



**UNIVERSITY of
RWANDA**

**EAC Regional Centre of Excellence for Vaccines,
Immunization and Health Supply Chain Management
(EAC RCE-VIHSCM)**

**FACTORS INFLUENCING ANNUAL PROCUREMENT PLANNING OF
MEDICINES AND MEDICAL SUPPLIES IN PUBLIC HEALTH
FACILITIES IN KAMPALA DISTRICT**

**Thesis submitted to the University of Rwanda, in partial fulfillment of the
Requirements for the degree of Masters in Health Supply Chain Management
(Msc HSCM)**

By

MARTHA GRACE AJULONG (Msc. Pharm.)

Registration Number: 218014670

**College of Medicines and Health Sciences School of Public health,
National University of Rwanda, Butare-Rwanda.**

Supervisor:

PROFESSOR JOHN CHARLES OKIRIA

OCTOBER 2019

CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by Rwanda University School of Public Health in the dissertation titled, “factors influencing Annual Procurement Planning (APP) of Medicines and Medical Supplies in government facilities in Kampala District ” in partial fulfillment of the requirements for the Master degree of health supply chain management .

Signature

Date.....

**Prof Okiria John Charles
(SUPERVISOR)**

APPROVAL

This is to certify that this research has been carried out by Martha Grace Ajulong under my supervision and has been submitted with my approval in partial fulfillment of the requirements for the award of Master degree of health supply chain management.

Signature:

Date:

Professor John Charles Okiria

(SUPERVISOR)

COPYRIGHT

This dissertation has not be reproduced by any means, in full or in part, except for short extract in fair dealings, for research or private study, critical scholarly review or discourse with an acknowledgement, without acceptance by author or Rwanda University School of public health.

DECLARATION

I, **Martha Grace Ajulong** declare that this dissertation is my own original work and that it has not been submitted for any academic award in any other University for a similar or any other Masters Degree .

Signature.....

Date.....

Martha Grace Ajulong
(STUDENT)

DEDICATION

This work is dedicated to God Almighty, the Father of Life, in whom I Live move and have my being. Thank you Lord so much for revealing your Love to me by enabling me to complete this Masters Program amidst all challenges, am eternally grateful. I also dedicate this work to my family who gave me strength to face every day's life challenges.

ACRONYMS

AMC	:	Average Monthly Consumption
APP	:	Annual Procurement Planning
DTC	:	District Therapeutic Committee
EMHS	:	Essential Medicines and Health Supplies
EMHSLU	:	Essential Medicines and Health supplies List for Uganda
IAPWG	:	Interagency Procurement Working Group.
LMIS	:	Logistics management Information Systems
MOS	:	Months of Stock
MTC	:	Medicines and Therapeutic Committee
NMS	:	National Medical Stores
NRH	:	National Referral Hospital
PP	:	Procurement Planning
RRH	:	Regional Referral Hospital
SCM	:	Supply Chain Management

TABLE OF CONTENTS

CERTIFICATION	i
APPROVAL	ii
COPYRIGHT	iii
DECLARATION	iv
DEDICATION	v
ACRONYMS	vi
TABLE OF CONTENTS	vii
LIST OF TABLES	x
LIST OF FIGURES	xi
ABSTRACT	xii
CHAPTER ONE	1
INTRODUCTION	1
1.0 Background	1
1.1 Definition of key concepts	2
1.2 Problem formulation	4
1.3 Statement of the Problem.....	6
1.4 Study area.....	7
1.5 Literature review	8
1.5.1. Theoretical Literature.....	8
1.5.1.2 Empirical Review.....	8
1.6 Study objectives	9
1.6.1 Main Objective.....	9
1.6.2 Specific Objectives	10
1.7 Conceptual framework.....	10
1.7.1 Capacity of health workers	12
1.7.1.1 Knowledge about the budget	12
1.7.1.2 Coordination between departments.....	12
1.7.1.3 Knowledge about APP	13

1.7.1.4 Challenges of not undertaking Annual Procurement planning	13
1.7.1.5 Competent professional work force	14
1.7.1.6 Knowledge about budget	14
1.7.2 Logistics management information systems	15
1.7.2.1 Records management	17
1.7.3 Management support.....	18
CHAPTER TWO	20
MATERIALS AND METHODS	20
2.1 Study Design.....	20
2.2 Methods.....	20
2.3. Study Population	22
2.4 Sample Size and Sampling method.....	23
2.5 Materials	24
2.6 Data analysis	24
2.7 Ethical Consideration.....	25
2.8 Limitation of the study.....	25
CHAPTER THREE	26
RESULTS OF THE STUDY	26
3.0 Introduction.....	26
3.1 Respondents’ Demographic information	26
3.2 Dependent variable	29
3.3 Univariate data analysis of the capacity of health workers in Annual Procurement Plan	30
3.4 Univariate data analysis of the Logistics Management Information System of health	32
3.5 Univariate data analysis of the management support in Annual Procurement Plan	34
3.6 Validity	38
3.7 Reliability.....	38
3.7.1 Confidentiality	39
3.7.2 Informed consent.	39

3.8 Dissemination plan.....	39
CHAPTER FOUR.....	40
DISCUSSION, CONCLUSION AND RECOMMENDATION.....	40
4.1 Discussion.....	40
4.1 Demographic information of health workers.....	40
4.2 Capacity of health workers and Annual Procurement Planning of Medicines and	40
4.3 Logistics Management Information systems and Annual Procurement Planning of.....	42
4.4 Management Support and Annual Procurement Planning of Medicines and Medical	42
4.5 Conclusion and Recommendations.....	43
REFERENCES.....	44
APPENDICES.....	46
APPENDIX I: Informed consent	46
APPENDIX II: IRB Approval from college of health sciences	50
APPENDIX III: Questionnaire	52
APPENDIX IV: Introductory letter KCCA	62
APPENDIX V: Introductory letter from prisons	64
APPENDIX VI: Work plan	65
APPENDIX VII: Budget.....	66

LIST OF TABLES

Table 1 showing respondents demographics information	26
Table 2: Bivariate data analysis of the demographics of health workers in Annual Procurement Plan	27

LIST OF FIGURES

Figure 1 shows the logistics Cycle.....	17
Figure 2 shows Medicine management Cycle (22).....	19

ABSTRACT

Background: Proper Annual Procurement Planning in supply chain improves health outcomes and value for money. In Uganda APP is a mandatory requirement for procuring health facilities in accordance with the public procurement PPDA Act of 2003. However, many public health facilities do not give proper attention to preparing the annual procurement plans. The purpose of this study is to assess the factors influencing annual procurement planning of Medicines and Medical supplies in public health facilities in Kampala district.

Method: A descriptive cross sectional study design was complemented with qualitative method. The qualitative data was gathered through reviewing logistics tools, physical count of the 30%purposively selected stock cards and interview of the staffs was carried out in Health facilities in Kampala District. A stastical package for social science version 20 was used to analyze the quantitative data. A chi-square was used to determine the association between dependent and the independent variables.

Results: Looking at the demographics the health workers who responded positively about the availability of the Annual Procurement Plan where from the National Referral hospitals with 56(37.8%) and reasonable number of other health workers from various health facilities also responded positive about the availability of the Annual Procurement Plan. Significant association was observed between knowledge and availability of annual Procurement planning X^2 value of 34.7 and p value of 0.0001, management support and Annual Procurement Planning X^2 of 9.87 and P value of 0.008. Lack of knowledge in annual procurement planning by the staff and poor management support were identified to be the bottle necks of Annual Procurement Planning of Medicines and Medical supplies.

Conclusion: The availability of annual procurement plans in the facilities was promising yet the capacity of health workers, quality of logistics management information systems and management support needs a lot of improvement. This is attributed to lack of trained staffs in annual procurement, poor use of Logistics management information systems and lack of management support for annual procurement planning of medicines and medical supplies.

Key words:

Public health facilities, Annual Procurement planning, Medicines and Therapeutic Committees, District Therapeutics Committees, essential medicines, supply chain management and health supplies and vaccines.

CHAPTER ONE

INTRODUCTION

1.0 Background

Availability of medicines is important in ensuring the reduction of mortality and morbidity associated with disease burden. However, as a result of lack of essential medicines being one of the most serious public health problems it is noted that 30% of the world's population still lacks the medicines they need. The situation in Africa and Asia is worse since they are part of the poorest in the world where the figure is at 50%. (1) .

There are several reforms in governance that have taken place in Uganda as far as the health sector is concerned. Among the reforms that were under taken was the fast move to having management of medicines using the pull system. The pull system – refers to the case where by the health facility staff participated in determining the quantity of medicines and medical supplies to order. Push system – is the supply mechanism of a standardized kit of essential medicines and health supplies to health facilities irrespective of the disease burden and patient population. It was observed that with more than eight years of considerable investment in and experimentation with the pull system, the push system was abandoned in 2010 and replaced with a dual push-pull system. The pull system has been maintained for Health Centre (HC) IVs and Hospitals, while the push system is being used by health centre 11s, Health centre 1 (commonly known as Village Health Teams (VHTs)). The HC IVs and Hospitals are considered to have the human resources and technical capacity to effectively manage the supply chain, while the later have been noted to have limitations in such capacity. (2)

Currently all Hospitals irrespective of the level of care whether National or Regional Referral Hospitals, District Hospitals and health centers at the districts are charged with acquiring medicines and medical supplies through the National Medical Stores (NMS) through the credit line system in which case Ministry of Health pays after Ministry of Finance and economic development has paid them .

1.1 Definition of key concepts

EM-Essential medicines, are those medicines that satisfy the needs of majority of population, should be available at all times ,in adequate quantities and in proper doses, are rational and are of proven therapeutic value and safety.(3)

Vital drugs: These are potentially life –saving drugs or supplies, which have significant withdrawal side-effects; a health care system needs these supplies in order to function.

Essential drugs: these are drugs that are effective against less severe but never the less significant forms of illness but are not absolutely vital to providing basic health care.

Necessary drugs : These are sometimes called non-essential items they are drugs that are used for minor or self-limited illnesses ,are of questionable efficacy ,or have a comparatively high cost for a marginal therapeutic advantage .(3)

Pull system refers to a supply mechanism whereby the facility determines items and quantities.(3)

Push system refers to a supply mechanism whereby the items and quantities to be supplied to a health facility are pre-determined not requiring an order from the health facility.(3)

Quantification: is the process of estimating the quantities and costs of the products required for a specific health program (or service) and determining when the products should be delivered. (4)

Lead time: This is the time interval when the order is placed to the time when the order is received and it is ready for use. (5)

A logistics management information system (LMIS) is a system of records and reports (paper –based or electronic) –used to document logistics processes ,aggregate ,analyze ,validate and

display data (at all levels of the logistics system) that can be used to make logistics decisions and manage the supply chain.(6)

Month of stock: Months of stock is the number of months a product will last based on the present consumption rate. (7)

$$\text{Month of Stock} = \frac{\text{stock on hand}}{\text{Average monthly consumption}}$$

Community health supply chain: is a system of organizations, people, activities ,information ,and resources involved in moving essential medicines and health supplies from the health facilities to the end user in the community through community health workers. (3)

Transparency: transparency can be defined as timely, easily understood access to information. Transparency assists in helping to ensure that any deviations from fair and equal treatment can be detected very early, and mistakes such as deviations are less likely to occur. It protects the integrity of the process and interest of the health facility and the public. (8)

Procurement Planning: is the process of defining or selecting the products /services and the respective quantities to be procured for a particular time period taking into consideration the budget .(3)

Procurement planning is the process of deciding what to buy, when and from what source. During the procurement planning process the procurement method is assigned and the expectations for fulfillment of procurement requirements determined.(9)

Stock book : is a monthly summary of transactions for each item in the store.(3)

1.2 Problem formulation

Despite significant progress that has been made by many countries towards meeting the millennium development goals and now called sustainable development goals, yet there has been little improvement in access to essential medicines in developing countries.(10)

In developing countries like Kenya it was noted that poor procurement planning in general has been one of the major stumbling blocks to the economic development of Africa and it has been clear that a number of African countries have not paid adequate attention to the proper management of public resources (Basheka, 2004)

Since 2002, Uganda there has been increased funding to the health sector mainly from the donors but the increased funding without proper planning has resulted into poor management of resources leading problems such as stock outs and expensive emergency procurements (11).

