

Factors Affecting Consistency in Supply of Pharmaceutical Products in Government Hospitals in Kenya: A Case Study of Maragua District Hospital

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ABSTRACT

This research was made to establish the factors that affected consistency in supply of pharmaceutical products in government hospitals in Kenya. In most cases, the government run hospitals have had inconsistency in supply of pharmaceutical and previous researchers have not identified the reasons culminating to such situations regardless of the huge amounts of budget allocations. The study was carried out in Maragua district hospital with a sample size of 100 individuals comprising of management, procurement department, nursing department and the pharmacy department personnel. The researcher used stratified random sampling. Structured questionnaires were given out to the respondents to fill and the researcher conducted unstructured interviews. Data collected was analysed and it was clear that the procurement process and its management, legal requirements and internal tools used for enhancing procurement greatly determined the timely availability of supplies following.

The researcher identified that the procurement department was understaffed and procurement process was at times not observed. Financing was a major problem. Legal requirements were bureaucratic and lengthened the procurement process leading to inconsistency in obtaining supplies. The hospital had no core tool for enhancing procurement performance. The legal framework needed review to reduce bureaucracy and shorten the process and training on procurement issues to all hospital procurement players was required to boost their knowledge. The hospital faced several challenges, which included shortage of staff in the procurement department and financial constrains.

DEFINITION OF TERMS

Supply supply is the quantity of goods and services that a producer is willing and able to produce for market transaction at a given price in a given time period (Dobler, 1996).

Shock demand Any sudden event that dramatically but (usually) temporarily increases or decreases demand for one or more goods or services. The event may result from government intervention, such as a change in money supply, or may be a random occurrence in the market (Rivard, 2002).

Procurement This is the acquisition of goods and/or services at the best possible total cost of ownership, in the right quality and quantity, at the right time, in the right place and from the right source for the direct benefit or use of corporations, individuals, or even governments (Dobler, 1996).

Pharmaceuticals Also referred to as medicine, medication or medicament, can be defined as any chemical substance intended for use in the medical diagnosis, cure, treatment, or prevention of disease (US, 2008).

Product This is anything acquired either as tangible or intangible which closely meets the requirements of a particular need and yield enough satisfaction to justify its continued existence. (Kotler, & Adam, 2006)

Consistency the ability of the supplier to demonstrate a high standard of delivery reliability and quality, preferably with evidence of improvement over time (Carter & Kirby, 2006)

CHAPTER ONE

INTRODUCTION

This chapter contains the overall overview of the research project. It contains the background of the study, statement of the problem, objectives of the study, research questions, scope of the study, significance of the study and limitations of the study.

1.1 Background of study

Advances in pharmaceuticals have transformed health care over the last several decades. Today, many health problems are prevented, cured, or managed effectively for years through the use of prescription drugs. In some cases, the use of prescription medicines keeps people from needing other expensive health care such as being hospitalized or having surgery (Zhang & Soumerai, 2007). Furthermore, the drug industry's profit margins have raised considerable attention. Pharmaceutical manufacturing was the most profitable industry in the U.S. from 1995 to 2002, and in 2008 it ranked third with profits after taxes of about 19 percent (US, 2007). Several factors have contributed to this growth in spending on pharmaceuticals, including:

Increased utilization and demand for prescription drugs - From 1999 to 2009, the number of prescriptions purchased in the United States increased 39% (Kaiser, 2008).

Types of prescriptions written – Most of the top-selling prescriptions are newer, higher-priced brand name drugs that have replaced older, less-expensive drugs.

Price increases - Retail prescription prices have increased on average 3.6% annually between 2000 and 2009, much faster than the average inflation rate of 2.5%.

Research and Development – Manufacturers try to recoup the research and development, costs for drugs that make it to the market as well as those that do not enter the marketplace. Only one in five drugs that make it to the clinical testing process receive FDA approval and are brought to market (Di Masi, 2003).

Advertising and Marketing - Pharmaceutical manufacturers make substantial investments on marketing to consumers and physicians, which may influence consumer demand and physician prescribing practices. Furthermore, the most heavily advertised products tend to be newer, more expensive drugs. This results in overall increases in spending.

