PERFORMANCE AUDIT REPORT

ON

DRUG DISTRIBUTION

AT

CENTRAL MEDICAL STORES

IN THE

MINISTRY OF HEALTH AND POPULATION

National Audit Office
P.O Box 30045
Lilongwe 3.

December, 2011

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National Audit Office
P.O Box 30045
Capital City
Lilongwe 3

6th December 2011

The Honorable Minister of Finance
Ministry of Finance
P.O Box 30049
Lilongwe 3
Malawi

Dear Sir,

Pursuant to the provision of Section 184(2) of the Constitution of the Republic of Malawi and the Public Audit Act, I have the honour to submit a Performance Audit Report on Drug Distribution by Central Medical Stores in the Ministry of Health and Population for tabling in the National Assembly. Performance audit has recently been introduced in my office in line with current international trends in the auditing profession.

A performance audit is an audit of the economy, efficiency and effectiveness with which the audited entity uses its resources to achieve its goals. The prime aim of a performance audit is to ensure better use of resources, improved operations and better decision making in reaching policy objectives.

Yours faithfully,

R. A Kampanje
Auditor General

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ABBREVIATIONS

CMS	Central Medical Stores
RMS	Regional Medical Stores
QECH	Queen Elizabeth Central Hospital
KCH	Kamuzu Central Hospital
DHO	District Health Office
HC	Health Centre
CHAM	Christian Hospitals Association of Malawi
NGO	Non Governmental Organisation
COSO	The Committee of Sponsoring Organisations of the Treadway Commision
CO	Controlling Officer
LMIS	Logistic Management Information System

EXECUTIVE SUMMARY

The Central Medical Stores (CMS) is a treasury fund under the Ministry of Health and Population (MoH). The main purpose of CMS is to procure, store, and supply quality assured and affordable medicines, medical equipment and medical supplies to all public health facilities, Christian Hospitals Association of Malawi (CHAM) facilities and other recommended organizations operating in the non-commercial health care sector. CMS gets funds for drugs and medical supplies from both the government and donors. The total budget for the CMS has doubled over three financial years from MK 2.6 billion in 2006/2007 to MK 5.2 billion in 2008/2009.

A performance audit on CMS was initiated following complaints by the general public regarding shortage of drugs and medical supplies in hospitals and health centres. The objective of the audit was to assess whether the CMS was carrying out its operations efficiently leading to continuous, uninterrupted and adequate supply of drugs and medical supplies to health facilities. Another objective was to assess how drugs and medical supplies were being managed by health facilities. To achieve the objective, the following audit questions were used:

1. To what extent is the delivery of drugs and medical supplies by medical stores meeting the needs of health facilities?
2. To what extent is the procurement of drugs and medical supplies done in order to secure continuous, uninterrupted and adequate supply to the health facilities?
3. To what extent is the CMS storing, distributing, and boarding off drugs efficiently?
4. To what extent are drugs and medical supplies properly managed at health facilities?
5. To what extent is the CMS well managed ensuring a good financial situation and internal control?
6. To what extent is the Ministry of Health and Population providing technical supervision to ensure efficient operations at CMS?

The audit focused on the 2007/2008 and 2008/2009 financial years. It covered Ministry of Health and Population, CMS and health facilities as auditees.

FINDINGS AND RECOMMENDATIONS

Drugs requisitioned from health facilities were partly supplied and others were completely not supplied by CMS. All sampled drugs for the audit had stock outs in the 2008/2009 financial year. Amoxycilline had the most stock outs of 60 percent, Metronidazole and film screens had stocks out of about 30 percent respectively. Central hospitals had frequent stock outs in 2008/2009 financial year than district hospitals. For example QECH and KCH had an average stock level of more than 25 percent.

There is no clear and realistic basis for coming up with the estimated quantification of drugs and medical supplies to be procured at national level. The two year tender that was floated in 2006, for procurement of drugs and medical supplies for 2007/08 and 2008/09 financial years was based on national demographic figure which is a rough estimate of the needs.

There is leakage of drugs both in the central and regional warehouses. In the sampled drugs and medical supplies, there was a shortage amounting to MK 422.5 million. This represented 8 percent of the 2008/09 drug budget. Cotrimoxazole was the drug with the highest shortage in value of MK 141.7 million. CMS receipt warehouses had the greatest shortage in value of MK 408 million.

There was lack of systematic filing, documentation and supervision in the warehouses. Central warehouses were neither keeping stores ledger nor stock cards. These created loopholes for pilferage due to inadequate supporting documents showing stock movement.

There was insufficient inspection by the required witnesses during drugs boarding-off. Drug board-off conducted at Southern Regional Medical Stores in 2009 showed that assembling of these drugs to be boarded off was done by the medical stores officers alone.

The revolving fund was not operating as expected due to erratic payments by health facilities. Review of income statements produced by the CMS showed that the outstanding debt by health facilities in 2008/2009 was MK 1.558 billion. This represented 30 percent of the total budget

allocated for drugs at medical stores. The consequences of under-collection of revenues were stock outs in CMS which again forced health facilities to buy drugs from private suppliers, which is less economical.

In Lilongwe there were eleven warehouses which were used for drug storage as at January 2010. This created supervision, capacity and coordination problems and the economy of many rented warehouses can be questioned.

In order to establish internal control in CMS, management is expected to monitor, assess and deal with risks to the fulfillment of the organization's goals. The audit showed that the top management of CMS had taken some measures to address the risk of leakage of drugs, but that CMS management had not established proper procedures and sufficient controls of warehouse operations. CMS did not have guidelines, procedures and controls related to donations of drugs and medical supplies. Furthermore, top management of CMS was not systematically monitoring the performance of its regional stores. That means the CMS top management had no basis to take corrective action on poor performance by regional warehouses. Continuous problems of stock-outs, under-collection of revenues, leakage of drugs and inefficient warehouse management, shows that the CMS top management has not taken sufficient action to deal with poor performance in the organization.

Every health facility is supposed to have a drug committee responsible for drug management to prevent pilferage. Many committees were not fully operational and there was lack of adequate controls over drug dispensation and utilization. There was also inconsistent implementation of procedures in place, such as issuing of drugs to user departments without supporting documents and procurement from private suppliers without Letters of Authority from the CMS.

The Ministry of Health and Population has the overall responsibility to ensure that the CMS has operated economically and efficiently. The audit shows that the Ministry has not provided adequate monitoring and supervision to CMS. When there were continuous challenges of drug procurement, warehouse management and distribution, the Ministry has not done enough to ensure efficient running of CMS.

A general recommendation is that CMS together with the Ministry should develop better systems and procedures to ensure that drug procurement, storage, distribution and dispensation are done economically and efficiently. The Ministry should put in place a clear and realistic basis for coming up with the estimations and quantification of drugs and medical supplies.

To address improper record keeping and leakages in the warehouses, the CMS management is advised to establish systematic controls, supervision and monitoring of each warehouse, develop a standardized system or guideline on warehouse management, and consider introducing a computerised logistical and record keeping system.

To improve the overall management in the CMS, the CMS should in cooperation with its employees and board establish a set of relevant and reliable performance indicators and ensure sufficient corrective action is taken to problematic areas. To improve drug management in health facilities, management of district hospitals are advised to ensure that drug committees are operational and deal with procurement of drugs from private suppliers in accordance with the regulations.

To ensure a sustainable economic situation for the CMS, the Ministry needs to receive regularly information from the CMS on DHOs that are not paying for the drugs on time and support CMS in revenue collection by following up on the DHOs. The Ministry should consider communicating with Treasury on whether another system of revenue payments should be established to ensure that DHOs pay for the drugs promptly.

1 INTRODUCTION

1.1 BACKGROUND

The Central Medical Stores (CMS) is a treasury fund under the Ministry of Health and Population (MoH), whose main purpose is to procure, store, and supply quality assured and affordable medicines, medical equipment and medical supplies to all public health facilities, Christian Hospitals Association of Malawi (CHAM) facilities and other recommended organizations operating in the non-commercial health care sector. It should ensure continuous, uninterrupted and adequate supply of approved quality and affordable medicines and other medical supplies to public and other approved health facilities. As a Treasury Fund under the technical supervision of the Ministry of Health and Population (MoH)[1], the funding received from Treasury is supposed to be a revolving fund. CMS was at the time of the audit preparing to turn into Trust Fund by June 2011.

The CMS gets funds for drugs and medical supplies from both the government and donors, but does not fall under Parliamentary vote. It charges handling fees of 12.5% and 5% on procured and donated drugs and medical supplies respectively in order to meet its operational objectives. The total budget for the CMS has doubled over three financial years from 2006/2007 to 2008/2009 from MK 2.6 billion in 2006/2007, to MK 5.2 billion in 2008/2009.[2] CMS was supposed to have 207 posts in total in 2007/08 and 2008/09 financial years, but 40 posts were unfilled.

The CMS has its headquarters in Lilongwe and has three regional medical stores (the Central, Southern and Northern Regional Medical Stores). By January 2010, the CMS headquarters had eleven warehouses which are used to store drugs and medical supplies received from suppliers before dispatching to regional medical stores. The regional medical stores have six warehouses in total. From regional medical stores, drugs and medical supplies are distributed to health facilities based on orders and stock availability. Health facilities are responsible for dispensing drugs and medical supplies to end users.

[1] Created by General Notice No. 125/1968 of the Finance and Audit Act Chapter 37:1 section 17
[2] Sourced from Central Medical Stores

The audit was initiated due to the complaints by the general public regarding shortage of drugs and medical supplies in hospitals and health centres. The National Audit Office got financial support from the Ministry of Development, Planning and Cooperation (Monitoring and Evaluation) to carry out the audit.