APPs provide information on significant quantities planned to be undertaken over the next twelve months. The procurement plan is an annual document which defines the products and services that a Public Body will obtain from external suppliers. A sound procurement plan helps a procuring entity to define their procurement requirements and to decide where and when to procure. (3)

APP of medicines and medical supplies involves a proactive and phased approach to management of a facilities procurement process so as to achieve overall objectives of agreed procurement policies. The process of APP involves reviewing of Stock cards, stock books, in-patient files on an annual basis in order to determine the quantities of items that can be planned and procured in the next financial year. Annual Procurement plans for medicines and medical supplies are planned for before the budget is read in June the following year. The APP for medicines and medical supplies are prepared following the financial year.

There are a number of factors that affect annual procurement planning of essential medicines and medical supplies and other commodities. A study conducted in Kenya (12) found that procurement staffs had inadequate competencies in procurement, lack of management support,

information technology tools and budgeting procedures affect procurement planning. In Uganda, some years ago almost all public health facilities had no knowledge on how to come up with an annual procurement plan for medicines and medical supplies and vaccines. This was attributed to lack of standard operating procedures to follow during the procurement planning process. The staffs who were involved in procurement planning were non pharmacists, pharmacy technicians and public nurses for immunization. More so, there was lack of knowledge on availability of allocated funds in the budget on time and some items to procure not indicated in the budget. These resulted in to loss of value for money, procurement of unnecessary items are not needed in much quantities and also expiries of health commodities. (12)

Therefore the government decided to allocate resources to the Ministry of Health Pharmacy division to hire a consultant in procurement planning to train pharmacists and pharmacy technicians on procurement planning of EMHS in order to obtain value for money by planning for right health commodities. Despite the efforts made by both Government and implementing partners, there still exist challenges of procurement planning government public health facilities. (13)

The reason for this study is therefore to contribute information on factors influencing annual procurement planning of medicines and medical supplies in Kampala city. This will help in designing policies and effective strategies to address the challenges with effective procurement planning. In general no stand alone research has been done regarding Annual Procurement planning of medicines and medical supplies and Vaccines in Uganda. In Kenya studies that have been conducted are specifically about general procurement planning and nothing has been mentioned about annual procurement planning of medicines and medical supplies and vaccines.(14)

1.3 Statement of the Problem

Annual procurement planning of medicines and medical supplies is extremely important to ensuring proper supply chain management in hospitals since it contributes affordable cost and accessibility to healthcare of the patients and the community.

Availability of essential medicines and medical supplies is a major determinant of quality of health care.

All government public Health facilities in Uganda are required to prepare annual Procurement plans and it is mandatory in accordance with the public procurement Act no. 293 of 2003. However, many government public health facilities do not give proper attention to preparing the annual procurement plans. A properly well prepared and vetted annual procurement plan is also a pre-requisite for proper national procurement planning. The national medical store consolidates procurement plans from different health facilities to constitute a national procurement plan that informs the procurement of medicines and health supplies. Hence ,a poor annual procurement plan from a health facility not only affects supply of medicines and health supplies to that facility but also the whole country.

Many public health facilities in Uganda develop partly improper annual procurement Plans leading increased stock outs of medicines and medical supplies. (15) It was noted that staff from public health facilities failed to answer basic questions on how to determine procurement quantities such as what is average monthly consumption (AMC), what items to order, what quantity should be ordered and when should the order be made(16) .

Anecdotal evidence shows that ineffective Annual procurement planning of EMHS, vaccines poses a big challenge to public health facilities in Kampala city, therefore the study aims at finding out factors influencing Annual Procurement Planning in Kampala city. Knowledge about these factors is important in informing interventions to improve the quality of procurement plans and eventually availability and access to EMHS.

1.4 Study area

The study is located in Kampala City.

Kampala is the capital and largest city of Uganda. The city is divided into five boroughs that oversee local planning: Kampala Central Division, Kawempe Division, Makindye Division, Nakawa Division, and Lubaga Division. Surrounding Kampala is the rapidly growing Wakiso District, whose population more than doubled between 2002 and 2014 and now stands at over 2 million. Kampala was named the 13th fastest growing city on the planet, with an annual population growth rate of 4.03 percent, by City Mayors. Kampala has been ranked the best city to live in East Africa ahead of Nairobi and Kigali by Mercer, a global development consulting agency based in New York City.

The population of Kampala grew from 1,189,142 in 2002 to 1,507,080 in 2014.

Kampala has a diverse ethnic population.

Kampala city was chosen for the study because it is the capital city of Uganda and despite the increase in the number of National Referral Hospitals and Health Centre IVs and IIIs to decongest the two (2) official National Referral Hospitals, Mulago National referral Hospital and Butabika National Psychiatric hospital, little impact has been felt from these public facilities since they continue to experience issues of EMHS stock outs. Therefore this study has been conducted so that factors affecting APP in public health facilities in Kampala city are established. The HCIV's in Kampala city where the study was carried out include: Kisenyi, and Murchison Bay. The HCIII's included, Kiswa, Kawala, and Komamboga. In addition to Mulago and Butabika national referral hospitals, the other National referral Hospitals where the study was carried out include Kawempe, Kiruddu, and Murchison bay Referral Hospital.

1.5 Literature review

Literature review involved identification, location and review of documents related to the study. The researcher conducted theoretical literature review and empirical literature review.

1.5.1. Theoretical Literature

Annual procurement plan for EMHS is the health facility document that shows indicative figures of the quantity of items planned for a particular financial year. The annual procurement plan facilitates early and smooth procurement of EMHS by the supplying organization. It also helps departments to prepare their requirement lists early enough so that they can be vetted upon by the MTC. The objective of the APP is to avoid haphazard procurement of health commodities thus giving NMS time to plan for the commodities to be procured for the health facilities. The study will be looking at the factors that are thought out to be affecting annual procurement planning in public health facilities.

1.5.1.2 Empirical Review

Empirical review helps to make comparison with the works others have done concerning APP. institutions.

Globally

The mean availability of many essential medicines in the public sector is lowest in the African Region, World Health Organization(WHO), followed by the WHO South East Region ,the regions that account for the majority of least –developed countries in the world. These Public entities of lack the technical capacity to efficiently and strategically carry out the procurement process and inadequate planning .(17)

A study was carried out in Tanzania regarding factors hindering Annual Procurement Planning ,in their conclusion they stated that the management of Medical Stores Department each year did involve some of their officer like budget officers, heads of various departments in the preparation of APP ,however, ordinary employees were not involved . (18)

Studies conducted in Kenya were specifically looking at the general Procurement Planning and nothing was mentioned about annual procurement planning of EMHS and vaccines.(14)

A research done by Mwanje Cobams in Uganda looked at Annual Procurement Planning in general which cuts across to EMHS .He stated that poor procurement planning has led to non compliance to the Public Procurement and Disposal of Public Assets Authority Act and guidelines in Uganda . According to PPDA report of (2016) Office of the Prime Minister quantified that 81% cost variance between the estimated costs and awarded contract prices. The implication is that inadequate procurement planning results into domestic arrears as the entity has to spend resources that have not been budgeted for. (19)

According to the PPDA Annual Procurement and Disposal report (2013), poor procurement planning(PP) led to procurements worth 8,844,048,674/= not being conducted within the procurement plans. The implications of poor planning to public entities were budget over runs, domestic arrears due to contract variations .(19)

According to Muhakanizi (2015) Poor procurement planning(PP) is evidenced by failure to prepare adequate specifications leading to cost over runs and designs reviews as well as onsite delays .(19)

The 4th technical review meeting of the ministry of health focused on management of EMHS and one of its recommendations was that procurement planning of EMHS should be carried out in a harmonized and comprehensive manner .(11)

Auditor General's Report of 31st December 2016 sited that Procurement and storage of drugs in which a number of shortcomings were observed such as failure to meet customer requirements, lack of procurement plans.

1.6 Study objectives

1.6.1 Main Objective

The main objective is to assess the factors which influence Annual Procurement planning of Essential Medicines and Health Supplies in the public health facilities in Kampala city.

1.6.2 Specific Objectives

- i. To assess the capacity of health facility staff in Annual Procurement Planning of Essential Medicines and Health Supplies in Kampala District.
- ii. To identify the logistics management information system (LMIS) tools used in the Annual Procurement Planning of Essential Medicines and Health Supplies in Kampala District.
- iii. To determine the management support systems that is used in Annual Procurement planning of Essential Medicines and Health Supplies in Kampala District.