The role of patent laws in drug pricing is also an important factor. Patent protection provides manufacturers an exclusive right to sell new drug products for up to 20 years from the date of the patent filing. Once the patent expires, the drug may be manufactured in generic versions by any number of manufacturers, thus lowering the prices for the drug. Pharmaceutical companies have been accused of obtaining a new patent on a slightly different version of a drug about to go off patent to extend their favorable market situation, and these patent protections have garnered criticism by some groups for limiting access to competition and making some life-saving medications unavailable and unaffordable for patients (Frank, 2007).

Rising prescription costs have led many to call for greater government involvement in regulating the pharmaceutical industry, particularly since prices for brand pharmaceutical products are considerably higher in the U.S. than in countries where governments take a more active role in negotiating prices and regulating profits.

Opponents however, argue that government involvement will not guarantee lower prices, may have unintended consequences for the rest of the market, and would negatively affect patients because regulatory actions would stifle industry incentives to invest in research and development of new therapies.

The health system in Kenya is organized and implemented through a network of facilities organized in a pyramidal pattern. The network starts from dispensaries and health clinics/ posts at the bottom, up to the health centers, sub-district hospitals, district hospitals, provincial general hospitals and at the apex there is the Kenyatta National Hospital. The Ministry of Health (MoH) is the major financier and provider of health care services in Kenya. Out of all the health facilities in the country, the MoH controls and runs about 52% while the private sector, the mission organizations and the Ministry of Local government runs the remaining 48%. The public sector controls about 79% of the health centers, 92% of the sub-health centers, and 60% of the dispensaries. The NGO sector is dominant in health clinics, maternity and nursing homes controlling 94% of the total while also controlling 86% of the medical centers in the country (CBS, 2004).

Kenya spends about 8% of its GDP on health. Per capita expenditure per person stood at about US\$ 11 per person in 2003. Out of this, US\$ 6 came from budgetary resources, which also included donor contributions and the balance of about US \$5 came mainly from out-of-pocket expenditure. This expenditure fell far below the WHO's recommended US\$34 per capita. Out-of-pocket expenditure thus accounted for 53% of the total cost of healthcare, with the remainder being Government contributions from general taxation (25%), Social Health Insurance (15%), private prepaid health plans (5%) and non-profit institutions expenditure at 2%. The above scenario means the current healthcare financing system depends mainly on out-of-pocket expenditure and therefore 75% privately financed.

The efforts at different levels to control diseases have seen the adoption of the Directly Observed Treatment Short-course (DOTS) as a national strategy in Kenya to contain Tuberculosis. The treatment success rate had improved to about 80% by end of 2003.

While there are a number of policy options under consideration for addressing rising drug costs, the two that are currently receiving the most attention from policymakers involve the government's role in drug pricing for the Medicare program and importation from other countries.

Government's role in Medicare drug prices is major issue currently under debate involves the appropriate role for government regarding drug prices for Medicare beneficiaries under the Part D drug benefit. The law specifically prohibits the government from participating in negotiations between the drug plan sponsors and drug manufacturers and pharmacies, establishing any specific list of drugs that will be covered (formulary), or imposing any price controls on drugs. Supporters of this market based approach believe that the competition for enrollees will cause plans to negotiate with drug manufacturers and pharmacies to offer drugs at the lowest possible prices, while opponents state that the lack of federal regulation and negotiating power will lead to higher costs for Medicare and for Medicare beneficiaries, many of whom still face sizable out-of-pocket costs for prescription medications (WHO,2008)

The significantly lower prices available for common brand name prescription drugs in Canada and other countries has led some individuals as well as state governments to import drugs from those countries. Prescription drug importation is illegal in most cases. A number of proposals on importation have been introduced in varying in scope, the countries from which drugs could be imported, safety standards, regulatory requirements, and fees that would be levied to help pay the costs of increased government regulation. Supporters believe that if importation were legal from other countries, including Canada and the Asian and European markets, there would be enough volume to significantly affect prices in the worlds market. Opponents question the safety of imported drugs and caution that cost savings would be small if foreign governments were to restrict the supply of drugs leaving their borders or pharmaceutical manufacturers limited the supply of drugs sold to foreign nations.

1.2 Problem statement

This study explored the factors affecting the consistent supply of pharmaceutical products in government hospitals in order to identify the cause for frequent shortages in these hospitals. Due to lack of constant supplies, most of the hospitals had been experiencing time-to-time shortages of pharmaceuticals therefore being not in a position to deliver better health care to patients. According to a study commissioned by Transparency International-Kenya, (2001) the shortage was creating a trail of misery for patients across the country. In most hospitals, patients had been asked to buy them from private chemists. In an effort to stabilize the supply of pharmaceutical products, KEMSA was set-up by the government in the year 2000 to procure and supply drugs and pharmaceutical supplies to public, mission and private hospitals in the country. Lead Consultant, observed that the government needed to put more resources in health care so that it can be in line with the Abuja declaration, which states that at least 15 per cent of the national budget should go to provision of healthcare. The study points out that KEMSA lack the institutional capacity, autonomy, financial and human resources capacity to perform its mandate effectively.

