As % of Release
Masaka	606,608,258	507,686,996	83.6	28.7	NA	NA
Kiboga	235,424,767	203,708,801	86.5	32.4	0	32.4
Kisoro	212,288,961	202,288,960	95.2	5.3	1.5	6.8
Kasese	462,868,936	400,512,124	86.5	38.2	NA	NA
Butalejja	166,788,928	144,319,367	86.5	10.4	4.5	14.9
Tororo	317,862,711	285,040,758	89.6	48	2.2	50.2
Moroto	182,986,017	158,334,494	86.5	17.3	NA	NA
Gulu	223,856,730	193,699,180	86.5	28.9	26.9	55.8
<b>Average</b>			<b>87.6</b>	<b>26.2</b>	<b>7</b>	<b>32</b>

Sources: i) "FY 2007/08 District Transfers for Health Services (MoH 2007)

ii) Annual Health Sector Performance Report for financial year 2007/08 (MoH 2008)

iii) EMHS Field Data 2009

\* NA denotes "Data not available".

The results in Table 4.6 show that none of the sampled districts received full disbursement of their PHC-NW budgetary allocations. On average the budget performance, i.e. the proportion of the PHC-NW allocations, that were released, was 87.6%. Apart from Kisoro district whose performance was 95.2%, the rest oscillated between 83.6% and 89.6%: Tororo received 89.6% while Gulu, Kasese, Kiboga, Moroto and Butalejja each got 86.5%. Masaka received 83.6%. The average budget performance of 87.6% implies that 12.4%

These results show that only two of the eight sampled districts complied with the MoH guideline to spend at least 50% of released PHC-NW funds on procurement of EMHS.



of all funds allocated for PHC-NW were not released. According to the AHSPR 2007/08, the sampled districts spent on average 26.2% of the funds released to procure EMHS at NMS and JMS. The proportions spent by the respective districts on EMHS at NMS and JMS were as follows: Masaka 28.7%; Kiboga 32.4%; Kisoro 5.3%; Kasese 38.2%; Butalejja 10.4%; Tororo 48%; Moroto 17.3% and Gulu 28.9%. However, information accessed during fieldwork showed that some districts also procured EMHS from local suppliers (PFPs) hence increasing the proportion of PHC-NW expenditure on EMHS. The expenditure at PFPs was as follows: Kisoro 1.5%; Butalejja 4.5%; Tororo 2.2%; and Gulu 26.9%. Data on expenditure at PFPs for Masaka and Moroto was not available while Kiboga did not procure from PFPs. The PFP procurements for Kasese district were not available because HSDs control their delegated funds and yet the study covered only two of the four HSDs. Purchases from PFPs increased total expenditure of PHC-NW on EMHS for Kisoro to 6.8%; Butalejja to 14.9%; Tororo to 50.2%; and Gulu to 55.8%. According to these results, Tororo and Gulu among the sampled districts complied with the MoH guideline to spend at least 50% of PHC-NW released funds on procurement of EMHS.

#### b) Budget Performance and Actual Expenditure on EMHS for GGHS

Government general hospitals (GGHs) operated independent of the lower health facilities because they are self-accounting. Although they received their funds through the District General Account, their allocations were clearly earmarked. The MoH guidelines on use of PHC-NW funds require that GGHs spend at least 40% of the released funds on procurement of EMHS. The performance of the respective government general hospitals (GGHs) in the sampled districts was assessed in terms of budget allocations, funds released and actual expenditure on EMHS. The sampled general hospitals were Kiboga, Kisoro, Kasese, Butalejja, Tororo and Moroto. The comparison between allocations, funds released and the proportion of the budget that was spent on EMHS is presented in Table 4.7.

**Table 4.7 Budget Performance and Expenditure on EMHS for GGHS**

District	GGH	PHC-NW Allocations As per District Transfers [MoH2007] (Ug.Shs))	Cash Released as Given by GGHs (Ug.Shs)	Budget Performance (%)	Proportion of PHC-NW Release Spent on EMHS		Total Expenditure As % of PHC-NW Releases
					NMS/JMS (%)	PFP (%)	
Kiboga	Kiboga	245,702,000	NA	NA	25.9	9.2	35.1
Kisoro	Kisoro	265,797,000	225,000,000	84.6	10.6	17.8	28.5
Kasese	Bwera	256,428,000	232,267,310	90.5	23.8	6.9	30.7
Butalejja	Busolwe	245,701,000	222,551,009	90.5	17.2	14.6	31.8
Tororo	Tororo	520,129,000	514,422,239	98.9	47.9	11.1	59
Moroto	Moroto	234,237,000	234,221,384	99.9	5.3	NA	NA
<b>Average</b>				<b>92.9</b>	<b>21.8</b>	<b>11.9</b>	<b>37</b>

Sources: i) Annual Health Sector Performance Report 2007/08

ii) The PHC Recurrent Non-Wage Allocation Figures are adopted from "FY 2007/08 District Transfers for Health Services (MoH 2007)

iii) Field Data EMHS Tracking, 2009

\* NA denotes "Data not available".

The average budget performance for five of the six sampled GGHs was 92.9%. The sixth district, Kiboga, was left out because the data about the total PHC-NW released was not available. The 92.9% average implies that none of the sampled GGHs received full PHC-NW disbursements as allocated: Moroto received 99.9%; Tororo received 98.9%; Bwera (Kasese) and Busolwe (Butalejja) received 90.5% each; while Kisoro got 84.6%. The proportion of allocated funds that was not released to the GGHs (total under-performance) was 7.1%.

According to the AHSPR 2007/08, on average, GGHs spent 21.8% of the released PHC-NW funds to procure EMHS at NMS and JMS. Moroto spent 5.3%; Tororo 47.9%; Bwera (Kasese) 23.8%; Busolwe (Butalejja) 17.2% and Kisoro 10.6%. Given that the MoH guidelines recommend spending at least 40% of the released PHC-NW funds on procurement of EMHS, these results imply non-compliance by all except Tororo, to guidelines on use of PHC on the part of the sampled GGHs. However, this conclusion is based on purchases from NMS and JMS only. The field team accessed information showing that some GGHs also procured some EMHS from local PFPs: Tororo 11.1%; Bwera (Kasese) 6.9%; Busolwe (Butalejja) 14.6% and Kisoro 17.8%. Data about local PFP purchases for Moroto was not available. Total expenditure of PHC-NW on EMHS for the four increases as follows: Tororo 59%; Bwera (Kasese) 30.7%; Busolwe (Butalejja) 31.8% and Kisoro 28.5%. Though the purchases at PFPs increased total expenditure for the four, apart from Tororo (expenditure improves to 59%), all remain below the recommended 40% of the released funds, which still reflects non-compliance to guidelines. However, average proportional expenditure improves from 24.9% to 37.5%.

### c) Budget Performance and Expenditure on EMHS for RRHs

Although the RRHs were vote-holders, they suffered the same problem of disbursements/releases that were less than their allocations. The sampled RRHs were Jinja, Masaka and Fort Portal. RRHs were also required by the MoH guidelines to spend at least 40% of the released PHC-NW funds on procurement of EMHS. Table 4.8 shows the budget performance and actual Expenditure on EMHS by the sampled RRHs.

**Table 4.8 Budget Performance and Expenditure on EMHS for RRHs**

District	Regional Referral Hospital	PHC-NW Allocations (Ug.Shs)	Cash Released as Given by RRHs (Ug.Shs)	Budget Performance	Proportion of PHC-NW Releases spent on EMHS (%)			Total Expenditure as % of Release
					Total NMS/JMS		PFP (%)	
					AHSPR 07/08	Field data		
Jinja	Jinja	1,162,551,000	NA	NA	(24.6)	NA	(5.9)	NA
Masaka	Masaka	880,917,000	355,816,250	40.4	15.4	18.9	25.3	44.2
Kabarole	Fort Portal	871,977,000	818,164,026	93.8	5.5	5.9	23.1	29
<b>Average**</b>				<b>67.1</b>	<b>10.9</b>	<b>12.4</b>	<b>24.2</b>	<b>36.6</b>

*Sources: Annual Health Sector Performance Report 2007/08*

*FY 2007/08 District Transfers for Health Services (MoH 2007*

*EMHS Field Data 2009*

*NA denotes "Data not available".*

*\*\*Jinja RRH not included in the averages*

On average, 67.1% of the PHC-NW budgeted funds for two of the three sampled RRHs were disbursed. Data about disbursements for Jinja was not available while Gulu originally included in the sample was not covered during fieldwork. The 67.1% average budget performance implies that 32.9% of the PHC-NW funds allocated to RRHs were not released. About the proportion of released funds that were spent on EMHS; RRHs spent on average 10.5% of the released funds at NMS and JMS according to the AHSPR 2007/08. Masaka spent 18.9% while Fort Portal spent 5.9%. These results indicate non-compliance to MoH guidelines on PHC-NW. This observation is based on procurements from NMS and JMS only. However, the study team was availed data

showing that these RRHs procured from local PFPs as well, where Masaka spent 25.3% and Fort Portal spent 23.1%. Total utilization for Masaka increased to 44.2% while that of Fort Portal increased to 29% and the average became 36.6%. A similar trend of under-utilization is reflected at the national level. According to the AHSPR 2007/08 (MoH 2008), all the three levels of health care utilized only part of the initially allocated funds to purchase EMHS as shown in Table 4.9.

**Table 4.9 Overall comparison of EMHS Allocations and Expenditure on EMHS at NMS/JMS**

Level of Care	EMHS Allocation (Ug.Shs bn)	Expenditure on EMHS	
		NMS/ JMS (Ug.Shs bn)	Utilization (%)
Districts	11.029	5.989	54 %
GGHs	4.245	2.376	57%
RRHs	3.928	1.908	49%
<b>Total</b>	<b>19.202</b>	<b>10.273</b>	<b>53.4%</b>

Source: Annual Health Sector Performance Report for Financial Year 2007/08 (MoH 2008)

Table 4.9 shows that on average, HUs across the three levels utilized 53.4% of the funds allocated to procure EMHS. The lowest utilization was at RRH level where only 49% of the EMHS funds were actually used to procure EMHS. The highest utilization was reported by the GGHs at 57%. Lower HUs (districts) utilized 54%. This under-utilization of funds initially allocated to procure EMHS, disrupted procurement planning and availability of EMHS at service delivery points.

#### **d) Factors Affecting Expenditure of PHC Non-wage (Delegated Funds) on EMHS**

The analysis of budget allocations, budget performance and expenditure on EMHS identified a number of factors that affected PHC-NW expenditure on EMHS and consequently availability of EMHS at HUs. The major ones included low budget performance; non-compliance to set guidelines on use of PHC-NW funds; low human resource capacity at HUs as reflected in poor record keeping and work plan management

##### **(i) Low Budget Performance**

Budget performance refers to the proportion of the budget allocation that is actually disbursed. The study found that despite the budget for the health sector being meager, not all of it was disbursed. Table 4.10 shows the proportions that were released for the sampled districts.

**Table 4.10 PHC Budget Performance for GGHs and Lower Public HUs**

District	Public HUs (%)	GGHs (%)	RRHs
Masaka	83.6	-	40.4
Jinja	-	-	NA
Kabarole	-	-	93.8
Kiboga	86.5	[27.9]*	

Kisoro	95.2	84.6	
Kasese	86.5	90.5	
Butalejja	86.5	90.5	
Tororo	89.6	98.9	
Moroto	86.5	99.9	
Gulu	86.5	-	
<b>Average</b>	<b>87.6</b>	<b>92.9</b>	<b>67.1</b>

\* The data about actual releases for Kiboga hospital was not available; this figure was actual expenditure on EMHS and is therefore included in the average.

It is apparent that budget performance for the districts averaged 87.6% while for five of the six sampled GGHs the average was 92.9% while for the two RRHs it was 67.1%. This shows that there was budget under-performance at all levels of healthcare i.e. less than budgeted funds were released. Releasing less than budgeted funds disrupted procurement planning and contributed to stock out of essential supplies at service centres, as fewer funds were available to use.

#### (ii) Non-compliance with Guidelines on Spending of PHC-NW Funds

Guidelines by the MoH provide that public HUs should spend at least 50% of the released PHC-NW on procurement of EMHS. General Hospitals (GGHs) and RRHs are required to spend at least 40% of the released PHC-NW funds. Results of this study showed that apart from Tororo district (50.2%); Gulu district (55.8%); (Table 4.6), Tororo hospital (59%) (Table 4.7) and Masaka referral (44.2%) (Table 4.8) all the other sampled HUs flouted the guidelines.

On average, districts utilized only 33.1% of funds released for EMHS while GGHs and RRHs utilized 37% and 36.6% respectively hence the high rates of stock outs in most HUs. The HUs claimed that non-compliance was due to the need to cover other PHC activities such as out-reaches hence some EMHS funds were diverted to cover such budget lines. The argument was that the remaining portion of PHC (50% for districts and 60% for hospitals) was not enough for other PHC activities. The results in this study corroborate those of the AHSPR (2007/08) which show that on average, the HUs at all levels spent only 53.4% of funds released for EMHS: RRHs were the worst defaulters spending only 49%; districts spent 54% while GGHs spent 57%. This non-compliance to guidelines made available fewer funds than planned thus less quantity of EMHS were procured affecting availability of EMHS at HUs.

**Table 4.11 PHC-NW Utilization on EMHS by RRHs, GGHs and Public HUs**

District	Public HUs	GGHs	RRHs
Masaka	28.7		15.4
Kiboga	32.4	25.9	
Kisoro	5.3	10.6	
Kasese	38.2	23.8	
Butalejja	10.4	17.2	

Tororo	48	47.9	
Moroto	17.3	5.3	
Gulu	28.9	-	
Kabarole	-	-	5.5
Jinja	-	-	24.6
<b>Average</b>	<b>26.2</b>	<b>21.8</b>	<b>15.2</b>

Table 4.11 shows that all the sampled districts spent less than 50% of the PHC allocation on procurement of EMHS. Average utilization (based on purchases from NMS and JMS) for the sampled districts was 26.2%. GGHs spent 21.8% while RRHs spent an average 15.2%. Flouting the guidelines led to spending less on EMHS than the planned amounts.

### (iii) Low Human Resource Capacity at HUs

Most public HUs were under-staffed. The problem was both in numbers and in qualifications of health workers. Nursing Assistants instead of Enrolled Nurses managed 41% of the sampled HC IIs. While a HC III is supposed to be managed by a Senior Clinical Officer, only 17% (4 out of the 24 sampled) HCIIIs had this position filled. The details are shown in Appendix 6.

Where there were better qualified health workers, it was noted that the substantive “In- charges” were often absent thus leaving the HUs to the less qualified persons. At 45.8% (11 of the 24) of the HC IIIs visited, the in charges were found absent while at 54.5% (12 out of 22) of the HC IIs, the in-charges were not at work when the field teams visited. The effect of this neglect of duty was that the personnel left in charge could hardly measure up to the responsibilities of managing a HU, hence failure to keep records and to plan for the respective HUs.

### (iv) Record Keeping and Work Plan Management

The Staff Establishment for HC IIIs provide for two Health Information Assistants. For HC IIs, it provides for one. The Health Information Assistant is in charge of records and stores at the HU. However only 21.1% (5 out of 24) of the sampled HC IIIs had the two positions filled. Fourteen percent (3 out of 22) of the sampled HC IIs had this position filled. The inadequate staffing by appropriate personnel in records and stores management at HC IIs and HC IIIs made it difficult for HUs to keep records that could be used reliably for planning purposes. Such health units experienced problems in quantifying their needs and making timely orders against available funds.

#### 4.7 Key Learning Points

- The main reason for low EMHS funding is the small share of the health sector funding in the national budget. Funding to the health sector is very low and declining; falling from 9.7% in FY 2004/05 to 9.6% in FY 2007/08. As long as the level of the health sector funding remains low, funding for EMHS will also be low hence persistent shortages of EMHS at service delivery points.
- Bureaucracy in government procedures makes the processes at the various stages of the EMHS procurement chain long. The long processes eventually lead to long procurement lead times. The system of delivery (scheduled bi-monthly deliveries in FY 2007/08) by NMS prolonged the

procurement lead times further as orders brought in early wait for those that come in late to be processed and delivered together. There is need to consider the special nature of medicines and enable expedited procurements.

- Lack of human resource capacity to quantify supplies against available credit contributed to high levels of stock outs particularly at lower HUs. Higher HU levels (hospitals) with better human resource capacity utilized their credit line better than lower ones. In this study, sampled RRHs utilized 109.2% and GGHs utilized 98.2% while HSDs utilized 88.5% in FY 2007/08. The Annual Health Sector Performance Report for FY 2007/08 (MoH 2008) reported the same trend; 105% utilization for RRHs; 100% for GGHs; and 84.5% for HSDs in the same period. Building human resource capacity at lower HUs will improve management of EMHS and enhance appropriate quantification of EMHS requirements.
- Non-compliance to guidelines on expenditure of PHC funds affected availability of EMHS. None of the sampled districts complied with guidelines to spend at least 50% of PHC allocations on EMHS; and neither did the hospitals (RRHs and GGHs) spend the recommended 40%. On average, districts spent a paltry 33.1% instead of 50%; RRHs and GGHs spent only 36.6% and 37.5% respectively instead of 40% hence the high rates of stock outs in most HUs. HUs claimed that non-compliance was due to the need to cover other PHC activities such as out-reaches hence diverted some EMHS funds to cover such budget lines. The argument was that after deducting funds for EMHS, the remaining portion of PHC funds (50% for districts and 60% for hospitals) was not enough for other PHC activities hence the diversions.
- The MoH delayed payments to suppliers (NMS/JMS) for credit line supplies delivered as per MoU. Delayed payments (by the MoH) affected the cash flows of the suppliers which disrupted their (suppliers) procurement plans.
- The MoU between NMS and MoH provided for NMS to deliver to district headquarters. The cost of distributing EMHS from the district to the HSDs and HSDs to the lower HUs was not provided for in the operational budgets of the HUs. Funds to cover these costs have to be mobilized from other sources. Whenever funds were not readily available, collection of consignments is delayed.

## **5 AVAILABILITY, AFFORDABILITY AND USE OF EMHS AT COMMUNITY LEVEL**

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### **5.1 Introduction**

Essential medicines save lives and improve health when they are available, affordable and of assured quality and properly used. Still, lack of access to EMHS remains one of the most serious global public health problems<sup>2</sup>. This chapter provides an assessment of availability, affordability and use of EMHS at community level. Availability was measured by indicator items; by ownership of facility; and by level of Health facility.

