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An Assessment of the implementation of the East African pooled procurement mechanism among faith-based medicines supply organizations

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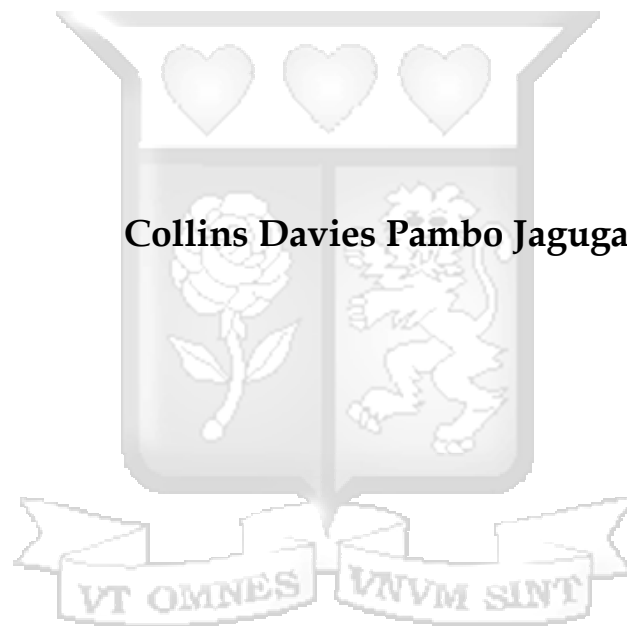
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**An Assessment of the Implementation of the
East African Pooled Procurement Mechanism among
Faith-Based Medicines Supply Organizations**



Collins Davies Pambo Jaguga

Master of Business Administration in Healthcare Management

June, 2018

An Assessment of the Implementation of the East African Pooled Procurement Mechanism among Faith-Based Medicines Supply Organizations

Collins Davies Pambo Jaguga

**Submitted in partial fulfillment of the requirements of the degree of Master of
Business Administration in Healthcare Management at Strathmore University**



Strathmore Business School

Strathmore University

Nairobi, Kenya

June, 2018

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DECLARATION

I hereby declare that this research proposal is my original work and has not been submitted for the assessment of a master's degree elsewhere.

Collins Davies Pambo Jaguga [Name of candidate]

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ABSTRACT

The East African region has a significant burden of communicable and non-communicable diseases, yet patients have low access to essential medicines and medical supplies. Some of the barriers to accessing medicines are high prices and stock-outs. Pooled procurement of health products is an innovative approach to obtaining large volumes of products at competitive prices, thus promoting affordability and availability. A number of factors influence the success of pooled procurement mechanisms. These include sustainable financing, harmonization of processes and political support. The East African Pooled Procurement Mechanism had been in operation for over three years but significant benefits were not being realized. This study sought to understand how this pooled procurement intervention was implemented, challenges encountered and key strategies for the realization of intended outcomes. A census survey was conducted among members of the pooled procurement steering committee. Data was collected through questionnaires, a focus group discussion and individual interviews. Collected data was analyzed using content and thematic analysis approaches. The results revealed that implementation of the East African pooled procurement intervention involved, for the most part, elements of successful implementation of pooled procurement mechanisms. These were stakeholder engagement; situation analysis; consensus building and implementation planning; setting up of a central procurement agency and managing and organizing procurement. However, a myriad of challenges were faced in the implementation of this intervention. The major ones were conflicting legislations and regulations for health products across the East African countries and limited financial resources for procuring health products and meeting administrative costs. As a result, there were marginal cost savings and delays in delivering or non-delivery of health products to medicine supply organizations. In view of the major challenges, it is recommended that the initiative adopts the third or fourth model of pooled procurement, to navigate country legislations and regulations for health products; a revolving drug fund for sustainable financing is implemented for organizations that are not financially stable and a continuous quality improvement system through reporting, monitoring and evaluation system is established.

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LIST OF ABBREVIATIONS AND ACRONYMS

| | |
|-----------|---|
| ACAME | African Association of Central Medical Stores |
| AIDS | Acquired immune deficiency syndrome |
| CEC | Chief Executives Committee |
| CFA franc | Currency for West and Central Africa countries |
| CHAG | Christian Health Association of Ghana |
| CMS | Central Medical Store |
| CPA | Central Procurement Agency |
| CQI | Continuous Quality Improvement |
| E-mail | Electronic mail |
| EAPPM | East African Pooled Procurement Mechanism |
| ECDS | Eastern Caribbean Drug Service |
| EPN | Ecumenical Pharmaceutical Network |
| DDP | Delivered Duty Paid |
| FORMED | Revolving Fund for Essential Drugs for Central America and Panama |
| GCC | Gulf Cooperation Council |
| GMP | Good Manufacturing Practice |
| GPP | Group Purchasing Programme |
| ICB | International Competitive Bidding |
| HIV | Human immunodeficiency virus |
| HMC | Health Ministers Council |
| LMIC | Low- and middle-income country |
| LMIS | Logistics Management Information System |
| MSH | Management Sciences of Health |
| MSO | Medicines Supply Organization |
| OECS | Organization of Eastern Caribbean States |
| PAHO | Pan American Health Organization |
| PPM | Pooled procurement mechanism |
| PPS | Pharmaceutical procurement service |
| Q&F | Quantification and forecasting |
| RDF | Revolving Drug Fund |

| | |
|---------|---|
| RMC-PPM | Regional Multi-Country Pooled Procurement Mechanism |
| TB | Tuberculosis |
| TFDA | Tanzania Food and Drugs Authority |
| TQM | Total Quality Management |
| TWG | Technical working group |
| UEMOA | West African Economic and Monetary Union |
| UNICEF | United Nations Children’s Fund |
| US | United States of America |
| USAID | U.S. Agency for International Development |
| USD | United States of America Dollars |
| WHO | World Health Organization |
| XCD | Eastern Caribbean Dollar |

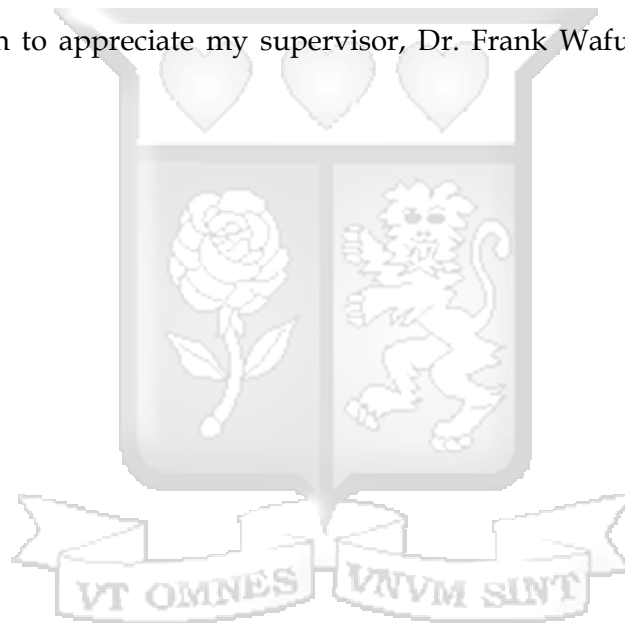


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I wish to appreciate all the respondents for giving me answers to my questionnaires and participating in focus group discussions and interviews.

I finally wish to appreciate my supervisor, Dr. Frank Wafula for his supervisory work.



DEDICATION

To my wife and children:

Vivianne Pambo, Wyse Pambo and Tefilah Pambo

Your support and understanding led to my success.

To my parents:

Dr. James Wilson and Grace Lucy Jaguga

Thank you for all that you have been to me.

Above all, to whom, I live and move and have my being:

Glory be to God.



CHAPTER 1: INTRODUCTION

1.1 Background to the Study

The East African region, like the rest of Africa, has a high burden of human immunodeficiency virus and acquired immune deficiency syndrome (HIV/AIDS), tuberculosis (TB) and malaria. It also faces a significant burden of other communicable as well as non-communicable diseases. Access to essential medicines for managing these diseases is a key aspect in lowering this high disease burden. Access is defined as “having medicines continuously available and affordable at public or private health facilities or medicine outlets that are within one hour’s walk of the population” (UNDG, 2003). Essential medicines are those that satisfy the priority health care needs of the population. They are selected with due regard to public health relevance, evidence on efficacy and safety, and comparative cost-effectiveness. They are intended to be available within the context of functioning health systems at all times in adequate amounts, in the appropriate dosage forms, with assured quality and adequate information, and at a price the individual and the community can afford (WHO, 2018). According to one of the World Health Organization’s (WHO) six building blocks of a health system, “A well-functioning health system ensures equitable access to essential medical products, vaccines and technologies of assured quality, safety, efficacy and cost effectiveness, and their scientifically sound and cost-effective use” (WHO, 2010).

Generally, access to essential medicines in developing countries is not adequate. In countries for which there is information, the availability of medicines in the public sector is only one third, while private sector availability is about two thirds, and the prices people pay for lowest-priced generic medicines vary from 2.5 times to 6.5 times international reference prices in these two sectors, respectively. Access to essential medicines can be improved through stronger partnership among governments, pharmaceutical companies and civil society, including consumers, working together to ensure universal access to essential medicines (UNDG, 2003).

Patients in East Africa partner countries have low purchasing power and cannot easily afford to buy medicines. Government budgets are also insufficient to meet healthcare needs. In Kenya, for instance household out-of-pocket (OOP) healthcare financing accounted for 28% of the total healthcare financing mechanisms between the financial years 2009/2010 to 2015/2016 (MOH, 2017). This compromises equitable access to essential health products and makes the healthcare market extremely price-sensitive.

1.2 Pooled Procurement Mechanism

Pooled procurement is purchasing done by one procurement office on behalf of a group of organizations, facilities, health systems or countries (Ghoneim, Mpundu & Mbirizi, 2016). Participating members agree to purchase certain medicines exclusively through this mechanism (Syam, 2014). Pooled procurement activities are aimed at improving the outcomes of procurement for individual members. Successfully implemented regional pooled procurement mechanisms (PPMs) help countries access sustainable supply of quality essential medicines, achieve greater demand predictability and reduce transaction costs (WHO, 2017). Besides, economies of scale result in better leverage in pricing negotiations with pharmaceutical companies leading to significant price discounts. A regional PPM could attract major medicines suppliers by offering a large regional market compared to smaller national markets (UN, 2005). It is also noted that PPM can lead to elimination of wasteful expenditure, unnecessary purchase and stock outs. The implementation of regional PPMs is influenced by a myriad of factors including sustainable financing, harmonization of processes and political support among others.

Reduce transaction and health product costs, increase availability and continuous supply and enhance streamlined and efficient procurement management systems (WHO, 2017).

1.3 Levels of Pooled Procurement

The WHO outlines four levels of pooled procurement. Each level represents an individual mechanism on its own or a step in the process of attaining higher

levels of cooperation. The four levels are informed buying, coordinated informed buying, group contracting and central contracting. In the first level, member countries share information, particularly about suppliers and products and procurement is conducted individually. In the second level, coordinated informed buying, member countries undertake joint market research, share supplier performance information and monitor prices. Procurement is also conducted individually. In the third level, known as group contracting, member countries jointly negotiate prices, select suppliers and purchase from the selected suppliers. Procurement is conducted individually. Under central contracting, member countries jointly conduct tenders and award contracts through organizations acting on their behalf. The central buying unit manages purchases on behalf of member countries.

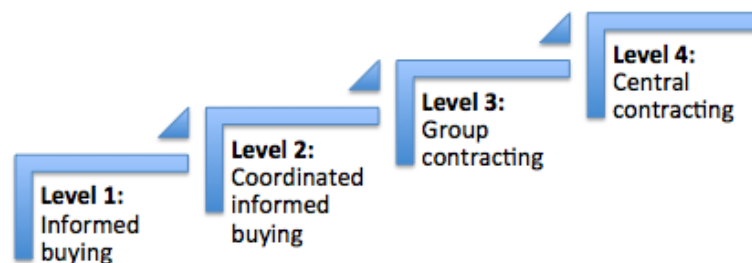


Figure 1.1 Levels of Pooled Procurement

1.4 Problem Definition

Four faith-based medicines supply organizations (MSOs) in East Africa, Mission for Essential Drugs and Supplies (MEDS), Kenya; Bureau des Formations Médicales Agréent du Rwanda (BUFMAR); Mission for Essential Medical Supplies, (MEMS), Tanzania and Joint Medical Store (JMS), Uganda formed a partnership in the year 2010 to increase the affordability and availability of quality assured essential medicines in the East African region. This was to be achieved through joint bulk purchasing or pooled procurement of medicines and medical supplies. Ecumenical Pharmaceutical Network (EPN) was appointed as the secretariat of this partnership. EPN is a Kenyan-based, non-governmental organization whose mission is to promote the provision of just and compassionate quality pharmaceutical services in faith-based health systems.