For effective operations in any institution, supplies should be available when needed. Proper stock control records enable organizations to eliminate stock outs by ensuring timely ordering of stocks. Having formed KEMSA to be in charge of pharmaceutical products distribution in Kenya, the government had taken a move towards achieving consistency in supply in government hospitals. However, this had not been achieved. In consistency in supply of pharmaceutical products engulf government hospitals in Kenya. The factors culminating to this state of affairs had not been well identified and this research therefore sought to unearth this factors.

1.3 General objective

To establish the factors that affect consistency in supply of pharmaceutical products in government hospitals in Kenya.

1.3.1 Specific objectives

- i. To identify the effects of procurement process and its management on consistency in supply
- ii. To determine the influence of legal policy on consistency in supply of pharmaceuticals
- iii. To identify methods of enhancing the process of procurement to achieve consistency

1.4 Research questions

- i. How do the procurement process and its management affect consistency in supply?
- ii. How does the legal framework influence the procurement of pharmaceutical products?
- iii. What measures can be taken to improve the procurement process to achieve consistency in supply?

1.5 The significance of the study

The study was made to unearth the causes of the unstable supply of pharmaceuticals products in government hospitals. In that case be in a position to identify what hindrances were faced and therefore formulate best institutional policies and regulations that can sustain constant supplies. This study is significant at this time when the governmental hospitals are faced with great challenge of handling huge Kenyan population who require better services. In consideration to this, the results of this study are believed to be of great benefit to:

A. Investors

After obtaining the basic enlightenment highlighted out in this study, investors will obtain knowledge; hence due to the demand of doing business, willing and able investors will be in apposition to make use of the information and make sound decisions while venturing in the pharmaceuticals business.

B. Management

The management shall be acquainted with major issues that affect the supply of pharmaceutical products in their hospitals; and therefore be in a position to make sound judgments and decisions on how to counter them. In addition ensure smooth running of the hospitals by ensuring all required pharmaceuticals are availed when needed hence no stock outs and un warranted overstocking which can lead to expiry of products.

C. The public

The public shall be informed of the causes leading to the un availability of proper medical care in government hospitals.

D. Government

The government being in charge of delivering proper medical care to its citizens; the finding of this research will facilitate in formulating and putting in place best practices to ensure all hospitals receive supplies. Having deployed great effort to achieving better medication for all Kenyans, the government will be able to asses its performance.

1.6. The scope of the study

The research focused on the factors that affected the consistency in the supply of pharmaceutical products in government hospitals. The research therefore was conducted in Maragua level 4 Hospital in Murang'a County as an example of a government run hospital.

1.7. Limitations of the study

Due to personal attitudes, individual values and organizational policies, practitioners' in the medical profession keep most of there undertaking secret. The researcher received minimal cooperation from some respondents. The un availability of target respondents due to their busy schedules was a major challenge. Therefore, accessibility of records was limited; hence limiting the availability of more information that would have permit elaborate research.

Resource constrains also posed a great limitation; with constrained finances and very busy schedules therefore the researcher having limited time to carry out the research.

CHAPTER TWO LITERATURE REVIEW

2.0 Introduction

This chapter presents the literature review of the main concepts in relation to supply of pharmaceutical products, and the conceptual framework of the study

2.1 Theoretical frame work

2.1.1 Inventory management

In order to help hospitals ensure constant availability of pharmaceutical product, good inventory management system is key to the success in the steady availability of supplies. Several systems are available for use as observed by various scholars. In a standard hospital supply chain, all material operations are controlled by the hospital. Material personnel include purchasers, material handlers, and stockroom personnel. Other personnel, mainly nurses, technicians, and pharmacists, also spend a significant amount of time with material operations. Purchasers and material handlers are typically assigned to one or more wards within a hospital. Material from the hospital's various suppliers is delivered in bulk to the hospital's loading dock and transported to a main store room. Material handlers then transport material from the main store room to various secondary store rooms in wards throughout the hospital as the inventory in those wards diminishes. Typically, hospitals do not track perpetual inventory, but rather use visual cues to decide when to place an order for more material. The standard hospital supply chain is characterized as having inflated inventories (6 – 8 weeks) and a high occurrence of stock outs (90-95% fill rate). In general, medical staff has no incentive or time to be concerned with efficient material operations as they are much more concerned with taking care of patients. In addition, the lack of any inventory system makes it virtually impossible for the personnel to know which inventory is in excess and which short is, as they have no visibility into the inventories that are scattered all over (Rivard, 2002).