The pattern of availability was established by first ascertaining the number of days in every month when a given indicator item was out of stock at a given facility. The total number of days in the study period was then summed up to get the total stock out-days for that particular item. The total was divided by 365 (days in a year) to get the proportion of stock out in the year, which was then expressed as a percentage.

We also looked at the percentage of indicator items that were stocked at a given facility (stock items) where the denominator was the total number among the indicator items that were allowable at a given level of health facility. In cases where some records were missing, the denominator was only valid data obtained.

### **5.2 Availability and Accessibility of Indicator Items**

This study was guided by a list of 22 medicines and medical supplies as indicator items, selected from the 538 unique medicines and formulations listed in the EMHS for Uganda (EMLU 2007). The selection of the 22 indicator items was agreed on by the Consultant and the Client (MoH). The selection covered five categories based on burden of disease; maternal and child health; new emerging life-style diseases; mental health; and key health supplies. Table 5.1 shows the service area, items covered and level of healthcare where they may be used.

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<sup>2</sup> WHO Policy Perspectives on Medicines. Equitable access to Essential medicines, a framework for collective action, 2005



**Table 5.1 Study Indicator Items and Level of Use**

	Service Area	Item	Level of Use
1	Malaria	• Coartem Yellow 20/120 mg Tab	HC II
		• Quinine 300mg/ml 2ml	HC III
2	HIV Testing and Counseling	• Determine i/ii kit	HC III
3	Family Planning	• Depo Provera Injection	HC III
4	STI Diagnosis and Treatment	• Cotrimoxazole 480mg/ 120 mg Tab	HCII
		• Amoxicillin 250mg Capsule	HCII
		• Metronidazole 200mg Tab	HC II
5	Immunization	• Measles Vaccine	HC II
6	ANC/ PNC	• Ferrous Sulphate/ Folic Acid Tab	HC II
		• Ibuprofen 200mg Tab	HC II
		• Paracetamol 500 mg Tab	HCII
7	Hypertension	• Propranolol 40mg Tab	HC IV
		• Bendrofluazide 5mg Tab	HC III
8	Diabetes	• Glibenclamide 5mg Tab	HC IV
		• Insulin Mixtard 30/70 IU 100 IU/ML	HC IV
9	Mental Health	• Haloperidol 5mg Tab	RRH
		• Carbamazepine 200mg Tab	HC IV
10	Supplies	• Examination Gloves	HC II
		• Syringes 2ml	HC II

It is noted that this list differs from the indicator items under HSSP II which had Coartem (Green), Depo Provera; Measles Vaccine, Oral Rehydration Salt and Cotrimoxazole. Of this list only Coartem (yellow), Depo Provera; Measles Vaccine and Cotrimoxazole are also included on the EMHS tracking study list.

### 5.2.1 Stocking Patterns

The level of stock out of EMHS at HUs is a key factor in the study because it acts as an indicator of the level of availability/accessibility to health supplies. This indicator was measured by the proportion of indicator items available at different levels of HUs against those allowable at that level according to the EMLU. Figure 5.1 presents the findings about stocking levels of the listed items.



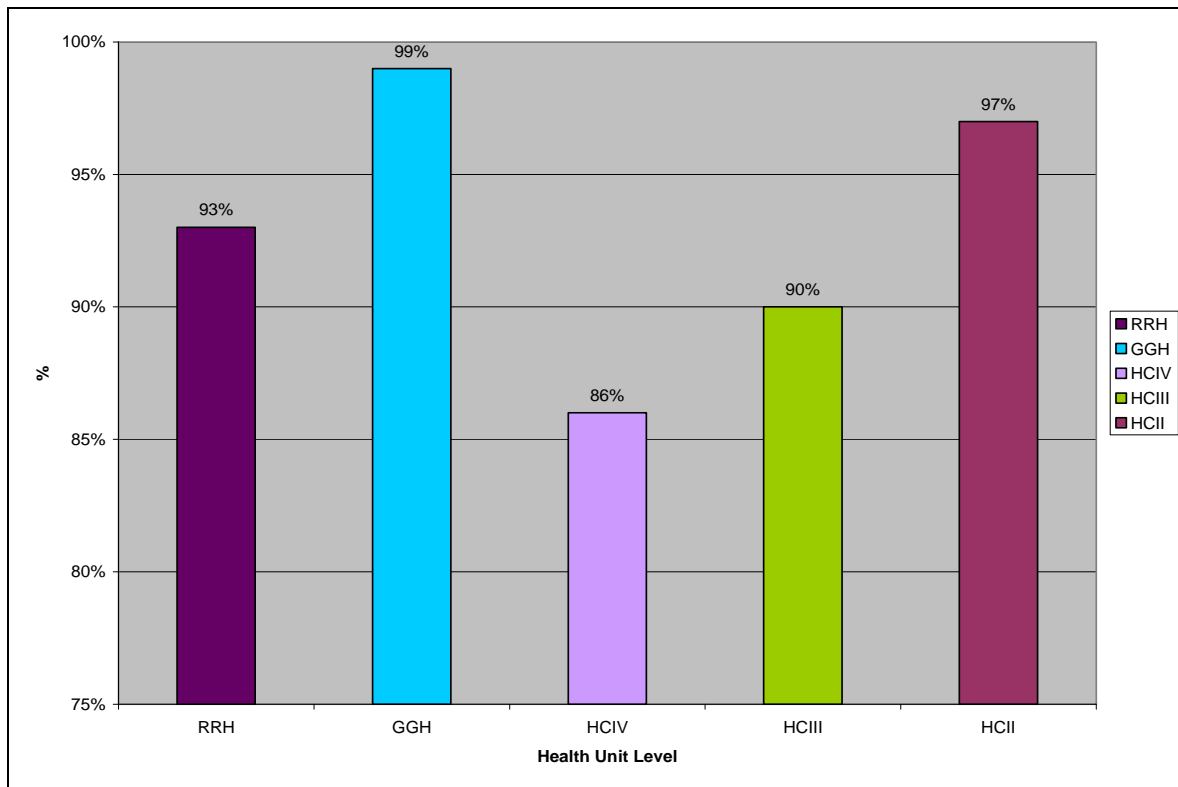


Fig. 5.1 Stocking Patterns by Health Facility Level  
 Source: Field Data EMHS Tracking, 2009

Overall, the sampled health units acknowledged stocking 93% of the EMHS Tracking Study listed items allowable at the respective HU level. The RRH stocked all (100%) of the items. However, this study had sampled Lacor among the RRHs and it does not stock contraceptive items. Inclusion of Lacor reduced the stocking rate at RRHs to 93%. The stocking rate for GGHs was (99%), at the HC IV, 86%; at HC III it was 90% and HC II, 97%. The GGHs showed a higher percentage because all of the sampled units were public facilities. Kiboga hospital did not stock Glibeclamide and Moroto hospital did not stock Depo Provera for lack of market.

Overall, facilities acknowledged stocking 93% of the items allowable at the respective facilities.

Eight (67%) of the sampled 12 HC IVs did not stock Insulin; 7 (58%) did not stock Bendrofluazide; while 6 (50%) did not stock Glibeclamide. Two (17%) did not stock Propranolol and Carbamazepine.

The stocking rate at HC IIIs was affected by the number of HUs in the sample that were PNFs. Nine out of twenty four (37.5%) were catholic-founded and therefore did not stock Depo Provera and Microgynon. Twenty (83%) did not stock Bendrofluazide while four (16.6%) did not stock Ferrous/Folic.

According EMLU, HCIIIs may stock measles vaccines but because most of the sampled HUs did not have cold chain facilities, they did not stock it. Of the 24 HC IIIs that were sampled, only 4 (16.6%) stocked the vaccine. Six (25%) out of 24 did not stock Ibruprofen while 4 (16.6%) did not stock Ferrous/Folic.

### 5.2.2 Stock outs across Health Units

The study sought to establish the frequency of stock outs of the listed items at the different health facility levels of the sampled HUs. It was found that all the HUs across the levels experienced stock out of at least one indicator item at any one time during the FY 2007/08. Fig 5.2 presents the details.

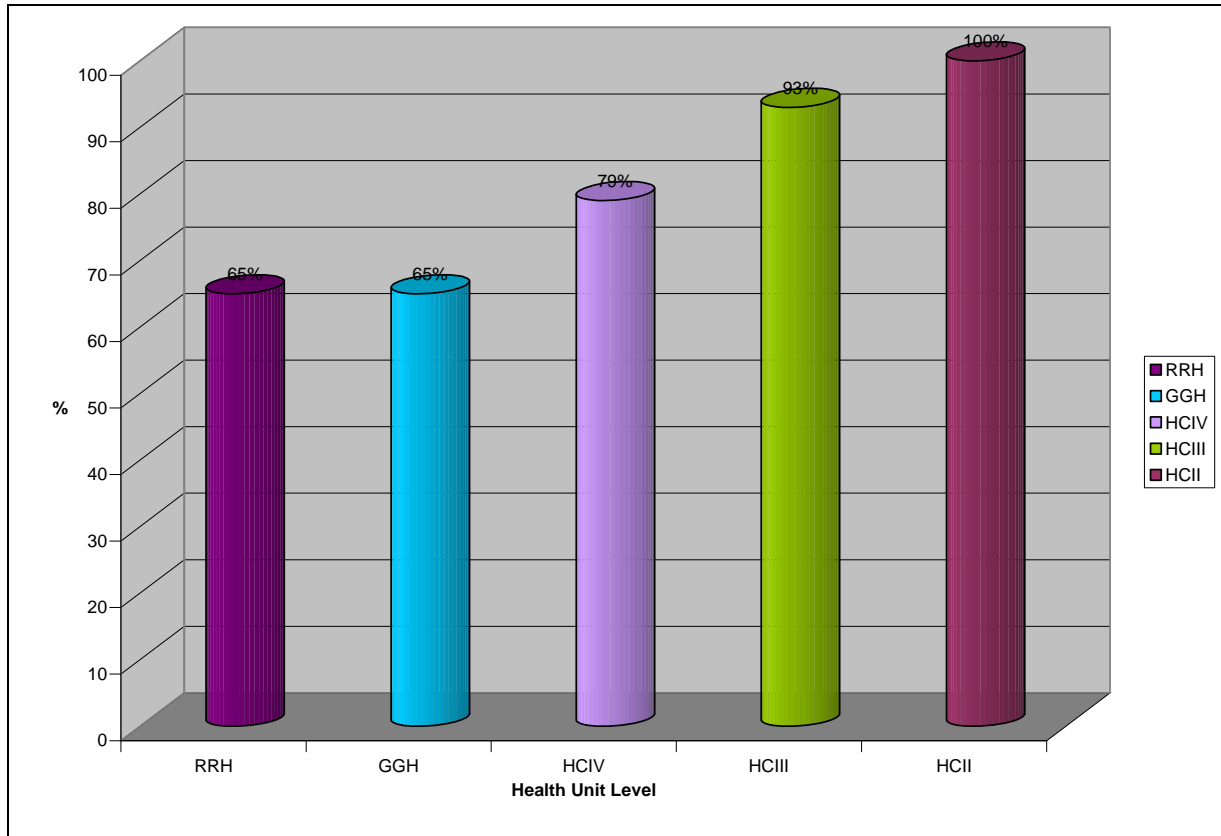


Fig 5.2 Stock Out Levels Across Health Units  
Source: Field Data EMHS Tracking

The results show that all the sampled HC IIs at one time or other during 2007/08 experienced stock out of each of all (100%) the listed items. At HC IIIs and HC IVs, 93% and 70% respectively of the items in this study were out of stock while at RRHs and GGHs 65% of the items experienced stock outs. This shows that stock outs were more prevalent at lower HUs than at higher ones.

### 5.2.3 Stock out Rates exceeding 30<sup>3</sup> Days

Having established that most listed EMHS experienced stock outs at the respective levels of health care, the study team sought to establish a reasonable stock out period. Taking into account, the lead times at the various levels of the supply chain, the team considered any stock out period of indicator items beyond one month (30 days) in a year (365 days) as critical. Figure 5.3 illustrates the Indicator Items with stock outs of more than 30 days by health facility level.

<sup>3</sup> The 30 days are not necessarily consecutive but as accumulative total of stock out days in a year

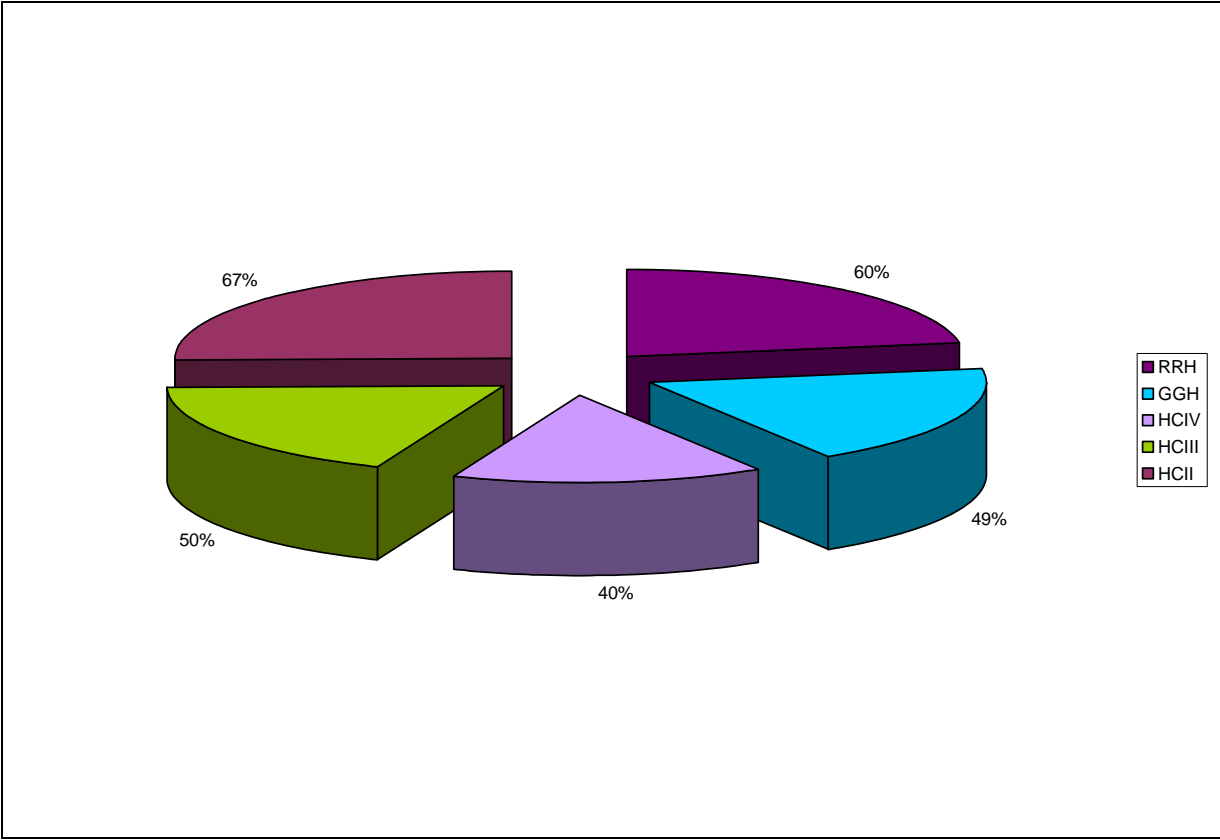


Fig 5.3 Indicator Items with Stock out of more than 30 days in a year.  
 Source: Field Data EMHS Tracking

It can be observed from Figure 5.3 that 67% of all the 20 indicator items experienced stock out days of more than 30 days at HC II level. At HC IIIs, 50% of indicator items were out of stock for more than 30 days. RRHs reported stock out days beyond 30 days averaging 60% while that at GGHs and HC IVs was 49% and 40% respectively. At the RRHs, the items that experienced stock out of more than 30 days were: Depo Provera (171 days), Ferrous/Folic (110 days), Ibuprofen (108 days), Propanolol (60 days), Bendrofluazide (67 days) and Insulin (105 days). This implies that clients that are referred from lower health units for these items will still not be able to access them at the RRHs. Figure 5.4 shows stock out days by item and facility level.

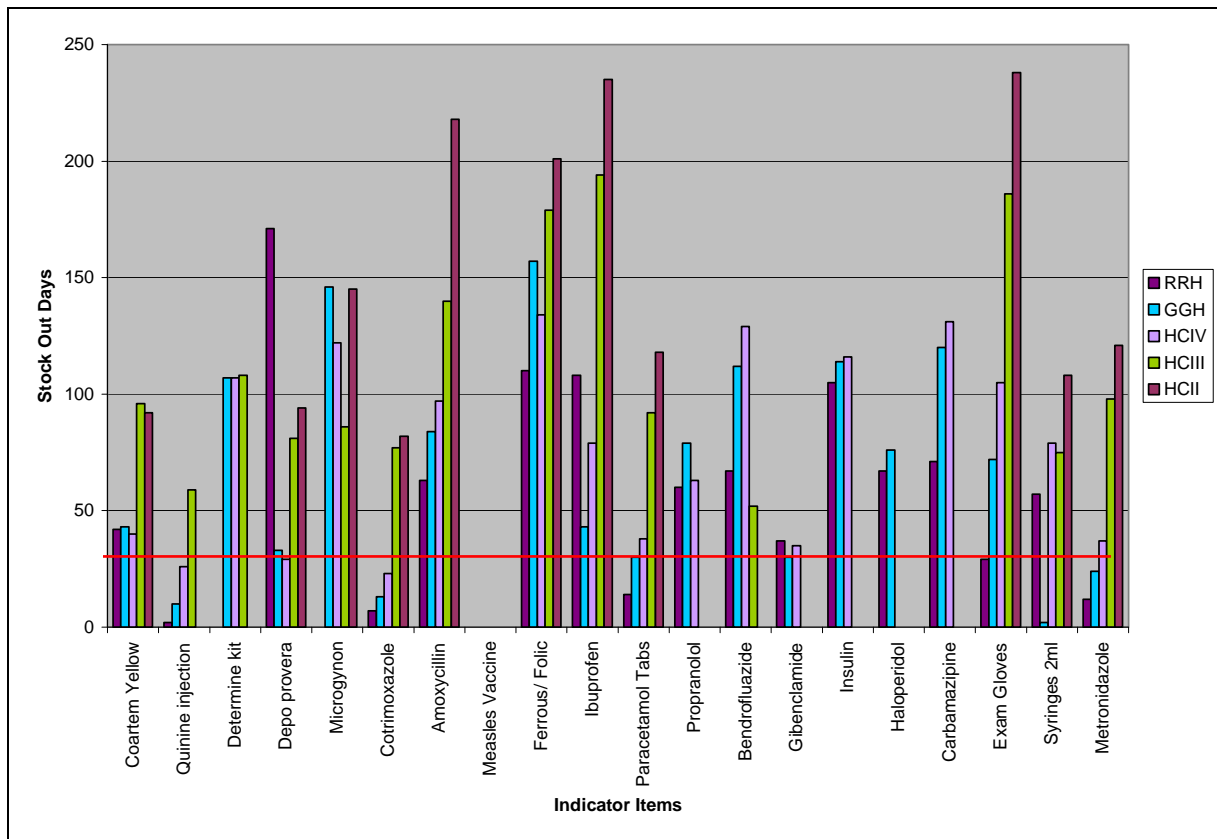


Fig 5.4 Average Stock Out by Facility Level  
 Source: Field Data EMHS Tracking

At the GGHs, Ferrous/Folic (157days) Microgynon (146 days), and Insulin (114 days) had long stock out periods while at HCIVs, Ferrous/Folic (134 days), Carbamazepine (131 days), Bendrofluazide (129 days), Microgynon (122 days) and Determine kits (107 days) were out of stock most days. At HCIII, Ibuprofen had the highest stock out days of 194 days, Examination Gloves for 186 days and Ferrous/Folic 179days. At HC IIs, Examination Gloves were out of stock for 238 days, Ibuprofen for 235 days and amoxicillin for 218 days. Although Measles Vaccine may be stocked at all levels HC IIs that did not have cold chain facilities did not stock it as earlier explained (Section 5.2.1) hence registering the lowest (“zero”) stock outs in the graph above.