Two joint bulk purchasing exercises were conducted in 2015 and 2016 respectively, but were characterized by minimal price reductions, inconsistent supply of health products and administrative challenges. These and other undocumented challenges had largely contributed to the East African pooled procurement mechanism's (EAPPM) failure to achieve meaningful impact years after formation. Worse still, no systematic research, analyses and documentation of experiences and challenges had been done, making it difficult for member organizations to make informed decisions on the best way forward.

This study seeks to understand how the pooled procurement intervention was implemented and challenges encountered, if any. The findings will inform member organizations on the best way forward and contribute, globally, to the debates around the uptake and implementation of pooled procurement models as an intervention to increase affordability and availability of quality assured medicines.

1.5 Research Objectives

1.5.1 Primary objective

To assess how the East African pooled procurement mechanism of faith-based medicines supply organizations was implemented.

1.5.2 Specific objectives

- a) To determine if stakeholders were engaged in the implementation of the EAPPM intervention.
- b) To determine if a situation analysis was conducted in the implementation of the EAPPM intervention.
- c) To find out if an EAPPM implementation plan was mutually developed by stakeholders.
- d) To find out if a central procurement agency or secretariat was established in the implementation of the EAPPM intervention.
- e) To establish how procurement of products was managed in the implementation of the EAPPM intervention.

1.6 Research Questions

- a) Were stakeholders engaged in the implementation of the EAPPM intervention?
- b) Was a situation analysis conducted in the implementation of the EAPPM?
- c) Was an EAPPM implementation plan mutually developed by stakeholders?
- d) Was a central procurement agency or secretariat established in the implementation of the EAPPM?
- e) How was procurement of products managed in the implementation of the EAPPM intervention?

1.7 Scope of Study

The study involved all the eighteen members of the EAPPM steering committee that had been involved in actualizing it since inception. The steering committee was composed of two teams namely, Chief Executives Committee (CEC) and Technical Working Group (TWG). The CEC was composed of Chief Executive Officers of the four MSOs and the Executive Director of EPN. The TWG consisted of representatives of each MSO and EPN. The study specifically gathered data on how the EAPPM was established and challenges encountered during implementation.

1.8 Significance of Study

Pooled procurement mechanisms are an intervention to, primarily; exert downward pressure on the prices of essential medicines thus increasing their affordability (Veronika et al, 2016). They also assure consistent supply of health products thus eliminating stock outs. The results of this study will guide appropriate action to be taken so that the goal of price reductions and continuous availability of health products is realized to the benefit of patients. Increased affordability and availability of health products in the respective countries will instill public confidence in their health systems and increase uptake of public health services. Ultimately, increased access to essential medicines will contribute to universal healthcare in East Africa.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter discusses descriptions of key terms, a theoretical literature review, an empirical literature review and a conceptual framework. The theoretical literature review discusses the stakeholder theory in relation to establishing a PPM for health products. The components of establishing a PPM are engagement of stakeholders; situation analysis; consensus building and implementation planning; setting up a central procurement agency (CPA), and managing and organizing procurement. In each of these components, an examination of the application of the stakeholder theory is discussed. The empirical literature review discusses regional multi-country PPMs of medicines in various parts of the world. These are African Association of Central Medical Stores for Essential Drugs (ACAME); Revolving Fund for Essential Drugs for Central America and Panama (FORMED); Gulf Cooperation Council/Group Purchasing Programme (GCC/GPP) and Organization of Eastern Caribbean States (OECS/PPS)/Pharmaceutical Procurement Service. The chapter finally discusses a conceptual framework for implementing the EAPPM.

2.2 Descriptions of Key Terms

2.2.1 Stakeholder engagement

The bringing together organization entities, resources and participants to optimize value and efficiency in developing and building a streamlined and effective pooled procurement system.

2.2.2 Situation analysis

An assessment of the capacity at the individual and organizational levels to manage and conduct a well-performing procurement system with the aim of gauging the gaps and needs a pooled procurement mechanism can address.

2.3 Theoretical Framework

This theoretical framework examines the stakeholder theory in light of the implementation of a PPM.

2.3.1 Stakeholders

Stakeholders are defined as individuals, groups and organizations that have an interest in the processes and outcomes of a firm and upon whom the firm depends for the achievement of its goals (Freeman, 1984; Freeman, Harrison & Wicks, 2007). Stakeholders can be differentiated as either internal or external, and primary or secondary. Those stakeholders within a firm, i.e. employees, managers, and owners are depicted internal stakeholders, while those outside of an organization, e.g. suppliers, customers, and the government, are defined as external stakeholders. Primary stakeholders are crucial to an entity's survival, while secondary stakeholders have no formal claim on a firm; firms merely endeavour not to do them any harm (Parmar et al., 2010). The internal stakeholders in the EAPPM were board members, CEOs and TWG members of MSOs and EPN. External stakeholders were suppliers, patients, the community and governments of the various countries involved in the EAPPM.

2.3.2 Stakeholder theory

According to Freeman et al. (2010), stakeholder theory aims at improving the understanding of value creation and how it is traded, connecting ethics and capitalism, and helps managers deal with these matters (Freeman et al., 1997; Parmar et al., 2010). In other words, the stakeholder theory addresses the problem of value creation and trade, the problem of ethics of capitalism, and the problem of managerial mindset (Parmar et al. 2010). Donaldson and Preston (1995), argue that the different facets of the stakeholder theory are descriptive accuracy, instrumental power and normative validity. Stakeholder theory is descriptive in the sense that "it describes the corporation as a constellation of cooperative and competitive interests possessing intrinsic value", it is instrumental because "it establishes a framework for examining the connections, if any, between the practice of stakeholder management and the achievement of various corporate performance goals" and finally "the

fundamental basis” of stakeholder theory is normative and involves acceptance of the following ideas: “stakeholders are persons or groups with legitimate interests in procedural and /or substantive aspects of corporate activity” and “the interests of all stakeholders are of intrinsic value”.

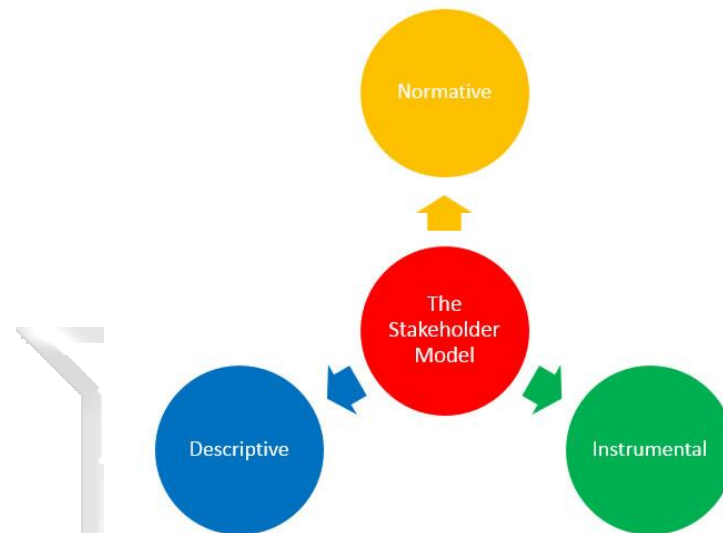


Figure 2.1. The stakeholder theory model

2.3.3 Stakeholder theory in the pooled procurement mechanism

a) Normative validity

Stakeholders are persons or groups with legitimate interests in procedural and /or substantive aspects of corporate activity. The interests of all stakeholders are of intrinsic value. The concept of establishing a PPM has this theory in play because the intrinsic value of stakeholders is an incentive for them to be part of the PPM. They all indeed have legitimate interests in substantive aspects of a PPM.

b) Instrumental power

Setting up a CPA and managing and organizing procurement in a PPM are best described by this aspect of the stakeholder theory. The CPA and its role in managing and organizing procurement establish the connection between stakeholders, their management and the achievement of the pooled procurement goals.

c) Descriptive accuracy

Engaging stakeholders with the aim of developing and building a streamlined and effective pooled procurement system, conducting a situation analysis and mutual development of a strategic and implementation plan describe the theory of a constellation of cooperative and competitive interests that are exploring value creation and how to trade it in exchange for value.

2.4 Empirical Literature Review

2.4.1 African Association of Central Medical Stores for Essential Drugs

ACAME was a regional multi-country pooled procurement mechanism that was established in 1996. It adopted the group contracting level of pooled procurement and piloted its first joint bid purchase in 1998.

a) Stakeholder engagement

Stakeholders held a general assembly at the inception of ACAME with 11 countries in attendance. These were Benin, Burkina Faso, Chad, Democratic Republic of the Congo, Guinea, Madagascar, Mali, Niger, Rwanda, Senegal and Togo. The assembly decided to conduct a joint bulk-purchasing test with a group of countries and to report to the general assembly in September 1998 in Bamako, Mali. The countries involved in the initial pilot were Guinea, Mali and Niger. The objectives of ACAME were to promote the establishment of central medical stores (CMS) for generic essential drugs in African countries which do not have them; to set up a data bank on suppliers and prices; to promote the exchange of information among CMS for generic essential drugs; to progressively organize joint bulk purchasing and to protect the moral and material interests of members.

b) Situation analysis

Whilst there is no evidence of a systematic and detailed assessment of the gaps necessitating establishment of ACAME, it is noted that the devaluation of the CFA franc had resulted in a sharp increase in the prices of essential medicines that affected their affordability and

availability. It was also felt that there was need to strengthen drug and pharmacy management in the region.

c) Consensus building and implementation planning

The group contract level of pooled procurement and categories of products for the bulk purchase were agreed upon. These were “fast-moving” and “slow-moving” generic oral and parenteral pharmaceutical products. Center for Pharmaceutical Management, (2002) cites that “an agreement clearly defining the applicable rules during the entire tender period must be prepared and signed; this agreement must cover all matters concerning drug marketing; and the framework agreement should be transparent to reassure suppliers”. Besides, signing a framework agreement governing the joint bulk purchasing process and procedures was an area that had been omitted (CPM, 2002).

d) Central procurement agency

For the test joint bulk purchasing, Pharmacie Populaire du Mali was responsible for coordinating the activity because a permanent secretariat had not yet been established. One of the lessons learnt at the end of the pilot was that establishing a permanent secretariat to act as a data bank that disseminates information to all member countries was crucial for the success of a pooled procurement mechanism.

e) Managing and organizing procurement

ACAME had a tender committee composed of procurement managers of member CMSs. It adopted restricted tendering and a shortlist of 25 suppliers was established from the list of best suppliers of each member’s CMS, and a shortlist of five anti-infective drugs (from the countries’ essential medicines list) was selected. The committee established bidding conditions and adjudicated the tendering process. Products were delivered to individual purchasers since they had signed separate contracts with

the selected suppliers. The supplier was thus paid directly by each participating country, 30 percent upon delivery of goods and 70 percent after quality control testing.

ACAME did not receive any external technical assistance. WHO did provide a grant of USD 4,000 to ACAME at the outset, and two meetings received partial financial support from West African Economic and Monetary Union (UEMOA) and other donors.

The Niamey Laboratory in Niger (the regional quality control laboratory) was selected to conduct drug quality control testing. However, for communication and cost reasons, the Laboratoire National de la Santé du Mali carried out the tests (ACAME and WHO/AFRO 1999a).

f) Achievements

ACAME's pilot achieved price reductions with five anti-infective medicines. The prices obtained were 7 to 27 percent lower than the lowest prices each of the participating countries had obtained for more than three years for any of the five medicines. Additional benefits noted were that group bulk purchasing reduced expenses through regional quality control and that it enhanced information exchange about providers and pharmaceutical manufacturers (Centre for Pharmaceutical Management, 2002).

g) Challenges

Political instability in the region and lack of transparency in carrying out analyses and inviting tenders existed (ACAME and WHO/AFRO 1999b). There were delays in deliveries and ACAME noted that this was to be a disincentive for awarding contracts. There was registration of products challenges and as a result, countries were encouraged to harmonize registration procedures in the subsequent general assembly (ACAME and WHO/AFRO 1999a).

Guinea did not have the CFA franc as its national currency, had difficulties with the mode of payment suggested by the schedule of conditions. Suppliers did not comply with coverage of insurance expenses in accordance with the tender agreements, which caused difficulties for countries with less experience in dealing with these types of transactions.

The tender documents did not adequately clarify controlling rules when regulations in the various countries differed, especially in the area of drug registration.

g) Lessons learnt

ACAME learnt that firm commitment and will of the CMS managers, backed by the support of their ministers of health was imperative.