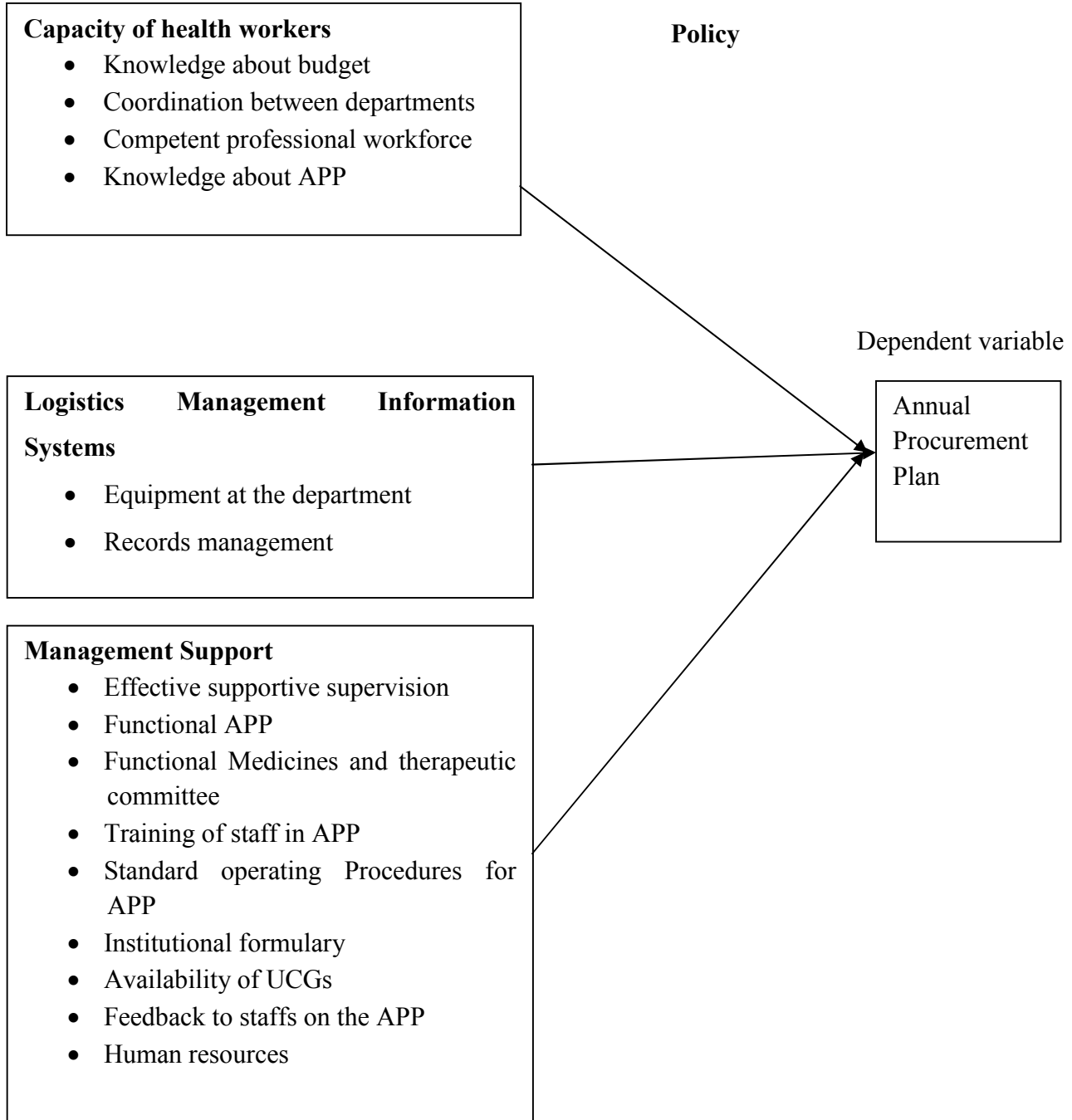
1.7 Conceptual framework

A conceptual framework is a graphical presentation of information in form of the relationship between the identified variables in a study (Barasa, 2014). It is presented as a graphical picture or visual depiction of the key variables of the study (Apiyo and Mburu, 2014). According to *Saunders et al*, (2009) a dependent variable changed by reason of changes in other variables and an independent variable is one which can cause a change in a dependent variable. Extraneous variables are independent variables that are not directly related to the purpose of the study, but may have an impact on the dependent variable (Kothari,2004).(20)

This study considered APP as a dependent variable and independent variables are: Capacity of health workers, LMIS and Management support

Independent variables

extraneous variable

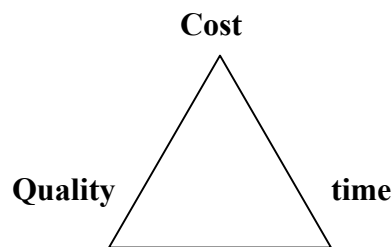


1.7.1 Capacity of health workers

A system that has got competent professional workforce equipped with defined skills and knowledge for specified procurement jobs can produce a sound APP.(OECD-DAC, 2006). For an APP document to be developed there is need for a workforce of health workers with the right skills and capabilities and this was sighted as a challenge, given changes to procurement processes, the introduction of single supplier and increased reliance on services provided by the donors (Government Accountability Office, 2005).

1.7.1.1 Knowledge about the budget

The “iron” Triangle



The iron bar is vital in that a change in one component will impact on the others, and therefore:

- If the cost of vital Essential medicines and health supplies are greatly reduced it may impact on the quality of the EMHS to be delivered at the right time.

1.7.1.2 Coordination between departments

The development of an APP is the first step in the ensuring availability of EMHS. The department of pharmacy is taken as the lead department in ensuring the development of APP for EMHS. The department of pharmacy therefore with other stakeholder departments should work together closely in the early stages so as to come up with the actually quantities of the items to be procured. It is recognized that in some case the budgeting cycle is done annually.

1.7.1.3 Knowledge about APP

The advantages of APP are as follows:

- The department of pharmacy helps to forge links between the stake holders that is the users units and planning department so as to provide requirements.
- Pharmacy department staff will be informed of the potential requirements needed by each department or unit.
- Economies of scale are gained by aggregating all the requirements of different hospital user units.
- No user unit will claim in the later months that items were planned for and yet they are not being bought.
- The EMHS items planed for will be for a whole year , no major interruptions are required in the middle of the year.
- All the user units can plan and fix resources to items that are vital in the specific departments.
- Periodic reports of budget monitoring on the progress of use of funds can be published on the basis of the Annual procurement plan .(these are not obligatory but can help warn users units be informed of the financial implications if there is none adherence to the Annual procurement plan)
- Cooperation with the National Medical Stores and other contracted suppliers will lead to reduced stock outs of EMHS.
- The APP of the Health facility will be linked to National Medical Stores supply schedules.

1.7.1.4 Challenges of not undertaking Annual Procurement planning.

By not developing an APP the following are most likely to occur:

- The user units, planning department, hospital management and the pharmacy department will work in isolation un aware of each other's needs.
- The pharmacy department will not avoid receiving surprises of requirements of items that were budgeted or planned for.
- Pharmacy department will not quantify for the right commodities for the user units due to lack of information.

- The budgeting for the EMHS required will be hard since no input was obtained from the user units.
- Some of the EMHS will not be planned for a whole year since some are slow moving in other units thus causing a break in the supply chain.
- It would be very difficult to allocate resources to the facility without Annual procurement plan.
- Periodic reports of budget monitoring would not be published easily.
- Working with National Medical stores would be difficult since determining the quantities of items to procure for the health facility difficult.
- There will be no Annual Procurement Plan of health facility linked to National Medical Stores supply Schedule.

1.7.1.5 Competent professional work force

Robust human resource management is defined by a strategy that enables an organization to systematically address the dynamics of the health workforce across the working lifespan –from entry, to development and performance, and then exit.

Human resources are a key performance driver within supply chains as well as

Therefore, the effective management of a supply chain demands excellence in managing its human resources. By proactively managing plans, policies, and procedures associated with people, an organization can expand its operations that sustain supply chain performance

1.7.1.6 Knowledge about budget

Procurement Planning versus Budget and Allocation

EHMS are the second largest item of recurrent primary health care expenditure after wages, contributing to over 40% of GOU recurrent expenditure.

According to the pharmaceutical financial manual march 2012 page 1 a budget is the amount of money a health facility is expected to receive and spend on specific planned items during a given financial year (1st July to 30TH June).

The manual further explains that the credit line represents a virtual allocation /financial limit of the value of commodities a health facility can order cumulatively in a financial year or in a given delivery cycle. For harmonization purposes the terms budget and allocation will be used interchangeably throughout the manual to mean allocation as per budget line either the vote 116 or lab –vote.

There is a general lack of knowledge about Annual Procurement Planning of EMHS. In Most health facilities procurement planning is equaled with making department requirements which is totally different from procurement planning for EMHS.(13)

Pharmaceutical financial management

According to the pharmaceutical financial manual march 2012 page 1 a budget is the amount of money a health facility is expected to receive and spend on specific planned items during a given financial year (1st July to 30TH June).

The manual further explains that the credit line represents a virtual allocation /financial limit of the value of commodities a health facility can order cumulatively in a financial year or in a given delivery cycle. For harmonization purposes the terms budget and allocation will be used interchangeably throughout the manual to mean allocation as per budget line either the vote 116 or lab –vote .(13).

This research therefore intends to find out how to make health facility understand the importance of knowing budget and allocated funds for them to be able to come up with proper Annual Procurement Plans and be able to monitor them.

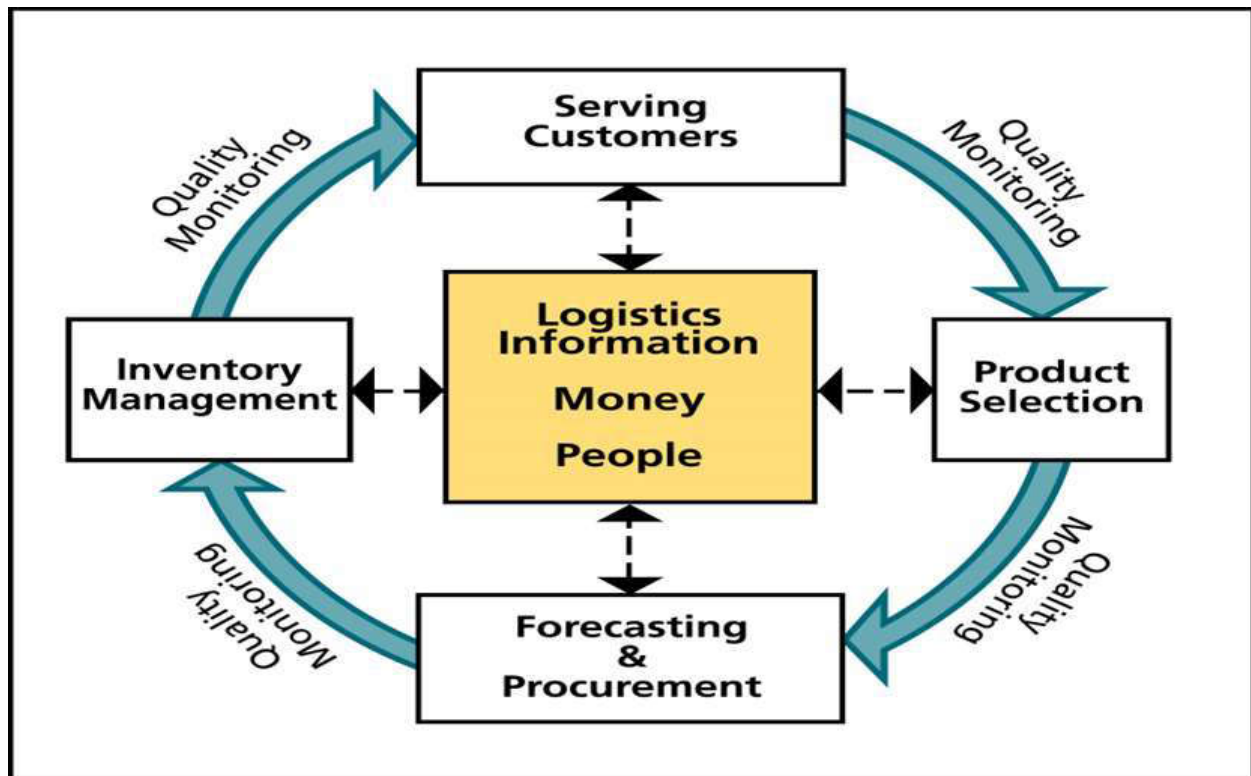
1.7.2 Logistics management information systems

A logistics management information system (LMIS) is a system of records and reports (paper – based or electronic)–used to document logistics process ,aggregate , analyze, validate and display data (at all levels of the logistics system) that can be used to make logistics decisions and manage the supply chain. An effective LMIS system should always ensure that there is adequate quantity and quality of health commodities available at every point of service delivery

to meet patients demands. LMIS is important in supply chain management in ensuring planning of EMHS, forecasting procurement from suppliers, shipment, central warehouse management, ordering, distribution/redistribution, receipt, facility storage, stock management, requisition and issues, dispensing, reporting on logistical process, other consumption data and disposal. The LMIS data elements used to facilitate capture of aforementioned data include stock on hand, losses and adjustments, consumption, demand, issues, shipment status, and information about the cost of commodities managed in the system. The absence or use of wrong LMIS causes the following:

- a. Poor record keeping leading to incomplete or not up to date stock and consumption records.
- b. Poor reporting as a result of late, incomplete and poor quality reports.
- c. Poor flow of data at different service delivery points that is to say facilities not submitting to districts, districts not sending reports to Ministry of health which is the central level and hence central level not providing feedback to districts and health facilities.
- d. The EMHS data not being utilized at the facility for decision making. (3)