#### 5.2.4 Discrepancies between Physical Count and BIN Card Balance

Records available at the visited HUs tended to provide inaccurate information regarding stocking levels of EMHS at those HUs. In-charges would report stock out of a given item yet the Bin cards/Stock cards reflected contrary information. The study therefore carried out on-spot physical count to ascertain whether stock cards were updated. The importance of this finding was to establish whether the stock card balances represented the actual availability or stock out levels and whether the conclusions drawn from the stock cards were correct. Figure 5.5 indicates the discrepancies between physical (on spot) count and BIN card balances of EMHS at HUs.

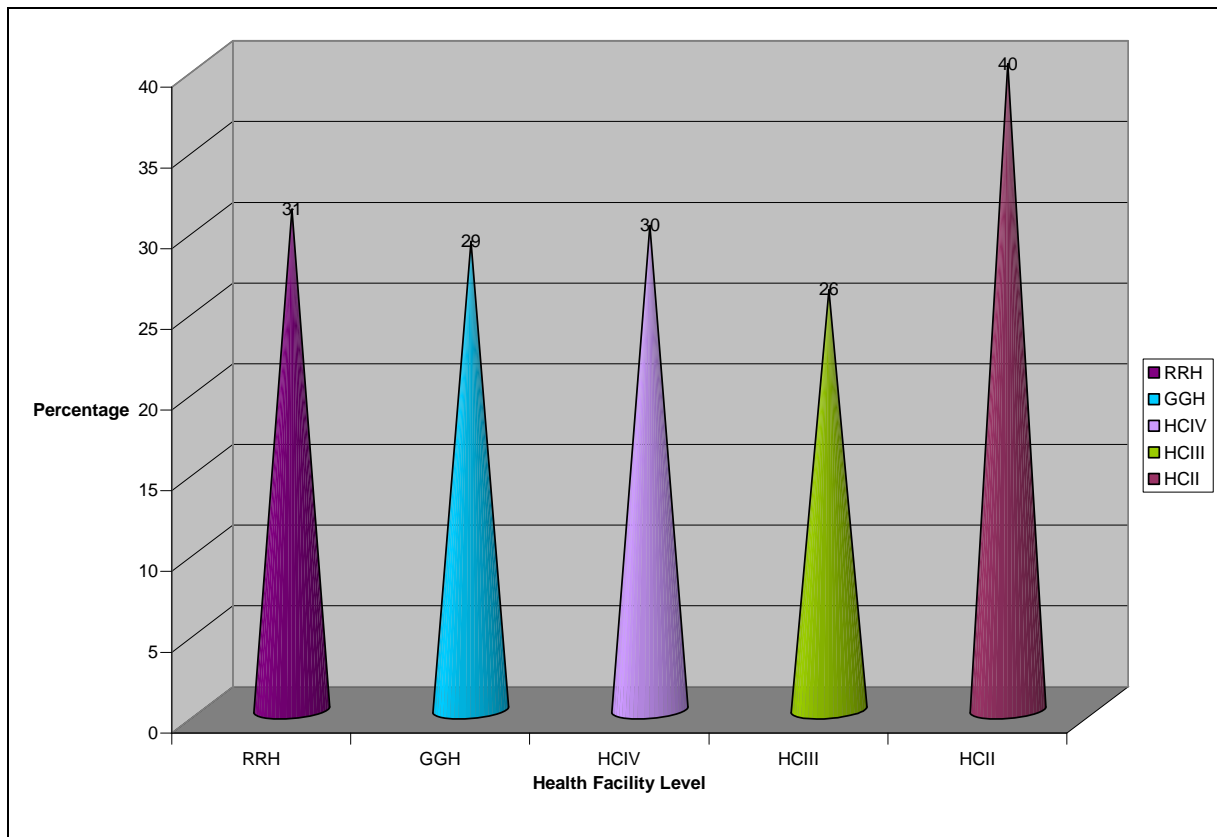


Fig 5.5 Discrepancies between Physical Count and BIN Card Balance  
 Source: Field Data EMHS Tracking, 2009

Figure 5.5 shows that there were discrepancies in Bin/Stock card balances and physical count of stocks at all health facilities visited across the five levels. HC IIs had the highest (40%) discrepancy between spot check physical count and BIN card balance. RRHs had an average discrepancy of 31% while the discrepancy at HC IVs averaged 30%. The lowest discrepancy (26%) was at HC III. The results show that the Bin/Stock cards do not reflect the correct position of stock levels at the health facilities. In most cases, the balance reflected on BIN Cards was much higher than the physically available stock. Stock card balances are therefore not a reliable indicator of availability of EMHS in the facility.

On investigating the reasons for the discrepancies, the staff at HC IIs claimed that the discrepancies were largely due to inadequate staffing at the HUs; the staff were few in number and prioritized attending to patients leaving them little time to up-date their records including Bin cards. However, the study team noted that in addition to inadequate staff, the available workers largely lacked the capacity to utilize the Bin cards accurately. This is the reason the entries on the cards were often incorrect. At most HC IIs clients reported in the morning and the health units closed at around 1 PM. The remaining time of the day (2 -5 PM) could be used to do administrative work including up-dating Bin cards if the staff were serious at their work. Further, the higher HUs (RRHs and GGHs) had relatively competent staff that could handle stock cards competently but they too had the same problem of inaccurate Bin/stock cards. This means that the reason for not updating stock cards went beyond under-staffing per se. The main reason according to the study team was negligence of duty by most workers. The study further noted that 18% (3 out of the 20) indicator items did not have stock cards. The common items that did not have stock cards were Folic/ Ferrous Sulphate, Examination Gloves and Depo Provera. On why

these items conspicuously lacked Bin cards, the stores' staff at various health facilities claimed that these particular items were stored in the maternity wards and were controlled there. However, in the maternity wards, no one was in charge of records. Nurses picked materials and used them without any recording. Overall, 57% of the available Bin cards for the listed items at the sampled HUs were updated.

### 5.2.5 Level of Prescription Fulfillment

Respondents were asked whether they obtained all the medicines that were prescribed for them from the HU they visited. This indicator would show the level to which the prescribed medicines were available at a given health facility and dispensed if available. By prescribed medicines, the study means prescribed medicines by type and not number. The study assumed that each prescribed medicine was dispensed in full dosage (number of tablets etc). The responses are categorised in two; those who received all the prescribed medicines and those who received less than the prescribed medicines. The assumption was of a full dose i.e each medicine is used to have been received in full dose. Figure 5.6 illustrates the responses by district.

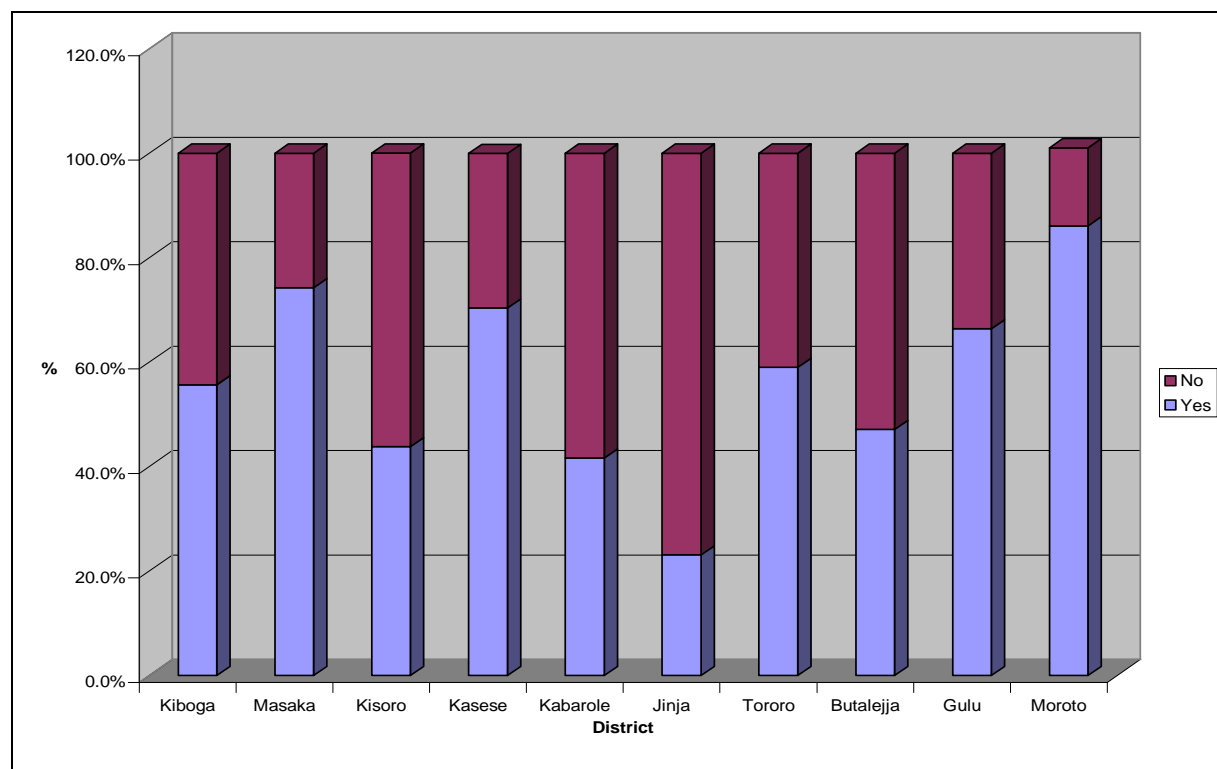


Fig 5.6 Prescribed Medicines that were obtained at the Health Facility.  
Source: Field Data EMHS Tracking

According to Figure 5.6, Moroto had the highest number of clients (86.1%) who received all the medicines that were prescribed for them. Masaka and Kasese followed with 74.3% and 70.4% respectively. Jinja regional referral hospital had the lowest (23.1%) number clients who received all the medicines that were prescribed. The details of proportions the clients received are shown in Table 5.2

Jinja regional referral had the lowest number of clients (23.1%) who received all the medicines that were prescribed

of

Table 5.2 Prescription Fulfillment by District

District	No. of Respondents	No. of Medicines Prescribed (x)	No. of Medicines fully Dispensed (y)	Level of Prescription Fulfilment (y/x%)
Kiboga	108	648	511	78.9
Masaka	107	642	509	79.3
Kisoro	109	654	455	69.6
Kasese	111	666	592	88.9
Kabarole	12	72	62	86.1
Jinja	13	78	43	55.1
Tororo	94	564	443	78.5
Butalejja	92	552	465	84.2
Gulu	113	678	574	84.7
Moroto	120	720	684	95
<b>Average</b>		<b>527</b>	<b>434</b>	<b>80</b>

Source: *Field Data, EMHS Study 2009*

The results in Table 5.2 show that the average capacity of the sampled districts (and RRHs) to dispense fully the prescribed drugs was 80%. Moroto reported the highest capacity of 95%, followed by Kasese (88.9%) while Jinja (55.1%) reported the lowest. The results further show that 54.8% of the clients interviewed received all the medicines that were prescribed for them from the health facility they visited. A small proportion (13.3%) of all the clients interviewed received 83.5% of the medicines prescribed while 4.8% of the interviewed clients got 17% of the prescribed medicines as presented in Appendix 4.

Although Moroto and Kasese were among the districts that reported the highest capacity to dispense all the prescribed medicines, the two districts also reported the highest number of clients who claimed to have informally paid health workers in order to be given the medicines. Figure 5.7 illustrates the responses as to whether or not clients made informal payments for the medicines they received.

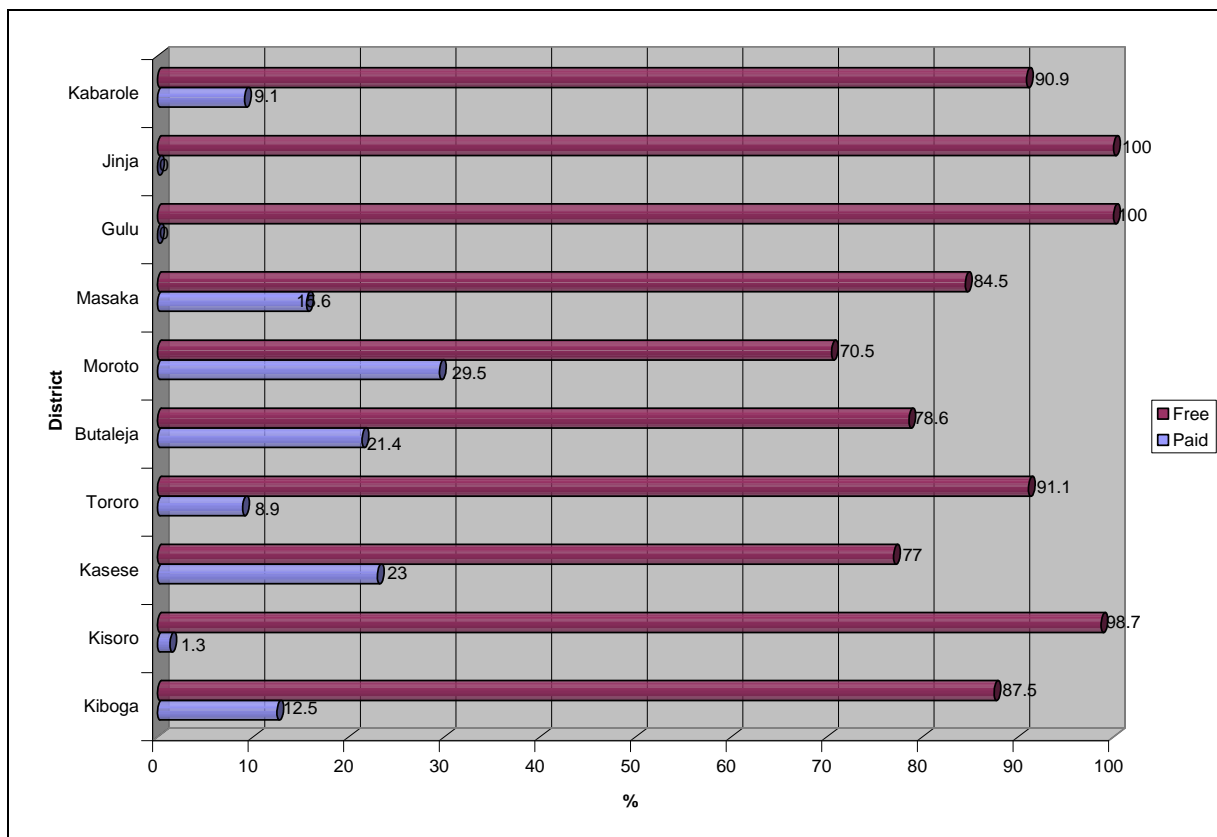


Fig 5.7 *Informal Payment for the Medicines Received*  
 Source: *Field Data EMHS Tracking*

The districts that reported the lowest number of clients claiming to have paid for services at public health facilities were Jinja and Gulu (0%), and Kisoro (1.3%). This corresponds to the explanation for the small proportion of clients that received all prescribed medicines in those districts as earlier presented in Table 5.2. This seems to indicate evidence of corruption in dispensing of medicines in public health units. A possible explanation is that HUs in Gulu and Kisoro hoarded the medicines as long as the clients were not offering to pay (informally) for the medicines and sent patients to private pharmacies.

### 5.2.6 Trends of Availability of EMHS over Time

While the official stock out data as presented in AHSPR 2007/08 showed deterioration in availability of EMHS measured by the six tracer medicines, the general perception of healthcare consumers seems otherwise. A possible explanation would be that the GoU credit line budget increased in FY 2007/08 to Ug.Shs. 12.6b, from Ug.Shs. 8b in FY 2006/07 while stockouts can be attributed to poor management practices. In FY 2008/09 the GoU credit line budget decreased to Ug.Shs. 6.7b, which is even lower than in 2006/07. The study team sought the views of the clients about availability of medicines presently (2008) at the health facilities as compared to one year ago (2007). Figure 5.8 presents the views expressed by clients that were interviewed at the sampled HUs.