2.1.2. Stockless inventory

Under a stockless program, the distributor delivers product in pieces rather than bulk. The hospital is still responsible for placing the orders. Orders are transmitted from individual wards, and the material is delivered directly to the ward, bypassing the storeroom. Some redundant functions are removed from the supply chain as shipments are counted only once (at the distributor) as compare to the old system where each shipment was counted twice (at the distributor and at the hospital receiving dock). In essence, as compared with the standard supply chain, distributors have assumed the duties of holding inventory and replenishing individual locations. The implementation of a stockless system requires a "continuous flow of information between the point of use and the distributor" (Rivard & Beaulieu, 2002).

In addition, under this program, the distributors have more visibility into the actual usage of the hospital; thereby reducing the bullwhip effect that is prevalent in many extended supply chains. The bullwhip effect explains that demand variations tend to increase as one move up the supply chain. Nathan and Trinkaus noted two hospitals with item fill rates over 99%, compared with a conventional average of 92% (Rivard, 2002).

2.1.3. Vendor managed inventory

While stockless inventory systems have clear benefits for hospitals with virtually no inventory control, the system still does little to optimize operations within the entire supply chain channel. It removes fiscal accountability from hospital employees placing orders on the distributors. Order one piece of a particular part every day rather than consolidate to weekly shipments of five pieces. In short, there is no incentive for the ordering group to be efficient (Marino, 1998). As a result, distributors offer a service of vendor-managed inventory (VMI). Under VMI, the distributor hires employees to work in the hospital and assume all material operation duties, including material handling, warehousing, and purchasing. The distributor not only purchases material from its own facilities, but also from manufacturers and their competitors, as directed by the medical staff (Marino, 1998).

2.1.4. Automated point of use systems

These systems keep perpetual inventory records and automatically place orders based on the established reorder and order-up-to points. APU systems apply accountability to those using the inventory; and therefore, reduced shrinkage and increase cost capture. Another benefit of APU systems is that they allow for visibility into the entire hospital's inventory. Hence, for common parts, a shortage in one ward can be mitigated with excess inventory from another ward until the next replenishment arrives. This is a very significant advantage. Duclos, (1993) performed a study that demonstrated that point-of-use safety stock was much less effective than central store safety stock in preventing stock-outs during shock demand situations. In her model, as emergency demand is a characteristic of many hospitals business model, the study's conclusions are cause for concern and question

the stockless model. However, in this study, Duclos’s model assumed no visibility of inventory from ward to ward. The added visibility from APU systems void Duclos’s findings and increase the resiliency of the hospital supply chain under emergency demand situations.