Figure 1 shows the logistics Cycle



1.7.2.1 Records management

Equipment used at department level

In Tanzania: the use of the SMS based system by health facility staffs using providers own phones .The SMS system did the following:

- It helped to reinforce reporting at health facility level rather than replaces Tanzania's paper –based system
- It helped to remind the health workers to complete their required data collection tools on time.
- It helped to collect stock status reports for 20 products at the facility.
- It helped it making emergency orders on time.
- It helped to do evaluation of health facility stock status results.
- It caused 97% increase in reporting rate s and adherence to reporting groups
- It helped to have 93% improvement in inventory management
- And increased product availability by 45%.(21)

Tanzania and Zambia eLMIS

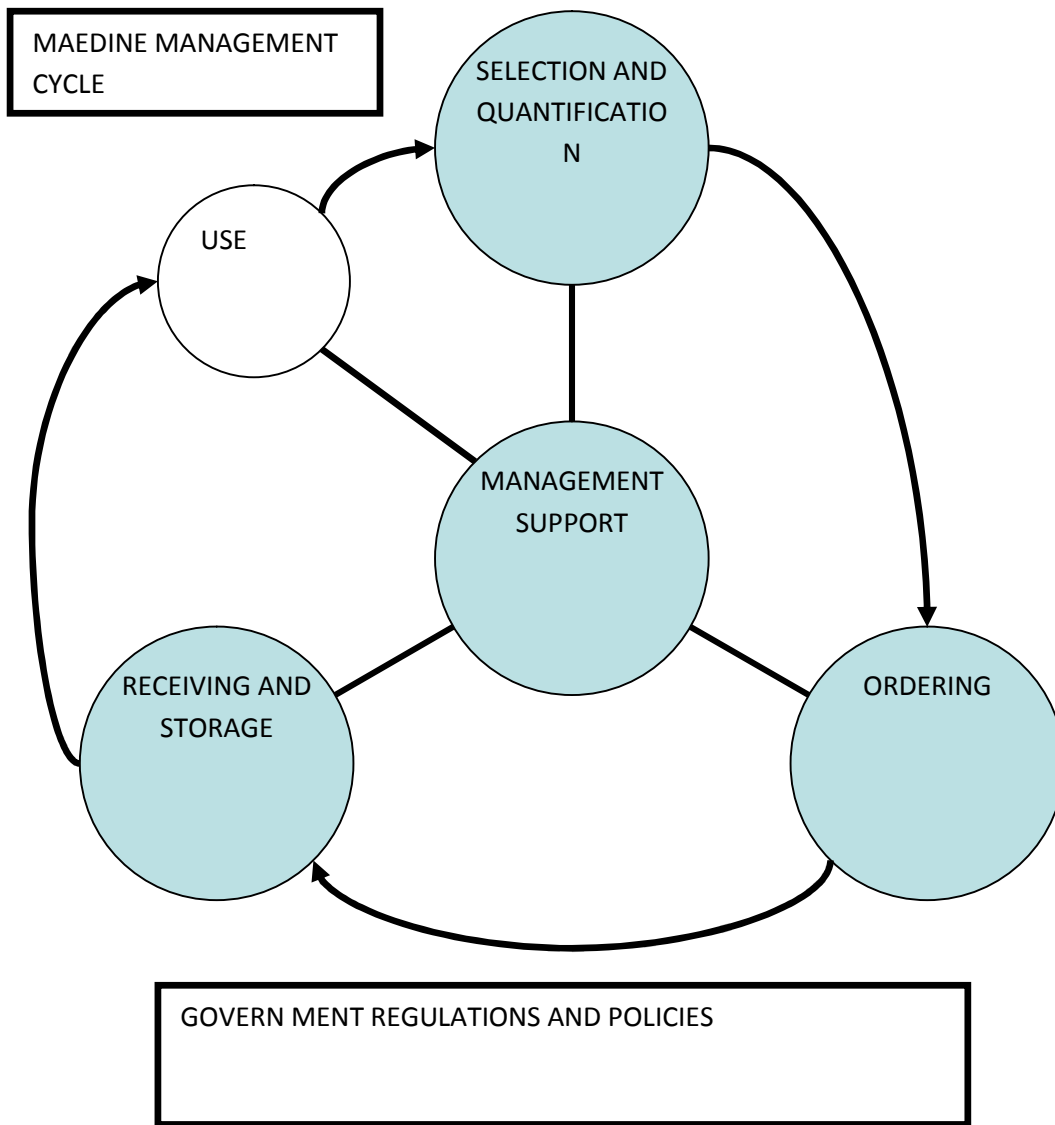
The above countries found out that an effective e LMIS should provide integrated access to :

- Data that is accurate, timely submission of data and routine consumption data collection
- The real time logistics management capabilities covering point of origin to point of consumption.
- It should ensured demand forecasting ,capacity planning and modeling based consumption (21)

1.7.3 Management support

Medicines management is a continuous activity as represented in the cycle shown below. The main components of the cycle are selection of medicines, ordering, receiving, storage and use. The whole system operates under management support that includes human and financial resources, and LMIS.

Figure 2 shows Medicine management Cycle (22)



Effective pharmaceutical management rests on a policy and legal frame work that establishes and supports the public (21)

CHAPTER TWO

MATERIALS AND METHODS

2.1 Study Design

Descriptive cross sectional study design was adopted because it allows the researcher to collect data at particular point in time and it is not time wasting.

2.2 Methods

The study tends to achieve the study objectives by linking the independent variable to the dependent variable as shown in the conceptual frame work above. Each study independent variable is linked to the each specific objective as shown below.

Specific objective 1

To assess the capacity of health facility staff in Annual Procurement planning of Essential medicines and Health supplies in Kampala District.

These are the independent variables below that were used to assess the Capacity of health facility staffs;

- Knowledge about budget
- Coordination between departments
- Competent professional workforce
- Knowledge about APP

Specific Objective 2

To identify the Logistics management information systems tools used in Annual Procurement planning of medicines and medical supplies in Kampala district.

The independent variable below was used to assess Logistics management information systems tools at the facility

- Records management /equipment at the department.

Specific objective 3

To determine the management support systems that is used in APP of Essential medicines and Health supplies in Kampala district.

The independent variables below were used to asses Management Support at the facility

- Effective supportive supervision
- Functional APP
- Functional Medicines and therapeutic committee
- Training of staff in APP
- Standard operating Procedures for APP
- Institutional formulary
- Availability of UCGs
- Feedback to staffs on the APP
- Human resources

Study variables

The study variable is the dependent variable which is the Annual Procurement Plan, the independent variables like:

- Records management (LMIS tools)
- Functional APP teams
- Coordination between departments
- Management support systems in place
- Functional MTCs /District Therapeutic Committees (DTCs) in place
- Equipment at department level e. g computers
- Standard Operating Procedures (SOPs) to guide in APP
- Knowledge about budget allocation for medicines and medical supplies.
- Trained staffs in APP
- Institutional formulary.
- Uganda clinical guidelines
- Effective supportive supervision
- Competent professional work force.

- Knowledge about Annual procurement planning
- Implementation of Pharmaceutical Finance manual

In the analysis plan data analysis was done using SPSS V20 soft ware .Were by Univariate and Bivariate analysis were used.

2.3. Study Population

The study was targeting the health care system with health care workers who are involved in annual procurement planning at the public health facilities as respondents. The target populations were the health workers in public health facilities in Kampala involved in Annual Procurement Planning. There are six public hospitals in Kampala city namely Mulago National Referral Hospital, Kirru National Referral Hospital which was formerly Directorate of medicine under Mulago National Referral Hospital, Kawempe National Referral Hospital which was formerly Directorate of Obstetrics and Gynaecology under Mulago National Referral Hospital, Butabika Psychiatric National Referral Hospital, Naguru Regional Referral Hospital and Murchison Referral Hospital for the Prisons Services.

There are two HCIVs namely Kisenyi HCIV under Kampala Capital City Authority (KCCA), and Nsambya Police barracks HCIV under Ministry of health Uganda .All these facilities are funded by the government of Uganda. They get their EMHS from National Medical stores Uganda (NMS).

There are four HCIIIs namely Kiswa HCIII, Komamboga HCIII and Kitebi HCIII, this health Centre threes are under the management of under Kampala Capital City Authority (KCCA), Kyambogo University HCIII is under Kyambogo University management. They are also supported by the government of Uganda.

2.4 Sample Size and Sampling method.

The sample size was determined using widely researched and applied formula. Since the target population N is known, the study has adopted the formula of Yamane, (1968) as shown in the equation below, to determine the sample size, n , is the number of case study respondents:

$$n = \frac{N}{1 + N(e)^2}$$

where n is the optimum sample size, N the target population (i.e. the total number of employees within the respective levels and departments) at the public health facilities in Kampala District, e the probability of error (i.e. the desired precision e.g. 0.05 at 95% confidence level.) n is approximately 206 as derived in the equation 2 below:

Where

n =sample size

N = study total population

e = error 5% at 95% confidence interval

$$n = 424 / 1 + 424(0.05)^2$$

$$n = 206$$

The number of staffs that were interviewed in each level of care were determined proportionately as follows.

National Referral Hospitals $228/424 \times 206 = 111$, but since each Hospital has 38 target staff, then three (3) Hospitals were selected for the study.

Health centre 1V $108/424 \times 206 = 52$, then the number of HCIV's included were two (2) since each health center has 27 target respondents.

Health centre III $88/424 \times 206 = 43$, then two (2) HCIIIs included in the study were two since each HCIII has 22 target respondents.

Sampling method

The health facilities were selected by simple random sampling, the facilities are in different levels of health care that is to say National Referral Hospital, National Referral Hospitals, Health Center 1V and Health Centre 111. The National Referral Hospital's staffs were purposively sampled. Mulago National Referral Hospital is not one of the study sites so as to avoid biases because the researcher is from Mulago National referral Hospital. The National Referral Hospitals, Health Centre 1Vs and Health Center 111s were selected using simple random sampling. This was done by writing the names of the facilities in small papers, put them in a basket and randomly picked the required number of facilities. The health workers involved in APP were purposively selected where the health workers are very many to determine the number required and simple random sampling was used for facilities.

2.5 Materials

The data collection instruments used were a questionnaires and document reviews. The survey questionnaire was developed based on the APP activities at the pharmacy department in the health facility and the study variables. The questionnaire contained information on existing procurement planning activities; annual procurement process data tools used for annual procurement and available supply chain human resources. Suggestions for solutions were captured by the research instrument. Ample time to analyze and answer questions was done by respondents as I obtain the information. The questionnaire was semi-structured. The document review used was to obtain information about the LMIS tools. The document review required to purposively select 30% of the stock cards in all the facilities that the study was carried out from.

2.6 Data analysis

Data analysis was done using SPSS V20 soft ware.

Data analysis is done in two levels namely:

1. Univariate

This level of data analysis looks at only frequency and percentages .But since the frequency and percentage cannot give significance, then we use Bivariate analysis.

2. Bivariate

Bivariate analysis is used to relate independent and dependent variables to find out how strong their relationship. In bivalent analysis you can conclude and make recommendations.

2.7 Ethical Consideration

The study permission and approval was obtained from Institutional Review Board (IRB) School of health Sciences Research and ethics Committee College of health sciences. Permission to conduct the study for Health centre IVs was obtained from Directors Kampala Capital City Authority (KCCA) /in-charges of the Health Facilities. Data for Murchison Referral Hospitals was obtained from Head Research Prison services.

2.8 Limitation of the study

The study is only limited to government Public health facilities in Kampala, it did not look at the Private facilities in Kampala district.