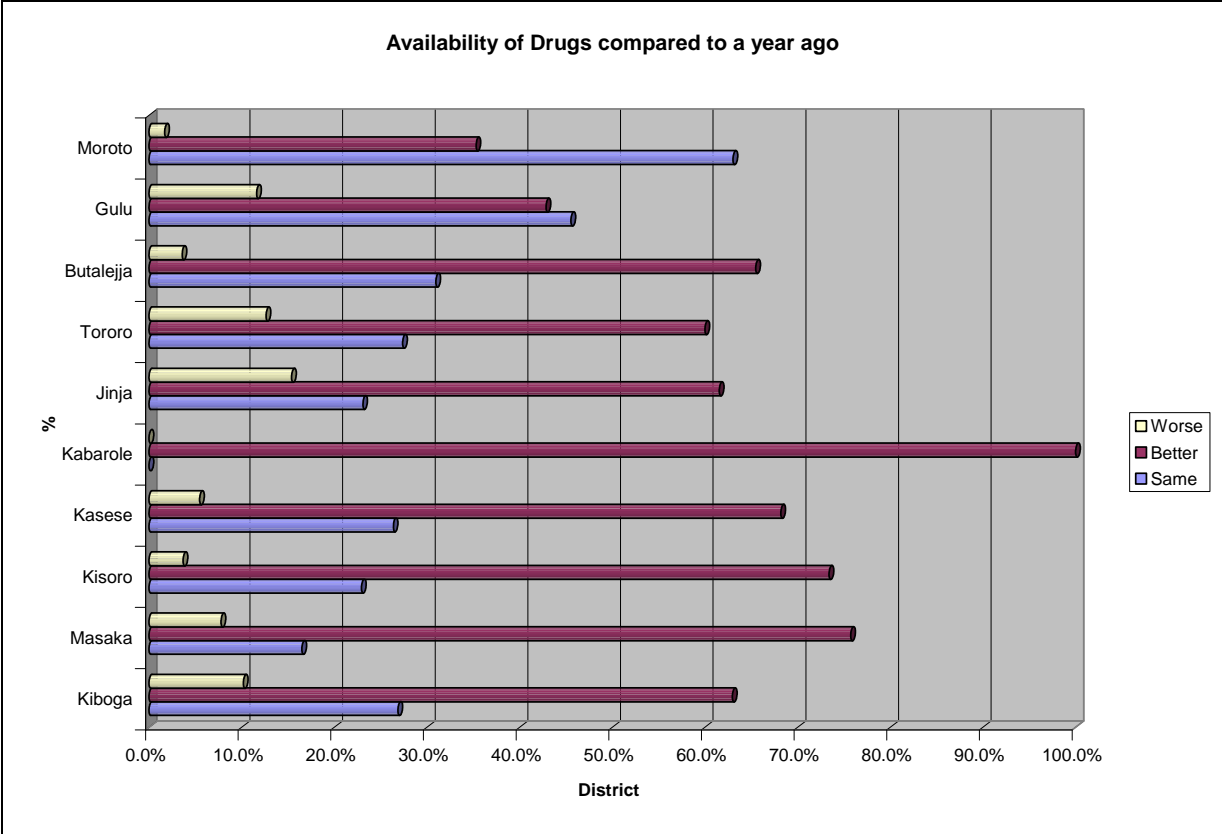


Fig 5.8: Clients' Perception of Availability of Medicines Presently Compared to a Year Ago.  
 Source: Field Data EMHS Tracking

The findings show that all the respondents in Kabarole were of the view that medicines were more available today (2009) than last year (2008). In Tororo, Kisoro, Kiboga, Butalejja, and Kasese, more than 60% of the interviewed clients were of the view that medicines were more available today than they were a year ago. However, in Gulu and Moroto, less than 50% of the clients interviewed thought the situation had improved. In Moroto, more than 60% of the respondents thought the situation had remained the same while in Gulu nearly 50% thought the situation had remained the same and about 15% thought it had gotten worse.

Overall, about 80% of the interviewed clients were of the view that the availability of medicines had improved in 2009 compared 2008. Their argument was that even if the prescribed medicines were not available at the public HU, the medicines would be available at private outlets (PFPs). Participants in Focus Group Discussions were of the same view that medicines were presently more available than the previous year.

**5.2.7 Alternative Source of Medicines**

Some indicator items were reported to be out of stock for over a year. The study team asked clients what they did in situations where the medicines were out of stock for such long periods. Fig 5.9 presents the alternative sources from which clients sought services.

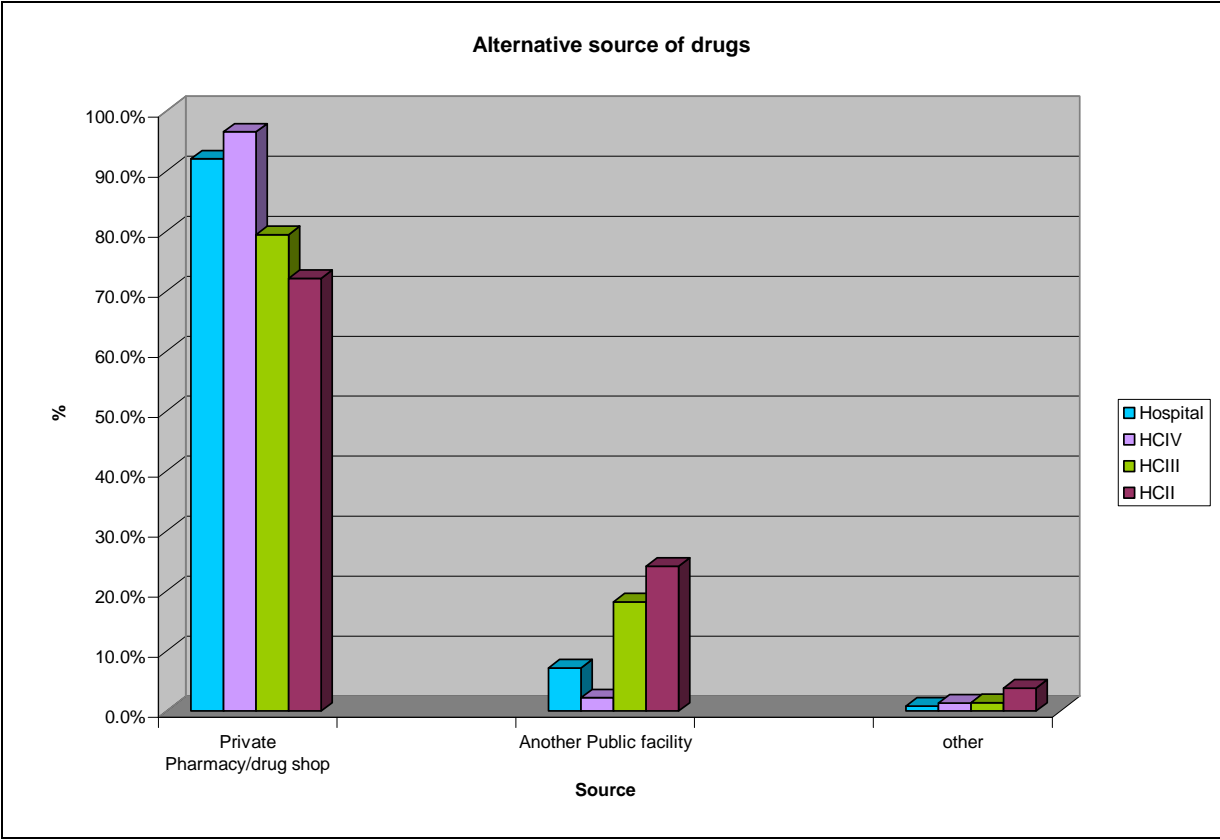


Fig 5.9: Alternative Source of Medicines  
 Source: Field Data EMHS Tracking

The results in figure 5.9 show that on average 85% of patients who did not receive medicines from the public health facilities bought them from private pharmacies/ drug shops. A small proportion (13%) visited another public health facility for the medicines while 2% reported that they waited for the next delivery of the medicines to their HU. More clients (24.1%) at HCII than at any other level went to higher public health facilities for medicines. At hospital level (regional and district), 7% of the clients reported to be getting the unavailable medicines from another public health facility. This leaves one wondering whether they go to lower levels for medicines. Participants in FGDs reported that clients were advised of the pharmacies or drug shops from where to buy medicines they had failed to find at public HUs. This may be a good practice but it raised suspicions as clients alleged that those pharmacies/drug shops belonged to the health workers at public health facilities.

The health workers prescribed and advised clients to buy the medicines from private pharmacies/drug shops that according to FGDs allegedly belonged to the same Health workers at public facilities.

According to the clients, health workers who doubled as private drug-shop owners could divert medicines from the public health facilities to sell at their shops. However, this study could not clearly establish the link between the health workers and the drug shops ownership.

**5.3 Affordability of Essential Medicines**

Availability of essential medicines was identified as a major problem at public HUs. On the contrary, PFPs were found to be generally well stocked with essential medicines most of the time. Even in GGHs that had private wings, the medicines were more available in the private wing

than in the public wards. Because medicines were often not available at public outlets, clients at times bought the medicines from private outlets after getting prescriptions from public HUs. Clients interviewed at the sampled public HUs who had not been given the prescribed medicines were asked whether they would be able to buy those medicines at private outlets. They responded as shown in Fig 5.10.

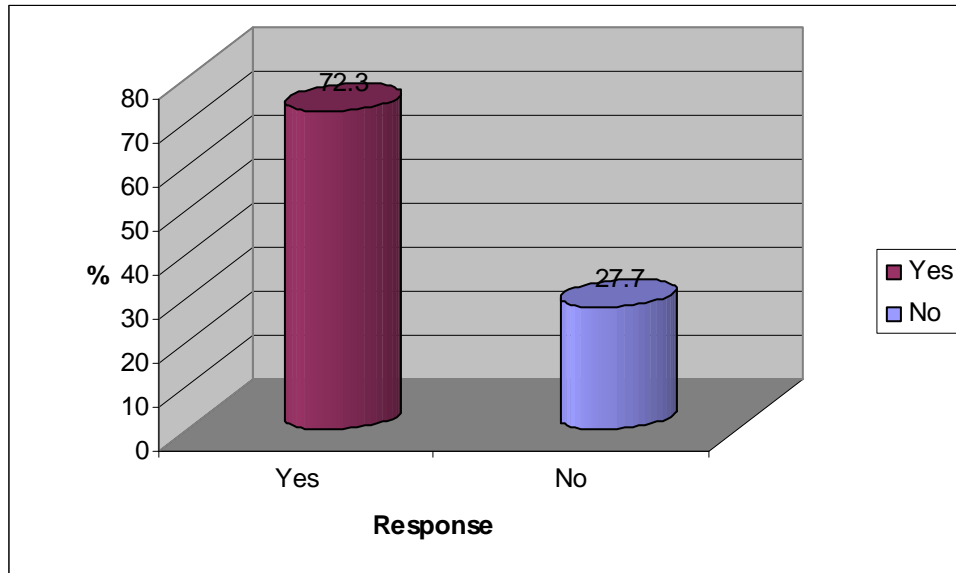


Fig 5.10 Affordability of Medicines at PFP  
Source: Field Data EMHS Tracking

According to the results, 72.3% of the interviewed clients responded that they could afford the charges. The responses were based on the previous contact of the client with the drug source since they were interviewed before going to the pharmacy. However, much as clients expressed the view that they could afford to buy medicines at PFP, health workers were of the contrary view that most clients could not afford. On further inquiry from health workers, the study established that clients thought that affording less than full dosage or just one out of the prescribed medicines was alright. The implication here is that perceived affordability did not consider the issue of right dosage, a situation that is dangerous to clients. Clients using medicines in this way is inappropriate and tantamount to irrational use of medicines, creating medicines use problems in future (such as antibiotic resistance), but this also indicates unprofessional or poor dispensing practices.

#### 5.4 Use of EMHS at Community Level

Officials at MoH reported that there had been efforts to promote appropriate use of EMHS by health professionals, patients and the general public. This, they argued, has been implemented through attempts to provide appropriate information on medicines to the health workers and the community.

In 2007, the MoH formulated the latest edition of the EMLU. This has helped in guiding the health workers and streamlining procurement based on the national needs. The Uganda Clinical Guidelines-UCG (2003) though not currently updated (it is supposed to be updated after every five years) was also in place. According to MoH, the up-dated version (2009) is almost ready for printing (at the time of this study). During fieldwork, some participants in FGDs said that they

had accessed the EMLU and expressed the view that EMLU was responsive to people’s needs. According to the participants, the most essential medicines were Coartem, Paracetamol, Quinine, Fansidar, Ferrous Sulphate/Folic Acid, and Metronidazole all of which were listed in EMLU. However, they noted that these medicines usually ran out of stock in a short time.

In the study area, all the four (4) sampled RRHs and six (6) GGHs had MTCs. The MTCs at the hospitals participated in compiling the procurement orders of medicines. Members to the MTC were drawn from different departments/sections/units. Each unit representative presented the needs of their unit. These were put together to compile a complete order for the hospital. The purpose of this participation was to ensure that all and only relevant medicines were ordered.

It is a good practice that health workers advise clients on taking medicines; storage; and possible side effects of the medicines given. The study team interviewed some patients at sampled HUs to find out whether they were given information about: how to take the medicines given; storage of the medicines; and possible side effects.

**i) Advice on How to Use Medicines Given**

Exit clients were asked whether they had been advised on how to use the medicines given. This was done by first asking the clients what advice/instructions they had received and the response was compared with the instructions written on the dispensing envelopes. Table 5.3 shows the findings about clients who were advised about medicines dispensed to them and could recall the instructions that were given.

**Table 5.3 Clients who could Recall Instructions give on How to Use Obtained Medicines.**

Level of HF	Were given Appropriate Advice on how to use medicines given and could recall it (%)	Were not given Appropriate Advice on how to use given medicines or could not recall advice given (%)
Hospital	98.8	1.2
HCIV	98.9	1.1
HCIII	98.9	1.1
HCII	97.6	2.4
Average	98.5	1.5

Source: Field Data EMHS Tracking

The results show that most patients were advised on how to use the medicines given to them and could recall it. This was across all the levels of HU. At the hospital level, 98.8% of the interviewed patients had been advised on how to use the medicines and could recall the advice. At the HC IV and HC III level, 98.9% had received and could recall the advice. Similarly, at HC II level the proportion of those who had received and could recall the advice was 98.6%. This implies that most clients (98.6%) at different health facility levels were generally advised on how to use the medicines given to them and could recall the advice. This is a good effort for enhancing rational use of medicines.

**ii) Advice on Possible Side Effects**

Clients are supposed to be advised on the side effects of the treatment they are undertaking. This information reduces on drug wastage that comes from discontinuing treatment because of side effects of the medicines. In such cases, clients usually think the treatment is not working and they fail to adhere to medicine prescriptions. About whether they were advised of the possible effects of the medicines, the responses are illustrated in Fig 5.11.

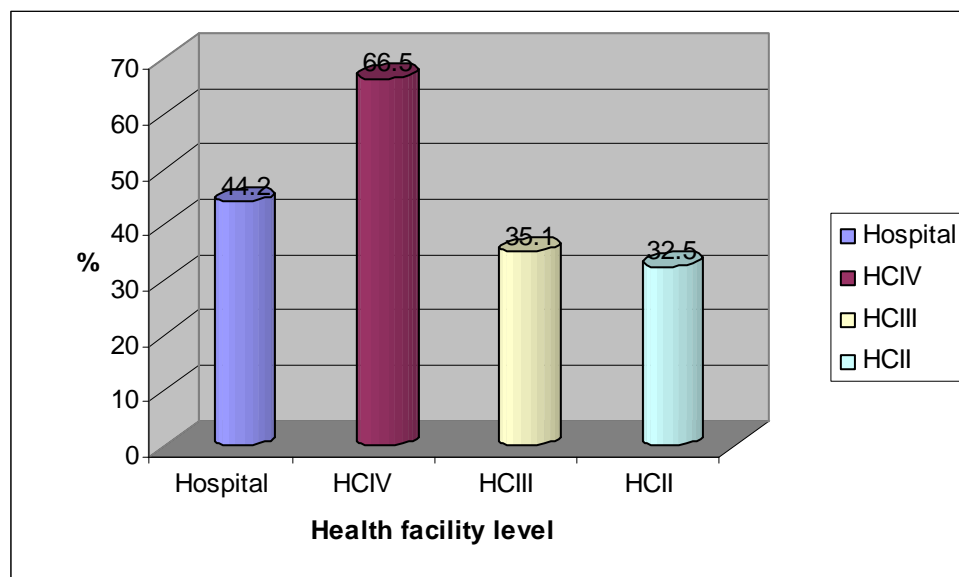


Fig 5.11 Advice on Possible Effects of Obtained Medicines

Clients who responded in the affirmative were 66.5% at HC IV, 44.2% at hospital level, 35.1% at HC III and 32.5 % at HC II. On average, 44.6% across all levels were advised on possible effects of medicines given to them. The implication is that 55.4% of the interviewed clients were not advised on the possible side effects of the medicines they received. This could lead to irrational use of medicine. For example, clients that were not aware of the side effects might discontinue the medicine before completing the dosage.

### iii) Advice on Storage

Storage of medicines given to the clients is also crucial. Clients should be advised to keep the medicines according to the prescribed information with regard to appropriate temperatures and where they may not be tampered with especially by children. Improper drug storage may render the medicines less effective and in extreme cases it is dangerous. Respondents were asked whether they were advised on proper storage of medicines. Table 5.4 presents the results.

**Table 5.4 Advice Given on Best Storage Conditions**

Level of HF	Were given advice on best storage conditions (%)	Were not given advice on best storage conditions (%)
Hospital	64.4	35.6
HCIV	59.1	40.9
HCIII	72	28
HCII	58.1	41.9
Average	63.4	36.6

Source: Field Data EMHS Tracking

The results show that 64.4% of respondents at GGHs were not advised on the best conditions to store their medicines. At HC IV, 59.1% had received the advice while at HC III, 72% and at HC II

level, 58.1% of the respondents had been advised. The results imply that although most patients were advised on storage conditions for the medicines given, a significant number was not advised. Poor storage may amongst others, compromise the effectiveness of medicines and can be dangerous to children.

## 5.5 EMHS Supply and Utilization of Health Facilities

Health Units reported that once medicines were delivered, even people who were not ill, flocked them overwhelmingly. This was reportedly most common at HCIIIs and HCIIIs, where supplies were said to last 1 to 2 weeks because of the upsurge in client attendance immediately after delivery of supplies. This issue was investigated by comparing client attendance records one month before and one month after delivery of the medicines. Records available at HUs showed minor increases in client attendance following delivery of medicines contrary to what HUs reported. The possible explanation to the apparent sharp increases that HUs experienced was that once medicines were delivered, clients came in big numbers over a short period of time (1-2 weeks) yet, the study considered records spanning over a month. The analysis of attendance records should have been over a shorter period (probably two weeks before and after) to bring out the sharp contrasts. The reason, people all of a sudden flocked the HU once supplies arrived, was that many people in the communities were sick but had kept away because they knew there was no medicine and waited until the medicines arrived. In addition, because of the erratic availability of medicines at HUs, some people turned up to collect medicines to keep at home for use in future when they fell sick.