2.2. Conceptual framework

INDEPENDENT VARIABLES

DEPENDENT VARIABLE

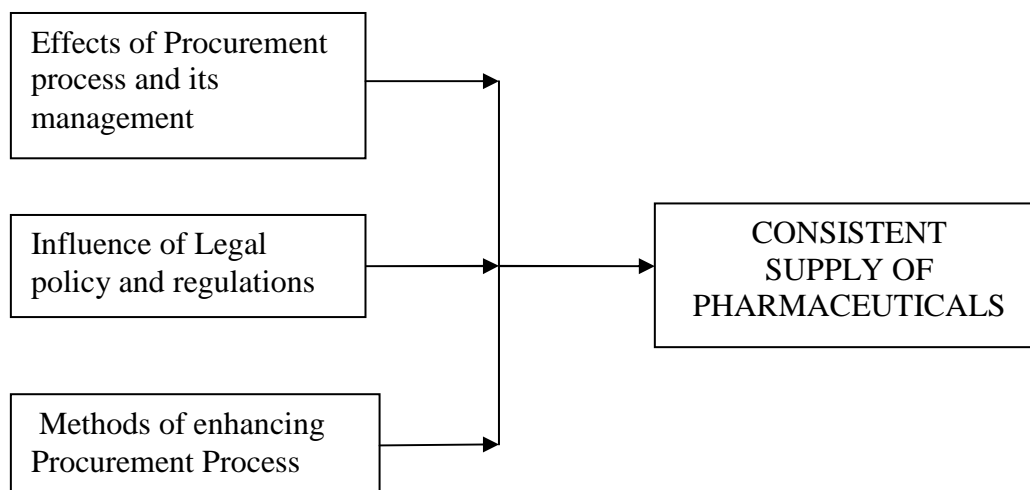


Figure: 2.1 conceptual frame work

2.2.1. Procurement process

Providing health facilities with drug and medical supplies is a very complex process that involves a large variety of actors from both the private and public sectors. Government’s health ministries often lack the management skills required to write technical specifications, supervise competitive bidding, and monitor and evaluate the contract performance. Corruption can occur at any stage of the process and influence decisions on the model of procurement (direct rather than competitive), on the type and volume of procured supplies, and on specifications and selection criteria ultimately compromising access to essential quality medicines (Smith, 1990).

The Kenya Medical Supplies Agency (KEMSA) is established by law as the primary public procurement agency for medicines, medical supplies, and medical devices and equipment. It is funded by direct allocation in the national budget and by development partners. The procurement process starts with the receipt by KEMSA of procurement requests from the relevant department in the Ministry of Health. It then prepares a procurement plan, with descriptions, specifications, and quantity of items required by the public institutions. KEMSA’s mode of purchase is through open tender or quotations for urgent supplies. For regular procurement, a decision is made by the user department and the funding agency on the mode of tendering, i.e. whether it should be local open tender or international open tender. Interested companies domiciled in Kenya are eligible for local tendering. The next step is the publication of tender notices. These describe the required items and quantities; the procedures to be followed for bidding, receipt of samples, and technical evaluation; and the conditions of award. The tender notice also provides an opportunity for bidders to seek clarifications and offers the possibility of amendments before the tender deadline. There are technical specifications for tender qualification: pharmaceutical manufacturers need certification by the national authority with regard to conformance to the WHO certification scheme and GMP. All products must be currently registered with the Pharmacy and Poisons Board. Evidence is required for bio-availability and/or bio-equivalence for certain critical items, upon request. There are several other requirements with regard to packaging, labeling, etc (WHO, 2008).

At the close of the tender period, KEMSA carries out commercial and technical evaluation of the bids. Before an award is made, it appoints a technical evaluation committee to assess the bids’ compliance with product specifications and other GMP/certification requirements. The assessments are submitted to a tender committee that awards the contract on the basis of lowest price amongst the bids of acceptable quality. Supplies are delivered to KEMSA warehouses where they are again evaluated on receipt and before storage. KEMSA, in conjunction with the user department, prepares a distribution list. Distribution is made mainly to public health institutions and KEMSA outsources transport for deliveries to the health facilities (MOH & CBS, 2004).

The pattern of procurement at KEMSA has recently been changed following the emergence of various problems in the process in recent years. In the past, KEMSA had, in some years, procured above budget. This resulted in unpaid bills from one year having to be carried over and settled out of the following year's budget allocation. This procedure then created budgetary shortfalls in the succeeding year. Moreover, money allocated by Treasury for purchase of pharmaceuticals but not spent in a budgetary year automatically reverts to the Treasury on 30 June each year. To avoid this situation, transfers were made to KEMSA's account from the Ministry of Health before financial year-end so that it would appear that the funds had already been spent. In order to resolve this anomaly, both KEMSA and the Task Force report recommend the establishment of a special fund as already provided for in the Act establishing KEMSA. In an attempt to resolve this problem, tenders covering a two-year period instead of just one are now advertised (MOH, 2004).

There is also provision to procure only a portion of the total quantity specified in the tender, according to the needs, priority and available funds. A joint survey funded by USAID, the Millennium Challenge consortium, and Management Sciences for Health was carried out in 2007/8 to compare KEMSA's procurement prices with those of the Mission for Essential Drugs and Supplies, Kenyatta National Hospital, and local manufacturers and distributors. One of the purposes was to determine whether KEMSA and the Ministry of Medical Services were getting value for money in public procurement. The conclusion was that, for the most part, KEMSA prices are more competitive than for similar products purchased by health facilities from all the other entities surveyed, and that KEMSA was indeed achieving value for public-funded procurement of medical commodities (MOH, 2004).