1.2 AUDIT OBJECTIVE, SCOPE AND QUESTIONS

The objective of the audit was to assess whether the CMS was carrying out its operations efficiently leading to continuous, uninterrupted and adequate supply of drugs and medical supplies to health facilities. The other objective was to assess how drugs and medical supplies were being managed by health facilities. The objective was specific to the following audit questions:

1. To what extent is the delivery of drugs and medical supplies by medical stores meeting the needs of health facilities?
2. To what extent is the procurement of drugs and medical supplies planned in order to secure continuous, uninterrupted and adequate supply to the health facilities?
3. To what extent is the CMS storing, distributing, and boarding off drugs efficiently?
4. To what extent are drugs and medical supplies properly managed at health facilities?
5. To what extent is the CMS being managed to ensure good financial situation and internal control?
6. To what extent is the Ministry of Health and Population providing technical supervision to ensure efficient operations at CMS?

The audit focused on the two financial years of 2007/2008 and 2008/2009. The audit focused on the Ministry of Health and Population, Central Medical Stores and Health facilities as auditees with CMS as the main auditee.

2 METHODOLOGY

Interviews, documentary reviews and physical observations were carried out to collect data for the audit.

2.1 INTERVIEWS

Two interviews were carried out at Ministry of Health and Population Headquarters. The purpose of the interviews was to assess whether the technical supervision had been appropriate.

Management in the CMS headquarters as well as warehouse officers, accounts officers and drivers at all the regional medical stores were interviewed. The purpose of these interviews was to establish how the procured drugs and medical supplies are managed along the whole process from procurement up to the point they are delivered to health facilities.

District health officers, pharmacists and the chairman and members of the drug committee (where available) were interviewed at fourteen hospitals. The hospitals were selected in order to obtain information from a representative sample in all the regions of Malawi. All the four central hospitals were visited, while a sample of ten district hospitals were selected based on the region and the geographical location (being from different directions and delivery routes).[3]

Under each district hospital visited, except for Mchinji, Dowa and Karonga, three health centres were selected and visited. The health centres were also selected basing on different directions and delivery routes. The purpose of these interviews was to establish how reports on drug consumption were produced and how drugs were managed. The list of interviews conducted is in annexure 1.

2.2 DOCUMENT REVIEW

Documents relating to drug distribution and dispensation were obtained from medical stores, hospitals and health centre offices visited. The documents from medical stores were analysed to assess how contract management, warehousing and distribution of drugs were done to avoid

[3] The ten district hospitals visited are: Nsanje, Mulanje, Mwanza, Dedza, Manngochi, Ntcheu, Mchinji, Dowa, Nkhata Bay and Karonga.

material leakages. The documents from hospitals and health centres were analysed to appreciate the controls over drug management at health facility level. These documents are listed in annexure 2.

An examination of records for 2008/2009 financial year at all medical stores offices and warehouses was carried out to establish whether drugs were supplied according to needs and efficiently without leakage. The records showed drugs and medical supplies received from suppliers and issued for distribution to health facilities. Whether drugs were supplied according to the needs of the health facilities were calculated by a comparison of what was ordered and what was issued. A comparison of the receipts and dispatches at medical stores warehouses were carried out to establish whether there was any leakage. The opening and closing balances and the board off of the sampled drugs and medical supplies were taken into account.

A sample of nine drugs and medical supplies was selected for the analysis: Amoxycilline (A0039), Paracetamol (A0296), Cotrimoxazole (A0405), Penicillin (A0302), Metronidazole (A0261), Doxycycline (A0414), Cotton Wool (F0242), Film Screens (N0060) and Benzyl Penicillin (B0222). Several antibiotics were sampled as these are relatively expensive and therefore prone to abuse. The other drugs were sampled considering all areas of the health facilities

The documents examined in the warehouses were for the sampled drugs and for deliveries to all the districts. In a sample of health facilities[4] it was verified through document review to assess whether the health facilities received the drugs and medical supplies according to the documentation in the medical stores warehouses. Several drugs were delivered to the health facility without documentation of the dispatch in the regional warehouse. The percentages that these drugs represented were used to calculate a "tolerable documentation error" when calculating the extent of leakage in the regional warehouses. For the CMS receipt warehouses it was not possible to come up with an allowance for tolerable documentation error.

[4] This included the district hospitals in Mchinji, Ntcheu, Mulanje, Mwanza and Karonga, and the central hospitals Zomba and Queen Elisabeth (Blantyre).

Several documents were requested in formal letters to the CMS and the MoH, but not delivered to the National Audit Office.[5] This is a violation of the Public Audit Act section 7 (1) which states that the auditors should have full access at all reasonable times to all documents, books and accounts in the audited entity. The documents requested from the Ministry were handover notes or final report by Glocoms, minutes of meetings between the Ministry and CMS for 2008-2010 and reports received from CMS for 2008-2010. Documents requested from the CMS include; summary of deliveries by suppliers for the 2007-08 two year tender, dates when the two year tender was advertised, awarded and closed, any evaluation report of the tender process in the years 2006 to 2010 and report on how the two year tender was run. These documents were requested in order to assess the efficiency of contract management by the CMS and how the Ministry carried out the technical supervision of CMS.

2.3 PHYSICAL OBSERVATION

Observations on how drugs and medical supplies were being stored were made at all the warehouses and in the sampled hospital pharmacies and pictures were taken. The team also made an observation on how expired and damaged drugs and medical supplies were destroyed after a board off exercise.

2.4 DISCUSSIONS ON FINDINGS WITH THE AUDITEE

The findings of the audit were discussed on the 26th May 2011 with the management of the Ministry of Health where a representative of the Central Medical Stores was also present. The ministry did not give written responses to the findings despite several reminders through letters, meetings and follow ups. However the Central Medical Stores submitted written comments on the 29th October 2011 directly to the National Audit Office.

[5] Documents request letters of 25th January, 2011

3 Criteria for assessing performance

3.1 THE GOALS AND OBJECTIVES OF THE CENTRAL MEDICAL STORES

According to the CMS Final Strategic Business Plan of March 2007, the goals of the CMS are:

- To ensure constant supply of drugs and medical supplies to client institutions.
- To ensure effective quality control and monitoring of the supply chain management operations
- To ensure effective and transparent procurement management systems
- To ensure effective financial and administrative systems
- To ensure effective operations management and integration of service delivery within the CMS
- To ensure effective technology framework for all CMS processes and procedures
- To ensure adequate human capacity for undertaking procurement, financial management and administration, and general operations management

3.2 REQUIREMENTS REGARDING THE PROCUREMENT OF DRUGS

Drug distribution involves processes of procurement, storage, distribution and payments for drugs and medical supplies by the CMS. Procurement of drugs and medical supplies is done at the head office in Lilongwe. Procurement should be done through normal tenders coupled with emergency, supplementary and special orders. Drug dispensing process is done by hospitals and health centres.

Procurements should follow ODPP regulations as prescribed in the Procurement Act No. 8 of 2003. Drug estimation and quantification is a function within the Ministry of Health and Population. Determination of quantities to establish drug and medical supplies requirements for hospitals and health centres should be based on the demand of health facilities. Pharmaceuticals department at the Ministry of Health and Population are supposed to collect consumption data from health facilities and then quantify how much will be required in the next 12 months. The estimated quantities of drugs should then be communicated to Central Medical Stores[6].

[6] Source: interview with the Ministry 20th January, 2011

3.3 REQUIREMENTS REGARDING INTERNAL DISTRIBUTION AND WAREHOUSING

Suppliers may deliver drugs either at CMS head office warehouses in Lilongwe or at Southern Region Medical Stores in Blantyre**.** According to the CMS procedures,[7] upon receipt of drugs and medical supplies procured from suppliers by the receipt section at CMS headquarters warehouse, physical inspection should be done to check packaging and quantity. Samples of drugs and medical supplies received should then be sent for quality assurance before raising a receipt voucher and dispatching to regional medical stores. Some drugs should be sent for quality control before being moved into the warehouse for arrangement and storage. When results for quality control are out, a receipt voucher should be raised for payment and original copy sent to the head office.

The stocks transferred from the central warehouses should be accompanied with a transfer voucher. The offloading and physical inspection in the regional warehouses should then be done against the transfer voucher which is later signed. A copy should be sent back to CMS headquarters. Transfer vouchers should be recorded in a register and thereafter used to update stock cards. Then the transfer vouchers should go to the control office for recording and data entry. Receipt vouchers should then be raised.[8]

According to Treasury Instructions[9] and general standards for good record management and control the following contributes to efficient warehouse management:

- Controlling Officers must ensure that an efficient system exists within their Ministries for the control of stores and equipment and that storekeepers are appointed with responsibilities for custody and issue of all stocks of stores and the maintenance of the accounts and records required by these Instructions.
- Every Officer entrusted with stores is responsible for their safe custody and must take all measures necessary to prevent their deterioration or damage.
- Where the stores ledgers are readily accessible for use by the stores personnel in locating stocks, bin or tally cards need not be kept otherwise bin or tally cards will be maintained

[7] From interviews with CMS officers: 9th Sept, 2009
[8] Sourced through interviews with RMS' officers: 3rd June-9th Aug, 2009
[9] Treasury Instructions (Stores) copy No. 838, 5602, 5604(2) and 5605 (3).

by storekeepers for each item of stock. Bin or tally cards will show all receipts, issues and the current stock on hand.

- Records supporting stock and their movement should be relevant, sufficient, complete and reliable.
- There should be a systematic filing system of documents and information relating to stores to enable easy access for inspection.