To investigate this issue further, clients were asked whether they had ever sought treatment because they heard that medicines had come. Tables 5.5 and 5.6 illustrate the responses

**Table 5.5: Client Response to Bulk Supply of EMHS by District**

District	Whether clients sought treatment because they heard that medicines had been delivered at the health Unit	
	Yes	No
Kiboga	61.2%	38.8%
Masaka	51.0%	49.0%
Kisoro	44.0%	56.0%
Kasese	60.2%	39.8%
Kabarole*	16.7%	83.3%
Jinja*	7.7%	92.3%
Tororo	46.7%	53.3%
Butalejja	80.2%	19.8%
Gulu	73.6%	26.4%
Moroto	82.1%	17.9%
<b>Average</b>	<b>61.2%</b>	<b>38.8%</b>

Source: Field Data EMHS Tracking

\* Kabarole and Jinja were only covered as Regional Referral Hospitals not Districts.

**Table 5.6 Client Response to Bulk Supply by Health Facility Level (Excluding RRHs)**

Health facility Level	Whether clients sought treatment because they heard that medicines had
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come		
	Yes	No
HC IIs	73.5%	26.5%
HC IIIs	70.7%	29.3%
HC IVs	52.5%	47.5%
GGHs	50.1%	49.9%
<b>Average</b>	<b>61.7%</b>	<b>38.3%</b>

Source: Field Data EMHS Tracking

The results in Table 5.5 show that on average, 61.2% of the clients across all levels of healthcare admitted seeking treatment because they heard that supplies had arrived. Table 5.6 shows that most clients in Moroto (82.1%), Butalejja (80.2%) and Gulu (73.6%) reported to have ever sought treatment due to information they received that supplies had come. The numbers were relatively lower in Jinja (7.7%) and Kabarole (16.7%). The reason for the big differences in the responses from these districts was because Jinja and Kabarole were only studied as RRHs and not as districts. The regional referral hospitals are detached from the communities such that people may not know when the hospitals receive supplies. It is apparent that client attendance responded to arrival of supplies. When drugs are available, then the sick people who were considering going to a private facility have a good reason to visit the government HU which partly explains the upsurge in the number of clients.

61.2% of the clients admitted seeking treatment because of mere hearing that supplies had arrived. This is what is referred to as frivolous consumption of medicines which does not auger well for rational use of medicines.

When this indicator was analyzed by HU level, it was found that lower HUs (HC IIs and HC IIIs) received the highest number of clients seeking treatment because they had heard that supplies had been delivered. The numbers are higher at lower HUs because these HUs are within the communities and people get to know when supplies are delivered. On the other hand, higher HUs are detached from the communities and people may not notice when supplies are delivered.

## 5.6 Factors Affecting Availability of EMHS

The study identified a number of factors that contributed to unavailability of medicines at service delivery points. Among the main ones are:

- Inadequate funding of the health sector
- Stock outs of medicines and supplies at HUs
- Stock outs of medicines and supplies at supply source
- Capacity of the suppliers
- Poor record keeping at HUs
- Long procurement lead times
- Human resource capacity at HUs
- Affordability of medicines
- Frivolous consumption of medicines
- Irrational prescribing of medicines

### **5.6.1 Inadequate Funding**

The national health budget has not shown any significant increase overtime despite the increase in population and EMHS needs. According to MoH, as earlier indicated, Ug.Shs.252 billion was needed for the health sector but only 144 billion was approved for FY 2008/09 (Ministry of Health Planning Department). The budget for procurement of EMHS, both credit line and PHC (Recurrent Non-wage) is inadequate. According to the *"FY 2007/08 District Transfers for Health Services (MoH 2007)*, the allocation for the FY 2007/08 was Shs.20,440,003,100 in Credit Line and Shs. 59.94 billion for PHC RNW. It should be noted that not all the total allocations were released (average budget performance was 79.4% for PHC-NW further reducing the amount of money available to procure EMHS).

### **5.6.2 Non- Compliance to Guidelines on Use of PHC to Procure EMHS**

All health facilities did not comply with the MoH guidelines regarding the proportion of PHC that should be used to procure EMHS. As indicated in the preceding analysis, MoH guidelines provide that RRHs and GGHS spend at least 40% of the PHC (recurrent non-wage) on procurement of EMHS. The lower HUs are required to spend at 50%. However, it was found that RRHs spent 36.6% (Masaka spending 44.2 and FortPortal 29%, Table 4.8) whereas GGHS spent only 37% and the lower HUs spent 32% (Tables 4.7 and 4.6 respectively).

### **5.6.3 Stock Outs at HUs**

EMHS experienced stock outs at all levels of health facilities. The problem was more critical at lower HUs (HC IIs and HC IIIs) yet, these were the main service delivery points to the communities. Some essential medicines and supplies were out of stock for periods exceeding 3 months. At HC IIs and HC IIIs, supplies meant to last 2 months were reportedly consumed in a period of 1-2 weeks because demand far exceeded supply.

### **5.6.4 Capacity of the Suppliers**

The capacity of the main suppliers (NMS/JMS) affected availability of EMHS at health facilities. The study established that most times, NMS supplied less than the ordered quantities despite the fact that the beneficiaries had credit with NMS and had actually ordered for more supplies. In this study, the proportion of processed deliveries to credit available for RRHs averaged 88.2%; 90.2% for GGHS; and 31.5% for HSDs (Appendix 5). This shows that NMS failed to supply according to order. The failure to supply the full orders was mainly because the ordered items were either out of stock at NMS or the ordered quantities were beyond the quantities available at NMS. This information shows that service levels at HSD are extremely low with only 31.5%.

Secondly, the requirement that the supplier gives the client a certificate of non-availability as authorization to purchase elsewhere was reportedly an impediment to timely procurement as suppliers especially NMS were said to be reluctant to give the certificate of non-availability. This purported "refusal" compelled some clients to wait until NMS stocked the item the HUs wanted.

### **5.6.5 Poor Record Keeping**

Record keeping at most HUs at all levels was poor. This meant that the HUs did not have reliable records upon which they could accurately plan and forecast their workplans including procurement of EMHS.



### **5.6.6 Long Procurement Lead Times**

The procurement process for EMHS was long with various stages. At each of these stages were several processes that required time to complete. Ultimately, the process was long and therefore, it took time to replenish an item that ran out of stock.

### **5.6.7 Human Resource Capacity**

Most HUs especially HC IIs and HC IIIs had insufficient human resource capacity in terms of required skills. Consequently, the HUs could not properly forecast and quantify the EMHS needs to make orders in time. Inadequate capacity contributed to poor record keeping and lack of initiative to follow up orders and deliveries.

Further more, there appeared to be no commitment to work as it was found that most HUs especially lower ones opened only in the morning closing at 1' O'clock yet official government business starts at 8AM and should close at 5PM.

### **5.6.8 Affordability**

The majority of the clients (79%) claimed they could afford medicines not obtained at public health facilities from PFPs. This means the 21% who could not afford were unable to access medicines that were not available at public HUs. It was also indicated that there were cases of under-the-counter<sup>4</sup> payments to health workers in order to access medicines at public Health facilities. This means that those who could not afford under-the-counter payments to health workers would not access the medicines at public HUs.

### **5.6.9 Frivolous Consumption**

HC IIs and HC IIIs are situated within the communities. People were more aware of "practices" at these health centres as compared to RRHs and higher HUs. When supplies are delivered the local people get to know immediately. As indicated earlier, the study found that people tended to flock the HUs whenever medicines arrived at the HUs whether they were sick or not.

### **5.6.10 Irrational Prescribing of Medicines**

Although most clients (98.6%) were adequately advised on how to use the medicines, they were not given sufficient information about how to store the medicines (51.1%) nor their side effects (55.4%). This may lead to irrational use of medicines and ultimately, waste of resources that go into purchase of such badly stored medicines.

### **5.6.11 Key Learning Points**

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<sup>4</sup> Un official payments solicited through corrupt practices

All the HUs across the levels of health care experienced stock outs though the incidences were higher at lower HUs. HC IIs were the most affected while RRHs were least affected. The trend showed that stock outs were more prevalent at lower HUs than at higher ones. This seems to imply that the higher the level of supervision, the lower the level of stock outs.

Bin/Stock cards often did not reflect the correct position of stock levels at the health facilities. There were discrepancies in Bin/Stock card balances and physical count of stocks often equally at all health facilities visited across the five levels. This shows that it is not enough to have stock cards in place but more useful to have staff with the capacity, right attitude and ethics to correctly use them.

Affordability of medicines outside the public HUs is a challenge, as 28% of the respondents could not afford. It is possible that, some of those who claimed that they could afford bought only part of the prescribed dosage.

Health workers advised clients on how to use medicines given but did not advise them adequately about storage and possible side effects of the medicines. Dissemination of this information affects rational use of medicines and saves resource outlays that are otherwise wasted on poorly stored and used medicines.

Clients made under-the-counter payments to health workers in order to obtain medicines from public HUs. This issue was found rampant in the national integrity survey conducted by the Inspectorate of Government (NIS 2008).

There is *frivolous* consumption of medicines. This kind of consumption was found to be a rational behavioral response to scarcity but indicates the level of waste due to irregular and sporadic nature of deliveries. It is therefore more cost-effective if there were regular stocks at HUs.

## **6 PROBLEMS IN THE AREAS OF SYSTEMS, PROCESSES AND PROCEDURES RELEVANT TO THE PROVISION OF EMHS**

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### **6.1 Introduction**

This chapter summarizes the problems in the areas of systems, processes and procedures in the procurement of EMHS to highlight the inefficiencies that negatively impinged on sufficient provision of EMHS and achievement of the HSSP II EMHS related objectives. This study identified the major problems to efficient procurement of EMHS in the areas of financing; procurement; and EMHS management.

### **6.2 Financing**

The main problems affecting efficient provision of EMHS and availability of essential medicines at health facilities were mainly financial in nature. The size of funding was small; budget performance poor; per capita expenditure low; non-compliance to PHC-NW expenditure guidelines rampant; and financial lead times apparently long for no plausible reasons.

#### **i) Limited National Funding for EMHS.**

The health sector is under-funded and the funding trend has been declining since 2004. The proportion of the health sector budget in the national budget has shrunk from 9.7% in 2004/05 to 9.6% in 2007/08. According to estimates by the Planning Department of the MoH, the needs of the health sector for FY (2008/09) required Ug.Shs 252bn. However, the budget provided only 57% (Shs.144bn) of the estimate implying that the provided funding could only meet 57% of the requirements.

#### **ii) Budget Performance**

In addition to the health sector budget being meagre as indicated in (i) above, its performance (comparison of allocation against release) has not been impressive. First, regarding credit line contributions, the GoU has often released to the EMA less than the budgeted credit line contributions. For example in the FY 2007/08, GoU released only 76% of the budgeted contribution. The other contributor to EMA is DANIDA. Secondly, PHC-NW faced the same problem: for the FY 2007/08 the study found that there was budget under-performance at all levels of healthcare as illustrated in Table 6.1.

**Table 6.1 PHC Budget Performance for RRHs, GGHs and Lower Public HUs**

<b>Level</b>	<b>PHC-NW Disbursed (%)</b>
Lower Public HUs	87.6%
GGHs	87.5%
RRHs	98.9 %
<b>Average</b>	<b>91.3%</b>

*Source: Field Data*

The illustration shows that in the sampled districts, budget performance for the lower HUs (districts) was 87.6%, GGHs 87.5% and RRHs, 98.9%. Under-performance of the budget means that less than planned funds were made available. Releasing less than budgeted funds disrupted procurement planning and contributed to stock out of essential supplies at service centres.

### iii) Per capita expenditure on EMHS

Per capita expenditure on EMHS has generally been declining over the HSSP II period. It dropped from Ug.Shs. 17,437 in 2004/05 to Ug.Shs.13, 949 in 2007/08. This was because the health sector budget was small and was often not fully released; hence there was less than planned expenditure on EMHS despite the growing population and demand for EMHS. The result of under-funding amidst high population growth is that increasing demand exceeds dwindling supply leading to persistent stock out of essential medicines.

### iv) Non-compliance to guidelines on expenditure of PHC-NW

MoH guidelines on expenditure of PHC-NW funds provide that hospitals spend at least 40% on procurement of EMHS while districts/HSDs may spend at least 50%. More often, these guidelines were ignored. Table 6.2 shows the proportions of PHC-NW the different levels of healthcare spent.

**Table 6.2 Overall Comparison of Proportion of released PHC-NW spent on EMHS**

Level	PHC-NW spent at NMS/JMS (%)	PHC-NW spent at PFPs (%)	Total PHC-NW spent on EMHS (%)
Lower Public HUs	26.2	7	32
GGHs	21.8	11.9	37
RRHs*	(12.4)	(24.2)	(36.6)
<b>Average</b>	<b>24</b>	<b>9.5</b>	<b>35</b>

Sources: AHSPR 2007/08,

Field Data EMHS Tracking, 2009

\*RRH data lack reliability but indicates the trend

The AHSPR 2007/08, reports that in FY 2007/08, the sampled districts spent an average 26.2%, RRHs 12.4% while GGHs spent 21.8%. Conversely, this study found that on average, the districts had spent 7% of the released PHC-NW to procure from local PFPs improving average expenditure to 32%; GGHs had spent 11.9% improving expenditures to 37% and RRHs had spent 24.2% improving expenditure to 36.6 %. These results also show that overall expenditure on EMHS was 35%. Of this, 24% was spent at NMS/JMS and 9.5% at PFPs. However, these averages were still not compliant as they still fell below the recommended guidelines.

A similar trend of under-utilization was reflected at the national level: Table 4.9 shows that, on average the three levels of health care utilized 53.4% of the funds initially allocated to purchase EMHS at NMS/JMS. RRHs had utilized 49%, GGHs 57% and lower HUs (districts) 54%. The rest of the released funds were used to procure from PFPs and diverted to other uses. The consequence of flouting the guidelines (non-compliance) is that less than the planned funds are spent on EMHS, disrupting procurement planning and availability of EMHS at service delivery points.

The HUs claimed that non-compliance was due to the need to cover other PHC activities such as out-reaches and other administrative costs hence they diverted some EMHS funds to cover such budget lines. The argument was that the remaining portion of PHC-NW (50% for districts and 60% for hospitals) was not enough for these other PHC-NW activities.

#### **v) Financial lead time**

The process of releasing funds for procurement of EMHS, both credit line and PHC-NW is long; requiring careful plans if stock outs are to be avoided. The chain of activities between the time the MoH communicates “*commitment of funds*” to suppliers (NMS/JMS) and the time the suppliers are paid for supplies delivered, involved many procedures as presented in Fig 4.4 and Fig 4.6. This affected procurement lead-time and hence availability of the medicines at HUs.

- There is bureaucracy in the release of PHC-NW at the local government level (district). The stages are many; requisitioning, approving and authorizing requiring several signatories, which prolongs the process. These long procedures affect the procurement lead-time and availability of EMHS at the HUs.
- There were reported cases of MoH indebtedness to NMS for deliveries made. It was established that it took about 3 months for the MoH to honor payments against invoices raised. Such delayed payments, according to NMS, affected the cash flow forcing NMS to procure less quantity with the limited funds available, which could lead to stock outs of essential medicines.

### **6.3 Procurement**

The present system of EMHS procurement is demand/“order” based. The clients make orders according to their present demand and quantify the order against the funds available to them. The funds for credit line are not accessed in cash by the beneficiaries but in form of supplies. All public HUs are required to procure EMHS from NMS while NGO-HUs (PNFPs) procure from JMS under Credit Line.

PHC-NW funds are controlled at the district. In some districts, procurement was done by the district (DHO) while in others procurement was done by the HSD. Public HUs are required to procure from NMS but may procure from other sources if NMS is unable to supply and issues a certificate of non-availability of particular EMHS. The PNFPs procure from JMS or any other source if JMS is unable to supply. This study identified problems emanating from the processes and procedures under the current procurement system. These were mainly in ordering; logistics and storage; functionality of HSDs; capacity of the suppliers; poor information flow; and procurement legal requirements. The real constraints to efficient procurement included incorrect ordering due to human resource challenges; capacity of NMS to supply; poor information flow and procurement laws.

#### **i) Capacity of NMS to Supply**

The requirement that all public HFs procure their EMHS from NMS seemed to overwhelm the capacity at NMS. This is manifested in the long lead times that processing an order within the NMS took. The areas of inefficiency the study identified included low stock levels; MIS; and distribution capability of NMS.

#### **a) Low stock levels at NMS**

Low stock levels at NMS contributed to non-availability of EMHS at the HUs. The study established that HUs often received fewer deliveries than they had ordered although they had

credit with NMS. On average, NMS reportedly supplied 70% of the ordered items in FY 2007/08. However, this could not be verified because NMS changed its software and could not retrieve the data. The proportion of processed deliveries to credit available for RRHs averaged 88.2%; for GGHs it was 90.2%; and for HSDs it was 31.5% (Appendix 5). On investigating the explanation for NMS supplying less than the HFs ordered, the main reason identified was that NMS did not have the items ordered. Either the items ordered were out of stock at NMS or the ordered quantities were beyond the quantities available at NMS. The low capacity at supply source and therefore failure to supply the full orders affected availability of EMHS at the health facility. Data accessed at NMS was not sufficient to establish the stock out days per item for the FY 2007/08, as the newly installed system (software) could not retrieve it, and the available stock cards were incomplete and badly kept (inaccurate). Table 6.3 presents stock out days (SOT) at NMS (based on the scanty data the team accessed) and at JMS for comparison purposes.