It has been estimated that KEMSA's purchases constitute 30 per cent of all prescription drugs in the Kenyan market. The Agency also procures for some donor partners. KEMSA's 2010/2011 Government budget (not counting donor contributions) for the procurement of essential medicines for public hospitals is US\$ 19.8 million; together with US\$ 29.7 million for Rural Health Facilities, this makes a total of US\$ 49.5 million. Out of 343 items on the Essential Drug List (EDL), KEMSA procures only about 117 selected items, based on available funds. Many EDL medicines can not be purchased because of budgetary constraints (CBS & MOH, 2004).

Mission for Essential Drugs and Supplies (MEDS) is another large-scale, bulk procurer of medicines. It is a not-for-profit organization, which procures medical items for Faith-Based Organizations (FBO) and some donors. About 45 per cent of MEDS' annual turnover of 800 million to 1 billion KSh (about US\$ 12 million) is spent on medicines. Some donors procure directly.

2.2.2 Legal & regulatory framework

The organization of Kenya's health care delivery system revolves around three levels, namely:

The MOH headquarters - The headquarter sets policies, coordinates the activities of NGOs and manages, monitors and evaluates policy formulation and implementation.

The provinces - The provincial tier acts as an intermediary between the central

Ministry and the Districts. It oversees the implementation of health policy at the district level, maintains quality standards and coordinates and controls all district health activities. In addition, it monitors and supervises District Health Management Boards (DHMBs), which supervise the operations of health activities at the district level.

The Districts - district level concentrates on the delivery of health care services and generates their own expenditure plans and budget requirements based on the guidelines from the headquarters through the provinces. Other key players in the healthcare sector include the private sector, which consists of the churches, private healthcare providers, pharmaceutical companies, NGOs, and the traditional herbal medical practitioners (MOH, 2004).

2.2.3. Policy on pharmaceuticals

The patent protection of pharmaceuticals in Kenya is based on the African Regional Industrial Property Organization (ARIPO) patent system. Kenya's patent laws have been revised from the traditional British based format to the ARIPO system, which was created by the Lusaka agreement in 1976. To date several amendments have been made through parliament bills and enacted.

ARIPO is based in Harare, Zimbabwe; the organisation was mainly established to pool the resources of its member countries in industrial property matters together in order to avoid duplication of financial and human resources. Additionally, the Kenyan government passed the Kenya Industrial Property Bill in 2001. This bill allows Kenya to import and to produce more affordable medicines for HIV/AIDS and other diseases (MOH, 2004).

2.2.4. Registration of medicines and other pharmaceuticals

Market approval (or registration) of pharmaceutical products is usually granted based on efficacy, safety and quality. It is a regulatory decision that allows a medicine to be marketed in a given country. Compliance with regulations affecting drug licensing, accreditation and approvals can be costly for pharmaceutical companies wanting to market their products. Some of them may try to bribe or influence the regulator to get their product registered or simply to speed up the approval process. One form of influence is to offer lucrative industry jobs or consulting assignments to regulatory officials, rewarding them for decisions that are favorable to industry. Such conflict of interest can also affect the setting of user fees for drug registration, which are often set well below true cost. Thus, government is effectively subsidizing costs of private industry for little public benefit. The concept of conflict of interest is not always well understood (Kaplan & Laing, 2003).

2.2.5. Procurement procedures

Every organization that purchases goods or services has standard procurement procedures, the methods they use to acquire those things. These procedures cover all aspects of the procurement cycle, including the selection of the supplier, contract negotiations, order placement and payment (WHO, 1999). All firms have procurement procedures, and they are used to control spending activity, ensure appropriate approvals are in place and reduce the risk of overpayment. Procurement or purchasing activity encompasses all spending activity, excluding payroll, and often represents more than 50 percent of all expenditures. Article 5 of the public procurement act outlines the following Procurement Procedures:

A supplies, services or works contract shall be awarded by means of one of the following procedures under the conditions set out in these Rules: Open tendering, Restricted tendering, Competitive request for quotations, Negotiated tendering and Direct procurement

Article 6 of public procurement Act outlines the Conditions for use of the Procurement Procedures

- (a) The Secretariat may award contracts by an open tendering for any procurement regulated by these Rules.
- (b) Restricted tendering may be used in the event of a large or complex procurement, which requires a pre-qualification procedure.
- (c) In all cases where the contract value exceeds 30 000 (thirty thousands) EUR, the Secretariat shall apply open or restricted tendering.
- (d) Competitive request for quotations may be applied if the contract value is less than or equal to 30 000 (thirty thousands) EUR.
- (e) Negotiated tendering shall be applied in special cases and only if conditions set forth in Article 7 are met (public procurement Act, 2005).