CHAPTER THREE
RESULTS OF THE STUDY

3.0 Introduction

Chapter four presents the study findings. These findings are presented in a manner that addresses each of the specific objectives as highlighted in chapter one of these dissertations.

3.1 Respondents' Demographic information

Table 1 showing respondents demographics information

Variables	Frequencies (n=206)	Percentages (100%)
Level of health facility		
Health center III	51	24.8
Health facility IV	65	31.6
National referral hospital	90	43.7
Total	206	100.0
Qualification of the respondents		
Medical doctor	24	11.7
Pharmacy technician	85	41.3
Procurement officer	36	17.5
Nurse	61	29.6
Total	206	100.0
How long served in the facility		
Less than 2 years	71	34.5
2-4years	53	25.7
5 and more	82	39.8
Total	206	100.0
Position in the facility		
In charge for facility	48	23.3
store in charge	69	33.5
pharmacy in charge	89	43.2
Total	206	100.0

Description of the demographic data of respondents

Majority of the study respondents were health workers from the National referral hospitals 90(43.7%), followed by the Health centre IV 65(31.6%) and Health centre III with 51(24.8%). By Qualification, pharmacy technician were the majority 85(41.3%) followed by nurse 61(29.6%). Majority of the health workers had for more than 5 years in these respective health facilities 82(39.8%) and majority of them held positions as pharmacy in-charge 89(43.2%).

Table 2: Bivariate data analysis of the demographics of health workers in Annual Procurement Plan

Variable	Presence of Annual procurement plan		Chi-square value	P-value
	Yes	No		
Level of health facility				
Health center III	51(34.5%)	0(0.0%)	26.576a	0.0001
Health facility IV	41(27.7%)	24(41.4%)		
National referral hospital	56(37.8%)	34(58.6%)		
Total	148	58		
Position in the facility				
In charge for facility	45(30.4%)	3(5.2%)	27.517a	0.009
store in charge	35(23.6%)	34(58.6%)		
pharmacy in charge	68(45.9%)	21(36.2%)		
Total	148	58		
Qualification of the respondents				
medical doctor	24(16.2%)	0(0.0%)	22.446a	0.0001
pharmacy technician	68(45.9%)	17(29.3%)		
procurement officer	19(12.8%)	17(29.3%)		
nurse	37(25.0%)	24(41.4%)		
Total	148	58		
How long have served in the facility				
less than 2 years	37(25.0%)	34(58.6%)	34.487a	0.0001
2-4years	53(35.8%)	0(0.0%)		
5 and more	58(39.2%)	24(41.4%)		
Total	148	58		

Table 2 Description of Bivariate analysis for demographic

Majority of the health workers who responded positively about the availability of the Annual Procurement Plan were from the National Referral hospitals with 56(37.8%) and reasonable number of other health workers from various health facilities also responded positive about the availability of the Annual Procurement Plan. The chi-square value of 26.576 was produced with the P-value of 0.0001 giving the implication that, there is a statistical significance between level of health facilities and the availability of the annual procurement plan.

Majority of the health workers who responded positive about the availability of the Annual procurement plan were the pharmacy technician 68(45.9%) however, equally big numbers of other health workers of other qualifications responded positive about the availability of the Annual procurement plan. A chi-square value of 22.446 and p-value of 0.0001 were produced implying that there is a strong statistical association between health workers qualification and the availability of annual procurement plan.

The duration of services by health workers in the health care facilities was found statistically significant to the availability of Annual Procurement Plan. This was evidenced by the chi- square value of 34.487 and the significance value of 0.0001 less than 0.05.

3.2 Dependent variable

Variables	Frequencies (n=206)	Percentages (100%)
Presence of Annual procurement plan		
Yes	148	71.8
No	58	16.5
Total	206	11.7
Total	206	100.0
Duration of respondents participation in the procurement planning		
Less than 2 yrs.	112	54.4
2 -4years-	17	8.3
5 yrs. and more	36	17.5
Never	41	19.9
Total	206	100.0
Role in procurement planning committee		
None	77	37.4
Secretary	51	24.8
Chairperson	41	19.9
Member	37	18.0
Total	206	100.0

Description of dependent variable in table 4.2

The majority of the respondents who participated in the study 148(71.8%) reported that they had Annual Procurement Plans present in the facility,112(54.4%) of the respondents had been in the facility for less than two years and regarding the role of health workers involvement of annual procurement planning 77(37.4%) recorded not been involved .

3.3 Univariate data analysis of the capacity of health workers in Annual Procurement Plan

Variables	Frequencies (n=206)	Percentages (100%)
Know the importance of procurement plan of medicine		
Yes	145	70.4
No	61	29.6
Total	206	100.0
why is APP done		
To improve quality of commodities	114	55.3
To match the budget allocated	75	36.4
Do not know	17	8.3
Total	206	100.0
Health workers involved in APP		
Yes	145	70.4
No	61	29.6
Total	206	100.0
When are health workers involved in APP		
None	20	9.7
Beginning of the year	145	70.4
End of the year	41	19.9
Total	206	100.0
When is NMS get involved in APP		
Do not know	145	9.7
beginning of the year	20	70.4
end of the year	41	19.9
Total	206	100.0

Univariate

In the univariate analysis of the capacity of health workers in APP majority of the health workers 145(70.4%) reported knowing the importance of annual procurement planning ,114(53.3%) of the health workers reported knowing the why Annual Procurement Planning should be done annually ,145(70.4%) reported being involved in Annual Procurement Planning ,145(70.4%) of the health workers interviewed reported that Annual Procurement Planning is done at the beginning of the year, and 145(9.7%) reported not knowing When National Medical Stores gets involved in Annual Procurement Planning of essential medicines and medical supplies.

Bivariate data analysis of the Capacity of health workers to conduct Annual Procurement Plan

Variable	Presence of Annual procurement plan		Chi-square value	P-value
	Yes	No		
Health workers involved in the APP				
yes	128(86.5%)	17(29.3%)	65.356a	0.0001
no	20(13.5%)	41(70.7%)		
Total	148	58		
When are health workers involved in APP				
Never	20(13.5%)	0(0.0%)	28.135a	0.0001
beginning of the year	111(75.0%)	34(58.6%)		
end of the year	17(11.5%)	24(41.4%)		
Total	148	58		
Health worker's knowledge on why is APP done.				
to improve quality of commodities	90(60.8%)	24(41.4%)	47.339a	0.0001
to match the budget allocated	58(39.2%)	17(29.3%)		
do not know	0(0.00%)	17(29.3%)		
Total	148	58		

Bivariate description showing relationship between capacity and availability of the APP

Majority of the health worker who were involved 128(86.5%) in the Annual Procurement Plan responded positively about it's availability than those who were not. The chi- square value of 65.356 and the significance value of 0.0001 less than 0.05. This gave an implication that involving health workers in the procurement plan had a strong statistical significance.

The biggest percentage of health workers who had knowledge on why procurement plan is done annually responded positively about it's availability. The chi-square value of 47.339 and p-value of 0.0001 <0.05 were produced giving an implication that there is a statistical significance between knowledge and availability of annual procurement plan.

3.4 Univariate data analysis of the Logistics Management Information System of health workers in Annual Procurement Plan

Variables	Frequencies (n=206)	Percentages (100%)
What LMIS tools do you use to get information during procurement plan		
stock card and book	141	68.4
outpatient register	24	11.7
previous procurement plan	24	11.7
do not know	17	8.3
Total	206	100.0
Do you use the information from stock book in procurement plan?		
Yes	75	36.4
No	131	63.6
Total	206	100.0
Reasons for not using the information LMIS tools.	N=131	
Stock book not available	39	18.9
Stock book not updated	51	24.8
Do not know	41	19.9
Total	131	100.0

In the use of Logistics Management Information systems in Annual Procurement Planning it was found out that majority of the health workers 141(68.4%) knew that we use stock book and stock a card during APP, in regards to actual use of stock book during APP 131(63.6%) reported that they do not use the stock book in APP, and regarding health workers not using LMIS tools during Annual Procurement Planning 51(24.8%) stated that the stock book is not updated while 41(19.9%) reported that they do not know.

Bivariate data analysis of the Logistic management system to Annual Procurement Plan

Variable	Presence of Annual procurement plan		Chi-square value	P-value
	Yes	No		
What LMIS tools do you use to get information during procurement plan				
stock card and book	107(72.3%)	34(58.6%)	78.448a	0.0001
outpatient register	0(0.0%)	24(41.4%)		
previous procurement plan	24(16.2%)	0(0.0%)		
do not know	17(11.5%)	0(0.0%)		
Total	148	58		
Health workers usage of the information from stock book in procurement plan				
yes	51(34.5%)	24(41.4%)	0.862a	0.353
no	97(65.5%)	34(58.6%)		
Total	148	58		

The biggest percentage of health workers 107(72.3%) who where using stock cards and stocks as the logistics management information tools as sources of procurement information positively responded to the availability of the annual procurement plan. A chi-share value of 78.448 with P-value of $0.0001 < 0.05$ were produced to implicate the strong relationship between the LMIS tools and the availability of the annual procurement plan.

Majority of respondents when asked whether they use the information from the stock book in procurement plan, they responded negatively giving a reason of them not being updated. A chi-square of 0.862 and the p-value of 0.353 >0.05 giving an implication that failure to use information on stock book has no statistical association with the availability of the annual procurement Plan.

3.5 Univariate data analysis of the management support in Annual Procurement Plan

Variables	Frequencies (n=206)	Percentages (100%)
Dose the facility in charge disseminate the information on budget allocated for medicines		
yes	75	36.4
no	131	63.6
Total	206	100.0
How many procurement plan meeting do you conduct for specific procurement period		
once a year	114	55.3
twice a year	75	36.4
other	17	8.3
Total	206	100.0
What kind of meetings do you hold		
Entry procurement planning meeting	58	28.2
Review of procurement plan	87	42.2
Do not know	61	29.6
Total	206	100.0
Do you have minutes for the procurement plan meetings		
Yes	41	19.9
No	165	80.1
Total	206	100.0
Do you have operational medicines and therapeutic committee?		
Yes	17	8.3
No	135	65.5
Do not know	54	26.2
Total	206	100.0

If yes, what is the role of MTC		
constitutes the procurement plan	17	8.3
none	19	9.2
Total	206	100.0
If no MTC, do you have procurement planning committee?		
Yes	111	53.9
No	95	46.1
Total	206	100.0
How do you rate the support from management during the procurement planning		
Very good	51	24.8
Fair	95	46.1
Poor	60	29.1
Total	206	100.0
What kind of support do you get from management		
Facilitation of procurement planning meetings	34	16.5
Ensuring availability of information for PP	17	8.3
Budgeting for PP activities	17	8.3
All above	73	35.4
None	65	31.6
Total	206	100.0
Who is responsible for the procurement plan?		
Facility in charge	34	16.5
All above	128	62.1
Don't know	44	21.4
Total	206	100.0
what further support needed to facilitate effective PP		
All above	206	100.0

Source: filed data

Looking at the univariate analysis in management support 131(63.9%) reported that the facility in-charge does not disseminate information regarding the budget, 114(55.3%) reported that procurement planning meeting are held once a year ,61(29.6%) reported that they do not know what kind of meeting are held , 165(80.1%) reported that there were no minutes kept ,135(65.5%) reported having no operational Medicines and Therapeutic Committees at the facility,19(9.2%) that reported availability of Medicines and Therapeutic Committee did not know their roles in MTC ,111(53.9 that reported none availability of MTC ,reported that they have Procurement Planning committee instead of MTC, in rating of management support 95(46.1%) rated it as fair while 60(29.1%) rated management support as poor, 65(31.6%) reported not getting any support from management,128(62.1%) reported that all the above mentioned cadres are involved in the APP,44(21.4%) of the health workers reported not knowing who should be involved in APP and in regards to support from management support 206(100%) of the health workers reported that they needed support from management.