Distribution to regions should be done through pull system whereby regions order what they want except for donated items which are mostly pushed to regions and health facilities. Drugs and medical supplies are dispatched to regional medical stores using a document called a Transfer Voucher.

3.4 REQUIREMENTS REGARDING DISTRIBUTION OF DRUGS AND OTHER MEDICAL SUPPLIES TO HOSPITALS AND HEALTH CENTRES

3.4.1 Requisitions from hospitals and health centres

District Health Officers (DHO) should make requisitions to the regional medical stores. The requisitions should be prepared basing on information from an electronic supply chain manager system. The supply chain manager in the health facilities should generate monthly reports indicating quantity consumed, quantity in stock and quantity required to cater for three months buffer stock. There is a standing order by the Ministry of Health and Population that, if requisitions from the DHOs do not come with attached reports, then no supply should be made[10].

When the warehouses receive the requisitions and the reports, they should acknowledge the availability of the requested stocks. If the items are out of stock, the DHO can obtain an authorization letter from CMS to order from a private supplier.

3.4.2 Dispatches to hospitals and health centres

If items are in stock, the requisition forms are supposed to be sent to the Pharmacist In Charge (PIC) for authorization. The requisition forms should then be sent to the control room where

[10] Source: interview with the Ministry 20th January, 2011

control numbers are allocated. Assembling is supposed to be done by Stores clerks and checked by stores supervisor.

The requisition forms from District Hospitals and Central Hospitals are used as delivery notes. For the health centres, a delivery note should according to the procedures be prepared based on the requisition. Delivery schedules are supposed to be prepared monthly and sent to every district. The regional medical stores should deliver stocks directly to health facilities every month. Clients from public health facilities should not collect stocks from the regional medical stores except when there are emergency orders.

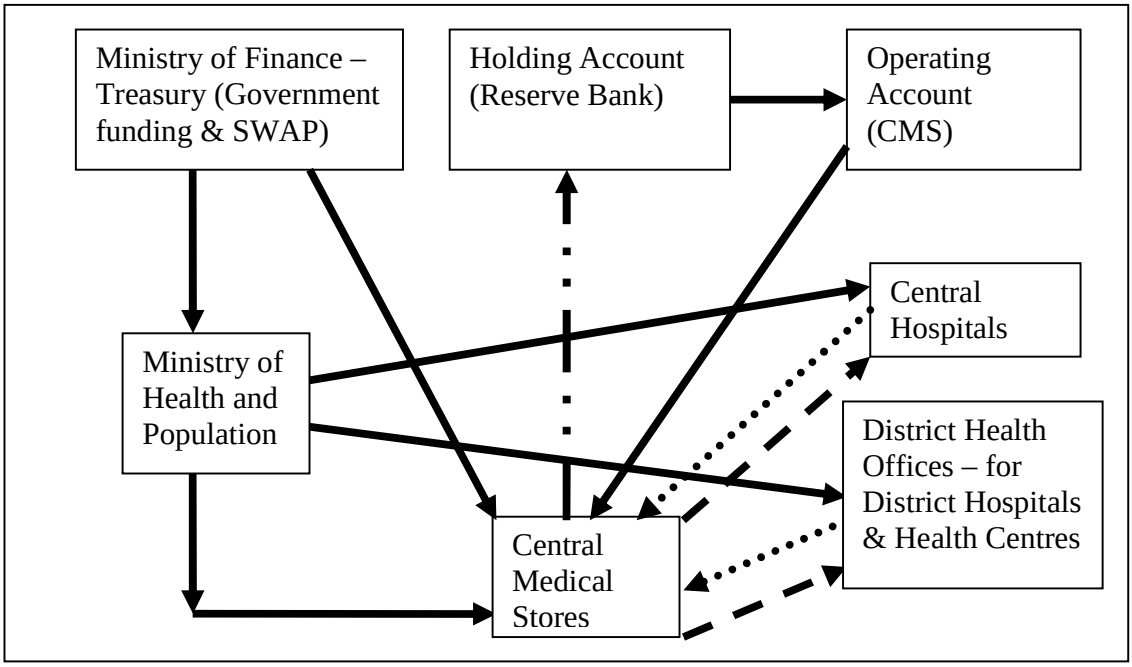
After physical delivery of stocks, distribution officers are supposed to return a delivery note which is authenticated by DHO, HC and counter signed by a member of community committee. Overages are brought on charge to the warehouse.

Invoices for DHO's and HC's are prepared separately. However, delivery notes for HCs are attached to the Invoices. Drugs and medical supplies are supplied on credit to government public health facilities. Statements on amounts outstanding are prepared on which debt collection is based. Supplies to CHAM hospitals and other registered NGOs are on cash basis and general receipts are raised.

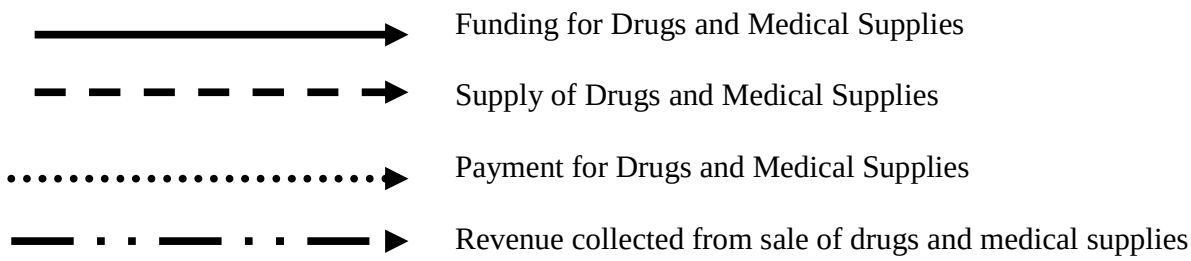
3.4.3 Collection of revenues

The funding of CMS is in the form of a revolving fund. This means that once given the funds, the CMS is supposed to regenerate the funds through sale of drugs and medical supplies to health facilities and be able to support its activities, except logistics which fall under Other Recurrent Transactions (ORT). To ensure the fund is really revolving, payment of drugs by health facilities to CMS should be made monthly. Flow diagram 1 shows the funding flow for CMS and health facilities.

Flow diagram 1 Funding flow for Central Medical Stores and health facilities



Key:



3.5 REQUIREMENTS REGARDING DRUG DISPENSING AT THE HEALTH FACILITY

3.5.1 In patients

The Ward In Charge should request drugs from the pharmacy depending on conditions and cases of admitted patients. It is the responsibility of the ward to prepare requisition forms which are in duplicate (one for pharmacy and another for ward) from the pharmacy. Vials should be ordered based on what has been used by returning empty vials. Antibiotics should be ordered through a doctor's prescription and strictly controlled to avoid abuse and high cost.

3.5.2 Out patients

Out patients should be prescribed in a health passport and recorded in the Health Management Information System Register (HMIS). A number should be given to the patient in the health

passport before going to dispensary to get drugs. Patients whose drugs are out of stock should be sent back to a clinician for alternative drug prescription.

3.6 REQUIREMENTS REGARDING CMS MANAGEMENT

As a Controlling Officer, the director of CMS is responsible for ensuring that all expenditure is incurred with due regard to economy, efficiency and effectiveness and the avoidance of waste. He is also responsible to take all necessary precautions to safeguard public resources. The CO must ensure that an effective system of internal control is developed and maintained.[11]

COSO has developed an internationally recognised framework for internal control.[12] Internal control is broadly defined as a process, effected by an entity's board of directors, management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in the following categories:

- Effectiveness and efficiency of operations
- Reliability of financial reporting
- Compliance with applicable laws and regulations

According to COSO, internal control consists of five interrelated components:

- *Control environment:* Control environment factors include the integrity, ethical values and competence of the entity's people; the way management assigns authority and responsibility, and organizes and develops its people.
- *Risk Assessment:* Risk assessment is the identification and analysis of relevant risks to the achievement of the objectives, forming a basis for determining how the risks should be managed.
- *Control activities:* Control activities are the policies and procedures that help to ensure that management directives are carried out. They help ensure that necessary actions are taken to address risks to the achievement of the entity's objectives. Control activities include a range of activities as diverse as approvals, authorizations, verifications,

[11] Public Finance Management Act (No 7 of 2003, section 10h, i and p.
[12] "COSO" stands for "The Committee of Sponsoring Organizations of the Treadway Commission". The text below is based on an Executive Summary of COSO's "Internal Control — Integrated Framework" (www.coso.org/publications/executive_summary_integrated_framework).

reconciliations, reviews of operating performance, security of assets and segregation of duties.

- *Information and Communication:* Pertinent information must be identified, captured and communicated in a form and timeframe that enable people to carry out their responsibilities. Information systems produce reports, containing operational, financial and compliance-related information, that make it possible to run and control the business.
- *Monitoring:* Internal control systems need to be monitored - a process that assesses the quality of the system's performance over time. It includes regular management and supervisory activities. Internal control deficiencies should be reported upstream, with serious matters reported to top management and the board or Ministry.

3.7 REQUIREMENTS TO THE TECHNICAL SUPERVISION BY THE MINISTRY

Each Controlling Officer (CO) is responsible for ensuring that, in relation to his Ministry, all expenditure is incurred with due regard to economy, efficiency and effectiveness and the avoidance of waste. He is also responsible for taking all necessary precautions to safeguard public resources. The CO must ensure that an effective system of internal control is developed and maintained.[13] Through the technical supervision, the Ministry of Health and Population is thus expected to monitor the internal control and economy, efficiency and effectiveness of CMS operations. Such monitoring is expected to take place through regular reporting and meetings between CMS and the Ministry. The Ministry is expected to establish a set of relevant and reliable performance indicators to make the technical supervision focused.