2.4.3 Revolving Fund for Essential Drugs for Central America and Panama

FORMED is a drug revolving fund that was established in Central America in 1986 for the purchase of pharmaceuticals. Its objectives were reduction in the prices of pharmaceuticals; encouraging joint actions between countries of the sub-region in response to common problems, thus promoting a Central American spirit of cooperation; improving intersectoral coordination and management of the purchasing process; helping promote participation by the Central and Latin American pharmaceutical industry in the purchases made by the countries. It operated for about three to four years and ended around 1989, after two rounds of joint purchases.

a) Stakeholder engagement

There were seven countries involved namely Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama. There was however no formal, legally binding agreement made among the countries. Political commitments were expressed in the form of letters from the ministries of health stating their interest in participating.

b) Situation analysis

An analysis conducted by the Pan American Health Organization (PAHO) confirmed that prices paid by governments not only varied greatly from country to country but were also considerably higher than prices obtained through PAHO or United Nations Children's Fund (UNICEF) (Center for Pharmaceutical Management, 2002).

c) Consensus building and implementation planning

In the initial phase of the project, 16 essential drugs were selected on the basis of the following criteria - basic medicines used to treat diseases prevalent in the population; medicines part of specific health care programs for the control of such priority health problems as acute respiratory infections, parasitic diseases, diarrhea and dehydration, malaria and tuberculosis, single medicines of good quality and recognized effectiveness; medicines whose purchase represent sizeable public sector expenditure or consumption and utilization of foreign exchange, medicines listed in the latest report of the WHO Expert Committee on Essential Drugs, medicines difficult to obtain, medicines whose procurement would have a considerable economic impact on the participating institutions and whose joint purchasing would bring about considerable savings.

d) Central procurement agency

PAHO acted as the secretariat. A manual of guidelines and procedures for FORMED was prepared by PAHO and was subsequently reviewed and approved by national coordinators designated by the participating countries. All purchases were made through the PAHO procurement office. Using the concept of a drug revolving fund, member countries were to make monthly payments to PAHO in hard currency i.e., United States of America (US) dollars. PAHO charged a 3 percent handling fee for each order.

e) Managing and organizing procurement

Orders were placed by member states' CMSs, through the local PAHO office in the country, to the PAHO procurement office in Washington, DC. The procurement office, in turn, solicited international competitive bids (ICB) and purchased the drugs from the supplier with the lowest bid. The lead time was originally set at four months, which in reality became five to seven months (and more than a year in one case when the orders were misfiled) (Rankin 1991b). FORMED began with purchases of commonly used and easily procured essential medicines (a list of 16 drugs) and raw materials, but later included purchases of expensive essential medicines. The first round of joint purchases amounted to USD 3.3 million (including USD 0.68 million for raw materials); 139 suppliers were contacted, 33 bids were received, and 12 bids were awarded. The second round of joint purchases amounted to approximately USD 1 million.

FORMED was one of several projects on essential drugs funded by various agencies through PAHO. It was initially capitalized with a donation from the Dutch government of USD 4 million. The Swedish government also provided USD 277,000 during the first year to finance the technical cooperation necessary to implement the program.

The PAHO secretariat did not receive technical assistance to establish FORMED. Rather, it provided the technical assistance and managed the procurement program as part of the activities of its Essential Drugs Program and the procurement office, both at headquarters and in the field.

f) Achievements

Reduction in prices averaged 64 percent, ranging from 26 percent (Costa Rica) to 75 percent (Guatemala), depending on administrative efficiency and negotiating capacities of the different

procurement systems in the sub-region. The price reductions were attributed to international competitive bidding; prompt payment in US dollars, purchases packaged in economical units, large volume of purchases and selection of the most economical method of transportation. In addition, pharmaceutical price information system was generated and a mutual regional essential medicines list was established.

Despite FORMED's discontinuation, Belize continued to participate in a drug revolving fund arrangement with PAHO for some time because it continued to obtain better prices through PAHO. However, in 1990, the Government of Belize began to have difficulty making monthly payments to the revolving fund, and it is not clear whether Belize it continued with the arrangement thereafter.

g) Challenges

Completion of the second round of purchases was threatened by the failure of some of the participating countries to settle their obligations from the first round. Lack of payment to the revolving fund was attributed as the main reason for FORMED's failure. The donor-funded revolving fund absorbed the costs that were not reimbursed, which drained the fund account. Secondly, the countries' supply of hard currency was limited, especially during the 1980s; that priority for available hard currency was given to other areas, such as vaccine procurement. Thirdly, reimbursements to the fund were not legally or strictly enforced before the next order was placed; and there was no strong central authority (such as a regional bank) to ensure that financing mechanisms were sound and adequately enforced. Fourthly, ministries of health were lax in making the prescribed contributions to the revolving fund (Rankin 1991b) and fifthly, resistance was encountered at country level in the local procurement offices. Local suppliers undermined the program by offering inducements to procure locally rather than

through FORMED. The result was that a substantial portion of the funds that should have been used to replenish FORMED accounts was instead used to purchase products on the local market (Rankin 1991b).

Another challenge encountered was poor procurement management on the part of PAHO headquarters, PAHO local offices, and the member countries' CMSs (for example inefficient communication between the parties involved). Operational challenges met included delays caused by long delivery times (which made planning difficult and necessitated emergency purchases), slow customs clearances, unacceptable expiration dates, inadequate external packaging, wrong language on the labels, delays in receiving analysis results from reference laboratories and incorrect shipping documents.

2.4.4 Gulf Cooperation Council / Group Purchasing Programme

GCC/GPP began in 1976 and continues to date. Its objectives were securing financial surplus through purchasing; large amounts of supplies for a smaller price; certifying companies that follow good manufacturing practices and that are registered according to the rules and regulations set by the Executive Board, thus ensuring a high quality of purchased items; ensuring use of the same drugs manufactured by the same company by all the GCC states; rapid processing and awarding of presented tenders; ensuring a continuously supply of drugs, hospital supplies and equipment all year round through regular successive deliveries; encouraging other health sectors, e.g. specialized hospitals, to secure their needs through group purchasing; encouraging the policy of purchasing from generic-registered companies to obtain a greater financial surplus and supporting the Gulf drug industry to achieve security of drug supplies in the Gulf countries (Khoja & Bawazir, 2005).

a) Stakeholders engagement

Following the first meeting of the Health Ministers' Council (HMC) of the Arab Countries in the Gulf, a special division was created

within the HMC to oversee the group purchasing programme. Countries represented at the meeting were Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

b) Situation analysis

Whilst there is no evidence that a structured situation analysis was conducted to elicit the gaps necessitating establishment of the group purchasing programme, the objectives cited give an indication that indeed certain gaps existed.

c) Consensus building and implementation planning

The GCC tender procedure is conducted through a committee composed of two representatives of the pharmaceutical sector from each member state and a delegate of the GCC executive bureau (Executive Office for Health Ministers) responsible for the entire procedure.

d) Central procurement agency

Following the first successful bid on pharmaceuticals in 1978, a permanent designated health committee within the GCC was formed (Executive Board HMC, 2002). A permanent secretariat was established by the ministers of health to conduct purchasing operations and act as a data bank. Its mandate was to procure safe and effective pharmaceutical products, hospital supplies, and equipment of high quality.

e) Managing and organizing procurement

The group purchasing committee meets at four decisive stages of the process: pre-tender preparations, bid opening, adjudication, and post-tender evaluation. Their work process involves reviewing submission of tenders from bidding companies; notification of countries about awards and sending samples of items awarded to

each country for delivery; notification of the companies about items awarded and the total sum of delivery (Khoja et al, 2005).

The GCC invited only registered suppliers to the tender. The first tender in 1978 was for more than USD 1 million dollars and involved 32 items awarded to nine companies. By 2001, there were 23 tenders for pharmaceuticals worth USD 234.5 million, involving 1,127 items procured from 109 companies. Payments are made directly to suppliers through their local agents in U.S. dollars, except in Saudi Arabia and Kuwait, where local currency is used. At least 80 percent of the public sector drug needs of the member countries are met by group purchasing. Saudi Arabia buys all of its drugs through the group. Through group purchasing, an average of 30 percent reduction in costs has been realized. Private hospitals have recently joined the bulk-purchasing system. The success of the group purchasing of pharmaceuticals has led the GCC to use bulk purchasing for hospital supplies, vaccines and sera, pharmaceutical chemicals (raw materials), medical rehabilitation supplies, and laboratory apparatus.

Technical assistance from an outside agency was not provided during the planning of the regional pooled procurement program. Later, however, a consultation committee was appointed and worked closely with the program. This committee consisted mainly of faculty members from the College of Pharmacy at King Saud University and a pharmacist from the medical supply department of Saudi Arabia's Ministry of Health.

f) Achievements

The achievements of GCC have been reduction in the costs of pharmaceuticals; reduction in operation costs; standardization of product use (using the same drugs by the same manufacturing companies) and product quality (purchasing only from companies registered according to the rules and regulations set by the

Executive Board, thus ensuring items of high quality); sharing of information among member states; enhanced purchase operations (ensuring rapid processing of presenting tenders and their awards); continuous supply of drugs, hospital supplies, and equipment year-round through successive deliveries and minimizing routine administrative and financial procedures; improving the application of quality assurance, control procedures, and bioequivalence testing and expanding bulk purchasing to other health sectors, such as specialized hospitals. Other benefits include establishing a central drug registration, bioequivalence program, drug formulary, good manufacturing practices, and accreditation of central laboratories for quality control; the system has required solid defense against pressure of various types (Bawazir 2002).

g) Challenges

GCC was not devoid of challenges. There was decreased rate of participation by some member countries. Some countries did not purchase all the quantities they required through the programme which led to decreasing purchasing power; some members decreased the amount of their original quantities substantially after the tender award; some members delayed their notification regarding their final quantities that resulted in delays in the tender award; many companies offer reduced prices for their products in local tenders of some member countries with the intention of keeping these countries out of the programme and finally, some member countries did not participate in all tenders offered by the programme (Khoja et al, 2005).

h) Lessons learnt

The successes realized with the GCC/GCP were attributed to strong political commitment at ministerial level from the outset; standardization of registration procedures; independent, well-run executive secretariat and detailed description and follow-through with procedures, technical specifications, and the tendering process;

demand for local pharmaceutical production has been on the increase; registration procedures for drugs have improved; correct information and transparency are important; purchases of this size and at this level are always subject to attempts at interference from commercial and other pressure groups.

2.4.5 Organization of Eastern Caribbean States / Pharmaceutical Procurement Service

The OECS/PPS was created in 1981, with the mission of contributing to the sustainable development of its member states.

a) Stakeholder engagement

The nine member states of OECS - Anguilla, Antigua and Barbuda, British Virgin Islands, Dominica, Grenada, Montserrat, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines were involved in the initiation of this bulk purchasing programme. In carrying out its mission, OECS works with a number of sub-regional and regional agencies and institutions, including the Eastern Caribbean Central Bank (ECCB), the Caribbean Community (CARICOM), and the Caribbean Development Bank.

b) Situation analysis

In 1986, the rising cost of pharmaceuticals led the OECS to establish the Eastern Caribbean Drug Service (now known as OECS/PPS).

c) Central procurement agency / Secretariat

The OECS secretariat and the OECS/PPS permanent secretariat are both located in Castries, St. Lucia.

d) Managing and organizing procurement

The program operates through a centralized, restricted tendering system and invites only prequalified suppliers to the international competitive bidding process. The member states procure about 85 percent of their public sector pharmaceutical needs through this program. Pharmaceuticals are now purchased on the basis of the

biennial Regional Formulary and Therapeutics Manual. This manual consists of the core list of essential drugs common to all nine member states; it has reduced wastage resulting from overstocks and nonessential items.

Technical assistance was provided by Management Sciences for Health (MSH) from 1986 to 1990, through the U.S. Agency for International Development (USAID) with an initial amount of USD 3.5 million for technical assistance and start-up financing. Each country's counterpart fund was XCD 0.7 million (approximately USD 260,000).

Through USAID, MSH provided technical assistance to Eastern Caribbean Drug Service (ECDS) from July 1986 to September 1990 (Rankin 1991a). Initially, USD 3.5 million was provided for technical assistance and start-up financing, while the countries' counterpart fund was XCD 0.7 million (Burnett 2002a). ECDS became self-sustaining in 1989, and in June of that year the Agreement Establishing the Eastern Caribbean Drug Service was signed by government representatives of each member state (OECS 1990).

e) Achievements

During the first year of the program's operation (1987-88), participating countries benefited from an average 44 percent reduction in acquisition price (of the top 25 pharmaceuticals in the region), which has been sustained in subsequent tenders. Other achievements included comprehensive quality assurance program, including prequalification of selected suppliers; contractual purchasing agreements; regular testing of priority drugs; review of suppliers' past performance; biennial regional formulary and therapeutics manual; provision to member states of related services, such as training and technical assistance, drug utilization studies, rational drug use guidelines, and inventory management. Availability of essential medicines has consistently been higher than

85% from 2010 (Regional workshop, 2014). Major reductions in unit prices of medicines, for example, prices more than 25% lower than individual country prices in the Organization of Eastern Caribbean States (OECS) (Burnett 2001).

f) Challenges

The reputation for prompt payment that OECS/PPS established initially was tarnished over the years because some countries were slow in reimbursing the country drug accounts due to economic challenges. Late payments resulted in several suppliers withholding shipments to both defaulting and non-defaulting countries.

g) Lessons learnt

An important element in OECS/PPS's initial success in reducing the cost of pharmaceuticals was the ability to pay suppliers promptly in foreign exchange within 42 days (later changed to 60 days) of receipt of goods at country level. Bids are solicited in U.S. dollars (the exchange rate between the EC dollar and the U.S. dollar has remained stable for the last 25 years). The program enjoys strong political support of the member countries' governments, and procurement activities are well run by the permanent secretariat.