The primary driving force for the development of procurement procedures is to control all spending (WHO, 2008). The actual procedures used can vary slightly but will be similar. An appropriate approval process usually involves a separation of tasks and the involvement of senior managers for transactions that will cost more than a specific price. Another standard procurement procedure is to limit access to the purchase order forms and require signed authorization from a manager other than the person using the goods. This separation of the goods recipient and the approval is designed to ensure that a senior staff member is aware of the order, can confirm that the materials are required, and will be used for the proper purpose.

2.2.6. Distribution and appropriation of pharmaceutical products

Due to under-financed and badly managed systems, poor record-keeping and ineffective monitoring and accounting mechanisms, large quantities of drugs and medical supplies are stolen from central stores and individual facilities, and diverted for resale for personal gain in private practices or on the black market (Ferinho, 2004). This involves a variety of practices such as record falsification, dispensing drugs to "ghost patients", or simply pocketing the patient's payment. Patients are directly affected in this process as they are forced to supply their own medications. This results in considerable leakage of public resources. Distributing medical supplies to the healthcare facilities also involves managing an effective transportation system and preventing misappropriation of fuel and vehicles for private or non-health related uses.

(Rafael & Ernesto, 2002) Measures to reduce illegal practices at the distribution stage of medical supplies include establishing efficient inventory control systems, improving record keeping and control procedures, fortifying security against robbery in central warehouses, etc. These are actions to be taken by the ministry at national and/or provincial/district level. The means of promoting a competitive market or using it, where it exists, are other avenues to improve efficiency and reduce corruption in distribution. Rafael and Ernesto (2002) has provided many tools for improving drug distribution systems, including guidelines for forecasting, supply chain management, process mapping for improved health logistics system performance, and warehousing of health commodities.

2.2.7. Timely and accurate information communication

Information is the lifeblood of procurement and is needed at every stage if the procurement process is to be optimal. What to order, when to order and how much to order and from who should be communicated on time to ensure steady supply in the hospitals. Timely and accurate information exchange is necessary among staff and among procurement trading partners. Thus, maintaining an up-to-date inventory and management information system and ensuring the use of the data are critical for productivity, effectiveness, and efficiency in the institution. This aids in the effort to control costs and helps the hospital to ensure that enough supplies are at hand and that stock-outs are minimized (Huff, 1996). Records and documentation can be kept in a number of ways. Human error can be reduced, lead-time eliminated and data processing improved by the use of telecommunication and computer technologies, which should be introduced when available and appropriate.

2.2.8 Transparency in procurement

The high market value of pharmaceutical products means that the procurement of these products is prone to unethical practices such as theft and corruption. Though such practices are common around the world, a number of factors predispose developing countries to higher risks. It is estimated that in some countries, up to two thirds of all hospital medicines are "lost" through poor procurement practices, including corruption and fraud (Cohen, 2008; Jillian & Jorge 2001). Unsafe medical products can also enter the hospital with potentially serious health consequences.

Any pharmaceutical procurement must therefore be done in a manner that ensures transparency and a corruption-free process. In addition, a hospital is often the buying legal entity, and the pharmacist or procurement officer is delegated the responsibility to oversee the process. Transparency and adequate reporting builds trust and ensures that the relationship between implementers and governance organizations are mutually supportive.

2.2.9. Pharmaceutical procurement in hospital settings

Pharmaceutical procurement is a complex process that involves many steps and many stakeholders. It is also conducted within national and institutional policies, rules, regulations, and structures that may hinder or support the overall efficiency of the procurement process. An effective procurement process at any level must ensure that four strategic objectives are achieved: the procurement of the most cost effective drugs in the right quantities, the selection of reliable suppliers of high-quality products, procurement and distribution systems that ensure timely and undisturbed deliveries, and processes that ensure the lowest possible total costs (WHO, 1999).

Procurement in hospitals is the responsibility of the pharmacist or pharmacy staff, though skills beyond basic pharmacy are also required (Karr, 2004). In order to arrive at consensus statements that are appropriate for the hospital drug procurement, nine issues have been taken as key areas of attention: transparency, cost containment, technical capability, operational principles of good pharmaceutical procurement, purchasing for safety, ensuring appropriate selection, timely, accurate and accessible information, ensuring quality products, and proper budgeting and financing. These respond to the specific needs of the key stakeholders in the hospital setting.