[13] Public Finance Management Act (No 7 of 2003, section 10h, i and p.

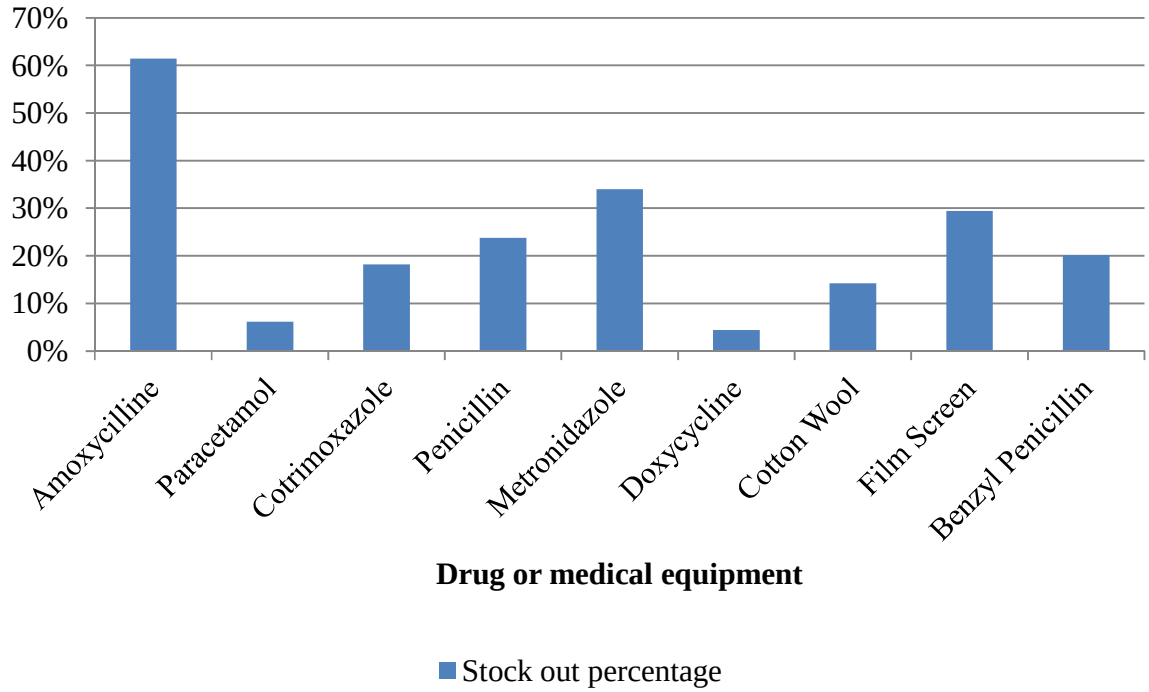
4 Findings

4.1 CMS' SUPPLY OF DRUGS TO THE HOSPITALS AND HEALTH CENTRES

Health facilities order drugs from regional medical stores through requisition forms which show quantities of various drugs required. The audit team had expected to see the regional medical stores supplying the requisition quantities in full since they are required to stock drugs and medical supplies enough to cater for six months.

A review of requisitions from various health facilities showed that requisition quantities for some drugs and medical supplies were partly supplied and others were completely not supplied. Graphs 1 and 2 show the level of stock outs in 2008/2009 financial year, based on drug type and health facility.

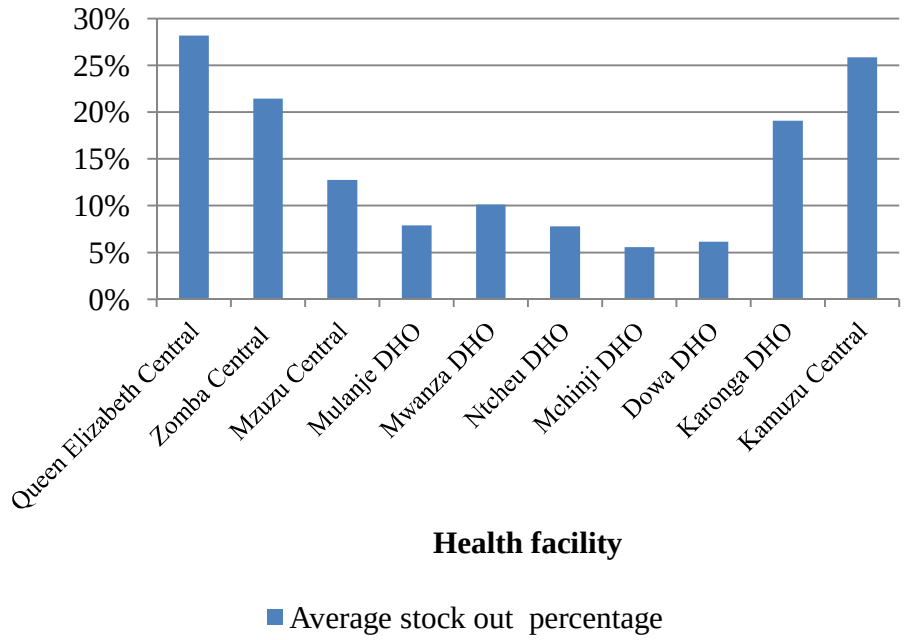
Graph 1 Level of stock outs by drugs sampled



Source: Requisitions from regional medical stores

From graph 1, all the sampled drugs had stock outs in the 2008/2009 financial year. Amoxycilline had the most stock outs of 60 percent. Metronidazole and film screens had stocks out of about 30 percent respectively.

Graph 2 level of stock outs by health facilities



The central hospitals were affected to a greater extent than district hospitals by frequent stock outs in 2008/2009 financial year as can be observed from graph 2. Both Queen Elizabeth and Kamuzu Central Hospitals had an average stock level out of more than 25 percent.

Management comment

It is true that the sampled drugs were not fully supplied according to requisitions submitted by health facilities because supplies were either in short supply or not available. This was due to delays in floating tenders. The prevailing policy allows CMS to give out authority to procure from private suppliers.CMS issued the DHOs authority to procure from other sources. With CMS turning into a Public Trust it is our hope that delays in floating tenders will be minimized and improves on stocks of essential drugs as per sample by the Auditors.

Stock out will be minimized since there is a deliberate move by government and donors to clear CMS drug debt which has been contributing to delay in floating tenders.

4.2 PLANNING OF PROCUREMENT

It is a requirement that there should be a clear and realistic basis for coming up with the estimated quantification of drugs and medical supplies to be procured at national level. There is

supposed to be a procedure that will enable the Ministry to assess the needs of health facilities from different regions of the country. In 2006, a new system of drug estimation was introduced. In this system, health facilities should produce stock status reports every month as a basis for estimating the need for drugs. These reports are called Logistic Management Information System (LMIS). The reports should be produced by feeding the monthly consumption quantity and balance in stock in a computer package called the "Supply Chain Manager" which calculates the quantity required. The quantity required should be found by multiplying the consumption of the month by three less balance in stock. Reports from health centres are done manually and should be sent to district hospitals where an aggregate report for all health centres should be compiled using the "Supply Chain Manager".

Through interviews with medical stores officers and document review, it was established that the procurement of drugs and medical supplies for 2007/08 and 2008/09 financial years was based on national demographic figures. National demographic figures are a rough estimate of the needs for drugs.

By August 2010 the Ministry had not started using the data in the "Supply Chain Manager" for estimating needs for procurement at the national level. In the visited district`s, hospitals were using the "Supply Chain Manager" for reporting on drugs consumption and requesting new drugs. However, in the majority of the visited districts, there was irregular production of monthly reports by health centres to the district hospitals. Furthermore, there was a mismatch of the consumption reported by the health centres and the actual consumption as shown by the stock cards.

The central hospitals were not using the Supply Chain Manager system. The calculations of drug consumption and needs were done manually. One cause was that most hospitals did not have well established computer systems in their pharmacies.

The Ministry of Health and Population informed the auditors through interview that the lack of production of reports by heath facilities negatively affects the reliability of drug estimation and quantification. This resulted in supply chain manager not working effectively.

Management comment

It is true that planning for procurement at the time of audit was not done properly. The Logistic Management Information System (LMIS) was not fully used to enable the ministry to properly estimate quantity of drugs to be procured. The system itself has no problem. The major problem is originating from the users from health facilities. It would appear the ministry is trying to build capacity so as to make full use of the LMIS and eventually improve on the quantification of drugs. The other problem is the provision of computers in Central Hospitals which when broken down it takes time to have them replaced.

4.3 WAREHOUSING, DISTRIBUTION AND BOARD OFF OF DRUGS BY THE CMS

4.3.1 Receipt and dispatch of drugs and medical supplies by medical stores warehouses

It is warehouse procedure that opening balance plus material received less material dispatched and boarded off (damaged) is equal to closing balance. A comparison of the receipts and dispatches at medical stores warehouses were carried out. The opening and closing balances and the board off of the sampled drugs and medical supplies were taken into account. Table 2 shows the value and quantity of the variance between the receipts and the dispatches that were provided in the central and regional stores.