From this literature review, pooled procurement initiatives have existed for more than 30 years. Regional approaches to multi-country PPMs have had mixed results, although there are long standing ones that have achieved great success e.g. GCC/GPP and OECS/PPS. It is worth noting that only one PPM has been successful in sub-Saharan Africa although the success was short lived. The benefits of PPMs are evident and seem to be similar across regions, globally. Some of these are drug costs savings, standardization of quality assurance and consistent supply of medicines among others. Likewise the common challenges encountered include defaulting countries, negative influence of local suppliers by offering lower prices than pooled procurement

prices and late payments to suppliers. Literature on regional multi-country PPMs of medicines that does not involve state actors is lacking. The EAPPM does not involve the public health system and exclusively involves faith-based medicine supply organizations (MSOs).

2.5 Conceptual framework

In conducting this study, a conceptual framework was developed to show the relationship between independent variables and the dependent variable. In this study, the dependent variable is effective implementation of pooled procurement and the independent variables are; stakeholder engagement; situation analysis; consensus building and implementation planning; establishing a central procurement agency and managing and organizing procurement. The constructs and relationships between research variables are illustrated in the following figure 2.2.

2.5.2 Stakeholder engagement

Engagement of stakeholders is crucial in developing and building a streamlined and effective pooled procurement system. The essence of pooled procurement is about bringing together different organization entities, resources and participants to optimize value and efficiency in the pharmaceutical supply chain. Stakeholders are to be identified correctly and should meet and engage often and regularly, building the rapport and trust to continuously improve processes and systems in a coordinated and transparent manner. Engaging stakeholders includes identifying key stakeholders through stakeholder mapping; informing stakeholders of the option to develop a pooled procurement system; determining objectives, benefits, and primary concerns for collaboration in pooled procurement; establishing strategy and plans for procurement and a TWG based on key stakeholders' feedback and establishing a decision-making process and building consensus.

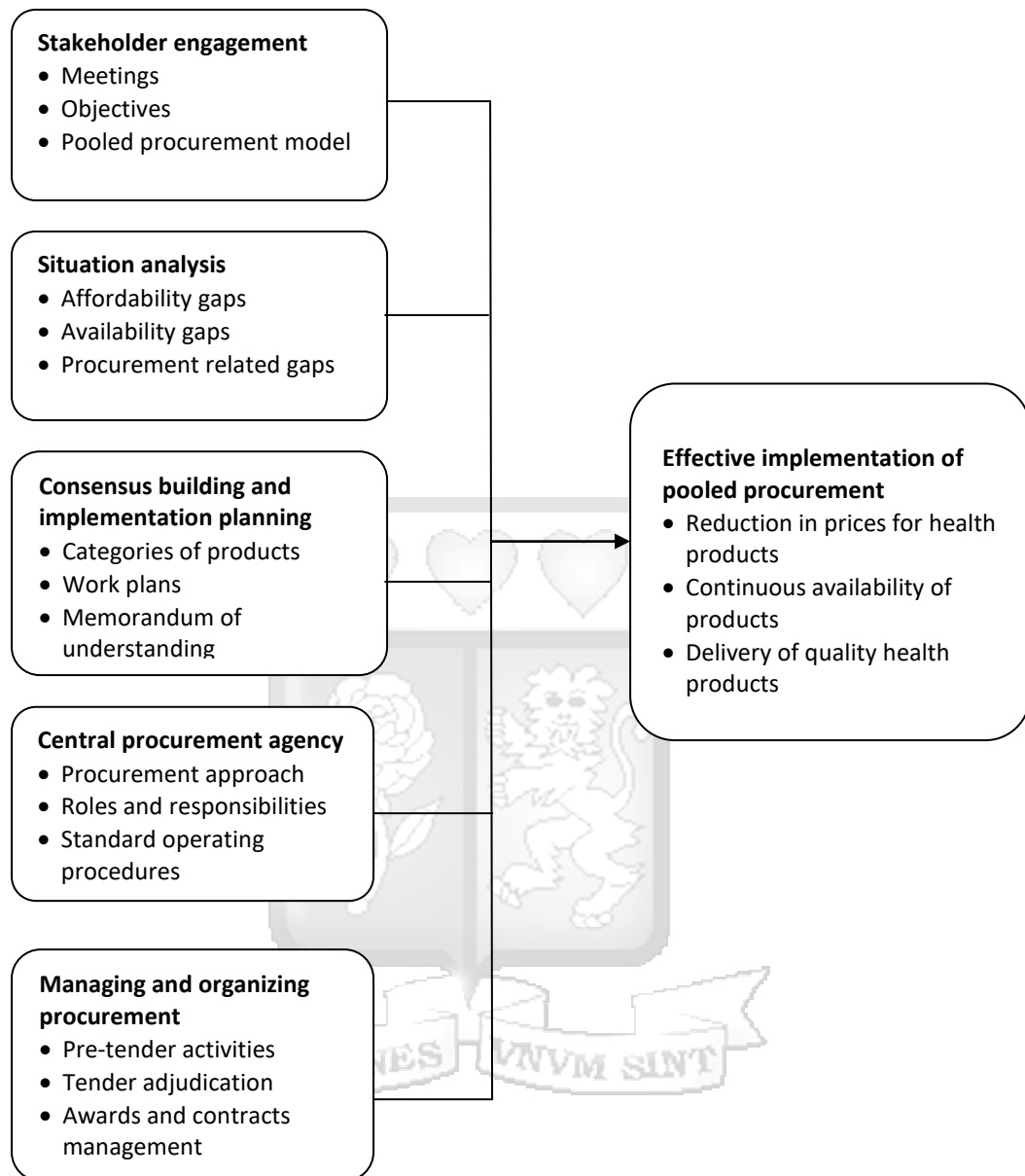


Figure 2.2. Conceptual Framework

2.5.3 Situation analysis

The importance of a situation analysis is that it ensures all stakeholders are in agreement about what the current issues and performance gaps are in terms of procurement and availability of essential medicines. The situational analysis can be based on previous studies conducted in the country or more specific, detailed and updated assessment on the

procurement related gaps (United Nations Children’s Fund, 2016) and associated costs; availability of essential medicines; financing for products, human resource and quality of products as part of the pooled procurement intervention (Ghoneim et al, 2016). These inform the gaps and needs the pooled procurement intervention is to address. In the review of empirical literature gaps identified that necessitated the introduction of pooled procurement programmes were drastic increase in the prices of essential medicines that affected their affordability and availability; the need to strengthen drug and pharmacy management processes; enhancing quality of products and guaranteeing continuous supply of products.

2.5.4 Consensus building and implementation planning

Consensus building and implementation planning or mutual development of an implementation plan is the process of seeking unanimous agreement by stakeholders. In terms of establishing a pooled procurement programme, some of the areas that need mutual agreement with subsequent implementation planning are the central procurement agency and its scope of work, technical working group’s scope of work, selection of medicines, quantification procedures, potential suppliers and agreements on criteria, tendering process, ordering process, applicable incoterms, procedures and agreements for distribution and financial agreements and payment mechanisms (Ghoneim et al, 2016). In the review of empirical literature, some of the areas where consensus was built in terms of the implementation plan were the list of products to be purchased, criteria for selecting medicines to be included in the bulk purchasing programme, level or model of pooled procurement to be adopted and purchasing processes and procedures. These parameters have a bearing on the extent of price reductions achieved in pooled procurement mechanisms.

2.5.5 A central procurement agency

Stakeholders agree on the overall mandate of a CPA or secretariat and establish it. Some considerations in setting up the CPA are selecting

procurement methods, establishing roles and responsibilities of the CPA and developing standard operating procedures around receipt, inspection, customs clearance, storage, distribution and transport. The success of GCC was attributed to a well run secretariat among others. A CPA or secretariat for group contracting or central contracting model of pooled procurement is thus important, if pooled procurement intervention goals are to be achieved.

2.5.6 Managing and organizing procurement

The procurement agency or secretariat plays a vital role in managing and organizing the procurement process. The processes of the CPA revolve around ensuring that the right products in the correct quantity arrive at the right place in a timely manner. This unit is also charged with obtaining the best possible process for the highest-quality products for distribution and use among the respective organizations within the pooled procurement system. The functions of the CPA include quantification exercises, selecting procurement and ordering methods; prequalifying suppliers and products based on specified standards; managing the tender process, establishing contract terms; assuring quality of medicines; obtaining best prices and ensuring that suppliers adhere to contract terms. In the empirical literature review, some of the workings of managing and organizing procurement are restricted tendering system and general adjudication of tender processes; limitation of procuring only registered products. Some cross cutting supporting issues are financial and technical support and favourable legislations and regulations for the procurement of products.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Design

The study employed a mixed methods research design. There was both quantitative and qualitative data collection in the study.

3.2 Population and Sampling

This was a census survey; the study thus entailed sampling the universe of all key stakeholders involved in the EAPPM process. This therefore ruled out application of a specific sampling design and technique. A census survey was used since the population of 18 was small and the study aimed to reach all the previous and current steering committee members of the EAPPM. Population census is unique in that it provides the possibility of examining small and special population groups, and acquiring information on small units. The census approach is justified since according to Field (2006) results obtained from a census are likely to be more representative, accurate and reliable than results obtained from a population sample and thus census assists in generalization of research findings. Census provides a true measure of the population since there is no sampling error and more detailed information about the study problem within the population is likely to be gathered (Sekaran & Bougie 2010).

The population was stratified into two groups i.e. CEOs and TWG members. There were five CEOs and thirteen TWG members. The CEOs were from BUFMAR, JMS, MEDS, MEMS and EPN while the TWG members comprised of representatives from each of these five organizations. One CEO and two TWG members were no longer working with any of the MSOs or EPN at the time of data collection.

3.3 Data Collection Methods

3.3.1 Documents review

Data was collected by analyzing written reports and minutes of meetings of the steering committee in the course of implementing the pooled

procurement intervention. The documents that were analyzed are listed in Appendix 1. This data collection approach was used to gather data for all research questions. Document analysis is a systematic procedure for reviewing or evaluating documents—both printed and electronic (computer-based and Internet-transmitted) material. It requires that data be examined and interpreted in order to elicit meaning, gain understanding, and develop empirical knowledge (Corbin & Strauss, 2008). Document analysis is used in combination with other qualitative research methods as a means of triangulation—‘the combination of methodologies in the study of the same phenomenon’ (Denzin, 1970). In this study, data was drawn from multiple sources of evidence with the aim of seeking convergence and corroboration through different data sources and methods.

3.3.2 Questionnaires

Data was collected by use of a questionnaire, administered via electronic mail (e-mail) and face-to-face for stakeholders that could be physically reached. The questionnaire contained both closed and open-ended questions - Refer to Appendix 2. The questionnaire data collection approach was used to gather data for all research questions. Questionnaires are used as data collection instruments because, according to Dempsey (2003), they allow respondents to give much of their opinions pertaining to the researched problem. Besides, according to Kothari (2003), the information obtained from questionnaires is free from bias and researchers influence and thus accurate and valid data is gathered.

3.3.3 Focus group discussions and interviews

A focus group discussion (FGD) and face-to-face interviews were held depending on the availability of the study participants. These utilized a topic guide - see Appendix 3 - to explore in-depth the attitudes, perceptions, challenges and experiences of the steering committee members on the implementation of the pooled procurement intervention. FGDs and interviews were used to gather data for the research question

on how procurement of products was managed and organized in the implementation of the EAPPM. Focus group discussions were selected to complement the quantitative approach to the study. The aim was to obtain the context, in terms of implementing the EAPPM intervention that was going to be difficult to obtain quantitatively through questionnaires and also to determine consensus on the preliminary insights on the research questions (Gibbs, 1997).

Interviews were held for participants who were not able to attend the focused group discussion. An interview is a purposeful discussion between a researcher and a participant that can help gather valid and reliable data that is relevant to the research objectives (Kahn and Cannel, 1957).

3.4 Data Analysis

Data from documents was analyzed using content and thematic analysis approaches. Content analysis is the process of organizing information into categories related to the central questions of the research (Bowen, 2009). Content analysis was used to data for objectives (a), (b), (c) and (d). The relevance of documents to the research problem and purpose were determined. Besides it was ascertained that the content of the documents were in line with the conceptual framework of the study. Pertinent information in line with the research objectives were elicited from the documents.