**Table 6.3 Stock outs at NMS and JMS**

Indicator Item	NMS		JMS	
	Stock Out Days	%SOT	Stock Out Days	% SOT
Coartem Yellow	NA		-	
Quinine injection	13 /365	3.6%	10	2.7%
Determine kit	NA	NA	0	0
Depo provera	NA	NA	NSI	NSI
Microgynon	NA	NA	NSI	NSI
Cotrimoxazole	57/365	15.7%	0	0
Amoxicillin	70/300	23%	0	0
Measles Vaccine	NA	NA	0	0
Ferrous/ Folic	NA	NA	0	0
Ibuprofen	22/183	12.1%	0	0
Paracetamol Tabs	32/183	17.6%	0	0
Propranolol	NA	NA	1	0.3%
Bendrofluazide	NA	NA	0	0
Glibenclamide	NA	NA	0	0
Insulin	NA	NA	0	0
Haloperidol	NA	NA	67	18.4%
Carbamazepine	NA	NA	0	0
Examination				
Gloves	NA	NA	0	0
Syringes 2ml	13/365	3.6%	0	0
Metronidazole	NA	NA	0	0
<b>Average</b>				

*NSI connotes Non Stock Item*

In addition, with NMS unable to supply fully the orders placed, HUs that had credit with NMS in form of credit line had no option of purchasing from other sources since credit line can only be accessed in form of supplies. This implies that the beneficiaries would not be able to utilize their credit line whenever NMS was unable to supply what they wanted.

Further, the requirement to obtain a certificate of non-availability before procurements could be done at places other than NMS, contributed to non-availability of essential supplies, as NMS were reportedly reluctant to issue the certificate of non-availability. According to beneficiaries of PHC-NW NMS reportedly treated issuing the certificate as a vote of confidence in themselves to supply. They (NMS) therefore in most cases preferred that the clients wait for the next procurement deliveries (to NMS) rather than issue a certificate of non availability, a practice that prolonged the stock out periods at HUs.

#### **b) Medicines Information System**

NMS faced challenges of an inefficient MIS that experienced frequent failures and could not, among many other things update product tracking information, and was unable to allow multi- processing of information (no more than one person can process an order at any one given time). This largely contributed to the long period taken to process orders, within NMS (see Table 4.3). The study found that on average, processing orders for the sampled districts

took NMS 39.7 days. The process stages within NMS included receiving and posting orders, which on average took 26.1 days; posting to dispatch, 11.3 days; and dispatch to delivery 2.6 days.

In addition, NMS closed business for long periods during annual stocktaking. Because their system was unable to undertake stock reconciliation, it necessitated closing business for the exercise. It was established that during annual stock taking NMS closed for a period of two weeks. This meant that clients could not be served within this period thus prolonging order processing. Due to the above reasons NMS is currently updating its software to Navision

### **c) Distribution**

According to a Memorandum of Understanding (MoU) reached between the NMS and MoH, NMS delivers EMHS to district headquarters. Once the deliveries were at the district, distribution to lower units is the responsibility of the district. A number of inefficiencies were identified in this arrangement.

- Ideally, a responsive delivery system would address each order as it came in. However, NMS was practically unable to do that due to shortage of fleet. The current fleet cannot deliver orders individually. They therefore scheduled their deliveries by region. Although presently they deliver to each district once every month, in 2007/08, NMS made deliveries bi-monthly (once every two months). Scheduling deliveries delays the dispatch time, is not responsive to timely needs of HUs and affects availability of the items at the health facilities.
- The MoU to deliver EMHS to district headquarters left out the stretch of distributing to the HSDs and from the HSDs to the HUs. After NMS has delivered up to the district level, the district takes up the responsibility to distribute to the HSDs and the HSDs are in turn supposed to distribute to the lower health units. This study found that in most cases, the HUs were called upon to arrange transportation of their consignments. Due to lack of transport facilitation, the lower HUs delayed to pick their supplies. This was found to be particularly costly for HUs, which did not have means of transport and did not have a budget to meet the cost of collecting supplies from the HSD. Though these delivery delays to HUs currently contributes only 13% to lead time, they need to be addressed.
- Where the system of procurement used was ordering through the DHO, some districts (e.g. Masaka, Tororo and Butalejja) lacked storage capacity to handle supplies for the entire district. Supplies were stored in makeshift facilities that at times compromised the safety of the supplies. For example, at Masaka district headquarters the “store” was a metallic container placed in the sun outside the office of the DHO; in Tororo, the “store” was a badly constructed wooden shed under a tree in the compound of the district headquarters while Butalejja did not have any store and used the stores of the general hospital. The same problem of inadequate stores for supplies in transit also applied to HSDs especially those that had many HUs under them (eg Rwesande in Kasese, which has 28 HUs).
- Storage space at lower HUs was largely inadequate. Almost all HC IIs kept EMHS in unsuitable locations (dark and damp) that were not well stacked. Most of the HC IIs lacked cold-chain storage and therefore could not stock vaccines (measles vaccine was



one of this study's listed items). Although HCIIIs may stock measles vaccine (according to EMLU), because they did not have cold chain facilities most of the sampled HUs did not stock the vaccine. For example, only 16.6% (4 out of 24) of the HC IIIs that were sampled, stocked the vaccine.

## **ii) Ordering.**

The pull system replaced the "push" system in 2003. The pull system is based on demand. Districts/HSDs place orders according to the existing demand at the HUs and those who do not place orders do not get supplies. Likewise, those who place inaccurate orders receive insufficient supplies. Some districts procured (through DHO office) on behalf of all the HUs in the district while for others, procurement was done by HSDs for lower HUs under them. For either system, the orders had to be "pooled" before submitting them to NMS, yet, the HUs did not run out of supplies at the same time. Those who brought in orders early had to wait for those who submitted late. This, coupled with long processes at NMS, prolonged the procurement lead-time of those who submitted early.

Lack of human resource with requisite skills and knowledge to plan for and manage procurement processes presented a challenge to most HUs. Accurate ordering requires accurate quantification and yet, most HUs lacked human resources with capacity to accurately track their credit, forecast their demand and quantify their orders. Nursing Assistants instead of Enrolled Nurses managed 41% of the sampled HC IIIs. While a Health Centre III is supposed to be managed by a Senior Clinical Officer, only 17% (4 out of the 24 sampled) HCIIIs had this position filled.

Absenteeism and abscondment of senior staff exacerbated the human resource gap of lower HUs particularly those in remote rural areas. It was noted that the substantive "In-charges were often absent" thus leaving the HUs to the less qualified persons. At the HC IIIs, 45.8% (11 of the 24) of the sampled HUs were found absent while at HC IIs, 54.5% (12 of the 22) were not at work when the field teams visited. The effect of this neglect of duty was that those left in charge could hardly measure up to the responsibilities of managing a HU, hence failure to keep records and to plan for the respective HUs effectively.

## **iii) Functionality of HSDs**

Most HSDs in the sampled districts were at the level of HC IV, although a few like Mutolere (Bufumbira East) in Kisoro district, Bwera (Bukonjo East) in Kasese district, Busolwe (Bunyole) in Butalejja district and Matany (Matheniko) and Moroto (Bokora) in Moroto district, were at hospital level. The responsibility of HSDs is to supervise operations of the lower HUs. However, this study found that the operations and jurisdiction of HSDs differed from district to district. There were districts where the roles of the HSD and those of the district (DHO) were apparently not clearly defined. For example in Kisoro district, it was not clear whether Bufumbira East HSD (Mutolere) or the DHO was responsible for procuring EMHS. Lack of clarity between the roles and responsibilities posed real or potential source of conflict between the DHO and the HSD.

## **vi) Poor Information Flow**

- There are no clear direct communication channels between NMS and the districts to facilitate information flow between the supplier and the client. Currently NMS communicates to the districts through the newspapers. The communication in the papers

was limited to availability of credit; when deliveries were made to the district; and the value of the deliveries. This implies that the beneficiaries who did not access newspapers remained uninformed and other information like credit balances was not communicated. Poor information flow affected accurate operations of the respective HUs as the clients especially the lower HUs often did not know their credit line allocations/balances with NMS.

- NMS does not inform beneficiaries in time, about the items that are out of stock. As a result, HUs place orders including items that are out of stock at NMS. Consequently, the procurement lead-time is prolonged as the process starts afresh after delivery of the old order.

#### 6.4 EMHS Management

In EMHS management, the study considered the capacity to expedite the processes of procurement; plan and accurately forecast HU needs and ensure constant availability while avoiding frequent stockouts. The main inefficiencies were identified in the areas of record keeping; work plan management; prescription of medicines and monitoring mechanisms.

##### i) Record keeping

- Poor record keeping or total absence of reliable records at the HUs made EMHS management difficult. Records and stores at the HUs are a responsibility of Health Information Assistants. The staff establishment for HC IIIs provides for two Health Information Assistants. For HC IIs, it provides for one. However only 21.1% (5 out of 24) of the sampled HC IIIs had the two positions filled. Fourteen percent (3 out of 22) of the sampled HC IIs had this position filled. The inadequate staffing of appropriate personnel in records and stores management at HC IIs and HC IIIs made it difficult for HUs to keep records that could be relied on for planning purposes. They had problems quantifying their needs and making timely orders against available funds.
- Shortage/lack of the standard HMIS stationery especially the Order Form made record keeping at the HUs difficult. Official records were written in free hand on improvised pieces of paper and in single instead of multiple copies. This unorganized way of recording compromised the quality of records. As a result, the HUs did not have filed copies of records of their transactions. Because the study team could not access the original HU records, the team had to rely on purported copies of such records found at the DHO's office.

##### ii) Irrational prescription of medicines particularly at lower HUs was identified as one of the main factors that contributed to mismanagement of EMHS at service delivery points. This manifested in a number of ways:

- As alluded to earlier, most HUs had unqualified personnel performing medical duties: this resulted in poor dispensing practices. HUs reported that whenever supplies arrived many people including those who were not sick came to the HU for medicines. Because the health workers were not trained, they dispensed medicines to all including those that were not sick, hence irrational dispensing and mismanagement of the medicines.

- Essential medical publications to guide health workers in prescription of medicines were in limited circulation. Most HUs especially those in remote rural areas did not access medical publications like the Uganda Clinical Guidelines (UCG) and EMLU and as a result provided unguided actions that risked irrational prescription. Even when available, the UCG was not regularly updated (newest version is of 2003) to cater for new emerging diseases and prescription of new medicines. For example, while Coartem is a “First-line” anti-malarial treatment drug, it is not provided for in the UCG (2003) and thus health workers have no reference point for making orders, prescription and managing cases. Like wise, the newest version of EMLU is of 2007.
- It is a good practice for health workers to advise clients on how to use medicines prescribed; how to store the medicines; and possible side effects. Clients were not clearly sensitized on how to store the medicines or the possible side effects of the medicines. The study found that whereas 98.6% of the clients were advised on how to take the medicines, only 63.4% were advised about how to store; it and only 44.6% were advised about the possible side effects of the medicines they received.

### iii) Poor Monitoring Mechanism

There are no clear mechanisms at health facility level to closely monitor medicines and other health supplies. The study found that although HUs had HUMC, the role of the committees ended at verifying the deliveries to the HU. Activities that followed thereafter were not monitored. This left loopholes for misuse and possible leakages of the EMHS. For example, on-spot physical count revealed discrepancies between the physical balances and the stock card balances. An assessment of the medicines/health supplies received during the FY 07/08 and quantities given out as reflected on the stock cards showed glaring missing quantities of supplies. The commonly missing medicines were: Coartem, Cotrimaxazole, Amoxicillin, Metronidazole and Paracetamol. Table 6.4 shows an example of medicines that were not accounted for in four of the sampled health facilities

**Table 6.4 Example of Medicines that were not Accounted for**

Health Facility	Item					
	Coartem	Quinine	Cotri	Amoxy	Para	Metro
Kiyei HCIII	500	0	8500	50	500	2,900
True Vine HCIII	N/A	N/A	4000	4600	8000	5,120
Bobo HC III	1340	522	9000	3000	4000	1,000
DHOs Clinic	3,540	0	25,000	1,000	6,000	0

*Source: Field Data EMHS Tracking*

*Note: N/A either the closing stock was missing or opening stock, so it was impossible to get the discrepancy.*

### 6.5 Key Learning Points

- Much as Essential Medicines Account is grossly inadequate to fund all EMHS needs, efficient use of the available funding (adherence to guidelines) can help improve on availability and accessibility to EMHS.
- NMS delivering up to HU or HSD level can improve on availability of EMHS and reduce on un-accounted for supplies. This however requires sufficient logistical capacity at NMS and need a careful cost benefit analysis and reviewing alternatives.
- Training HUMC to do more than verification of medicines is a good initiative and would facilitate and empower communities to monitor EMHS deliveries effectively.
- It is not enough to improve remuneration of human resources but also induct them on issues of advising clients on rational use of medicines, storage and side effects of medicines they receive.

## **7 EMERGING ISSUES, CONCLUSIONS AND RECOMMENDATIONS**

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This chapter presents the emerging issues, study conclusions and recommendations to address the identified problems. The presentation is done according to the study's terms of reference which were to: establish the impact of HSSP-II interventions on achieving the EMHS related outcomes; track procurement and expenditure on essential medicines and health supplies; establish availability, affordability and use of essential medicines and health supplies at community level; and identify and analyze the problems in the areas of systems, processes and/or procedures relevant to the provision of EMHS in relation to HSSP- II objectives.

Table 7.1 presents the emerging issues per TOR, conclusions drawn from the study findings and recommendations proposed by the consultant. The recommendations are divided into two categories namely: short term (within 2 years) and long term (more than 2 years).

**Table 7.1 Emerging Issues, Conclusions and Recommendations**

Emerging Issues	Conclusions	Recommendation	
		Short term	Long term
<b>TOR 1: The Impact of HSSP II Interventions on Achieving the EMHS Related Outcomes</b>			
There was high turnover of health workers especially the qualified staff	Interventions like introducing Commodity Management as a course may not translate into increased qualified human resources if necessary measures are not taken to retain them	<p>The Ministry of Health should consider bonding health workers who are sponsored for the commodity management course.</p> <p>There is need to enforce work regulations and effective sanctions to reduce on absenteeism of health workers.</p>	The working conditions for health workers should be made more attractive to guard against high turnover.
There is shortage of qualified personnel like pharmacists and dispensers, which may explain the poor dispensing practices.	The prevailing irrational use of medicines could be partly blamed on unqualified staff that does not follow laid down procedures for prescribing and dispensing the right medicines.	The Ministry of Health and all other stakeholders like MoLG should make recruitment of pharmacists and dispensers a priority, with attractive remuneration.	The National Health Policy should address the shortage of trained Pharmacists and Dispensers
Credit line budget changes are not matched with increased population growth and inflation for over three years (2004/05 - 2007/08)	The already meager per-capita expenditure on medicines progressively reduces when population increases without corresponding increases in the budget.	Need to improve the funding of EMHS coupled with enhancing transparency and accountability of the limited available funding and subsequently increase the proportion of credit line in the EMHS financing budget	Renew government commitment to funding health towards meeting the Abuja Declaration (15% of national budget allocated to the health sector)

Emerging Issues	Conclusions	Recommendation	
		Short term	Long term
<b>TOR 2: Tracking Procurement and Expenditure of EMHS</b>			
Stock out of EMHS was a chronic problem at most of the public HUs visited. Some of the listed items had been out of stock for over a year.	Service delivery at public HUs was rated very poor particularly regarding availability of medicines.	<p>Improve on efficiency in management of EMHS to ensure a coordinated supply chain system</p> <p>HUs should plan early but also ensure implementation of the plans</p>	MoH to focus more on preventive measures so as to reduce on resources needed to purchase medicines.
The budgetary allocations and expenditure for EMHS were too low to satisfy the minimum health care needs of the country. This grossly affected service delivery at facility level.	The meagre budgets could not address the chronic stock outs of EMHS at public HUs.	The health sector budget should be increased to match the healthcare needs of the population. The increase should be consistent with the Abuja Declaration (15% of National Budget to be spent on Health).	
Only a proportion of budgeted PHC funds were released. Releases were also irregular and late.	Mismatch between budgetary allocations and releases disrupted procurement plans.	Districts should abide by guidelines governing central government grants including timely accountabilities of previous disbursements.	
Funds for procurement of EMHS are not disbursed in time.	Procurement of EMHS was being done as and when funds were available on an adhoc basis without any planning.	All DHOs, Hospitals and HSDs should be compelled to fulfil accountability conditions so as to receive the funds for procurement of EMHS in time.	
HSDs under-utilized credit line, among other reasons, due to inability of NMS to supply.	Under-utilization of credit line resulted in stock outs at lower HUs	Capacity building especially at lower HUs to improve planning, forecasting, quantification and general EMHS management.	NMS to stock all credit line items according to public health needs.

Emerging Issues	Conclusions	Recommendation	
		Short term	Long term
There is a high level of non compliance to MoH guidelines recommending the minimum proportion of PHC funds that should go into procurement of EMHS. Districts are required to spend 50% while RRHs and GGHs should spend 40% of allocated PHC recurrent non-wage.	Non-compliance to guidelines on PHC use resulted in under-procurement of essential supplies and hence stock outs of EMHS.	The MoH/MoFPED should enact sanctions against districts/RRHs/ GGHs that flout guidelines. Penalties could include cuts in funding. This is a “best practice” that has registered improvements in service delivery in Local Government Administration.	The proportion of credit line in the Health budget (30%) should be progressively increased since credit line cannot be diverted to uses other than EMHS.  The total budget for EMHS should be increased.
District Officials preferred to procure EMHS using PHC funds from local PFPs rather than NMS as recommended by government.  The requirement for more than one pre-qualified supplier was frequently ignored	The preference to procure from PFPs was suspect particularly since regulations to use the open tender system with more than one pre-qualified supplier were not followed. It is possible that unscrupulous district authorities diverted funds for procurement of EHMS to other uses	Enforce the PPDA guidelines with vigilance especially to ensure use of the open tender system when purchasing from PFPs.  Enact serious sanctions against non-compliance to regulations.  Strengthen internal audit investigations into use of PHC funds on EMHS .	Change the sharing of EMHS funding by increasing credit line allocation and reducing PHC allocation since credit line is more reliable.  Adjust procurement guidelines to take care of districts that may not locally get more than one pre-qualified supplier.