Bivariate data analysis of the management support to health workers in Annual Procurement Plan

Variable	Availability of Annual procurement plan		Chi-square value at 95% Confidence Interval	P-value
	Yes	No		
Dose the facility in charge disseminate the information on budget allocated for medicines				
Yes	75(50.7%)	0(0.0%)	46.219^a	0.001
No	73(49.3%)	58(100.0%)		
Total	148	58		
what kind of meetings do you hold				
Entry procurement planning meeting	58(39.2)	0(0.0%)	31.639^a	0.001
Review of procurement plan	53(35.8%)	34(58.6%)		
Do not know	37(25.0%)	24(41.4%)		
Total	148	58		

Do Health workers have minutes for the procurement plan meetings?				
Yes	41(27.7%)	0(0.0%)	20.060^a	0.000
No	107(72.3%)	58(100%)		
Total	148	58		
Presence of operational medicines and therapeutic committee?				
Yes	17(11.5%)	0(0.0%)	42.458	0.0001
No	77(52.0%)	58(100%)		
Do not know	54(36.5%)	0(0.0%)		
Total	148	58		
How do rate the support from management during the procurement planning				
Very good	34(23%)	17(29.3%)	9.782^a	0.008
Fair	78(52.7%)	17(29.3%)		
Poor	36(24.3%)	24(41.4%)		
Total	148	58		
kinds of support health workers get from management				
Facilitation of procurement planning meetings	34(23%)	0(0.0%)	80.049a	0.0001
Ensuring availability of information for PP	17(11.5%)	0(0.0%)		
Budgeting for PP activities	0(0.0%)	17(29.3%)		
All above	56(37.8%)	17(29.3%)		
None	41(27.7%)	24(41.4%)		
	148	58		

Source: Field data

Majority of Health workers when asked whether their in charges disseminate the information on budget allocated for medicines they responded negatively 58(100.0%). A chi-square of 46.219 and the p-value of $0.0001 < 0.05$ giving an implication having no information on budget

allocated for medicines has a strong statistical association with the availability of the annual procurement Plan.

The biggest proportion of health workers held various meetings such as Entry procurement planning meeting, review of procurement plan meeting. When they asked whether they receive minutes for these meetings majority 107(72.3%) responded negatively. A chi-square of 20.060 and the p-value of $0.0001 < 0.05$ this gave an implication that having no meeting minutes has a strong statistical association with the availability of the annual procurement Plan.

Majority of health workers 77(52.0%) when asked about the presence of operational medicines and therapeutic committee responded negatively. The evidence of the chi-square value 77(52.0%) and p-value of $0.0001 < 0.05$ implied that the absence of the operational medicines and therapeutic committee had a statistical significance to the availability of the annual procurement Plan

The biggest number of health workers rated the support from management during the procurement planning as fair 78(52.7%) and others reasonable number rated it poor 24(41.4%). The chi-square value of 9.782 and p-value of $0.008 < 0.05$ implied that the management support in them of facilitation of procurement planning meetings, ensuring availability of information for Procurement Plan and Budgeting for Procurement Plan activities were strongly associated to the availability of the annual procurement Plan.

3.6 Validity

The data collection tools will be pre –tested first. The data obtained through the questionnaire will be corroborated with data obtained through document reviews where necessary.

3.7 Reliability

Reliability is defined as the extent to which an experiment, test, or measuring procedure yields the same results on repeated trials. This will be achieved by first pre-testing the tools and obtaining primary data when available.

3.7.1 Confidentiality

Confidentiality of the information will be assured. The interviews will be carried out in places where there will be no or minimal interruption of the respondents. No respondent identifiers will be used and the results will be reported as aggregate data.

3.7.2 Informed consent.

Informed consent will be sought from the participants that are going to participate in the study .Written informed consents will be sought from the participants that are going to be part of the study.

3.8 Dissemination plan

The results will be disseminated through Ministry of Health Quarterly (MOH) meetings, MOH technical working groups for Medicines and health supplies, seminars, workshops.

CHAPTER FOUR

DISCUSSION, CONCLUSION AND RECOMMENDATION

4.1 Discussion

This chapter presents the discussion of findings of the study. Results were discussed in relation to the literature review.

4.1 Demographic information of health workers

The study found a statistical significance between level of health facilities and the availability of the annual procurement planning for medicines and supplies. This therefore, informs the heads of these respective health facilities to always consider annual procurement plans as an important aspect of improving availability of medicines and medical supplies thus improving the quality of life of the general population.

4.2 Capacity of health workers and Annual Procurement Planning of Medicines and Medical supplies.

As we focus on improving the procurement planning of medicine and supplies, there is need to involve all health workers of various qualifications in procurement process say the pharmacy technician, doctors, nurses ,store managers and many more as their contributions are equally important to the success of effective medicine supply chain. This was evidenced in these very study findings where it was revealed that involving health workers in the procurement plan had a strong statistical significance.

This is in agreement with a study conducted in Kenya on factors affecting procurement planning in county governments a case study done in Nairobi city 2014;11(11) 1-34 (12) which found that inadequate competencies of procurement staff, lack of management support, information technology tools and budgeting procedures affect procurement planning.

This study is also in agreement with the findings that were got in Namibia on capacity of health workers handling procurement planning the ,study found out that inadequate capacity and

information hampered procurement planning and quantification and inventory control systems in the supply chain were weak . (23)

In the same scenario this study is in agreement with the study results found in Rwanda regarding capacity of health workers in procurement planning ,in Rwanda it was found that a lack of capacity existed to quantify and coordinate needs for Prevention of Mother to child transmission (PMTCT) and Antiretroviral Therapy(ART) services .(23)

This is in agreement with a study carried out in Uganda, some years ago that almost all public health facilities in Uganda did not know how to prepare annual procurement plan for medicines and medical supplies and vaccines. This was attributed to lack of set rules, procedures and principles to follow during procurement planning process and the people involved in procurement planning were non pharmacists, pharmacy technicians and public nurses for immunization. More so, there was lack of knowledge on availability of allocated funds in the budget on time and some items to procure not indicated in the budget. These resulted in to loss of value for money, procurement of unnecessary items are not needed in much quantities and also expiries of health commodities. (12)

Health workers equally need to be empowered with knowledge on why procurement planning of medicines and other supplies are done annually so as to improve on the availability of essential medicines and other health supplies. This is in agreement with the study findings were it was found that, health workers who had knowledge on why procurement planning was done annually were more involved in the procurement plan and were much willing to support the process than those who did not know. Another study also in agreement with this study findings when they found that a sound Annual procurement Planning system has to have a competent professional workforce equipped with defined skills and knowledge for specified procurement jobs (OECD-DAC, 2006).

4.3 Logistics Management Information systems and Annual Procurement Planning of Medicines and Medical supplies.

The routine proper usage of logistics management information tools such as the stock cards and stock books as sources of procurement information are key in successful annual procurement planning of medicines and other health supplies. This was best revealed in the study findings where a strong statistical relationship between the LMIS tools and the availability of the annual procurement plan. This is in agreement with a research conducted in Tanzania and Zambia which found that an effective logistics management information system (LMIS) should ensure that adequate quantity and quality of health commodities are always available at the point of service to meet patient demand.

For these tools to be useful for annual procurement planning of medicines and other health supplies, they are required to be updated regularly by the health care professionals of concern.

4.4 Management Support and Annual Procurement Planning of Medicines and Medical supplies.

The study revealed that it is important to have information about the budget, entry, exit and review meetings are important in Annual Procurement planning of medicines and medical supplies .It was also noted that minute keeping is very important for future reference .The study also revealed that it is important to have an operational MTC, since MTC are the ones that are involved in vetting the Annual Procurement plan before it is approved by the facility in-charge. There is also need for great management support from management so as to improve annual procurement planning. This is in agreement with a study in Kenya on factors affecting procurement planning in county governments a case study done in Nairobi city 2014;11(11) 1-34 (12) which found that inadequate competencies of procurement staff, lack of management support, information technology tools and budgeting procedures affect procurement planning.

4.5 Conclusion and Recommendations

Conclusion

Proper management of medicines and medical supplies is among the building blocks of a health care system. Attainment of this building block requires proper Annual Procurement Planning. In order to attain this healthcare system block there is need to improve capacity of health workers through training, impacting knowledge as to why APP are done annually, making proper use of Logistics management information tools like stock cards, stock books is vital in ensuring proper Annual Procurement planning, as well as ensuring management support like having meetings, keeping of minutes of annual procurement planning meetings and ensuring functionality of Medicines and therapeutic committees in the health facilities.

Recommendations

From the study there is need to strengthen medicines and therapeutic committees in the health facilities and ensure availability of policies on annual procurement planning, avail policies to the health facilities.

The study also found out that the Logistics management information tools are not use and some are not available therefore the health workers should ensure that logistics management information tools are in use and available.

The study furthermore found that the health workers involved in annual procurement planning of medicines and medical supplies he have never had any training hence the study recommends that health facility in-charges/managers should ensure that the health workers are trained in annual procurement planning, logistics management information systems tools, and ensure to always have meetings, keep meetings of annual procurement planning of medicines and medical supplies for future reference.

REFERENCES

1. Paul Bakuluki, Peter k. Byansi, John Sengendo PB and DK-M. Global Health Governance, Volume V1, No2 (Summer 2013) <http://ghgj.org>. Change from pull to push Syst Distrib Essent Med Heal supplies Essent Med Heal supplies Uganda Implication Effic Alloc Med Meet localized Needs Heal Facil. 2013; V1 (No2): 11.
2. Paul Bukuluki, Peter K. Byansi, John Sengendo, Nyanzi I. Ddumba, Paul Banoba A, Kaawa-Mafigiri D. Changing from the “Pull” to the “Push” System of Distributing Essential Medicines and Health Supplies in Uganda: Implications for Efficient Allocation of Medicines and Meeting the Localized Needs of Health Facilities. Glob Heal GOVERNANCE, Vol VI, NO 2 (SUMMER 2013) <http://ghgj.org>. 2013; VI (NO 2): 11.
3. Siitanshu Sekhar Kar, Himanshu Sekhar Pradhan GPM. dian J Community Med RefereCE DOCUMENT. 2010. p. 35.
4. Edition F. PUBLIC PROCUREMENT MANUAL. 2009; (July).
5. EFFECTS OF PROCUREMENT PLANNING ON SERVICE DELIVERY IN STATE CORPORATIONS IN KENYA: A CASE OF KENYA AGRICULTURAL AND LIVESTOCK RESEARCH ORGANIZATION Jackson, J. G., & Ombui, K.
6. Management Sciences for Health. Managing procurement. Manag Sci Heal. 2012;
7. Hare L, Snow J. Logistics Management Information Systems (LMIS) Definition and function. 2012;
8. Of I. The public procurement and disposal of public assets act, 2003 _____ arrangement of sections. p. 2003;
10. Miller R, Wilkerson T, Wilkerson T. Improving Procurement Practices in Developing Country Health Programs FINAL REPORT With significant inputs from Acknowledgements. 2014; (January): 1–25.
11. Division P. The Three Year Rolling Procurement Plan for Essential Medicines and Health Supplies. 2011; (March 2010): 1–38.
12. Kingdom U, Ogubala R, Kiarie D. FACTORS AFFECTING PROCUREMENT PLANNING IN COUNTY GOVERNMENTS IN KENYA: A CASE STUDY OF NAIROBI CITY COUNTY. 2014; II(11): 1–34.
13. Division of Pharmacy Services. Pharmaceutical Financial Management Manual. 88 p.
14. Nyaga JN, Kihara A. OF KENYATTA NATIONAL HOSPITAL.