Thematic analysis was used for analyzing data for objective (e). Thematic analysis is a form of pattern recognition within data, with emerging themes becoming categories for analysis (Fereday & Muir-Cochrane, 2006). The process involves careful, more focused re-reading and review of data. Selected data is keenly examined, coded and categories constructed, based on the data's characteristics, to uncover themes pertinent to a phenomenon. In the analysis of data, objectivity (fair representation of research material) and sensitivity (responding to even subtle cues to meaning) in the selection and analysis of data was exercised. Patterns, resemblances and regularities in experiences

shared by respondents were noted in order to reach conclusions from the qualitative data.

3.5 Reliability and Validity

Reliability refers to the consistence, stability, or dependability of the data. Whenever an investigator measures a variable, he or she wants to be sure that the measurement provides dependable and consistent results (Cooper & Schindler 2003). A reliable measurement is one that if repeated a second time gives the same results as it did the first time. Validity refers to the extent to which an instrument measures what it's supposed to measure. Data need not only be reliable but also true and accurate. If a measurement is valid, it is also reliable (Joppe 2000). The validity and reliability of the data collected and the response rate achieved thus depend on the design of the questions and the structure of questionnaire. To check the validity and reliability of the questionnaire and topic guide questions, they were first reviewed by the supervisor to check the design and selection of questions and the layout of the questionnaire. Adjustments were made based on feedback from the supervisor.

3.6 Ethical Considerations

This study was approved by the Strathmore University Ethics Committee. The letter of approval is given in Appendix 4. Before filling the questionnaire, approval was sought from the various medicine supply organizations explaining the purpose and expected outcomes of the study. In addition, participants signed an informed consent document - see Appendix 5. This involved communication, in writing, prior to their involvement about the purpose of the study. Participation in the study was voluntary and participants were at liberty to withdraw at any time in the course of the study. There were no incentives for those participating in the study. Participants were assured that the information collected would not be divulged without their consent.

CHAPTER 4: RESEARCH FINDINGS AND DISCUSSIONS

4.1 General Information

4.1.1 Response rate

A total of eighteen (18) steering committee members who had been involved in the EAPPM were issued with the research questionnaire and invited for focused group discussions or individual interviews. A total of sixteen (16) personnel filled and returned the questionnaires and participated in group discussions and interviews. This was a response rate of 88.9%. Table 4.1 below indicates the breakdown of responses in terms of number of filled questionnaires, number of participants that took part in the focus group discussion and number of individual interviews held.

Table 4.1. Response Rate

| Category | Questionnaires | Focus Group Discussion | Individual Interviews | Total |
|--------------|--------------------|------------------------|-----------------------|--------------------|
| CEOs | 3 | 1 | 2 | 3 (19%) |
| TWG | 13 | 3 | 10 | 13 (81%) |
| Total | 16/18 (89%) | 4/18 (22%) | 12/18 (67%) | 16/18 (89%) |

4.1.2 Category of respondents

The pie chart below illustrates the category of respondents in the research.

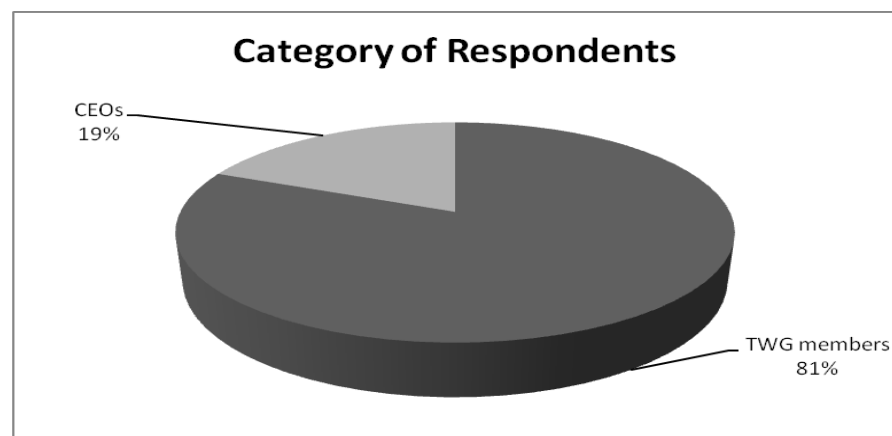


Figure 4.1. Category of Respondents

From the table above, 3 (19%) CEOs and 13 (81%) TWG members participated in this research.

4.1.3 Number of years respondents were members of EAPPM steering committee

Table 4.2 below illustrates the number of years research respondents had been involved in the EAPPM.

Table 4.2 Number of years respondents were members of EAPPM

| Duration | Frequency | Percentage |
|-----------------|------------------|-------------------|
| 1 year or less | 3 | 18.8% |
| 1 to 2 years | 3 | 18.8% |
| 2 to 3 years | 4 | 25.0% |
| Over 3 years | 6 | 37.5% |
| Total | 16 | 100.0% |

4.2 Stakeholder Engagement

The results indicate that stakeholders were engaged in the implementation of the EAPPM intervention. This began in the year 2010 with a stakeholders meeting that was attended by representatives from local, regional and international organizations. These included WHO, MSH and Christian Health Association of Ghana (CHAG) among others. The deliberations of the meeting focused on the need to establish a pooled procurement and exchange of ideas on its feasibility and potential impediments. Subsequent meetings were held bi-annually or annually.

These results demonstrate that stakeholders were identified and engaged at the inception of the EAPPM. This finding reinforces the argument by Ghoneim et al. (2016) that,

Engaging stakeholders is an essential step in developing and building a streamlined and effective pooled procurement system. The essence of pooled procurement is about bringing together different organization entities, resources and participants to optimize value and efficiency in the pharmaceutical supply chain.

4.3 Situation Analysis

The results show that a situation analysis was conducted in the year 2010 as part of the pooled procurement intervention process. This was a survey on procurement practices in the church pharmaceutical supply agencies in Kenya, Rwanda, Tanzania and Uganda. Data gathered entailed stock turnover, contribution of medicines to total stock purchases, medicines with limited sources, reliable suppliers, difficult to source medicines, payment terms for foreign suppliers, challenges encountered in the procurement of medicines, perceived benefits from pooled procurement, internal and external obstacles envisaged with pooled procurement, categories of medicines to be considered for pooled procurement and preferred organizations to be accepted into the pooled procurement initiative.

These results established that a situation analysis was conducted at the inception of EAPPM to reveal gaps that the pooled procurement intervention was going to address. This is similar to the framework by UNICEF (2016), for strengthening public health supply chains, which indicates that when a strategic and holistic supply chain strengthening process is began, an analysis of the current situation is required to ensure that all stakeholders agree on the key issues and performance gaps. Establishing a pooled procurement mechanism for health products is an aspect of strengthening the procurement phase of a health supply chain cycle that ultimately enhances access to medicines.

4.4 Consensus Building and Implementation Planning

The results demonstrate that an EAPPM implementation plan was mutually developed by stakeholders over a couple of meetings. Consensus was generated on the categories of health products to be included in the initiative e.g. hard to source products; products with high consumption rates; pharmaceuticals (insulin, oxytocin, analgesics, antibiotics, antineoplastics); non-pharmaceuticals (gloves, syringes, gauze rolls and intravenous fluids); work plans with timelines; preparing purchase orders and payment processes.

The results of this study found that consensus building and implementation planning featured at the inception of EAPPM. Consensus was generated on the categories of health products to be included in the EAPPM, financial resources for managing EAPPM, selection and appointment of TWG members and development of annual work plans. This is similar to the study by Ghoneim et al., 2016 that indicated that, “Stakeholders must have an organized and collaborative approach to planning implementation in the establishment of pooled procurement systems.” UNICEF (2016) also found that, “an essential piece for comprehensive system strengthening and capacity development is agreement between all the partners on a strategy.”

4.5 Central Procurement Agency or Secretariat

The results revealed that the organization, EPN was appointed as central the procurement agency or secretariat as part of the EAPPM intervention. Roles and responsibilities for each procurement process were defined but procurement standard operating procedures were not developed.

This outcome of the research is supported by (Ghoneim et al., 2016) that in the establishment of a pooled procurement mechanism, stakeholders need to decide on the objective and overall mandate of a central procurement agency. Similarly, the (Centre for Pharmaceutical Management, 2002) found that “A strong central authority that ensures financial mechanisms are sound and adequately enforced plays a crucial role. The absence of such an authority contributed to the failure of FORMED.”

4.6 Managing and organizing procurement

The results indicate that procurement of products in implementing the EAPPM intervention was coordinated by EPN. Assistance was offered by members of the TWG where country specific procurement related information was required. The procurement processes involved quantification and forecasting; harmonization of products; pre-qualification of suppliers; tendering approach and adjudication; price negotiations; monitoring and adherence to contract terms; monitoring order status; receiving products; paying suppliers; reporting, monitoring and evaluation. According to Ghoneim et al, (2016),

“The procurement agency plays a vital role in managing and organizing the procurement processes which revolve around ensuring that the right products in the correct quantity arrive at the right place in a timely manner within the pooled procurement system”.

4.6.1 Challenges encountered in managing and organizing pooled procurement

The study revealed that there were multiple challenges with the procurement processes. These have been categorized as major, moderate and minor based on the extent of direct impact on affordability, availability and quality of essential medicines – the ultimate goals of the EAPPM. See Appendix 6 for the complete list of challenges the study revealed. The major challenges were conflicting legislations and regulations for health products across the East African countries and limited financial resources for procuring health products. The moderate challenges were quantification and forecasting; pre-qualification of suppliers; tendering approach and adjudication; price negotiations; monitoring and adherence to contract terms; monitoring order status; receiving products and reporting, monitoring and evaluation. The only minor challenge was harmonization of products.

a) Legislation and regulation in East Africa

This research revealed that legislations and regulations of health products in member East African countries were heterogeneous and were impeding EAPPM’s success. Firstly, there was very few health products registered in all the four or at least three countries. Secondly, taxes, duties and freight clearance charges differed from one country to another leading to inequitable cost savings among MSOs. For instance, in Kenya, *“value added tax (VAT) on sterile and non-sterile gloves hindered bidders from offering unified prices for all MSOs”* says one TWG member. Thirdly, specifications for gloves and syringes varied from one country to another leading to tender awards and supply of different products with different quality standards and prices to different countries. This reduced pooled quantities and eliminated the benefits of economies of scale. Worse

still, gloves from a pre-qualified supplier failed quality tests in Uganda and reduced supplier confidence among the rest of the MSOs. Finally, information on the validity of a product's registration status was not always available. The registration status of some products became invalid during importation processes and before import permits were granted by national authorities. This led to prolonged lead times.

The challenge of legislation and regulation in East Africa is similar to that faced by ACAME regional pooled procurement program as established by Center for Pharmaceutical Management, (2002). It found that drug registration in member countries differed and unfortunately, tender documents had not adequately clarified controlling rules when drug registration regulations in the various countries differed. Besides, according to (ACAME and WHO/AFRO 1999b),

“Because of its system of registration of products and its very strict policy on authorizing new pharmaceutical products, Morocco had never extensively participated in bulk purchasing and had never purchased or imported more than 5 percent of its drug needs through bulk purchasing.”

Bailey (1999) also observes that,

The most common constraint on international procurement is drug registration. Countries with drug registration systems normally require that all drugs purchased through public tender be registered locally. Both restricted and open tenders can be limited to products registered in the purchasing country. This requirement may basically eliminate international procurement if the registration process is complicated and time-consuming.

The research also revealed that the long turnaround time of processing tax exemption certificates contributed to the challenge of

long lead times. In the FORMED pooled procurement program, one of the reasons for its failure was that originally, the lead time was set at four months, but in reality it became five to seven months (and more than a year in one case when the orders were misfiled) (Rankin 1991b).

b) Financial resources

With regard to financial resources for procuring health products, the results revealed that MSOs were paying suppliers in good time for the products they procure. Since prices of pharmaceuticals were generally high, MSOs with financial constraints were often limited in terms of product volumes they could purchase. Three out of the four participating MSOs were meeting their financial obligations to the secretariat. They were however all able to meet travel and accommodation costs for their TWG members to attend tender evaluation meetings in Kenya.

WHO (2007) indicates that one of the main challenges related to financing and financial arrangements of regional pooled procurement is inadequate total financing for procuring essential medicines. The (Centre for Pharmaceutical Management, 2002) also found that lack of payment to the revolving fund had been attributed to as the main reason for FORMED's failure. The donor-funded revolving fund absorbed the costs that were not reimbursed, which drained the fund account.

Financing of pooled procurements must therefore be sustainable, predictable and timely and the administrative costs of a pooled procurement mechanism have to be offset by the savings on drug purchases (EAC, 2007).