Table 1 Variance of receipts and dispatches of sampled drugs and medical supplies at medical stores

Unit / Region	Drug Name	Total Receipts[14]	Total transfers or dispatches[15]	Variance (Units)	Unit Price (USD)	Total Value (MWK)[16]
Receipt Section	Paracetamol	148,930	143,668	5,262	3.30	2,465,773
	Cotrimoxazole	287,216	165,167	122,049	8.18	141,767,236
	Penicillin	58,936	48,294	10,642	11.67	17,635,284
	Metronidazole	154,650	48,111	106,539	4.40	66,565,567
	Doxycycline	45,064	14,920	30,144	18.15	77,690,131
	Cotton Wool	562,573	394,591	167,982	2.77	66,074,040
	Benzyl Penicillin	1,501,825	869,270	632,555	0.40	35,929,124

[14] Includes opening balances, receipts from CMS Receipt Section and direct receipts from suppliers.
[15] Includes transfers to Regional Medical Stores, boarded off drugs and closing balances for the Receipt Section. Includes dispatches to health facilities, tolerable documentation error, board off drugs and closing balances for the regional medical stores.
[16] 1 USD = 142 MWK

Unit / Region	Drug Name	Total Receipts[14]	Total transfers or dispatches[15]	Variance (Units)	Unit Price (USD)	Total Value (MWK)[16]
	Sum Receipt Section					**408,127,156**
South	Paracetamol	83,848	74,860	8,988	3.30	4,211,879
	Film Screen	1,755	1,703	52	73.73	543,899
	Benzyl Penicillin	717,854	710,339	7,515	0.40	426,829
	Sum South					**5,182,607**
Central	Amoxycillin	12,588	12,078	510	16.63	1,203,614
	Doxycycline	22,473	22,320	153	18.15	394,350
	Cotton Wool	56,480	46,700	9,780	2.77	3,847,058
	Sum Central					**5,445,023**
North	Film Screen	2,964	2,606	358	73.73	3,748,138
	Sum North					**3,748,138**
	Grand Total Variance (Value)					**422,502,924**
	Drug Budget for 2008/2009					**5,232,067,718**
	Extent of leakage					**8 %**

Table 2 shows a total shortage of sampled drugs and medical supplies amounting to MK 422, 502,924. This represents 8% of the 2008/09 drug budget. Of the sampled drugs and medical supplies, Cotrimoxazole was the drug with the highest shortage in value of MK 141,767,236 in total.

Among the warehouses, the CMS receipt warehouses had the greatest shortage in value amounting to MK 408,127,156**.**[17] The least shortage in value was at Northern Regional Medical Stores amounting to MK 3,748,138.

[17] Poor record keeping contributed to the large amount of shortage at CMS receipt warehouses such that it was not possible to come up with an allowance for tolerable documentation error. Percentage of estimated loss of documents acceptable by auditors.

Management comment

The variance of receipts and dispatches of sample drugs as presented on table 1 and 2 by the auditors may not be very realistic. This is because it would appear these have been compiled from incomplete records. In the absence of stock cards as alluded to by the auditor`s records from which the auditors have based their conclusion may not be very reliable. This needed further scrutiny. The problem is emanating from poor record keeping and shortage of staff which CMS regrets. However as explained above it is hoped that Supply Chain Management Agent (SCMA) consultant will improve on maintenance of stock cards and related records. This consultancy is currently assessing the whole system of supply chain including staffing levels.

4.3.2 Record keeping at medical stores

According to Treasury Instructions[18] and general standards for good record management, there must be an efficient system for control of stores and equipment with readily accessible documentation for efficient warehouse management.

The following were established through observation and document review regarding the record management in both the regional and the central warehouses:

- There was no systematic filing. Officers in all medical stores warehouses were struggling and taking time to retrieve the documents requested for the audit.
- There was no consistent documentation of the activities in the warehouse. In many cases documents such as transfer vouchers, receipt vouchers and stock cards were not available.

The central warehouses were neither keeping stores ledger nor stock cards. Instead receipt and dispatch registers were being kept. However, they had the following shortfalls:

- Drugs and medical supplies received and issued were recorded in the receipt and dispatch registers respectively at random regardless of type.
- The registers could not contain all the information required and some drugs and medical supplies were not entered in the registers.

Lack of systematic filing and documentation in the warehouses, are likely to have been caused by the following:

[18] Treasury Instructions (Stores) copy No. 838, 5602, 5604(2) and 5605 (3).

- The use of manual system in preparing and keeping of records relating to stock receipts and issues, stock levels, procurement and documentation. According to the Central Medical Stores draft strategic plan of May 2004, two major computer applications were acquired and put into use in November 2003. These computer applications were ACCPAC and SIGMED accounting and supplies management systems respectively. They were supposed to be used in parallel with the manual system. However, SIGMED was not operational as at the time of the audit. The accounting system ACCPAC was made operational in 2009.
- Reliance on junior staff to prepare and maintain documents and sometimes to look after the warehouses.
- Shortage of staff due to transfers without replacement. By the end of 2008/2009 financial year there were 40 vacant posts out of 207 in total at all medical stores offices and warehouses.
- According to officers at the central warehouses, these warehouses were not supposed to store drugs and medical supplies, but to receive and dispatch to regional medical stores immediately after receipt. However, the central warehouses received large quantities of drugs after the two year tender floated in 2006 and donations received thereafter. The capacity to properly record these drugs was then not sufficient.

The consequence of no systematic filing and documentation in the warehouses was that the management did not have the current balance of the stocks except when a physical count was done. Insufficient record keeping also creates loopholes for pilferage due to inadequate supporting documents showing stock movement.

Management comment

It is very true that record keeping at the time of audit was not up to date. The system in place is that once drugs have been received at receipt section, immediately they must batch them. Receipt of such must follow batch numbers as well as expiry dates and stored or distributed accordingly. You may wish to know that all this is done manually. Though the automation is being introduced with the frequent staff turn over the use of this automation is retarded. This is why record keeping in the form of stock cards and stores ledgers is not up to date. This time all effort is being done to improve record keeping in all warehouses through the software called the Chanel.

Since CMS is now a Trust, it is expected that record keeping will be enhanced as the high staff turnover will be a thing of the past.

4.3.3 Distribution of drugs and medical supplies from the central to the regional stores

Distribution to regions should be done through a pull system where regions order what they need. According to management at the CMS headquarters[19], stocks are distributed from the central warehouses to the regions based on a push system proportional to the size of the regions. Southern Regional Medical stores gets 45%, Northern Regional Medical Stores gets 20% and Central Regional Medical Stores gets 35%.[20] This applies to normally procured items as well as donated ones.

As a result of using the push system instead of the pull system, the distribution of drugs to the regional warehouses is not likely to be according to the needs for drugs in the regions. The interviewed officers in the warehouses were aware of the requirement of using the pull system, but did nevertheless use the push system. According to the officers, the use of the push system was due to shortage of space in the headquarters warehouses.

Management comment

The system of distributing drugs using push system was being used previously before the two year tender in 2006/2007.The distribution percentage was indeed 45% for the south, 35% for the center and 20% for the north. Thereafter distribution is largely done using pull system. This is why headquarters receipt hired several warehouses of course after receiving items for the two year tender. Management at times may instruct to push items due to the outcry from facilities across the board, i.e if that particular item was out of stock. Once received it may be pushed out to the region in order to meet the demand. Similarly other donations come up with a distribution list already prepared by the donor or parallel program.Central Medical Stores just implements by pushing such item according to the laid down distribution list.

Suffice to say push system is the one preferred by various stake holders. The only challenge is the level of stocks of essential drugs. If the stock outs can be minimized the pull system can work

[19] Interview at CMS headquarters on 21st January,2011
[20] Interview at CMS headquarter

very well. The consultancy which has been highlighted above will come up with their own recommendations regarding the distribution system.

4.3.4 Drug board off at medical stores

The process of boarding off drugs and medical supplies is supposed to be witnessed by representatives from the Police, the City Assembly, the Medicine and Poisons Board, the Central Internal Audit and the National Audit Office.

Observation of drug board off conducted at southern regional medical stores in 2009 showed that assembling of these drugs to be boarded off was done by the medical stores officers alone. The required witnesses were called on the day of burning. The consequence was that the witnesses did not have enough time to verify the assembled drugs for destruction on the day of boarding off. This was due to the large volume of drugs and medical supplies involved. Picture 1 shows the volume of drugs being burned by the Southern Regional Medical Stores in June 2009.

Picture 1 Drugs and medical supplies being boarded off by Southern Regional Medical Stores in June 2009

Insufficient inspection by the required witnesses may result in misallocation of drugs and medical supplies in the name of boarding off the damaged and expired drugs. It may also lead to recycling of expired drugs by repackaging and selling of sub-standard drugs to the public.

In table 3, the extent of damage and expiration of various drugs and medical supplies including the sampled ones at different medical stores warehouses are presented.

Table 2 Damage and expiry of drugs and medical supplies

Financial Year	Type of supplies	CMS – Receipt	Southern Regional Medical Stores	Central Regional Medical Stores	Northern Regional Medical Stores	Total Board off Value	Allocated Budget for Drugs	Percentage of Total Board off over Budget
2007/ 2008	Normal Supplies	1,820,815	19,543,741	12,594,556	7,306,825	41,265,937	4,378,500,000	**0.94%**
	Donations	176,264	1,025,152	36,914	123,546	1,361,876	-	**0.03%**
	Percentage of total	4%	47%	31%	18%			
2008/ 2009	Normal Supplies	0	62,250,384	33,960,473	22,924,080	119,134,937	5,232,067,718	**2.28%**
	Percentage of total	0%	52%	29%	19%			
	Donations	17,964,261	642,465	228,200	79,785	18,914,712	0	**0.36%**

As table 3 shows, about 1 percent of the drugs procured in the financial year 2007/2008 were either damaged or expired. For drugs acquired in the year 2008/2009, this share increased to about 2.3 percent, amounting to MK 119.1 million. The regional medical stores had a higher percentage of damaged and expired drugs and medical supplies than CMS Receipt Section. Among the regional medical stores, the southern had the highest scoring of 47 and 52 percent for 2007/2008 and 2008/2009 financial years respectively. The value of the donated drugs that expired or were damaged in 2008/2009, constituted 0.36 percent of the allocated budget at CMS.