15. NMS POOR Procurement plans.
16. Medicines E. Management of Medicines and Health Supplies Manual. 2012;(March).
17. IEISLIE Arney. Global Health science and practice. Strateg Contract Pract to Improv Procure Heal Commod. 2014;
18. M.Kitimo G. factors hindering Annual Procurement plan.Acase of Medical Stores department Dare es salam. 2013.
19. Mwanje. cobams Masters. 2016.
20. Sowah EA. GHANA FRAME WORK. 2015.
21. Embrey M. Managing Access to Medicines and Health Technologies.

APPENDICES

APPENDIX I: Informed consent

APPENDIX 1: INFORMED CONSENT FORM TEMPLATE FOR RESEARCH PARTICIPANTS AGED 18 YEARS AND ABOVE.

Title of the proposed study:

Factors influencing Annual Procurement Planning of medicines and medical supplies in government health facilities in kampala district, Uganda .

Investigators:

Names: Martha Grace Ajulong

Institution: University Of Rwanda

Contacts of the investigators. +256772947082

Study sponsor

Self sponsored

Background and rationale for the study:

Availability of essential medicines and medical supplies is a major determinant of quality of health care.

In Uganda, the requirement for procuring health facilities to prepare annual Procurement plans is mandatory in accordance with the public procurement Act no. 293 of 2003. However, many public health facilities do not give proper attention to preparing the annual procurement plans . Many public health facilities are faced with the problem of partly improper development of annual procurement plans leading increased stock outs of medicines and medical supplies. Health care workers from public health facilities in Uganda have been reported to fail to answer basic questions on how to determine procurement quantities such as what is average monthly consumption (AMC), what to order, what quantity to order and when to order.

Purpose

To assess the factors influencing Annual Procurement Planning of medicines and medical supplies in public hospitals in Kampala city.

Procedures

The study is investigating factors influencing Annual Procurement Planning of medicines and medical supplies. Participants will be required to provide information on how Annual Procurement Planning of medicines and medical supplies is done at their facilities. There will be no experimental studies involved.

Who will participate in the study and where the study is going to be conducted from?

The health care workers who participate in Annual Procurement Planning of medicines and medical supplies will be involved in the study.

Risks/Discomforts

Minimal risks may be feeling of uncomfortable answering some technical questions by the health workers.

Benefits of the research study

There will be no possible benefits but the study will help to improve knowledge on Annual Procurement Planning of medicines and medical supplies in public health facilities in Kampala city.

Cost

There will be no costs incurred by the participants since the participants will be interviewed at their places of work.

Compensation for participation in the study

There will be no compensation the study will take around 40minutes with each participant. There will be no compensation for injuries since it's not an experimental study.

Reimbursement

There will be no travel costs since the participants will be interviewed at the places of work.

Questions about the study

They can reach the investigator through the provided telephone contacts. The telephone contact of the investigator will be provided after the interview. (0772947082)

Questions about participants rights

The participant's who have questions about their rights can contact the chair IRB MakSHSIRB chairperson Dr. Paul Kutwabami on telephone number +256 772404970 or +256 0200903786)

Research involving the collection of human materials/samples

This study will not involve collection of human materials /samples.

Dissemination of study feedback or study findings and progress of the study

The results of the study will be disseminated through Ministry of Health quarterly meetings, seminars, workshops.

Statement of voluntariness

This study is voluntary the participants can withdraw at any time they wish.

Approval of the research study

The study has been approved by Makerere University School of Health Sciences Research and Ethics Committee /IRB) which is an accredited Ugandan based Research and Ethics Committee/IRB.

Confidentiality

The results of this study will be kept strictly confidential, and used only for research purposes. My identity will be concealed in as far as the law allows. My name will not appear anywhere on the coded forms with the information. Paper and computer records will be kept under lock and

key and with password protection respectively.

The interviewer has discussed this information with me and offered to answer my questions. For any further questions, For any further questions, I may contact the Chairperson of the School of Health Sciences Research and Ethics Committee (MakSHSREC) on (+256) 772-404970 / (+256) 0200903786 or Uganda National Council of Sciences and Technology on Tel: (+256)-041-4705500).

Statement of consent

Martha Grace Ajulong has described to me what is going to be done, the risks, the benefits involved and my rights regarding this study. I have been informed about the study in which I am voluntarily agreeing to take part. In the use of this information, my identity will be concealed. I am aware that I may withdraw at anytime. I understand that by signing this form, I do not waive any of my legal rights but merely indicate that I have been informed about the research study in which I am voluntarily agreeing to participate. A copy of this form will be provided to me.

Name of research participant.....

Age.....

Signature

Date (DD/MM/YY).....

Name of the person consenting the research participant.....

Signature

Date (DD/MM/YY).....

APPENDIX II: IRB Approval from college of health sciences



**COLLEGE OF HEALTH SCIENCES
SCHOOL OF HEALTH SCIENCES
OFFICE OF THE DEAN**

August 27th, 2019

Ms. Martha Grace Ajulong
University of Rwanda
Rwanda

Category of review

- Initial review
 Continuing review
 Amendment
 Termination of study
 SAEs

Dear Ms. Ajulong,

**Re: Approval of research protocol #SHSREC REF: 2019-056
“Factors Influencing Annual Procurement Planning of Medicines and Medical
Supplies in Public Health Facilities in Kampala District, Uganda”**

Thank you for submitting an application for ethical review of the above referenced research protocol. The committee reviewed it and granted approval for **one (1) year**, effective **August 27th, 2019**. Approval is valid until **August 26th, 2020**.

Continuing Review

In order to continue working on this study (including data analysis) beyond the expiration date, the School of Health Sciences Research and Ethics Committee must reapprove the protocol after conducting a substantive, meaningful, continuing review.

This means that you must submit a continuing report form as a request for continuing review. To best avoid a lapse, you should submit the request six (6) to eight (8) weeks before the lapse date. Please use the forms supplied by our office.

Amendment Review

During the approval period, if you propose any change to the protocol such as its funding source, recruiting materials, or consent documents, you must seek School of Health Sciences Research and Ethics Committee approval before implementing it.

Please summarize the proposed change and the rationale for it in a letter to the School of Health Sciences Research and Ethics Committee. In addition, submit two (2) copies of an updated version of your original protocol application- one showing all proposed changes in bold or ‘track changes,’ and the other without bold or track changes.

Reporting

Other events which must be reported promptly in writing to the School of Health Sciences Research and Ethics Committee include:

Suspension or termination of the protocol by you or the grantor. Unexpected problems involving risk to participants or others

Adverse events, including unanticipated or anticipated but severe physical harm to participants.

Monitoring audit of research study activities

As per the Uganda National Guidelines for Research Involving Humans as Research Participants, Section 3.5, The Research and Ethics Committee has a duty to ensure that all research studies it approves are conducted in accordance with the research governance code of practice. In order to ensure compliance with scientific and ethical requirements, the School of Health Sciences Research and Ethics Committee undertakes random monitoring audits. If your research study is selected for monitoring audit, you will be given three (3) week's notice to prepare all documentation for inspection, Therefore, expect the monitoring team at your study site anytime.

It is your responsibility to inform us in the event of early termination of the research project or if you fail to complete the research project.

Documents approved for use along with the research protocol include:

- Informed consent form for research participants (English version)
- Questionnaire (English version)

Note: Only stamped informed consent form and data collection forms should be used for data collection. Any data collected using unstamped forms will be considered invalid.

Do not hesitate to contact us if you have any questions. Thank you for your cooperation and commitment to the protection of human subjects in research.

Final approval is to be granted by Uganda National Council for Science and Technology.

Yours sincerely,



Dr. Paul Kutyaabami
Chairperson, School of Health Sciences Research and Ethics Committee
College of Health Sciences, Makerere University



APPENDEX III: Questionnaire

**DATA COLLECTION TOOLS
QUESTIONNAIRE**

A. Part I: Respondent characteristics

1. Level of the health facility
 - a) Health center III
 - b) Health center IV
 - c) Hospital
 - d) Regional referral Hospital
2. Qualification of the respondent
 - a) Medical doctor
 - b) Pharmacist
 - c) Procurement officer
 - d) Nurse
 - e) Pharmacy technician
 - f) Clinical officer
 - g) Records personnel
 - h) Laboratory technician
 - i) Others; specify.....
3. What is your position in this facility?
 - a) In charge for the whole facility/Director
 - b) Stores in charge
 - c) Pharmacy in-charge
 - d) Others, specify.....
4. Does the facility have a procurement planning committee?

Yes—

No---
5. If Yes , What is your role in procurement planning?
 - a) Chair of the procurement committee
 - b) Secretary of the committee
 - c) Committee member
 - d) Others.....
6. For how long have you served in this facility?
 - a) Less than 2 years
 - b) For 2-4 years
 - c) More than 5 years
7. For how long have you participated in procurement planning?
 - a) Less than 2 years
 - b) For 2-4 years
 - c) More than 5 years

B. ASSESSING THE CAPACITY OF HEALTH WORKERS IN APP

8. Do you know the importance for procurement planning of medicines and medical supplies?

Yes ---

No---

If yes.

What is the importance of APP?

- a. For proper planning of medicines and health supplies.
- b. Improve availability of medicines and medical supplies
- c. Add value for money

9. Why do you think Annual Procurement planning of medicines and, medical supplies should be done annually?

- a) To improve the quantities of commodities
- b) To match the budget allocated
- c)

10. Are you all involved in Annual procurement planning of medicines and medical supplies in the facility? Yes ----- No-----

11. If Yes : what do you do ?

a)

When do you get involved in APP of medicines and medical supplies?

12. When does NMS get involved in APP?

- a) Beginning of the APP process
- b) At the middle of the Annual procurement planning process
- c) At the end of the Annual procurement planning process.

13. Are implementing partners support you during procurement planning of medicines and medical supplies? Yes ----- No-----

14. Which items are implementing partners interested in ?

- a) Amoxicillin DT
- b) ORS

c) Tablets Albendazole

15. Why are the implementing partners interested in the above items you mentioned in No 15?

a) The items are expensive

c) I don't know

b) The items are very vital

16. Have you been trained on Annual procurement planning?

a) Yes

b) No

Instructions for questions 18- 27 Tick answer(s) all that apply.

17. If yes, what kind of training?

a) Pre-service training

b) In-service training

c) Continuing medical education/continuing professional development

d) Others specify.....

19 .What steps/processes do you follow or go through while preparing a procurement plan?

a) Preparation of wish list by user department/user units or from a stock book

b) Consolidation of user unit wish lists

c) Vetting of procurement planned items

d) Approval of the procurement plan

e) Submission of the approved plan

f) Others specify

20.What information do you need when making a procurement plan? Budget allocation for the financial year being planned for.

a. Maximum stock level

b. Minimum stock level

c. Average monthly consumption

d. Stock on hand

e. Losses and adjustments

f. Disease burden

g. Others specify.....

21. How would you determine quantities to procure for the specified period?
- a) Maximum stock for the procurement period – stock at hand
 - b) Average monthly consumption x procurement period
 - c) Maximum stock for the procurement period+ stock at hand
 - d) Use quantities from the previous procurement plan
22. If the budget available to purchase medicines is not adequate, how would you prioritize medicines to procure?
- a) I with others will agree on the quantities to procure by consensus
 - b) I would reduce uniformly all the quantities the supplies by a factor
 - c) I would buy medicines that I prefer using
 - d) I would use the VEN principle
 - e) Others.....