With regard to paying suppliers, the research established that some MSOs were delaying payments to suppliers. Late payment is a disincentive for suppliers. Burnett (2001) stated that an important

element in OECS/PPS's initial success in reducing the costs of pharmaceuticals was the ability to pay suppliers promptly in foreign exchange within 42 days of receipt of goods. The reputation for prompt payment that OECS/PPS established initially had been tarnished in because some of OECS countries were slow in reimbursing the country drug accounts due to economic challenges. Late payments had resulted in several suppliers withholding shipments to both defaulting and non-defaulting countries (Centre for Pharmaceutical Management, 2002).



CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This study sought to assess how the East African pooled procurement intervention was implemented, challenges encountered and key strategies for the realization of intended outcomes. The objectives of the study were to determine if stakeholders were engaged in the implementation of the EAPPM intervention; to determine if a situation analysis was conducted in the implementation of the EAPPM intervention; to find out if an EAPPM implementation plan was mutually developed by stakeholders; to find out if a central procurement agency or secretariat was established in the implementation of the EAPPM intervention and to establish how procurement of products was managed in the implementation of the EAPPM intervention.

5.2 Conclusions

From the research findings it can be concluded that:

5.2.1 Stakeholder engagement

Stakeholders were engaged in the implementation of the EAPPM intervention. Various stakeholders were identified, a unanimous decision to establish the EAPPM was made and subsequent meetings were held to deliberate on implementation aspects.

5.2.2 Situation analysis

A structured situation analysis was conducted in the implementation of the EAPPM. The situation analysis was conducted to capture procurement related gaps that the pooled procurement intervention was going to address, obstacles envisaged with pooled procurement intervention, and organizations to be accepted into the pooled procurement initiative.

5.2.3 Consensus building and implementation

An EAPPM implementation plan was mutually developed by stakeholders over a couple of meetings. Consensus was generated on the categories of health products to be included in the initiative, work plans and procurement processes.

5.2.4 Central procurement agency or secretariat

A CPA was established in the implementation of the EAPPM. EPN was appointed as the CPA of the EAPPM intervention and its mandate was clearly made.

5.2.5 Managing and organizing procurement

The procurement of products managed in the implementation of the EAPPM intervention was coordinated by the Secretariat assisted by members of the TWG. The procurement processes involved quantification and forecasting; harmonization of products; pre-qualification of suppliers; tendering approach and adjudication; price negotiations; monitoring and adherence to contract terms; monitoring order status; receiving products; paying suppliers; reporting, monitoring and evaluation. Several challenges were noted with these processes. These were major, moderate or minor depending on the weight of their direct impact on the affordability, availability and quality of health products.

5.2.6 Challenges faced by the EAPPM

Two major challenges were noted in implementing the EAPPM. These were conflicting country legislation and regulations of health products and limited financial resources for procuring health products and meeting administrative costs

5.3 Research limitations

Information collected from the research participants was limited to their recollection and the duration with which they had been involved in the EAPPM.

5.4 Recommendations

Based on the challenges faced by the EAPPM, as revealed by research findings, it is recommended that:

5.4.1 Heterogeneous legislation and regulations

- a) The fourth model of pooled procurement also known as central contracting is applied to products with high consumption rates that either do not require registration or are registered in all participating countries and have similar quality specifications. In the fourth model of pooled procurement, member countries jointly conduct tenders and award contracts through a representative organization or secretariat.
- b) The third model of pooled procurement also known as group contracting is applied to all other categories of products irrespective of pooled quantities, quality specifications and registration status.

5.4.2 Financial resources

A revolving drug fund (RDF) be established to finance MSOs that are not financially stable. In a RDF a sum of money (contributed by the government, donors or the community) is used to purchase an initial stock of essential and commonly used medicines to be sold, ideally at a price sufficient to replace the stock of medicines and ensure a continuous supply (MSH, 2012). This approach will ensure affordable and sustainable supply of quality assured essential medicines and medical supplies.

5.4.3 Moderate and minor challenges

A continuous quality improvement (CQI) system should be adopted for the EAPPM through reporting, monitoring and evaluation. CQI is a quality management philosophy that encourages everyone in an organization, including board members, volunteers, and employees, to continuously ask what can be done better. It builds on existing quality management approaches such as total quality management (TQM), Lean, and Six Sigma, but emphasizes that internal and external customer satisfaction is paramount, and that problems are caused by processes, not people (Smartsheet, 2018).

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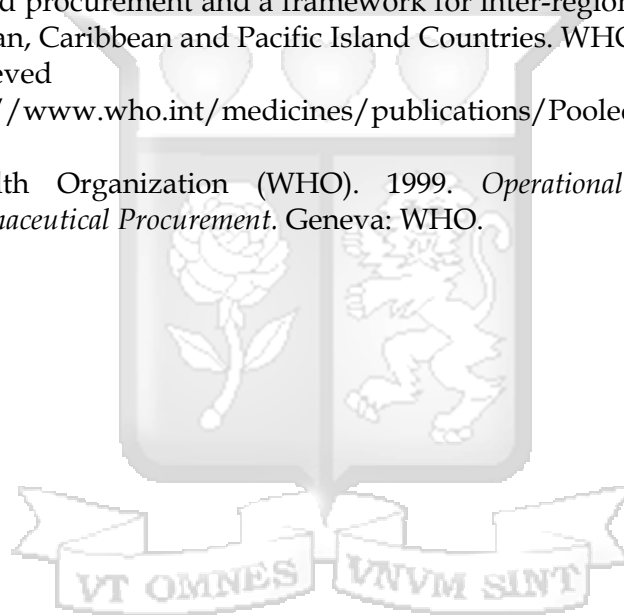
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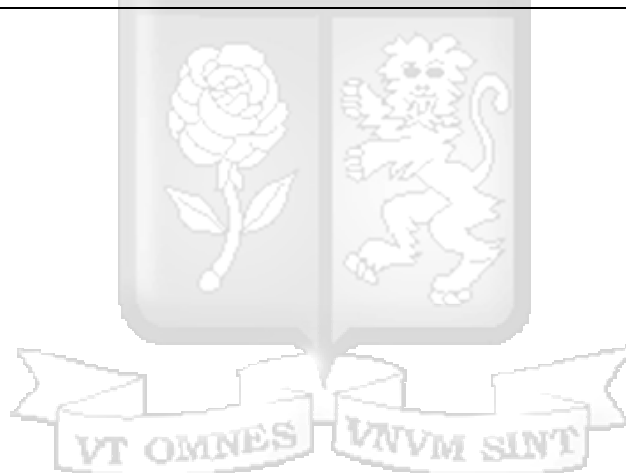
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APPENDIX 1 - DOCUMENTS REVIEWED

| | Name of document |
|----|---|
| 1. | EAC Pooled Procurement, Minutes of the CEOs and TWG meeting held on 27 th June 2016 on Kampala, Uganda. |
| 2. | The EAC Pooled Procurement Project, Terms of Reference, 2016 |
| 3. | The East Africa Pooled Procurement Project, The Project Performance and Status Report, January 2015. |
| 4. | EAC Pooled Procurement, Memorandum of Understanding, Multilateral Co-operation Agreement, 2013. |
| 5. | EAC Pooled Procurement, Technical Working Group, Terms of Reference, 2013. |
| 6. | Report of the CEOs Pooled Procurement Meeting held on 2 nd September 2011 at Red Court Hotel, Nairobi, Kenya. |
| 7. | Survey of Procurement in Six Church Pharmaceutical Supply Agencies in the Ecumenical Pharmaceutical Network, 2010. |
| 8. | Pooled Procurement of Medicines by Church Pharmaceutical Supply Agencies, Meeting Report, Dar es Salaam, Tanzania, 12 th to 13 th October 2010. |



APPENDIX 2 - QUESTIONNAIRE

| Section 1 - General information | |
|---|---|
| Organization | |
| 1. Medicine supply organization | <input type="checkbox"/> BUFMAR, Rwanda <input type="checkbox"/> JMS, Uganda <input type="checkbox"/> MEDS, Kenya <input type="checkbox"/> MEMS, Tanzania |
| Respondent information | |
| 2. Current position in the organization | <input type="checkbox"/> Chief Executive Officer <input type="checkbox"/> Member, Technical Working Group <input type="checkbox"/> Other: _____ |
| 3. Number of years involved in EAC pooled procurement mechanism | <input type="checkbox"/> More than 3 years <input type="checkbox"/> 2 to 3 years <input type="checkbox"/> 1 to 2 years <input type="checkbox"/> 1 year or less |

| Section 2 - East African Community Pooled Procurement Mechanism Challenges and Solutions | |
|--|--|
| A. Stakeholder Engagement | |
| (Engaging stakeholders is for developing and building a streamlined and effective pooled procurement system. This brings together different organization entities, resources and participants to optimize value and efficiency in the health commodities supply chain) | |
| 4. All key stakeholders (MSOs, procurement agencies, pharmaceutical suppliers) were involved in the initiation of the EAPPM. | <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Undecided <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree |
| 5. Identified stakeholders discussed and agreed on the pooled procurement option to be adopted (Informed buying; coordinated informed buying, group contracting and central contracting). | <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Undecided <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree |
| 6. The objectives, intended benefits and primary concerns for collaboration were determined and documented. | <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Undecided <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree |
| 7. A strategic plan was developed for the management and implementation of the selected pooled procurement model including creating a technical working group or a central unit for co-ordination. | <input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know |
| 8. The roles and responsibilities of the Chief Executive's Committee and the Technical Working Group in the implementation of the EAPPM are clearly defined with performance indicators. | <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Undecided <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree |

B. Situation Analysis

(A situation analysis ensures that all stakeholders are in agreement about what the current issues are and where performance gaps are in terms of procurement and availability of essential health products)

9. A structured situation analysis was conducted to reveal current practices and gaps that would inform establishment of the pooled procurement mechanism?
 Strongly agree Agree Undecided Disagree Strongly disagree
10. The EAPPM was established to address the following gaps: (Mark all that apply)
- Inadequate financing for products Inadequate human resource Weak procurement processes
- High cost of essential health commodities Poor lead times Stock-outs for health commodities
- Others _____
11. List the gaps, if any, that the pooled procurement mechanism has addressed to a “great extent”.
12. List the gaps, if any, that the pooled procurement mechanism has thus far addressed to “some degree”.
13. List the gaps, if any, that the pooled procurement mechanism has thus far addressed to “a minimal extent”
14. List the gaps, if any, that the pooled procurement mechanism has not addressed at all?

C. Implementation Planning *(Consensus building is a process of seeking unanimous agreement. It involves a good-faith effort to meet the interests of all stakeholders.)*

15. The categories of health products to be included in the pooled procurement mechanism were discussed and agreed upon.
 Strongly agree Agree Undecided Disagree Strongly disagree
16. Financial resources for managing the PPM were indentified and are available when needed.
 Strongly agree Agree Undecided Disagree Strongly disagree
17. The knowledge, skills and abilities of the technical working group members was considered before appointment to the team and correspond with the different processes of procurement and coordination.
 Strongly agree Agree Undecided Disagree Strongly disagree
18. The EAPPM has annual work plans with outputs, responsibilities, deadlines, budget requirements and SMART performance objectives that are monitored.
 Strongly agree Agree Undecided Disagree Strongly disagree
19. A signed memorandum of understanding exists between member MSOs and the coordinating organization (EPN).
 Yes No I don't know
20. If you are a member of the TWG, indicate which phrase below applies to you.
 I was issued with an appointment letter prior to joining the TWG.
 I was issued with an appointment letter and terms of reference prior to joining the TWG.
 None of the above.

D. Setting Up a Central Procurement Agency

21. A procurement method was agreed upon at the inception of the EAPPM. Procurement methods include open tender, restricted tender, competitive negotiation and direct procurement)

Yes No I don't know

22. Roles and responsible persons for each procurement process are clearly defined.

Yes No I don't know

23. Standard operating procedures are in place for each procurement related process.

Yes No I don't know

E. Managing and Organizing Procurement

24. Please indicate procurement related components that have gaps and need to be addressed. Write a concise description of the gap/challenge and propose solutions. Consider availability of standard operating procedures, required human resource for each component, availability of work plans, tools and resources etc.

| Procurement Component/Process | Description | Proposed solution(s) |
|--|-------------|----------------------|
| <input type="checkbox"/> Quantification and forecasting | | |
| <input type="checkbox"/> Harmonization of products and forecasts | | |
| <input type="checkbox"/> Pre-qualification of suppliers | | |
| <input type="checkbox"/> Tendering approach and adjudication | | |
| <input type="checkbox"/> Price negotiations | | |
| <input type="checkbox"/> Monitoring adherence to contract terms | | |
| <input type="checkbox"/> Monitoring order status | | |
| <input type="checkbox"/> Receiving products | | |
| <input type="checkbox"/> Paying suppliers | | |
| <input type="checkbox"/> Reporting, Monitoring & Evaluation | | |
| <input type="checkbox"/> Others | | |

APPENDIX 3 – TOPIC GUIDE

Topic Guide (Qualitative)

1. Shared executive leadership commitment

- Do you think there has been shared executive commitment in the implementation of EAPPM? Indicators of commitment or non-commitment?
- What are the financial and non-financial benefits that the EAPPM has realized? Have these influenced executive leadership commitment?
- How should non-commitment be spurred, if any?