Management comment

The observation by the auditors that drug board off was conducted by CMS officers alone is correct. In terms of treasury instructions (Stores) 6407 (2), it is the duty of a store keeper (CMS staff) to separate unserviceable stores to facilitate inspection by the board. This is so because of the bulk log of stores being held in warehouses. The staff has been entrusted with this responsibility, however the witnesses also have a duty to verify what is being boarded off prior to disposal of the items. It is assumed that both parties exercise their integrity in this very important

exercise. Unless once is bent to defraud the system such cases may not be completely ruled out. Otherwise this is the most used arrangement as regards to board off of drugs and other items.

This arrangement will be reviewed as CMS Trust reviews and updates its Standard Operating Procedures (SOP`s) for CMS as a whole.

4.4 FINANCIAL MANAGEMENT AND SYSTEMS OF INTERNAL CONTROL ESTABLISHED BY THE CMS HEADQUARTER S

4.4.1 Revenue collection by the CMS

Payment of drugs by health facilities to CMS should be made monthly to ensure the revolving fund of CMS is not distracted.

The revolving fund did not operate as expected due to erratic payments. Review of the income statements produced by the CMS showed that the outstanding debt in 2008/2009 was MK 1.558 billion. This represents 30 percent of the total budget allocated for drugs at medical stores. Details on the outstanding debt are shown in table 4.

Table 3 Outstanding debts by health facilities as at 30th June 2009

Region	Hospital	Amount (MWK)
Central region	Mchinji District Hospital	**1,015,312**
	Salima District Hospital	**60,996,298**
	Dowa District Hospital	**68,883,842**
	Lilongwe District Hospital	**272,277,168**
	Ntcheu District Hospital	**61,655,956**
	Kasungu District Hospital	**42,943,439**
	Dedza District Hospital	**4,905,258**
	Ntchisi District Hospital	**35,679,713**
Northern region	Rumphi District Hospital	**93,984,166**
	Chitipa District Hospital	**109,961,554**
	Karonga District Hospital	**178,582,461**
	Nkhata bayDistrict Hospital	**40,740,303**
	Likoma District Hospital	**11,799,679**

Region	Hospital	Amount (MWK)
Southern region	Mzimba District Hospital	**102,993,908**
	Chiradzulu District Hospital	**68,866,652**
	Balaka District Hospital	**82,283,456**
	Nsanje District Hospital	**11,947,466**
	Machinga District Hospital	**33,424,738**
	Mulanje District Hospital	**21,300,894**
	Thyolo District Hospital	**25,547,118**
	Mangochi District Hospital	**96,065,163**
	Blantyre District Hospital	**19,698,954**
	Chikwawa District Hospital	**57,269,148**
	Mwanza District Hospital	**55,283,072**
Grand total		**1,558,105,718**

For almost all of the health facilities sampled, the monthly funding was lower than the invoice amount from CMS. In addition, some health facilities prioritized paying for other activities than drugs.[21] According to the Ministry of Health and Population, the late invoicing by CMS and errors in invoices contributed to late payment by health facilities.[22] Failure by health facilities to pay the CMS timely reduces the capacity of the CMS to procure sufficient drugs.

Management comment

Payment of drugs by health facilities to CMS is supposed to be made monthly. It is true that government health facilities fail to pay within one month from the date of invoice. At the time of audit the sum of MK1.558 billion was indeed outstanding. Reasons for not paying in full were that monthly bills exceeded their monthly funding. Indeed in addition to that it depended on the mindset of the management team at that particular district health office which chose to prioritize payments of other activities and drug purchases from private firms as opposed to paying for drugs bought from CMS. Late invoices and errors in invoices are just lame excuses or scape goat. This is because each month those DHOs had invoices which had no errors but were left unattended thus accumulation of drug bills. This tendency has badly affected the CMS which fails to plough back money meant for replenishing purchases of drugs.

[21] Review and analysis of cash books and IPC minutes in health facilities visited.
[22] Interview conducted on 21st January 2011.

The only solution is for the trust to come up with a deliberate policy of 30days terms whereby CMS with the introduction of automation will be able to raise invoices for drugs and medical supplies immediately and DHOs who have one month outstanding bills will be required to settle the previous bills before they can be given supplies for current requisitions.

The Trust will be able to enforce this because it will have its own rules regulations as well as adequate personnel.

4.4.2 The economy of the CMS warehouse structure

A goal of CMS is to ensure effective operations management and integration of service delivery. In order to ensure an economic warehouse structure, it is more efficient to have one large warehouse as opposed to several small warehouses in the same geographical area. In Lilongwe there were eleven warehouses that were used for drug storage as of January 2010. According to CMS management, this created supervision, capacity and coordination problems. When collecting drugs and updating the records, they had to go around to a number of warehouses.

All the central warehouses were rented, while 40 percent of the regional warehouses were rented. According to management of the CMS, many warehouses were rented because of shortage of space in the warehouses owned by the medical stores. The owned warehouses were built when the population and drug consumption was lower. In total the CMS were paying MWK 104,767,200 per annum for renting of warehouses (see annexure 3 for details). CMS management stated that it was planning to build national warehouses to get rid of some rented warehouses. According to CMS management the alternative costs of owning warehouses are likely to be lower than the costs of renting warehouses.[23]

Management comment

It is true that by January 2010, CMS had eleven warehouses in Lilongwe which were being rented. You may wish to know that between April 2006 and March 2008 CMS was somehow run by consultants be the name of Glocomms. During that time they floated a two year tender without considering the storage space. The two year tender was full of bulky items such as cotton wool, plaster of Paris(POP), x-ray envelop and infusions of various kinds. This prompted CMS

[23] Interview with CMS management 13th January 2011

to hire warehouses in order to receive and store these items. Some of these were indeed pushed to Regional Medical Stores for safe keeping and eventually distributed to health facilities on request. Indeed capacity of CMS to manage them had been over stretched to limit.

We are happy to report that since January 2011, CMS came up with a deliberate plan of surrendering these warehouses, one by one as stocks were being depleted.

You may wish to know that to date, CMS is remaining with six warehouses only. By the end of this year CMS may remain with three warehouses to rent. Be advised further that CMS with the assistance of the Malawi Government is constructing a National Warehouse whose capacity will be big enough to store all drugs and medical supplies at one place. This is a long lasting solution as regards to economy on the use of warehouse structures.

4.4.3 Monitoring and controls of operations in the warehouses and regions

A goal of CMS is to ensure effective quality control and monitoring of the supply chain management operations. According to CMS monitoring of regional offices is done through monthly stock status reports and meetings with regional heads. At these meetings CMS management and regional heads discuss different challenges, but there is no set of established indicators to assess performance of the regions.[24]

To ensure efficient warehouse management the CMS management has allocated stores personnel to supervise two warehouses and one overall supervisor responsible to supervise all warehouses. According to the CMS management, the supervisor is supposed to check whether stock cards are updated, stock documents tally with the physical stock, transactions are properly recorded and updated in their right books and issues of leakages reported. These controls are supposed to be done through random surprise visits.[25]

According to CMS management,[26] some measures to avoid leakage, pilferage and theft of drugs were put in place. CCTV cameras have been installed in all the warehouses. Each delivery van

[24] Interview with CMS management 13th January 2011
[25] Interview with CMS management 13th January 2011
[26] Interview with CMS management 13th January 2011

carrying drugs from CMS Receipt Section to the regions is locked and the other keys are kept at the regional warehouses. This means that the drivers have no access to the drugs during transportation.

Management comment

It is true that during the period of audit, monitoring was being done through monthly stock status. However in addition to addition to that monitoring was also done by monthly sales reports. These two reports were being discussed and challenges arising from the report were being addressed accordingly. As regards, establishment of certain indicators to assess performance, these are yet to be introduced as we enter into the Trust. Some controls indeed include CCTV cameras in some warehouses, introduction of locks on delivery vans so that vans delivering drugs to Regional Medical Stores should not be opened on the way. Plans are underway to introduce GPS on delivery vans so as to monitor movement and stoppage of each van on delivery trips.

4.4.4 Procedures for receiving drugs and medical supplies from donations

It is a requirement that individuals and organizations willing to donate drugs and medical supplies to health facilities should go through CMS. To establish internal control, CMS should establish clear procedures and guidelines that should be followed when making the donations. This is to ensure that donated drugs and medical supplies are of good standard and have reasonable shelf life.

According to the management of CMS, there is a substantial percentage of the donated drugs that have a short shelf life. CMS has not been able to provide guidelines for receiving donated drugs to the audit team. This indicates that the CMS do not have guidelines, procedures and controls related to donations of drugs and medical supplies. This is likely to have contributed to the receipt of a substantial number of donated drugs with short shelf life.

Management comment

There are already guidelines for donations which were developed by the Ministry of Health in collaboration with Pharmacy Medicines and Poisons Board (PMPB.)

4.5 Drug management at health facilities

4.5.1 Drug committees

Every health facility is supposed to have drug committees which are responsible for the following purposes:

- Developing and upholding procedures that promote rational drug use.
- Identifying needs for the pharmacy.
- Drug management, monitoring and supervision.
- Developing methods for improving security on pilferage.