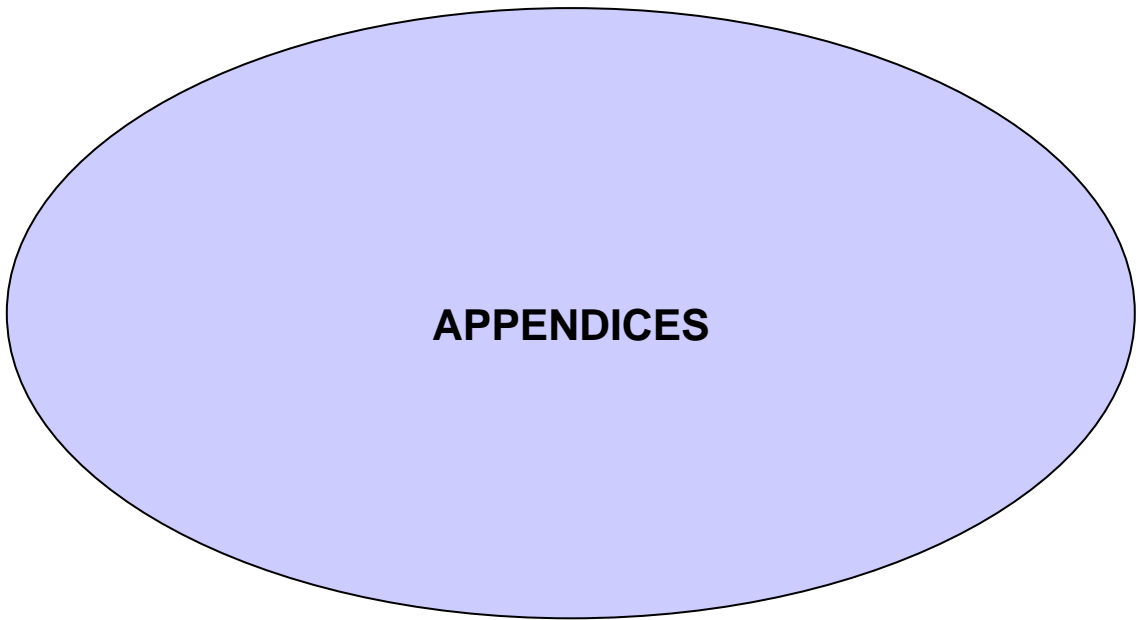
Emerging Issues	Conclusions	Recommendation	
		Short term	Long term
Some Districts had not procured EMHS from NMS with any of their PHC funds (cash) as required by the government guidelines claiming that NMS was reluctant to issue the certificate of non- availability.	The reluctance by NMS to issue “certificate of non- availability” was being used by the districts as an excuse to ignore the guideline and procure from their preferred sources (PFPs).	<p>Institute pre-audits (Mid-Term) to ensure that districts buy from NMS unless there is a certificate of non-availability.</p> <p>NMS to provide the certificate of non availability immediately on noticing inavailability of needed items to facilitate procurement from other sources.</p> <p>Instituting measures that make non-compliance a high cost under taking.</p>	NMS should progressively ensure availability of EMHS.
The requirement for all public HUs to procure EMHS exclusively from NMS exerted a lot of pressure and demand for service on NMS hence creating logistical and capacity problems for NMS.	Excessive demand on NMS prolonged procurement lead time at NMS (compared to JMS)	NMS should improve its logistical efficiency to carry out its business.	
The MoU between NMS and MoH provides for NMS to deliver EMHS to the district headquarters. Distribution from district to HUs is locally arranged at the district.	It is difficult to detect any leakages of supplies that may occur between the district and the HUs.	Strengthen the HUMC to be able to demand for accountability from the district health officials.	

Emerging Issues	Conclusions	Recommendation	
		Short term	Long term
Record keeping at the HUs regarding funding and procurement of EMHS was very poor. Finances allocated, orders placed and deliveries made could not be tracked easily from the HUs.	HUs did not have reliable records upon which to base their procurement and other management plans.	HUs should train records staff, strengthen supervision and where possible, progressively computerize to improve record keeping.	
Some HUs received EMHS they had not ordered for.	The push system was still used in some places especially at lower units; yet, the demand-based “pull” system has replaced the “push” system.	<p>Improve human resource capacity especially at lower level HUs to quantify needs and compile accurate orders.</p> <p>Proper planning by NMS to ensure that EMHS deliveries are consistent with orders placed. DMOs should do proper verification of items received to correct the anomaly.</p>	
Lower HUs collected their EMHS consignments from the HSDs yet there was no provision for it in their operational budgets.	The delivery system in place was expensive for lower HUs which had to incur costs collecting their orders from the HSD.	HSDs should meet the cost of distributing the consignments to the various lower HUs under them.	Need to study and pilot possible cost effective and responsive distribution modalities like outsourcing, joint efforts with JMS among others
<b>TOR 3: Availability, Affordability and Use of EMHS at Community Level</b>			
Access to essential healthcare items was poor due to persistent non-availability of EMHS at the public HUs. In some cases, essential items were out of stock for periods exceeding a year.	The EMHS supplies made to HUs were less than the minimum needs of the communities as manifested in the frequent stock outs.	EMHS managers should optimize utilization of the available funds through rational procurement planning, forecasting and quantification.	The MoH should focus more on prevention rather than cure to reduce morbidity and the cost of curative EMHS

Emerging Issues	Conclusions	Recommendation	
		Short term	Long term
Clients shunned lower HUs and congested at higher HUs especially general hospitals	Persistent stock outs of essential medicines at lower HUs forced clients to seek services from GGHs, which were relatively better on availability of medicines.	Focus more on availing medicines at lower HUs, which are closer to communities to prevent swarming GGHs. This could be done by increasing the proportionate funding of lower HUs within the available budget and improving efficiency of HU.	Increase funding to the health sector and enhance efficiency to cater for all health facilities at all levels adequately
PNFPs (NGO HUs) charged a modest user fee hence they experienced lower stock outs of essential medicines.	A modest charge on patients towards their treatment can improve availability of EMHS.	Government should increase allocations for EMHS to PNFPs to improve on EMHS availability.	The government should adopt the PNFP model (user fees) in the public HUs.
Private clinics were largely run by health workers who also worked at public HUs. Whereas there were no medicines at public HUs, the private clinics always had medicines. This left the community members wondering and accusing health workers of stealing public medicines for sale at their clinics.	Although it was not possible to prove this accusation, allowing health workers serving at public health facilities to run private clinics nearby, is likely to create conflict of interest	Emboss all public medicines / health supplies with easily identifiable marks and sensitize people about cases of non-embossment.	
Clients that failed to get all the prescribed medicines at public HUs and could not afford them at private outlets turned to irrational means of treatment such as taking less than prescribed dosages.	The high cost of medicines at private outlets led to irrational use of medicines as clients could not afford the right quantities from the right places.	MoH should conduct community programmes sensitizing people about the dangers of irrational use of medicines.	MoH/NDA should ensure that private outlets are managed by qualified personnel to avoid irrational use of medicines

Emerging Issues	Conclusions	Recommendation	
		Short term	Long term
Monitoring of EMHS at public HUs was poor despite the existence of HUMC (Health Unit Management Committees). Most HUMCs did not go beyond witnessing the delivering of EMHS to the health facility. The performance of HUMCs is reportedly constrained by lack of sustenance of their motivation since their work is purely voluntary.	HUMC were not closely discharging their responsibilities of watching over and ensuring that delivered EMHS were properly used at the HUs.	The LGs should streamline and properly explain the responsibilities of HUMC to the members.	MoH should train HUMC to improve their capacity to monitor management of EMHS.
Rational use of medicines requires that clients be given adequate information about use, storage and side effects of medicines given to them. Health workers explained instructions to patients on how to use the medicines given (e.g. 1X1 daily) but offered little explanation regarding storage, side effects and names of those medicines.	Clients were not receiving enough information about the medicines they were given. Lack of adequate information contributed to irrational use of the medicines.	Regular refresher courses for health workers, mainly focusing on medicine prescription and dispensing; including dosage, side effects, storage and usage by clients.	

Emerging Issues	Conclusions	Recommendation	
		Short term	Long term
<b>TOR 4 Identification and Analysis of Problems in the Areas of Systems, Processes and/or Procedures Relevant to the Provision of EMHS in relation to HSSP II objectives</b>			
There is no clear system to follow in procurement of EMHS. In some districts procurement for HUs was done through the HSDs, while in others, the DHO procured on behalf of all HUs in the district.	There was real or potential conflict between HSDs and the district (DHO) originating from lack of clarity as to whose role it was to procure EMHS.	Standardise procurement procedures for public HUs.	
Under collective ordering, all HUs submit their orders, at different times before the DHO/HSD finally compiled a combined order to the supplier.	Collective ordering prolonged procurement lead time for HUs. Those who submitted their orders first had to wait for late-comers.		Build capacity to enable HUs do their individual ordering.
Districts, RRHs and GGHs were not complying with guidelines to use 50% and 40% respectively of PHC funds for procurement of EMHS	Under-utilization of PHC led to under-procurement and ultimately contributed to non-availability of EMHS.	Institute strong sanctions for non-compliance with the guidelines.  Institute pre-audits to ensure that right proportions are met before purchase.	
There was low human resource capacity at most HUs. The most affected were HC IIs which were managed by Nursing Assistants.	Low management capacity at HUs compromised all operations at HUs.  Poor record keeping made it difficult for HUs to forecast their needs or track transactions carried out.	Build human resource capacity at HUs through improved remuneration, training of more pharmacists, accounts and records personnel.	



**APPENDIX 1: LIST OF KEY INFORMANTS**

<b>Name</b>	<b>Position</b>	<b>Organization</b>
Dr. Kenya Mugisha	Director-Clinical Services	MoH
Dr. Francis Runumi	Commissioner –Planning and Development	MoH
Mr. Martin Oteba	Ag. Assistant Commissioner-Pharmacy Division	MoH
Mr. Morris Seru	Pharmacy Division	MoH
Mr. Frans Bosman	Medicines Management Adviser	MoH/DANIDA
Dr. Frank Mwesigye	Ag. Commissioner-Quality Assurance	NDA
Mr. Dennis Mwesigwa	Senior Inspector of Drugs	NDA
Mr. Moses Kamabare	General Manager	NMS
Mr. Prince Williams Mawanda	Sales	NMS
Mr. Andrew Gyagenda	Procurement	NMS
Mr. Ojolong	Accounts	NMS
Mr. Anthony Damba		NMS
Mr. Joseph Kazibwe	Stores	NMS
Mr. Higenyi Emmanuel	Head Capacity Building	JMS
Mr. Andrew Wasswa	Head of Operations	JMS
Mr. Ben Asimwe	Head of Sales	JMS
Mr. Michael Aliyo	Desk Officer	MoFPED
Ms. Ulrika Hertel	1 <sup>st</sup> Secretary	SIDA
George Didi Bhoka	HIV/ AIDS Specialist	UNICEF
Dr. Flavia Mpanga		UNICEF
Giuseppe Braghieri	HSSP/Italy Programme Coordinator	Italian Cooperation
Mr. Benedict S. Kanu	Country Operations Officer	African Development Bank
Ms. Robina Kaitiritimba	Project Coordinator	Uganda National Health Consumers Association
Rosette Mutambi	Coordinator	HEPS
Dennis Kibira	Field Officer	HEPS
Dr. Fred Ntege	TB/Malaria Specialist	HIPS
Dr. Dithan Kiragga	Deputy Chief of Party	HIPS
Pascal Mujasi	Deputy Chief of Party,	Deliver Project
Ms. Loy Gwoyita	Technical Advisor-Training	MSH
Dr. Olalo Charles	Medical Superintendent	Fort Portal RRH
Dr. Aston Kasangaki	Accountant	Fort Portal RRH
Mr. Fred Karimu	District Health Inspector	Kasese
Charles Amanyire	Incharge	Busongora North HSD
Mr. Edward Tibasasira	Senior Accountant	Bwera Hospital
Mr. Enock Nzaghale	Senior Accounts Assistant	Bwera Hospital
Dr. Charles Rwabugiri	Medical Superintendent	Kisoro Hospital
Dr. Jerome Mugisha	Medical Superintendent	St. Francis Mutolere
Mr. Buters Mayunga	Administrator	“
Mr. Anatoli Nkusi	Chief Finance Officer	Kisoro
Dr. Assay Ndizihiwe	DHO	Kisoro
Mr. Abel Bizimana	District Health Educator	Kisoro
Kagaba Godfrey	Senior Accountant	
James Ndagijimana	Sr Accounts Assistant	
Dr. E Batiibwe	Medical Superintendent	Kiboga
Mr. F Mulabya	DHI	Kiboga
Kenneth Kazinda Tumusiime	Pharmacist	Jinja RRH
Dr. J.H Obonyo	DHO	Tororo
Obbo Bonifence	Health Inspector	Tororo Hospital

John L Minyuka	Dispenser	Tororo
Dr. Fred Wabomba	Sen. Medical Officer	Tororo
Mr. Amos Oboke	Sen Hospital Administrator	Tororo
Becholas Owere	Stores Assistant	West Budama South
Dr. Ochari	Medical Officer	Mulanda HCIV
Mr. James Ojwang	"	
Dr. K.H Mweru	DHO	Butalejja
Dr. Edele Omere M	Assistant DHO	Butalejja
Dr. Isabirye Fredrick D	Senior Medical Officer	Busolwe Hospital
Ms. Sylvia Kezaabu	Hospital Administrator	Busolwe Hospital
Dr. Ebele Omeke Michael	DHO	Moroto
Dr. James Elima	Medical Superintendent	Moroto Hospital
Ms. Agnes Asano	Senior Accounts Assistant	Moroto
Mr. Awuru Felex	Senior Accounts Assistant- DHO's Office	Gulu
Grace	Supplies Officer	Gulu
Gabriel	DHO	Gulu
Dr. Musisi	DHO	Masaka RRH
Mr. Meddy Bukenya	District Health Inspector	Masaka RRH
Mr. David Nuwamanya	Hospital Administrator	Masaka RRH
Joseph Lokong Adaktar	Medical Superintendent	St. Kizito Matany Hospital
Dr. Jerome Mugisha	Medical Superintendent	Mutolere Hospital
Ms Majunga Pontius	Hospital Administrator	Mutolere Hospital



## APPENDIX 2: AVERAGE PERCENTAGE STOCK OUT TIME BY OPERATOR

Indicator Item	OPERATOR		GOV'T (Days).	% SOT
	PNFP (Days).	% SOT		
Coartem Yellow	112	31	121	33
Quinine injection	19	5	101	28
Determine kit	NSI		106	29
Depo provera	NSI		156	43
Microgynon	NSI		108	30
Cotrimoxazole	45	12	283	78
Amoxicillin	126	35	77	21
Measles Vaccine			164	45
Ferrous/ Folic	127	35	26	7
Ibuprofen	158	43	189	52
Paracetamol Tabs	122	33	184	50
Propranolol			95	26
Bendrofluazide			86	23
Gibenclamide			172	47
Insulin	24	7	87	24
Haloperidol			321	88
Carbamazepine	222	61	160	44
Exam Gloves	209	57	221	60
Syringes 2ml	124	34	197	54
Metronidazole	79	22	83	23

Note: The average was calculated by using only the available data collected. Some medicines did not have BIN cards.

**APPENDIX 3: AVERAGE PERCENTAGE STOCK OUT TIME AT GGHS**

Indicator Item	Masaka Hosp	Busolwe Hosp	Moroto Hosp	Kisoro Hosp	Lacor Hosp	Kiboga Hosp	Kasese Hosp	Tororo Hosp	AVERAGE	Av. %age SOT
Coartem Yellow	0	0	0	0	123	201	56	43	53	14
Quinine injection	0	0	5	0	0	24	116	28	22	6
Determine kit	0	37	0	0	0	365	241		107	29
Depo provera	0	0		143		4		50	39	11
Microgynon	365	0	0	0		365			183	50
Cotrimoxazole	0	0	0	0	2	9	0	36	7	2
Amoxycillin	26	6	77	78	4	124	97	179	74	20
Measles Vaccine	0						0		0	0
Ferrous/ Folic	20	329	38		12	249	182	121	136	37
Ibuprofen	3	0	0	1	14	69	34	192	45	12
Paracetamol Tabs	6	0	0		0		51	91	30	8
Propranolol	46	0	0	87	0	83	258		79	22
Bendrofluazide	24	0	0		10	304	235	106	113	31
Gibenclamide	20	0	0		0		106	25	30	8
Insulin	20	0				321			114	31
Haloperidol	0	0			127		228		89	24
Carbamazepine	28	44	0	287	0	200	231	48	120	33
Exam Gloves	0	19	0			337	4		90	25
Syringes 2ml	0	2	0				5		2	1
Metronidazole	11	19	0		3		44	48	25	7
<b>Average for all medicines</b>	<b>28</b>	<b>24</b>	<b>30</b>	<b>60</b>	<b>21</b>	<b>190</b>	<b>111</b>	<b>81</b>		
<b>% Stock Out Time</b>	<b>7.8</b>	<b>6.6</b>	<b>8.2</b>	<b>16.3</b>	<b>5.8</b>	<b>52</b>	<b>30.4</b>	<b>22.1</b>		

**APPENDIX 4:--PERCENTAGE OF PRESCRIBED MEDICINES GOT FROM THE HEALTH FACILITY VISITED**

District	No. of Respondents	Percentage of Prescribed Medicines Received from the Facility					
		17%	33.5%	50%	67%	83.5%	100%
Kiboga	108	9.1%	6.1%	9.1%	5.1%	16.2%	54.5%
Masaka	107	8.2%	10.3%	8.2%	4.1%	8.2%	60.8%
Kisoro	109	18.5%	8.7%	8.7%	7.6%	7.6%	48.9%
Kasese	111	2.8%	3.8%	2.8%	8.5%	12.3%	69.8%
Kabarole*	12	0.0%	0.0%	0.0%	16.7%	50.0%	33.3%
Jinja**	13	0.0%	38.5%	38.5%	0.0%	0.0%	23.1%
Tororo	94	2.3%	9.1%	13.6%	13.6%	11.4%	50.0%
Butalejja	92	0.0%	6.7%	13.3%	10.0%	10.0%	60.0%
Gulu	113	5.7%	4.3%	1.4%	12.9%	15.7%	60.0%
Moroto	120	1.7%	0.0%	3.4%	5.2%	1.7%	87.9%
Average	-	4.8	8.75	9.9	8.4	13.31	54.8%