2. Legislation and regulation in East Africa

- How have the following been handled in the EAPPM? (Registration of health products; Taxes and duties; Freight and clearance; Quality standards)
- Any challenges encountered?
- Any recommendations to enhance these processes?

3. Financial resources

- Any financial concerns with regard to procuring of health products?
- How have costs for managing the pooled procurement been handled? Any challenges? Any future recommendations?

4. Capacity building

- Has the need for capacity building on pooled procurement for TWG members ever been identified?
- Have capacity building sessions on pooled procurement been conducted since inception of the EAPPM?
- In what areas do you think there is need for capacity building?

5. Harmonization

- What components of the EAPPM have required harmonization?
- How have these been handled? Any challenges?
- Any recommendations to enhance harmonization?

APPENDIX 4 – ETHICS REVIEW APPROVAL



Strathmore
UNIVERSITY

7th May 2018.

SU-IRB 0227/18

Dr. Collins D. P. Jaguga
P.O Box 622-00100
Nairobi
Kenya.

Email: ciaguga@gmail.com

Dear Dr Jaguga,

REF Student Number: 83147/14 Protocol ID: SU-IRB 0227/18
AN ASSESSMENT OF THE IMPLEMENTATION OF THE EAST AFRICAN POOLED PROCUREMENT MECHANISM AMONG FAITH-BASED MEDICINES SUPPLY ORGANIZATIONS

We acknowledge receipt of your application documents to the Strathmore University Institutional Ethics Review Committee (SU-IERC) which includes:

1. Study Proposal dated January 2018
2. Participant Information and Consent form dated 30th April 2018
3. Study questionnaire dated January 2018
4. CV

The committee has reviewed your application, and your study "*An Assessment Of The Implementation Of The East African Pooled Procurement Mechanism Among Faith-Based Medicines Supply Organizations*" has been granted **approval**.

This approval is valid for one year beginning **7th May 2018** until **6th May 2019**.

In case the study extends beyond one year, you are required to seek an extension of the Ethics approval prior to its expiry. You are required to submit any proposed changes to this proposal to SU-IERC for review and approval prior to implementation of any change.

SU-IERC should be notified when your study is complete.

Thank you

Sincerely,

Amina Salim
Regulatory Affairs Fellow



Ole Sangale Rd, Madaraka Estate. PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034000
Email info@strathmore.edu www.strathmore.edu

APPENDIX 5 – PARTICIPANT’S CONSENT FORM

SECTION 1: INFORMATION SHEET

1.1 Investigator: Dr. Collins D. P. Jaguga

1.2 Institutional affiliation: Strathmore Business School (SBS), Strathmore University, Kenya

SECTION 2: INFORMATION SHEET-THE STUDY

2.1 Why is this study being carried out?

This study is being carried out to assess how the East African Pooled Procurement Mechanism (EAPPM) was implemented since inception, an exploration of challenges encountered and to determine the appropriate next steps to achieve sustainable success and ultimately better access to medicines in the East African region.

2.2 Do I have to take part?

No. Taking part in this study is entirely optional and the decision rests only with you. If you decide to take part, you will be asked to complete a questionnaire to get information on how EAPPM was established, operationalized, challenges encountered and key success factors for sustainable success. If you are not able to answer all the questions successfully the first time, you may be asked to sit through another informational session after which you may be asked to answer the questions a second time. You are free to decline to take part in the study at any time without giving any reasons.

2.3 Who is eligible to take part in this study?

- Chief Executive Officers of the organizations involved in the EAPPM.
- Members of the technical working group of the EAPPM.

2.4 Who is not eligible to take part in this study?

- Those not defined in the criteria in 2.3 above.

2.5 What will taking part in this study involve for me?

You will be approached by the researcher and requested to take part in the study. If you are satisfied that you fully understand the goals behind this study, you will be asked to sign this informed consent form and then offered the questionnaire to complete. You will also be asked to take part in a focused group discussion to elicit detailed information on the research topic.

2.6 Are there any risks or dangers in taking part in this study?

There are no risks in taking part in this study. All the information you provide will be treated as confidential and will not be used in any way without your express permission.

2.7 Are there any benefits of taking part in this study?

The information will be used to improve pooled procurement of essential medicines in east Africa with the aim of increasing their affordability and availability.

2.8 What will happen to me if I refuse to take part in this study?

Participation in this study is entirely voluntary. Even if you decide to take part at first but later change your mind, you are free to withdraw at any time without explanation.

2.9 Who will have access to my information during this research?

All research records will be stored in securely locked cabinets. That information may be transcribed into our database but this will be sufficiently encrypted and password protected. Only the people who are closely concerned with this study will have access to your information. All your information will be kept confidential.

2.10 Who can I contact in case I have further questions?

You can contact me, Dr. Collins D. P. Jaguga, at SBS, or by e-mail cjaguga@epnetwork.org, or by phone +254-734-964-644 / 705-302552. You can also contact my supervisor, Dr. Francis Wafula, at the Strathmore Business School, Nairobi, or by e-mail fwafula@strathmore.edu or by phone +254-722-679-467.

If you want to ask someone independent anything about this research please contact:

The Secretary–Strathmore University Institutional Ethics Review Board, P. O. BOX 59857, 00200, Nairobi, email ethicsreview@strathmore.edu Tel number: +254 703 034 375

I, _____, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.

Please tick the boxes that apply to you;

Participation in the research study

I AGREE I DO NOT AGREE

Participant's Signature:

Date: ____/____/____

DD/MM/YEAR

Participant's Name:

(Please print name)

Time: ____/____

HR/MN

I, Dr. Collins D. P. Jaguga certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature:

Date: ____/____/____

DD/MM/YEAR

Investigator's Name:

(Please print name)

Time: ____/____

HR/MN

**APPENDIX 6 - CHALLENGES ENCOUNTERED BY EAST AFRICAN
POOLED PROCUREMENT MECHANISM**

| Procurement process | Challenges | Category of severity |
|--|---|-----------------------------|
| a) Quantification and forecasting (Q&F) | a) Since forecasting is largely dependent on historic consumption data, which may not be fully accurate, some MSOs end up not placing orders for projected quantities leading to displeased suppliers. b) Q&F is not harmonized. c) Inaccurate quantification of health products since health facilities inconsistently order products from either their warehouse or the government one. | Moderate |
| b) Harmonization of products and forecasts | a) Conversion of product descriptions from French to English often leads to incorrect product descriptions. b) Poor prediction of delays. c) The product list is too long and might not be attractive to potential bidders. d) Some MSOs seem attached to old suppliers for certain products despite potential benefits with new suppliers. e) MSOs do not adhere to set deadlines in collating and submitting information on forecasts to the secretariat. f) Product specifications are not fully harmonized; the units of products and pack sizes differ. | Minor |
| c) Prequalification of suppliers | a) Use of prequalified suppliers list from different MSOs yet each organization has a different prequalification procedure. b) Limited choice of suppliers thus reduced competitiveness in prices offered. c) MSOs with the wherewithal to conduct supplier inspection audits are doing so independently. | Moderate |
| d) Tendering approach and adjudication | a) Restricted tendering gives quick results but might not necessarily give the most competitive offers. May also be considered unfair since only previous suppliers participate in the tender. b) The evaluation of tender documents is a manual process and is not free from errors. c) Bidders often raise several questions during the tender open period, possibly implying that certain details are omitted. | Moderate |

**CHALLENGES ENCOUNTERED BY EAST AFRICAN POOLED
PROCUREMENT MECHANISM CONT'D**

| Procurement process | Challenges | Category of severity |
|--|---|----------------------|
| e) Price negotiations | <ul style="list-style-type: none"> a) Negotiated prices are still not as desired given the large pooled quantities of products. b) Fluctuating prices of products. c) EPN might not be well placed to negotiate for price reductions since they are not armed with market prices. MSOs might be able to obtain better prices individually than under pooled procurement thus watering down the intended benefits. d) MSOs are not involved in price reduction negotiations. e) Poor negotiation approach. f) The impact of price negotiations is not being felt. g) Limited negotiation skills by the responsible person at EPN. | Moderate |
| f) Monitoring adherence to contract terms | <ul style="list-style-type: none"> a) Occasionally, either suppliers or MSOs breach contract terms. Often realized too late e.g. delivery of supplies of a different quality than that awarded. b) EPN is a principal signatory in the EAPPM contracts yet MSOs have authority to cancel contracts even if contrary to EPN's wishes. | Moderate |
| g) Monitoring order status | <ul style="list-style-type: none"> a) There is no system for monitoring the status for orders. b) It's challenging for EPN to monitor the status of orders since they are not the users. c) It's not going on well. | Moderate |
| h) Receiving products | Delayed deliveries and defaulting by some suppliers | Moderate |
| i) Financial resources and paying suppliers | <ul style="list-style-type: none"> a) Delays by suppliers in acknowledging receipt of payment by MSOs. b) Some MSOs delay payments to suppliers. c) MSOs have not agreed on a payment mechanism. | Major |
| j) Reporting, Monitoring and Evaluation | <ul style="list-style-type: none"> a) No reporting, poor monitoring and evaluation. b) Monitoring and evaluating performance is based on e-mail communications through feedback from member organizations c) There are quarterly briefs for CEOs but limited interaction for TWG members. | Moderate |
| i) Legislation and regulation in East Africa | <ul style="list-style-type: none"> a) Very few products registered in four or three countries thus reducing pooled quantities. b) Differing tax and duties charges and requirements. | Major |

**CHALLENGES ENCOUNTERED BY EAST AFRICAN POOLED
PROCUREMENT MECHANISM CONT'D**

| Others | Challenges | Category of severity |
|---|---|----------------------|
| j) Shared executive leadership commitment | a) Non-payment of annual administrative fees to secretariat by one MSO. b) CEO of one MSO non-responsive to communications. | Moderate |
| k) Capacity building | a) Contracts management skills b) Negotiation skills c) International procurement procedures d) Evaluation of non-pharmaceuticals e) Manufacturers' inspection audits | Moderate |



APPENDIX 7 - SIGNED PARTICIPANT'S CONSENT FORMS

2.10 Who can I contact in case I have further questions?

You can contact me, Dr. Collins D. P. Jaguga, at SBS, or by e-mail cjaguga@epnetwork.org, or by phone +254-734-964-644 / 705-302552. You can also contact my supervisor, Dr. Francis Wafula, at the Strathmore Business School, Nairobi, or by e-mail fwafula@strathmore.edu or by phone +254-722-679-467.

If you want to ask someone independent anything about this research please contact:

The Secretary-Strathmore University Institutional Ethics Review Board, P. O. BOX 59857, 00200, Nairobi, email ethicsreview@strathmore.edu Tel number: +254 703 034 375

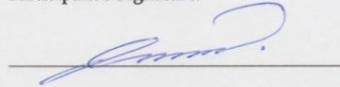
I, TRACIE MURAYA, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.

Please tick the boxes that apply to you;

Participation in the research study

- I AGREE to take part in this research
 I DO NOT AGREE to take part in this research

Participant's Signature:



Date: 06 / 02 / 2018

DD/MM/YEAR

Participant's Name:

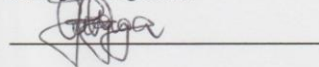
TRACIE MURAYA
(Please print name)

Time: 08 / 30

HR/MN

I, Dr. Collins D. P. Jaguga certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature:



Date: 6 / 2 / 2018

DD / MM / YEAR

Investigator's Name:

Collins D-P Jaguga
(Please print name)

Time: 8 / 22

HR / MN

2.10 Who can I contact in case I have further questions?

You can contact me, Dr. Collins D. P. Jaguga, at SBS, or by e-mail cjaguga@epnetwork.org, or by phone +254-734-964-644 / 705-302552. You can also contact my supervisor, Dr. Francis Wafula, at the Strathmore Business School, Nairobi, or by e-mail fwafula@strathmore.edu or by phone +254-722-679-467.

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I, Yvon de Jong, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.


Please tick the boxes that apply to you;

Participation in the research study

I AGREE to take part in this research

I DO NOT AGREE to take part in this research

Participant's Signature:



Date: 31 / 1 / 2018

DD / MM / YEAR

Participant's Name:

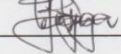
Yvon de Jong
(Please print name)

Time: 09 / 54

HR / MN

I, Dr. Collins D. P. Jaguga certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature:



Date: 31 / 1 / 2018

DD / MM / YEAR

Investigator's Name:

Collins D-P Jaguga
(Please print name)

Time: 10 / 00

HR / MN

2.10 Who can I contact in case I have further questions?

You can contact me, Dr. Collins D. P. Jaguga, at SBS, or by e-mail cjaguga@epnetwork.org, or by phone +254-734-964-644 / 705-302552. You can also contact my supervisor, Dr. Francis Wafula, at the Strathmore Business School, Nairobi, or by e-mail fwafula@strathmore.edu or by phone +254-722-679-467.