Tick all that apply

23. Have you had any training in the following below?
- a) Logistics management
 - b) Medicines management
 - c) Continuing medical education/continuing professional development on procurement planning of medicines
 - d) Others specify.....
24. What steps/processes do you follow or go through while preparing a procurement plan in your units ? tick all that apply
- a) Preparation of wish list by user department/user units or from a stock book
 - b) Consolidation of user unit wish lists
 - c) Vetting of procurement planned items
 - d) Approval of the procurement plan
 - e) Submission of the approved plan
 - f) Others.....
25. What information do you need when making a procurement plan? **Tick all that apply**
- a) Budget allocation for the financial year being planned for.

- b) Maximum stock level
 - c) Minimum stock level
 - d) Average monthly consumption
 - e) Stock on hand
 - f) Losses and adjustments
 - g) Disease burden
 - h) Others specify.....
26. How would you determine quantities to be procured for the specified period?
- a) By determining stock at hand
 - b) Determining Average monthly consumption
 - c) Calculating Maximum and minimum stock
 - d) Use quantities from the previous procurement plan
27. Do you get to know the budget available to purchase medicines from;
- a) The facility in-charge
 - b) National Medical Stores
 - c) The unit in-charge
 - d) None of the above

C. ASSESSING LOGISTICS MANAGEMENT INFORMATION SYSTEMS

Instructions purposively select 30% stock cards in the Health facility and fill in the information in the tables below.

28. What LMIS tools do you use to get information during Procurement planning?

Tick all that apply

- a) Stock card
- b) Stock book
- c) Dispensing log

Others.....

29. Do you use information from a stock book during procurement planning?

- a) Yes ---
- b) No---

30. If no, what reasons do you have for not using the stock book

- a) Stock book is not available
- b) Stock book is not update
- c) Others.....

31. Purposively sample 30% of stock cards in all the health facilities and check for the following information in the table below .

Stock cards	Correctly filled Yes or No	Physical counts done every month Yes or No	Physical counts agree with stock card balance Yes or No	Average monthly consumption correctly calculated Yes or No	Stock card update Yes or No
Total					
Percentage					

Note: Yes=1; No=0

32. From the 30% sampled stock cards , check for the corresponding information in the stock book and fill in the table below

Stock book	Correctly filled Yes or No	Stock book update Yes or No	Average monthly consumption correctly calculated Yes or No
Total			
Percentage			

D. ASSESSING MANAGEMENT SUPPORT

33. Does the facility in-charge disseminate the information on Budget allocated for medicines and medical supplies?

- a) Yes
- b) No

If No

Why -----

34. How often do you conduct procurement planning?

- a) Once a year
- b) Twice a year
- c) Others.....

35. How many procurement planning meetings to you conduct for specific procurement period?

- a) Once a year
- b) Twice a year
- c) Others.....

36. What kind of meetings do you hold?

- a) Entry procurement planning meeting
- b) Exit procurement planning meeting
- c) Review of procurement plan meetings
- d) Others.....

37. Do you have minutes of your procurement planning meetings? Check for the minutes

- a) Yes
- b) No

38. Do you have operational medicines and therapeutics committee (MTC) in place?

- a) Yes
- b) No

39. If yes, what is the role of the MTC in procurement planning?

- a) None
- b) Members of the MTC constitute the procurement planning committee
- c) Some members of the MTC are part of the procurement planning committee
- d) Others specify.....

40. If no MTC, do you have a committee for procurement planning?

- a) Yes
- b) No

41. If yes, who are the people in the procurement planning committee? Tick all that apply

- a) Facility in-charge/Director
- b) Pharmacy in-charge
- c) Stores in-charge
- d) Others specify.....

42. If no, who are the people responsible for procurement planning in this facility? Tick all that apply

- a) Facility in-charge/Director
- b) Pharmacy in-charge
- c) Stores in-charge
- d) Others specify.....

43. How would you rate the support from management during annual procurement planning of medicines and medical supplies?

Excellent	Very good	Good	Fair	Poor

44. What kind of support do you get from management during procurement planning?

- a) Facilitation of procurement planning meetings
- b) Training on procurement planning
- c) Ensuring availability of information for procurement planning
- d) Budgeting for procurement planning activities
- e) Others specify.....

45. What further support would you require from management to facilitate effective procurement planning

- a) Facilitation of procurement planning meetings
- b) Training on procurement planning
- c) Ensuring availability of information for procurement planning
- d) Budgeting for procurement planning activities
- e) Others specify.....

E. KEY INFORMANT INTERVIEW GUIDE

46. Does the facility have challenges in coming up with an APP?

a) Yes

b) No

If yes

What are the challenges?

.....

47. Generally what challenges do you encounter during procurement planning

a) Poor quality data for procurement planning

b) Manual LMIS system

c) Limited budget allocation

d) Limited knowledge on procurement planning

e) Limited range of medicines

f) Others.....

48. How can these challenges be addressed

a) Improve quality of data for procurement planning

b) Computerization of LMIS system

c) Increase budget allocation

d) Training on procurement planning

e) Others.....

49. Is there a policy on APP of medicines and medical supplies?

a) Yes

b) No

If No

How can challenges regarding the policy on APP of medicines and medical supplies be addressed.

50 What feedback do you get from pharmacy regarding medicines and medical supplies availability on a monthly basis?

a) Number of medicines delivered Yes No

b) Number of medicines out of stock Yes----- No-----

51 What feedback do you get from Pharmacy regarding medicines and medical supplies availability on a quarterly basis?

a) Amount of funds spent during the quarter Yes--- No-----

b) Balance of the amount of funds left Yes----- No----

APPENDIX IV: Introductory letter KCCA



DIRECTORATE OF PUBLIC HEALTH AND ENVIRONMENT

REF: DPHE/KCCA/1301/01

11th September 2019

Ms. Martha Grace Ajulong
Principal Pharmacist MNRH
KAMPALA

**RE: PERMISSION TO COLLECT DATA FOR THE STUDY ON
“FACTORS INFLUENCING ANNUAL PROCUREMENT
PLANNING OF MEDICINES AND MEDICAL SUPPLIES”**

Reference is made to the your letter dated 5th September 2019 regarding the above subject.

This is to inform you that permission to collect data for your research has been granted to you for a period of one month from the date of this letter. You are hereby granted to collect data from the following health facilities;

- Kawaala Health Centre III
- Kiswa Health Centre III
- Kisenyi Health Centre IV
- Komamboga Health Centre III

The above permission is granted to you on the following conditions:-

1. Participation in your research is voluntary and the informed consent process should be observed at all times.
2. You will provide a report to the office of the Director of Public Health and Environment.

P.O. Box 7010 Kampala - Uganda
Plot 1-3 Apollo Kaggwa Road
Tel: 0204 660 00

WhatsApp: 0794274444, Toll free line: 080099000

Web: www.kcca.go.ug Email: info@kcca.go.ug

f. [facebook.com/kccaug](https://www.facebook.com/kccaug); t. @KCCAUG

By copy of this letter, the In-Charges of the above health facilities are requested to render you all the necessary support.



Dr. Okello Ayen Daniel

AG. DIRECTOR PUBLIC HEALTH AND ENVIRONMENT

Copy: In-charges Kawaala Health Centre III
Kiswa Health Centre III
Kisenyi Health Centre IV
Komamboga Health Centre III

APPENDIX V: Introductory letter from prisons

WEBSITE : www.prisons.go.ug
TELEPHONE: +256-414-256751
FAX: +256-414-344104
EMAIL : compris@utlonline.co.ug
: info@prisons.go.ug

A REPLY TO THIS LETTER SHOULD BE ADDRESSED TO THE
COMMISSIONER GENERAL OF PRISONS AND THE
REFERENCE NUMBER QUOTED. PHQ: **ADM/143/219/01**



UGANDA PRISONS SERVICE
PRISONS HEADQUARTERS
P. O. BOX 7182
KAMPALA - UGANDA

10th September 2019

Ms. Martha Grace Ajulong
University of Rwanda
RWANDA

Tel: 0772947082/0704117124

PERMISSION TO COLLECT DATA FOR ACADEMIC RESEARCH

Reference is made to yours in regard to the above subject.

It is a pleasure to inform you that you have been granted permission to access Murchison Bay Hospital and collect data for academic research project Titled "*Factors Influencing Annual Procurement Planning of Medicines and Medical Supplies in Public Health Facilities in Kampala District, Uganda*".

Therefore, you have been advised to report with a copy of this letter to the Medical Superintendent Murchison Bay Hospital; Luzira for necessary formal guidance and support concerning your research exercise.

N.B This being a Government Security Institution, you **MUST** abide by the Rules and Regulations of the Institution.


D. A. Amibisibwe

For: **COMMISSIONER GENERAL OF PRISONS**

Copied to :

- The Regional Prisons Commander
Kampala Extra Region, Luzira
- The Medical Superintendent
Murchison Bay Hospital, Luzira
- The Chairperson
School of Health Sciences Research and Ethics Committee
College of Health Sciences
Makerere University, Kampala

APPENDIX VI: Work plan

Activity	To be done by when
I. Develop proposal	By 28 th Feb 2019
II. Send proposal for checking for plagiarism	By 20 th march 2019
III. Approval of Draft zero proposal	By 31 st march 2019
IV. Institutional Review Board approval	6 th August 2019
V. Dissemination of letters to facilities of the study	23 rd August 2019
VI. Data collection	25 th August 2019 to 10 th September 2019
VII. Report writing	15 th September 2019
VIII. Data analysis	17 th September 2019
IX. Submission of the thesis report	27 th September 2019

APPENDIX VII: Budget

Action to be taken	Unit of measure	amount	To and from	quantity	Total	Overall total	By when
Take introductory letters to the facilities	Fuel	@4500	Kawempe Kiruddu Kawala HCIV Kiswa HCIV	50litres	225,000/=	225,000	21st-28th August 2019
Conduct research activity at Kawempe RRH	fuel	@4500	Kawempe RRH	20liters	90,000/=		3RD - 5th/9/2019
Conduct research activity at Kiruddu RRH	Fuel	@4500	Kiruddu RRH	25litres	112,500/=		
Conduct research activity at Kiswa HCIV	fuel	@4500	MNRH-Kiswa HCIV	15litres	67,500/=		
Conduct research activity at Kawala HCIV	fuel	@4500	MNRH- Kawala HCIV	20litres	90,000/=		
Conduct research activity at Kisenyi HCIV	fuel	@4500	MNRH- Kisenyi HCIV	20litres	90,000/=		
Conduct research activity at all HC111 s	Fuel	@4500		90litres	405,000/=		5-10th /9/,2019
Total amount					1,079,500/=		
Airtime					200,000		
Internet services					800,000		
Note books	15pkts	@30,000			450,000		

Pens	5pkts	@20000			100,000		
Ream of paper	1 ream	@18,000			18,000		
Food							
Photocopying							
Report writing	Black cartridge	@250000			250000		10th /9/2019
Manuscript writing and publication		@1500000					
Data analysis		@250000					
Data entry		@250000					
Compensation for participants		@20000					
IRB local		\$300					
National council for higher		\$100					
					1,818,000		
Miscellaneous					1,000,000		
Overall total					4,397,000/=		

The table above shows the logistical action plan. Four million three hundred and ninety seven thousand shall be required to execute the research up to the end.