**APPENDIX 5: COMPARISON OF CREDIT AVAILABLE , ORDERS PLACED AND ORDERS PROCESSED**

District	HSD/RRH/GH	Opening Balance	Credit line Allocation	Total Amount	Original Order Amount	Booked Amount	% value supplied to available credit
Jinja	Referral	65,392,170.33	213,210,000	278,602,170.33	695,487,587	272,801,761	97.9%
Kabarole	Referral	30,572,604.13	143,493,210	174,065,814.13	229,474,965	146,372,911	84.1%
Masaka	Referral	19,098,774.77	174,697,660	193,796,434.77	223,334,449	160,156,446	82.6%
<b>RRH Average</b>							<b>88.2%</b>
Moroto	General	3,133,242.04	74,445,327	77,578,569.04	86,947,499	66,033,526	85.1%
Tororo	General	16,382,371.53	165,307,673	181,690,044.53	5,695,876	5,523,626	(3%)
Butalejja	General	49,704.08	78,088,821	78,138,525.08	112,809,506	74,572,882	95.4%
Kasese	General	1,797,685.79	81,498,082	83,295,767.79	51,205,157	79,008,971	94.9%
Kiboga	General	15,177,125.72	78,089,139	93,266,264.72	136,039,934	83,989,419	90.1%
Kisoro	General	5,168,743.95	84,475,743	89,644,486.95	110,413,647	76,819,766	85.7%
<b>GGH Average</b>							<b>90.2%</b>
Gulu	Omoro	3,787,642.07	56,253,556	60,041,198.07	19,176,998	13,459,285	22.4%
	Aswa	1,190,978.06	38,919,855	40,110,833.07	30,599,138	4,627,086	11.7%
Moroto	Bokora	18,153,614.88	60,801,283	78,954,897.88	48,583,790	34,734,433	44%
	Matheniko	1,833,742.03	40,561,343	42,395,085.03	24,773,155	19,019,585	44.9%
Tororo	Tororo County	6,927,440.75	68,001,877	74,929,317.75	69,665,503	56,557,095	75.5%
	Kisoko South	2,331,068.36	51,570,620	53,901,688.36	24,174,124	18,210,844	33.8%
Butalejja	Bunyole	16,901,221.72	83,201,092	100,102,313.72	12,490,907	6,088,023	6.1%
Masaka	Kalungu East	8,627,773.87	41,627,215	50,254,988.87	28,778,941	20,732,285	41.3%
	Bukoto West	9,643,281.85	38,719,941	48,363,222.85	12,158,215	11,659,407	24.1%
Kasese	Bukonjo East	23,147,392.10	63,938,148	87,085,540.10	4,146,007	4,146,007	47.6%
	Busongora North	10,034,164.76	50,567,538	60,601,702.76	7,991,727	7,238,694	11.9%
Kiboga	Kiboga East	354,595.13	79,067,578	79,422,173.13	1,455,986	994,763	1.3%
	Kiboga West	10,003,706.06	44,888,019	54,891,725.06	15,491,688	12,688,159	23.1%
Kisoro	Bufumbira East	15,896,782.60	41,335,761	57,232,543.60	32,387,319	21,012,529	36.7%
	Bufumbira North	11,764,990.57	32,482,542	44,247,532.57	26,303,448	20,893,645	47.2%
<b>HSD Average</b>							<b>31.5%</b>

Source: National Medical Stores

Note: The original order amount and booked amount for Tororo, appears unrealistic compared to the available credit.

**APPENDIX 6: STAFFING GAPS AT LOWER HEALTH FACILITIES (HCIIS AND HCII)**

	Karambi	Bugoye	Kasanga	Bukimbiri	Gateriteri	Kinanira	Lukaya	Munazamat	Butemba	Strankuambe	Nabwendo	Nabiganda	Mulagi	Butalejja	Loptuk	Iriiri	Nadunget	St. Rufus Kidepo	Cwero	Labworomor	Bobi	Merikit	True Vine	Kiyeyi
Senior Clinical Officer	1	1	1	0	1	1	1	0	1	1	1	1	1		1	1	0		1	1		1	1	1
Clinical Officer	0	1	2	1	1	1	0	1	1	1	1	0	0		1	1	1		1	0		0	0	0
Lab. Technician	1	1	1	1	1	1	1	1	1	1	1	1	1		1	0	1		1	1		1	1	1
Lab. Assistant	0	0	2	0	1	0	1	0	0	0	0	1	0		1	1	0		0	1		1	0	1
Health Assistant	0	0	1	1	1	1	1	1	1	1	1	1	1		1	1	1		0	0		1	1	1
Nursing Officer	0	1	1	1	0	1	1	1	1	1	1	1	0		1	1	1		1	1		0	0	1
Enrolled Midwife	2	0	0	1	1	1	0	1	1	2	0	0	2		2	1	1		1	1		0	1	2
Enrolled Nurse	2	3	1	3	3	2	2	2	2	2	0	2	1		0	0	2		2	3		3	2	1
Nursing Assistant	0	2	0	0	0	1	1	2	0	2	2	1	2		0	0	2		0	0		2	0	2
Health Information Ass.	1	0	1	1	1	1	1	2	1	1	1	1	1		0	0	1		0	0		1	1	1
Askari	0	1	0	1	1	0	1	1	2	2	0	1	1		2	2	1		2	2		2	2	2
Porter	1	1	0	0	0	0	1	1	0	1	0	0	0		0	2	0		2	2		0	0	2
<b>HCII</b>																								
	Kyempara	Ibanda	Kamasasa	Kagunga	Nyakabande	Gapfurizo	Kiraga	Kitoro	Kiti	Sirimula	Bukwiri	Bubalya	Bingo	Naweyo	DHO	Lorengchora	Kal-Ali	Coo-pe	Acet	Nyamalogo	Mwello	Apetai		
Enrolled Nurse	0	0	0	1	0	1	0	0	0	1	1	1	1		0	0	1	1	0	1	1	0		
Enrolled Midwife	1	1	0	1	1	1	0	1	0	1	1	1	1		1	0	0	0	0	1	1	1		
Health Information Assistant.	1	1	1	1	1	1	1	1	1	1	0	1			1	1	0	0	1	1	1	1		
Nursing Assistant	1	0	0	0	0	0	0	1	0	0	0	0			0	0	0	1	0	0	0	1		
Askari	2	0	2	1	2	2	1	2	1	2	2	2	2		2	1	2	2	2	2	2	2		
Porter	1	0	2	1	0	0	0	1	1	1	1	1	2		1	0	2	2	2	0	0	2		

**APPENDIX 6: CLIENT EXIT QUESTIONNAIRE**

Greetings:	Good Morning / Good Afternoon
Self Introduction:	My name is .....
Where you are from:	REEV Consult International Ltd
Letter from REEV :	Show the letter from REEV to the respondent
About REEV Consult:	Consulting Firm, which was contracted by the Ministry of Health to carry out a tracking study on Medicine and Health supplies
Purpose of the Study:	<ul style="list-style-type: none"> <li>• The purpose of our study is to track the flow of funds and commodities for the Essential Medicines and Health Supplies Program (EMHS).</li> <li>• We hope to establish the extent to which Essential Medicines and Health Supplies are available and accessed by the lowest of the facilities in the communities.</li> <li>• We also hope to identify and analyze problems in the provision of EMHS to the people of Uganda</li> </ul>
Selection of Respondent:	<p>Indicate to the respondent that:</p> <ul style="list-style-type: none"> <li>• He/she has been randomly selected to participate;</li> <li>• His/her views will be taken to represent views of many clients who have not been selected to participate</li> <li>• The information given will be treated with strict confidentiality; and</li> <li>• The name of the respondent will not be printed or used in any documents.</li> </ul>
Consent	Request for Consent of the respondent.

Date	D:	M:	Y: 2009	Interview Number	
District				Sub county/Division	
Name of the Health facility				Health Facility Level	
Health Sub district					
Signature of the Interviewer:				Signature of Team Leader:	

	QUESTION	CODING CATEGORIES
01	How far is the health unit from your home?	Less than 1km.....1 1-2 km ..... 2 3-5 km .....3 More than 5km .....4
02	Did you easily afford the transport fare to the health facility?	Easily.....1 Fair.....2 Too high.....3
03	What health condition brought you to this facility today?	Malaria .....1 HIV testing and counseling.....2 Family planning.....3 STI diagnosis and treatment.....4 Immunization.....5 Tuberculosis.....6 ANC/PNC.....7 Cancer.....8 Treatment of minor ailments .....9 Others (specify).....10
04	Upon seeing the health personnel, what service did you receive?	Medicines Tablets/ Injection.....1 Laboratory Investigations.....2 Physiotherapy.....3 Counseling.....4 Blood transfusion.....5 Intravenous Water/IV water.....6 Referral .....7 Other (specify).....8
05	Were all the medicines prescribed given to you?	Yes.....1 No.....2 I do not know.....3
06	If no, why?	Medicines not available.....1 Did not have enough money to pay.....2 Referred outside.....3 Line too long.....4 Other (specify).....5
07	How many of the prescribed medicines did you get from this facility?	1/6.....1 2/6.....2 3/6.....3 4/6.....4 5/6.....5 6/6.....6
08	For the medicines received at this facility, have you paid for them or were they free? If you paid for the medicines, how did you	Paid.....1 Free.....2
09	find the charges?	High.....1 Reasonable.....2 Low.....3
10	If the medicines prescribed are not available, what do you do??	Private Pharmacy/ drug shop .....1 Another Public facility.....2 Other (Specify) .....3
11	In your view, will you afford to buy these medicines	Yes.....1 No.....2
12	For all the medicines received at this facility, have you been given all the instructions on:	
	a) how to take the medicines?	Yes.....1 No.....2
	b) possible side effects of the medicines given?	Yes.....1 No.....2

	c) best storage conditions for your medicines?	Yes.....1 No.....2
13	In your view, how do you rate the availability of essential medicines at this facility compared to a year ago?	Same .....1 Better .....2 Worse .....3
14	Would you recommend this health facility to your friends and family?	Yes.....1 No.....2
15	Have you ever sought treatment because you heard that medicines had come?	Yes.....1 No.....2
16	What motivates you to seek health care from this facility?	Nearness.....1 Cost of health care.....2 Availability of medicines .....3 Kindness of health workers.....4 Variety of services.....5 Availability of equipments.....6 Other (specify).....7
17	Have you ever got sick and you did not seek treatment	Yes.....1 No.....2
18	If yes, what was the main reason?	Cost of health care.....1 Distance.....2 No medicines .....3 Self medication.....4 Other (specify).....5
19	What areas, if any, would you like improved on in order to make you more satisfied with the service at this facility?	Medicines availability.....1 Essential equipment.....2 Handling of clients.....3 Treatment/service charges.....4 Physical outlook.....5 Range of services.....6 Level of privacy.....7 Accessibility.....8 Other (specify).....9
20	What do you think should be done to improve on community's access to essential medicines and health supplies?	_____ _____ _____

**THANK YOU FOR YOUR COOPERATION**



**APPENDIX 8: HEALTH FACILITY TOOL**

**A: FINANCIAL BUDGETS, RELEASES AND EXPENDITURE TRACKING**

Financial year 2007/2008

Ministry of Health

H/facility .....

District..... Name of data collector.....

HSD..... Source of funding.....

Budgetary allocation					Cash releases/ Disbursements			Actual expenditure on EMHS					
Month	Credit Line/ EMHS	Cash for EMHS	Others	Monthly total	Cash/PHC	Others	Total	Credit Line/ NMS	Credit Line/ JMS	Cash			Others
										NMS	JMS	PPF	
Jul													
Aug													
Sept													
Oct													
Nov													
Dec													
Jan													
Feb													
Mar													
April													
May													
June													
<b>Total</b>													

**Indicators**

- % of budget allocation for EMHS that is actually released
- % of release funds that is actually spent on EMHS.
- Proportion of the total budget allocation that is spent on PFP suppliers
- % of released funds that is spent other than on EMHS.
- % USE of the credit line compared to cash.
- % USE of cash at PFP compared to JMS/ NMS.
- % use of credit line at JMS relative to NMS
- % of budget allocation on EMHS.

**B: FINANCIAL TRANSACTIONS TRACKING**

Financial year 2007/2008

Ministry of Health H/facility .....  
 District..... Name of data collector.....  
 HSD..... Source of funding.....

Requisition						Disbursement					

**Indicators**

- % of requisition that is actually disbursed
- Lead time between requisition and disbursement of funds

**C: ORDER TRACKING**

Financial year 2007/2008

Ministry of Health

H/facility .....

District.....

Name of data collector.....

HSD.....

Source of funding.....

Month	Supply source code	DATE of Requisitions	Requisition/ Order No.	Value	Date of Receipt	Voucher/ Invoice No.	Value	No of cases treated in the month
July								
Aug								
Sept								
October								
November								
December								
Jan								
Feb								
March								
April								
May								
June								

**Indicator**

- Lead time between order requisition and receipt of consignment.
- Proportion of orders made to the budget allocation.
- Proportion of value of order/ requisition to the value of good received.
- Value of orders/supplies per 1000 per cases

**D: ISSUES TRACKING**

Financial year 2007/2008

Issues from .....To ..... (E.g. from NMS to District; District-HSD, HSD-H/Facility)

Ministry of Health H/facility .....

District..... Name of data collector.....

HSD..... Source of funding.....

Consignee	Date of Requisition	Requisition No.	Value	Date Issued	Issue/ Voucher No.	Value	Actual lead time	Expected lead time	Discrepancy

**Indicator**

- Actual lead time
- Expected lead time
- Discrepancy between actual and expected lead time
- Discrepancy between value requisitioned and the value issued.

**E: PHYSICAL STOCK BALANCES OF INDICATOR ITEMS (On spot check)**

Ministry of Health H/facility .....  
 District..... Name of data collector.....  
 HSD.....

Item	Do you stock this item Yes=1 No=2	Does product have a stock card? Yes=1 No=2	Stock card balance	Physical count	Discrepancy	Is stock card up to date Yes=1 No=2	How much of the physical stock is expired?	Proportion of physical stock expired
Coartem Yellow								
Quinine Injection								
Determine kits								
Depo Provera Injections								
Microgynon								
Cotrimoxazole 480mg/ 120 mg								
Amoxicillin 250mg Capsules								
Measles Vaccine								
Ferrous/ Folic Acid Tablets								
Ibuprofen Tabs 200mg								
Paracetamol Tablets								
Propranolol 40mg								
Bendrofluazide 5mg Tabs								
Glibenclamide 5mg Tablets								
Insulin								
Haloperidol Tablets								
Carbamazepine 200mg Tablets								
Examination Gloves								
Syringes 2ml;								
Metronidazole								

**Indicator**

- % key EMHS available
- % of items (medicines) with stock cards
- % of stock card balance physically available
- % of physical stock which is expired
- % of medicines with discrepancy between physical balance and stock card balance

**F: AVAILABILITY/ PHYSICAL COUNTS OF INDICATOR ITEMS**

Fill in the stock outs for indicator items. Use stock cards.

Financial year 2007/2008

Ministry of Health H/facility .....

District..... Name of data collector.....

HSD..... Source of funding.....

Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Do you stock this item?	Stock 1.7.07	Qty recvd	Qty issued	Lowest balance	Highest balance
Coartem Yellow																			
Quinine Injection																			
Determine kits																			
Depo Provera Injections																			
Microgynon																			
Cotrimoxazole 480mg/ 120 mg																			
Amoxicillin 250mg Capsules																			
Measles Vaccine																			
Ferrous/ Folic Acid Tablets																			
Ibuprofen Tabs 200mg																			
Paracetamol Tablets																			
Propranolol 40mg																			
Bendrofluazide 5mg Tabs																			
Glibenclamide 5mg Tablets																			
Insulin																			
Haloperidol Tablets																			
Carbamazipine 200mg Tablets																			
Examination Gloves																			
Syringes 2ml;																			
Metronidazole																			

**Indicator**

- % availability of sampled indicator medicines
- % of items with stock cards
- % of items with updated stock cards
- % of stock card balances which is physically available.
- % of Physical stock which is expired.
- % of items with discrepancies between physical count and stock card balance.

**G: UTILISATION LEVELS**

Data source .....  
Population served .....  
Number of beds.....  
Data collector .....

**ATTENDANCE FOR 30 DAYS BEFORE AND AFTER DELIVERY OF BULK SUPPLY.**

Name of Health Facility	Date of Receipt of Supplies	No. of new OPD visits 30 days before receipt date	No. of new OPD visits 30 days after receipt date.

**Indicators:**

- % increase in OPD attendance relative to delivery of new supplies.

**H: COST RECOVERY (USE ONLY IN PFP health facilities)**

Data source.....

Data collector .....

**Cost sharing (CS) scheme (refers to where patients contribute towards costs of medicines and or services)**

- Is CS officially established? Yes/NO (please tick the correct option)
- Which type of system do you use?  
U = user charge (a fixed charge per patient per visit for all services offered/ medicines supplied  
F = fee for service (a variable amount consisting of different fees for different services  
O = other (specify) a variable charge for medicines only depending on item supplied, other services free
  
- How many health facilities are in the district? (Ask DMO)
- How many health facilities (HF) in the district operate any CS scheme? .....
- Where a CS scheme is in operation:
- Are there criteria for exemption from charges? Yes/NO (please tick the correct option)  
If Yes, what are these?  
.....  
.....  
.....  
.....
  
- How much is the income from cost sharing on average per month
- What is the proportion of cost sharing income to the general facility budget for the year?





## APPENDIX 9: FGD GUIDE

### (Drug Management Teams, VHTs, CBDAs and TBAs, Community People)

1. What is your role in the procurement, distribution and monitoring of Essential Medicines and Health Supplies?
2. In your view, what are basic medicines? What medicines are considered as basic by the community?
3. What would you comment on the pattern of availability of medicines? How often do you experience stock outs at the health facilities? When are the stock outs common?
4. What factors in your opinion influence the pattern of availability of medicines in the health facility?
5. Which medicines and supplies are usually out of stock? What happens to the patients when there are no medicines at the health facility?
6. How do you compare the availability of medicines at private health units with Public health units?
7. Are you always aware of the releases of medicines and funds to the health facility? How do you monitor the released medicines and funds? What challenges do you face in the monitoring of medicines and other health supplies?
8. Are there situations in which patients are made to pay in order to obtain services? Under what circumstances are patients made to pay? Are there any situations where patients are referred to drug shops to buy medicines? Is it a common practice? What happens when one cannot afford the costs? Are there criteria for exemption from charges? If so, what criteria is there?
9. How do you compare the availability and stock out of medicines now and 3 years ago? What has been the trend?
10. In your opinion, what solutions would you suggest to improve availability of medicines in the health facilities?
11. How do you assess the capacity of the health facilities in terms of human resource, infrastructure like storage of EMHS? What areas would like improved at the health facility?
12. How can service delivery be made effective?
13. What are your recommendations concerning the distribution of medicines?
14. Do you have any other comment you would like to give on EMHS?