In the health facilities visited, very few committee minutes and supervision reports existed. Interviews with pharmacy technicians and some drug committee members showed that drug committees were concentrating on identifying what was out of stock in the pharmacy rather than monitoring of consumption. Monitoring was being done only upon delivery of drugs and medical supplies by medical stores or private suppliers and not how the drugs and medical supplies were being dispensed or used.

According to District Health Officers and other senior officers in health facilities interviewed, changes of officers through transfers were negatively affecting the operation of drug committees. Dysfunctional drug committees created the following effects:

- Lack of adequate controls over drug dispensation and utilization.
- Inconsistent implementation of procedures in place e.g. issuing drugs to user departments without supporting documents.

4.5.2 Confirmation of drug stock outs

When drugs and medical supplies are out of stock at the medical stores, public health facilities are required to get a Letter of Authority from the CMS to procure from private pharmaceutical companies. The health facility should first inform the DHO or the director of a central hospital on the need for procurement. The DHO or the director of a central hospital should then write a letter to the CMS to get a Letter of Authority to procure.

Visits to the hospitals showed that the hospitals did not inform the DHO or the director of the central hospital when a procurement from a private supplier was necessary. The document review also showed that in all the central and district hospitals visited there were procurements of drugs and medical supplies from private suppliers without Letters of Authority from the CMS. Table 4 shows the details of such procurements at health facilities visited.

Table 4 Procurement of drugs by health facilities from private suppliers without authority from CMS for 2007/2008 financial year

Health Facility	**Total Amount (MWK)**
Ntcheu DHO	740,380
Mwanza DHO	1,518,500
Mulanje DHO	535,000
Queen Elizabeth Central Hospital	120,000
Zomba central Hospital	1,094,250
Ntcheu DHO	1,154,680
Mchinji DHO	2,525,610
Dowa DHO	1,112,980
Total	**8,801,400**

According to the interviewed officials at the hospitals, this was because health facilities were encountering stock outs at the time when they had already run out of drugs and medical supplies. Due to the urgent need of some of these drugs, health facilities were bypassing the procedure with the assumption that the process of getting authority from CMS and procuring drugs from private suppliers would take long.

Inspection in the health facilities showed that there was a lack of supervision of receipt and handling of drugs. Furthermore, there were no segregation of the procurement and the drug management duties. The pharmacy technician was involved in both procurement and handling and management of the drugs. Lack of segregation of duties by pharmacy technicians could result in health facilities opting to procure from private suppliers even when drugs and medical supplies are available at CMS in order to gain personal benefits.

4.5.3 Warehousing at health facilities

Through inspection, it was established that in most hospitals drugs were stored without stacks and different types of drugs were mixed. Furthermore, most hospitals did not have enough space for storing drugs. Picture 2 shows the use of a motor van at Zomba Central hospital for storage. When drugs are not properly stored, the rate of damage and early expiry of drugs will increase.

Picture 2 Drugs and medical supplies stored in a van at Zomba Central Hospital in July 2009

4.6 TECHNICAL SUPERVISION BY THE MINISTRY OF HEALTH AND POPULATION

CMS is supposed to be technically supervised by the Ministry of Health and Population. Through the technical supervision, the Ministry is expected to monitor the internal control and economy, efficiency and effectiveness of CMS operations. Such monitoring is expected to take place through regular reporting and meetings between CMS and the Ministry. The Ministry is also expected to establish a set of relevant and reliable performance indicators to make the technical supervision focused.

According to the Ministry,[27] the technical supervision was done in different ways: reporting by CMS on stock and debt status, quarterly technical supervision meetings, medical buying

[27] Interview with the Ministry of Health and Population top management 21st January 2011.

committee meetings and SWAP[28] meetings. CMS was required to report monthly on debt and stock status, but had failed to submit the reports regularly. According to the Ministry, the following issues have in particular been addressed in meetings between the CMS and the Ministry: Revenue collection and the debts of the districts, stock outs and procurement of drugs. The Ministry explained that it had addressed the stock outs of CMS through improved planning and procurement.

The Ministry was asked to provide documentation on how the technical supervision had occurred, but were not able to provide this documentation (see table 5).

Table 5 Documentation on the technical supervision carried out by the MoH

Documentation	**2008-09**	**2009-10**
Documentation showing the procedures for the technical supervision	Not provided	Not provided
Documentation on regular reporting from the CMS to the MoH	Not provided	Not provided
Documentation on regular technical supervision meetings between the CMS and the MoH	Not provided	Not provided

[28] SWAP is Sector Wide Approach

5 CONCLUSION

The objective of CMS is to ensure constant supply of drugs and medical supplies to hospitals and health centres. A major finding of the audit was that a lot of health facilities were not getting drugs as requested. Close to an average of 30 percent of the sampled drugs were out of stock. The consequence was that a lot of patients did not receive the treatment they needed, either because drugs were not available in health centres or because they arrived late. When there are stock outs in CMS, health facilities are also forced to buy drugs and medical supplies from private suppliers, which is less economical.

One reason of the stock outs in health facilities was that drugs and medical supplies procured for the two year tender in 2007-8 did not manage to cater for the two years. A supply chain manager system was introduced to estimate quantities to be procured, but the system was not being properly utilized. The consequence was that the Ministry of Health and Population was using inappropriate figures in estimating the needs for drugs and medical supplies. This also meant that frequent supplementary and emergency tenders had to be carried out, which are less economical.

Another reason for the failure of CMS to supply health facilities with appropriate quantities of drugs, were leakages in the CMS warehouses and distribution. The audit established a shortage of drugs and medical supplies representing 8% of the 2008/09 drug budget. The shortage was at both the receipt section and regional medical stores. Poor record keeping and unsystematic monitoring in the warehouses contributed to the leakage.

Proper drug management in health facilities is critical to ensure availability of drugs to patients. The audit noted that drug committees were not operating effectively in many health facilities. Many health facilities were not submitting regular reports on drug consumption and future needs. This means they were not doing proper stock taking and had no control of available drugs. In most of the visited hospitals drugs were stored without in stacks and different types of drugs were mixed. Furthermore, procurement of drugs from private suppliers was done without Letters of Authority from the CMS. There is a great risk of corrupt practices when drugs are procured outside the CMS.

CMS is dependent on collecting revenues from health facilities in order to buy new drugs and sustain its capacity in warehousing and distribution. The audit noted that almost 30 percent of the revenues were not collected. This shows that the CMS as an organization did not develop effective methods of revenue collection. The consequence of under-collection of revenues is stock outs in CMS which again forces health facilities to buy drugs from private suppliers, which is less economical.

In order to establish internal control in CMS, management is expected to monitor, assess and deal with risks to the fulfillment of the organization's goals. The audit noted that the top management of CMS had taken some measures to address the risk of leakage of drugs, but that CMS management had not established proper procedures and sufficient controls of warehouse operations. Furthermore, top management of CMS was not systematically monitoring the performance of its regional stores. That means the CMS top management had no basis to take corrective action on poor performance by regional warehouses. Continuous problems of stock-outs, under-collection of revenues, leakage of drugs and inefficient warehouse management, shows that the CMS top management has not taken sufficient action to deal with poor performance in the organization.

The Ministry of Health and Population has supervised the CMS in various ways and addressed some of its challenges. However, the Ministry did not succeed in establishing a systematic technical supervision system with regular reporting and documented technical supervision meetings. A set of relevant and reliable performance indicators were not established, and the Ministry had a weak fundament for dealing systematically with the inefficiencies at the CMS. This has contributed to continued under-performance of the CMS in terms of warehouse management and distribution.

6 RECOMMENDATIONS

6.1 RECOMMENDATIONS TO CMS

To address improper record keeping and leakages in the warehouses, the CMS management is recommended to take the following actions:

1. Setting up systematic controls, supervision and monitoring of each warehouse.

   Management comment: We acknowledge the above recommendation. Be advised that at present each warehouse has three locks whose keys are kept by officers from three different sections. No warehouse is opened or closed by a single section neither a single person. This means that supervision and monitoring is done automatically on a daily basis.

2. Develop a standardized system or guideline on warehouse management.

   Management comment: You may wish to know that guidelines or standard operating procedures (SOPs) were developed some time back. These have been revised with assistance from JSI- deliver in the year 2009/2010. The set back has been implementation due to staff turnover especially the stores section has been hit hard. As a result development capacity has been very low. Be advised that the ministry has engaged Supply Chain Management Agent (SCMA) in an effort to improve and develop further SOP in the warehouse management. The SCMA is currently assessing the whole supply chain management from CMS headquarters receipt up to Health Facilities through Regional Medical Stores.

3. Consider to introduce a computerised logistical and record keeping system. Such a system could assist regional medical stores to automatically identify the needs for ordering new drugs, to ensure continuous, uninterrupted and adequate supply of drugs to beneficiaries. CMS would then be able to use a pull system when distributing drugs and medical supplies to its regional medical stores.

   Management comment: Just as explained at (2) above, Accpac software was introduced in 2006. Of late a software called Channel is being introduced with assistance from UNICEF. Officers were trained and eventually posted out to other ministries and departments. As a result the computerized systems are failing to take off ground. You may wish to know that CMS turned into a Public Trust. It is our hope that once the trust is fully functional, i.e. able

to recruit its own employees the system will become workable because the Trust will be able to retain its employees. Both systems are currently being used depending on the type of drugs. These are Pull system is mostly being used since 2006.

4. Consider to provide refresher courses to its staff on record keeping and warehouse management.

   Management comment: We have noted the importance of providing refresher courses to employees. We hope CMS Trust will be able to implement this requirement.