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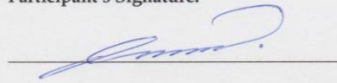
I, TRACIE MURAYA, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.

Please tick the boxes that apply to you;

Participation in the research study

- I AGREE to take part in this research
 I DO NOT AGREE to take part in this research

Participant's Signature:



Date: 06 / 02 / 2018

DD/MM/YEAR

Participant's Name:

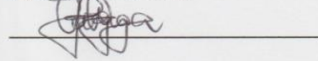
TRACIE MURAYA
(Please print name)

Time: 08 / 30

HR/MN

I, Dr. Collins D. P. Jaguga certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature:



Date: 6 / 2 / 2018

DD / MM / YEAR

Investigator's Name:

Collins D-P Jaguga
(Please print name)

Time: 8 / 32

HR / MN

2.10 Who can I contact in case I have further questions?

You can contact me, Dr. Collins D. P. Jaguga, at SBS, or by e-mail cjaguga@epnetwork.org, or by phone +254-734-964-644 / 705-302552. You can also contact my supervisor, Dr. Francis Wafula, at the Strathmore Business School, Nairobi, or by e-mail fwafula@strathmore.edu or by phone +254-722-679-467.

If you want to ask someone independent anything about this research please contact:

The Secretary-Strathmore University Institutional Ethics Review Board, P. O. BOX 59857, 00200, Nairobi, email ethicsreview@strathmore.edu Tel number: +254 703 034 375

I, Migwa Mpundu, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.

Please tick the boxes that apply to you;

Participation in the research study

I AGREE to take part in this research

I DO NOT AGREE to take part in this research

Participant's Signature:

Migwa

Date: 1, 2, 2018

DD/MM/YEAR

Participant's Name:

Migwa Mpundu
(Please print name)

Time: 02, 13

HR/MN

I, Dr. Collins D. P. Jaguga certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature:

Collins D. P. Jaguga

Date: 1, 2, 2018

DD/MM/YEAR

Investigator's Name:

Collins D. P. Jaguga
(Please print name)

Time: 02, 17

HR/MN

2.10 Who can I contact in case I have further questions?

You can contact me, Dr. Collins D. P. Jaguga, at SBS, or by e-mail cjaguga@epnetwork.org, or by phone +254-734-964-644 / 705-302552. You can also contact my supervisor, Dr. Francis Wafula, at the Strathmore Business School, Nairobi, or by e-mail fwafula@strathmore.edu or by phone +254-722-679-467.

If you want to ask someone independent anything about this research please contact:

The Secretary-Strathmore University Institutional Ethics Review Board, P. O. BOX 59857, 00200, Nairobi, email ethicsreview@strathmore.edu Tel number: +254 703 034 375

I, GEORGE MURIITHI MUNYI, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.

Please tick the boxes that apply to you;

Participation in the research study

I AGREE to take part in this research

I DO NOT AGREE to take part in this research

Participant's Signature:

Date: 31 / 01 / 2018



DD/MM/YEAR

Participant's Name:

Time: 11 / 50AM

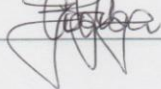
GEORGE MURIITHI MUNYI
(Please print name)

HR/MN

I, Dr. Collins D. P. Jaguga certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature:

Date: 21 / 1 / 2018



DD/MM/YEAR

Investigator's Name:

Time: 12 / 02

Collins D. P. Jaguga
(Please print name)

HR/MN

2.10 Who can I contact in case I have further questions?

You can contact me, Dr. Collins D. P. Jaguga, at SBS, or by e-mail cjaguga@epnetwork.org, or by phone +254-734-964-644 / 705-302552. You can also contact my supervisor, Dr. Francis Wafula, at the Strathmore Business School, Nairobi, or by e-mail fwafula@strathmore.edu or by phone +254-722-679-467.

If you want to ask someone independent anything about this research please contact:

The Secretary-Strathmore University Institutional Ethics Review Board, P. O. BOX 59857, 00200, Nairobi, email ethicsreview@strathmore.edu Tel number: +254 703 034 375

I, Jonathan Kiliko, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.

Please tick the boxes that apply to you;

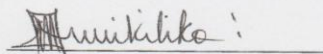
Participation in the research study

I AGREE to take part in this research

I DO NOT AGREE to take part in this research

Participant's Signature:

Date: 28 / 05 / 2018



DD / MM / YEAR

Participant's Name:

Dr. Jonathan Kiliko
(Please print name)

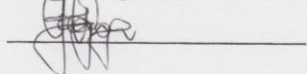
Time: 09 / 30

HR / MN

I, Dr. Collins D. P. Jaguga certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature:

Date: 28 / 05 / 2018



DD / MM / YEAR

Investigator's Name:

Collins Jaguga
(Please print name)

Time: 9 / 25

HR / MN

2.10 Who can I contact in case I have further questions?

You can contact me, Dr. Collins D. P. Jaguga, at SBS, or by e-mail cjaguga@epnetwork.org, or by phone +254-734-964-644 / 705-302552. You can also contact my supervisor, Dr. Francis Wafula, at the Strathmore Business School, Nairobi, or by e-mail fwafula@strathmore.edu or by phone +254-722-679-467.

If you want to ask someone independent anything about this research please contact:

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I, NAMUTEBI JOANITA, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.

Please tick the boxes that apply to you;


Participation in the research study

I AGREE to take part in this research

I DO NOT AGREE to take part in this research

Participant's Signature:

Date: 25 / 1 / 2018



DD/MM/YEAR

Participant's Name:

Time: 14 / 20


NAMUTEBI JOANITA
(Please print name)

HR/MN

I, Dr. Collins D. P. Jaguga certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature:

Date: 25 / 1 / 2018



DD/MM/YEAR

Investigator's Name:

Time: 14 / 25

Collins Jaguga
(Please print name)

HR/MN

2.10 Who can I contact in case I have further questions?

You can contact me, Dr. Collins D. P. Jaguga, at SBS, or by e-mail cjaguga@epnetwork.org, or by phone +254-734-964-644 / 705-302552. You can also contact my supervisor, Dr. Francis Wafula, at the Strathmore Business School, Nairobi, or by e-mail fwafula@strathmore.edu or by phone +254-722-679-467.

If you want to ask someone independent anything about this research please contact:

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I, Denise Twine, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.

Please tick the boxes that apply to you;

Participation in the research study

I AGREE to take part in this research

I DO NOT AGREE to take part in this research

Participant's Signature:

Date: 20 / 1 / 2018

Denise Twine

DD / MM / YEAR

Participant's Name:

Time: 09 / 27

Denise Twine
(Please print name)

HR / MN

I, Dr. Collins D. P. Jaguga certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature:

Date: 20 / 1 / 2018

Collins Jaguga

DD / MM / YEAR

Investigator's Name:

Time: 9 / 30

Collins Jaguga
(Please print name)

HR / MN

2.10 Who can I contact in case I have further questions?

You can contact me, Dr. Collins D. P. Jaguga, at SBS, or by e-mail cjaguga@epnetwork.org, or by phone +254-734-964-644 / 705-302552. You can also contact my supervisor, Dr. Francis Wafula, at the Strathmore Business School, Nairobi, or by e-mail fwafula@strathmore.edu or by phone +254-722-679-467.

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The Secretary-Strathmore University Institutional Ethics Review Board, P. O. BOX 59857, 00200, Nairobi, email ethicsreview@strathmore.edu Tel number: +254 703 034 375

I, Andrew Ojuga, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.

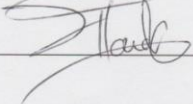
Please tick the boxes that apply to you;

Participation in the research study

I AGREE to take part in this research

I DO NOT AGREE to take part in this research

Participant's Signature:



Date: 2 / 2 / 2018

DD / MM / YEAR

Participant's Name:

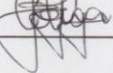
Andrew Ojuga
(Please print name)

Time: 04, 21

HR / MN

I, Dr. Collins D. P. Jaguga certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature:



Date: 2 / 2 / 2018

DD / MM / YEAR

Investigator's Name:

Collins D. P. Jaguga
(Please print name)

Time: 04, 30

HR / MN

You can contact me, Dr. Collins D. P. Jaguga, at SBS, or by e-mail cjaguga@epnetwork.org, or by phone +254-734-964-644 / 705-302552. You can also contact my supervisor, Dr. Francis Wafula, at the Strathmore Business School, Nairobi, or by e-mail fwafula@strathmore.edu or by phone +254-722-679-467.

If you want to ask someone independent anything about this research please contact:
The Secretary—Strathmore University Institutional Ethics Review Board, P. O. BOX 59857, 00200, Nairobi, email ethicsreview@strathmore.edu Tel number: +254 703 034 375

I, PASCHAL MANYURU have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.

Please tick the boxes that apply to you;

Participation in the research study

I AGREE to take part in this research

I DO NOT AGREE to take part in this research

Participant's Signature:

Date: 3, 2, 2018

Paschal Manyuru

DD / MM / YEAR

Participant's Name:

Time: 01, 30

PASCHAL MANYURU

HR / MN

(Please print name)

I, Dr. Collins D. P. Jaguga certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature:

Date: 3, 2, 2018

Collins Jaguga

DD / MM / YEAR

Investigator's Name:

Time: 01, 33

Collins Jaguga

HR / MN

(Please print name)

2.10 Who can I contact in case I have further questions?

You can contact me, Dr. Collins D. P. Jaguga, at SBS, or by e-mail cjaguga@epnetwork.org, or by phone +254-734-964-644 / 705-302552. You can also contact my supervisor, Dr. Francis Wafula, at the Strathmore Business School, Nairobi, or by e-mail fwafula@strathmore.edu or by phone +254-722-679-467.

If you want to ask someone independent anything about this research please contact:
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I, ORGENES LEMA, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.

Please tick the boxes that apply to you;

Participation in the research study

I AGREE to take part in this research

I DO NOT AGREE to take part in this research

Participant's Signature:

Date: 29, 01, 2018

Orgenes Lema

DD/MM/YEAR

Participant's Name:

ORGENES LEMA

Time: 10, 00

(Please print name)

HR/MN

I, Dr. Collins D. P. Jaguga certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature:

Date: 29, 01, 2018

Collins D. P. Jaguga

DD/MM/YEAR

Investigator's Name:

Collins D. P. Jaguga

Time: 10, 10

(Please print name)

HR/MN

2.10 Who can I contact in case I have further questions?

You can contact me, Dr. Collins D. P. Jaguga, at SBS, or by e-mail cjaguga@epnetwork.org, or by phone +254-734-964-644 / 705-302552. You can also contact my supervisor, Dr. Francis Wafula, at the Strathmore Business School, Nairobi, or by e-mail fwafula@strathmore.edu or by phone +254-722-679-467.

If you want to ask someone independent anything about this research please contact:

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I, Liliane, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.


Please tick the boxes that apply to you;

Participation in the research study

I AGREE to take part in this research

I DO NOT AGREE to take part in this research

Participant's Signature:



Date: 25/05/2018

DD/MM/YEAR

Participant's Name:


KWANTEGE Liliane
(Please print name)

Time: 9:01am

HR/MN

I, Dr. Collins D. P. Jaguga certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature:



Date: 25, 05, 2018

DD / MM / YEAR

Investigator's Name:

Collins Jaguga
(Please print name)

Time: 9, 01

HR / MN

2.10 Who can I contact in case I have further questions?

You can contact me, Dr. Collins D. P. Jaguga, at SBS, or by e-mail cjaguga@epnetwork.org, or by phone +254-734-964-644 / 705-302552. You can also contact my supervisor, Dr. Francis Wafula, at the Strathmore Business School, Nairobi, or by e-mail fwafula@strathmore.edu or by phone +254-722-679-467.

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I, DR. BILDARD BAGUMA, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.

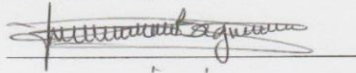
Please tick the boxes that apply to you;

Participation in the research study

I AGREE to take part in this research

I DO NOT AGREE to take part in this research

Participant's Signature:



Date: 07 / 06 / 2018

DD / MM / YEAR

Participant's Name:

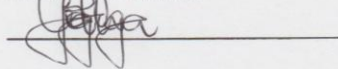
DR. BILDARD BAGUMA
(Please print name)

Time: 08 / 30 Am

HR / MN

I, Dr. Collins D. P. Jaguga certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature:



Date: 07 / 06 / 2018

DD / MM / YEAR

Investigator's Name:

Collins Jaguga
(Please print name)

Time: 8 / 35

HR / MN