To improve the communication between CMS and the health facilities, the CMS management should consider taking the following actions:

5. Regularly provide health facilities with updated lists of available drugs to prevent procurement of drugs by health facilities from private suppliers.

   Management comment: The list of available drugs is usually circulated to all health facilities. However you may wish to know that CMS has experienced delays in coming up with the list of suppliers which has eventually led to the delays in floating tenders to replenish essential drugs. This means that the circulated list does not meet the demand of the user units with frequent stock outs, the list has not been rich enough. The Trust will improve circulation of essential drugs once operational.

6. Consider to develop a system that automatically generates authority to procure from private suppliers by health facilities if there are stock outs of the drugs or medical equipment on the requisition forms from the health facilities.

   Management comment: Once the computerized logistical system is fully operational CMS will be able to automatically give authority to procure from private.

To improve the process of boarding off drugs, the CMS management should:

7. Put in place procedures to keep the expired drugs separated from serviceable drugs and at a safe place before boarding off, for instance with keys by independent officers up to the period of burning.

8. Involve other stakeholders such as officers from the Pharmacy and Poisons Board, the City Assembly and Police in assembling of damaged and expired drugs up to the time of destruction

To better deal with donated drugs, the CMS in conjunction with the Ministry are advised to:

9. Formulate guidelines and procedures which will:
    - Specifically state the standard shelf life of donated items
    - Enable CMS to know in advance what type and quantity of drugs are expected from donors
    - Ensure donors communicate with CMS on what types of drugs are required before making a donation

To improve the overall management in the CMS, the CMS is advised to:

10. Establish a set of relevant and reliable performance indicators.
11. Systematically review the performance of the organization and take corrective action to areas of no progress on performance indicators.
12. Ensure sufficient corrective action is taken to the identified critical risks to CMS goal attendance: leakage of drugs, inefficient warehouse management and record keeping and improper revenue collection.

6.2 RECOMMENDATIONS TO THE MANAGEMENT OF HEALTH FACILITIES

To improve drug management in health facilities, management of district hospitals are advised to:

13. Ensure drug committees are operational and should deal with procurement of drugs from private suppliers in accordance with the regulations.
14. Improve the capacity and routines within the district hospital for submitting reports on consumption and future needs of drugs and medical supplies.
15. Monitor whether health centres submit accurate data and timely reports on consumption and future needs of drugs and medical supplies.
16. Consider upgrading drug stores for public health facilities to ensure proper warehousing of drugs and medical supplies.

6.3 RECOMMENDATIONS TO THE MINISTRY OF HEALTH AND POPULATION

To ensure that a clear and realistic basis are used when estimating the need for drugs and medical supplies to be procured at national level, the Ministry of Health and Population is advised to:

17. Monitor and follow-up on the use of the Supply Chain Manager system in health facilities giving reliable data on consumption and needs.

To ensure a sustainable economic situation for the CMS, the Ministry is advised to:

18. Get regular information from the CMS on districts that are not paying for the drugs on time
19. Support CMS in revenue collection by following up on the districts that have not paid for drugs.
20. Communicate with Treasury on whether another system of payments should be established to ensure districts pay for the drugs.

To improve the drug management in health facilities, the Ministry is advised to:

21. Monitor the existence of effective drug committees at health facilities.
22. Establish a dialogue on corrective action with districts where the drug committees are not operating properly.

To improve the overall management in the CMS, the Ministry is advised through its representatives in the board of CMS to:

23. Ensure that a set of relevant and reliable performance indicators are established in CMS.
24. That corrective action is taken on the critical risks to CMS goal attainment: leakage of drugs, inefficient warehouse management and record keeping and improper revenue collection.

ANNEXURE 1: INTERVIEWS CONDUCTED DURING THE AUDIT

1. The Director of Finance and Administration (Ministry of Health and Population headquarters)
2. The Chief Pharmacist (Ministry of Health and Population headquarters)
3. Pharmacist in charge (Southern Regional medical Stores Drugs)
4. Assistant Accountant (Southern Regional medical Stores Drugs)
5. The Logistics Officer (Southern Regional medical Stores Drugs)
6. Head Driver (Southern Regional medical Stores Drugs)
7. The Stores supervisor - Receipt Section (Southern Regional medical Stores Drugs)
8. Accounts Assistant from Cash Office (Southern Regional medical Stores Drugs)
9. Stores Supervisor – Dispatching (Southern Regional medical Stores Drugs)
10. Pharmacist (QECH)
11. Deputy Director of Central Medical Stores (CMS HQRS)
12. Principal Procurement Officer (CMS HQRS)
13. Chief Accountant (CMS HQRS)
14. Pharmacist In Charge -(CMS head quarters- receipt section)
15. Stores clerks (CMS head quarters- receipt section)
16. Accountant (Mangochi DHO)
17. Pharmacy Technician (Mangochi DHO)
18. District Hospital Administrator (Mangochi DHO)
19. Acting District Health Officer (Mangochi)
20. District Nursing Officer (DNO) and Accountant (Nsanje DHO)
21. Pharmacy Technician (Nsanje DHO)
22. District Health Officer (Nsanje DHO)
23. Medical Assistant (Mbenje Health Centre in Nsanje)
24. Medical Assistant (Phokera Health Centre in Nsanje)
25. District Nursing officer (Dedza District Hospital)
26. The DHO (Dedza District Hospital)
27. Pharmacy Technician (Dedza District Hospital)
28. Pharmacist in charge (Mzuzu RMS)
29. Assistant Stores officer (Mzuzu RMS)
30. Pharmacist (Mzuzu CH)
31. Pharmacy Technician (Mzuzu CH)
32. Chief Accountant (Mzuzu CH)
33. Director (Zomba Central Hospital)
34. Chief Accountant (Zomba Central Hospital)
35. Procurement Officer (Zomba Central Hospital)
36. Senior Pharmacy Technician (Zomba Central Hospital)
37. Director (KCH)
38. Pharmacy In Charge (KCH)
39. Accountant (KCH)
40. Pharmacy Assistant (KCH)
41. Principal procurement officer (KCH)
42. Assistant accountant(N/Bay DHO)

43. Pharmacy In Charge(N/Bay DHO)
44. Procurement officer (N/Bay DHO)
45. Pharmacy Technician (Mwanza DHO)
46. Pharmacy Technician (Mulanje DHO)
47. Pharmacy Technician (Mchinji DHO)
48. Pharmacy Technician (Dowa DHO)
49. Pharmacy Technician (Karonga DHO)
50. CMS top management
51. Ministry of Health and Population top management

ANNEXURE 2: DOCUMENTS REVIEWED DURING THE AUDIT

1. Organograms for CMS headquarters and regions
2. Establishment Warranty for CMS
3. Requisitions from hospitals to CMS
4. LMIS reports for health facilities
5. Transfer Vouchers
6. Receipt Vouchers
7. IPC minutes for CMS and health facilities
8. Requests to procure drugs and medical supplies from private suppliers by hospitals to CMS
9. Delivery Notes and Invoices from private suppliers to Central Hospitals and DHOs
10. Bidding / Tender documents for 2006 tender.
11. Contract documents for 2006 tender
12. Debtors report for RMS – North
13. List of expired drugs for RMS – South for 2009 (Board off document)
14. Requisitions by wards and other user departments to pharmacy in health facilities
15. Stock cards
16. Stores ledgers
17. HMIS registers for health facilities
18. CMS assessment for Distribution, Network Optimisation and Warehouse Design report.
19. Authority to procure from private suppliers
20. Invoices from CMS to Health facilities
21. Strategic plan
22. Budget estimates
23. Payment vouchers from health facilities to private suppliers
24. Leakage study report
25. Stock status reports
26. Essential health package list

ANNEXURE 3: LIST OF RENTED WAREHOUSES IN 2010

NO.	NAME OF WAREHOUSE	LOCATION	SQUARE METRES	RATE/Month (MK)	AMOUNT/YEAR (MK)
1	Chawo Investments	Plot No. 29/29(Kanengo-Lilongwe)	1,500	1,200,000.00	14,400,000.00
2	MANOBEC Ltd	Lilongwe	2025	1,946,835.00	23,362,020.00[29]
3	Mtupanyama Holdings	Plot No. 28/53 (Kanengo-Lilongwe)	804.24	859,625.00	10,315,500.00
4	Bisno Investments LTD	Plot No. 23/174 Lilongwe	755	453,000.00	5,436,000.00
5	Central Government Stores Blantyre	Blantyre	Not provided	117,500.00	705,000.00
6	MEER Trust	Plot No. 4/195 Lilongwe	863.95	1,500,000.00	18,000,000.00
7	Babajee Trust	Plot No. 5/77 Lilongwe	1,200.85	1,124,640.00	13,495,680.00
8	Agriculture Development & Marketing Corporation	Lilongwe	342	153,900.00	1,846,800.00
9	Central Government Stores	Lilongwe	Not provided	660,400.00	7,924,800.00
10	Central Government Stores	Kanengo-Lilongwe	Not provided	435,700.00	5,228,400.00
11	Allied Freight Agencies	Area 28, Lilongwe	Not provided	148,000.00	1,776,000.00
12	Allied Freight Agencies	Area 29, Lilongwe	Not provided	131,000.00	1,572,000.00
13	Central Government Stores	Mzuzu	Not provided	117,500.00	705,000.00
	Total		Not provided	**8,848,100.00**	**104,767,200.00**

DRUG BUDGET FOR 2008/2009	**5,232,067,718.00**
EXTENT OF RENTAL VALUE OVER BUDGET	**2%**

[29] The warehouse was charged in US Dollars at USD153,697.50 per annum. The exchange rate used was MK152 = 1USD