2.2.10. Supply of medicines and other pharmaceuticals

An estimate of the Kenyan pharmaceuticals market by Business Monitor International (BMI) shows that expenditure on prescription medicines in 2008 was KSh 10.9 billion (US\$ 158 million) and that this constituted 68.7 per cent of the total market. The market share of prescription drugs could rise in future if strict controls are introduced on the sale of drugs since many people currently buy such medicines without a prescription. Self-medication is prevalent in Kenya and the Over the Counter (OTC) market is therefore very important. However, while sales volumes are large, OTC medicines are usually low-priced and competition is high. The OTC market component was estimated at KSh 4.96 billion (US\$ 72 million) and, combining prescription medicines and OTC products.

For purposes of comparison, another market study by Frost and Sullivan (2008) valued the Kenyan market for pharmaceuticals at \$208.6 million in 2007 and expected it to reach \$558.5 million by 2014, growing at a 15.1 per cent. The Frost & Sullivan report said that locally manufactured pharmaceutical products commanded 28 per cent of the overall pharmaceutical market in 2007, also forecast per capita expenditure on medicines at US\$ 5.9 in 2009, increasing to US\$14.1 by 2014. Of the total market in 2008, it estimates that generics would have accounted for 58.7 per cent of the total, while original branded pharmaceuticals would have accounted for the balance of 41.3 per cent (Frost & Sullivan, 2008).

2.2.11 Health institutions in Kenya

The country continues to have remarkable expansion in the number of health facilities in all provinces. This is in line with the government's effort to avail accessible health facilities and services to all Kenyans. The number of health institutions grew from 4,499 in 2002 to 4,557 in 2003, a marginal increase of 1.3%. Rift valley reported the highest number of health facilities, with 1,267 (27.8%), while North Eastern province, with 88 health facilities had the least number, accounting for 1.9% of the total. Table 2 below illustrates the distribution of health facilities in the country by province.

Table 1: Health institutions in Kenya 2002-2003

Hospitals, H/centers and H/Sub Centers & Dispensaries		
Province	Year 2002	Year 2003
Nairobi	485	493
Central	517	526
Coast	435	440
Eastern	831	837
North eastern	83	88
Nyanza	539	548
Rift valley	1259	1267
Western	350	358
Total	4,499	4,557

Source: *Economic Survey 2004 by Central Bureau of Statistics, Ministry of Planning and National Development*
 The World Health Organization estimates the global market for herbal medicines currently stand at over US \$ 60 billion annually and is growing steadily.

2.3. Critique of the existing literature

Different researcher have stood to contradict in opinion on the best way towards achieving stability in supply of pharmaceutical products; Rivard, (2002) suggested a standard supply chain, while Beaulieu, (2002) put forward the view that a stockless inventory system could work best. Stockless inventory systems have clear benefits for the hospitals, but still the system does little to optimize operations within the entire supply chain channel. Duclos, (1993) performed a study that demonstrated that point of use safety stock was much less effective than central store safety stock in preventing stock outs during shock demand situations

Huff, (1996) observed that, effectiveness and efficiency on supply chain of pharmaceuticals can be achieved by maintaining an up to date inventory and management information system which would ensure that enough supplies are at hand and minimize stock-outs; of which that is not the case,; for several factors come in to play towards achieving constant supplies and effectiveness and efficiency in supplies in the institutions. In addition most researchers have dwelled in trying to develop best ways of cutting procurement costs rather than making the purchases available consistently to the intended users as the core objective of the procurement process (WHO, 1998; 1999, Kaplan & Laing, 2003).

2.4 Summary

This chapter has covered the conceptual framework of the study. With major concern on the independent variables .i.e. procurement process and its management, legal frame work in relation to procurement of pharmaceutical products and procurement procedures, and the dependent variable. Previous studies made by other scholars in relation to inventory management in hospital setting and other relevant literature relevant in this study. A brief critique of available literature on previous studies has been tackled based on the perceptions and understanding of the researcher and a research gap has been developed on other areas, which former researchers have not touched in their studies.

2.5. Research gaps

Several studies have been carried out in relation to medical supplies; however, there are little or no theories in relation to consistency of supply of pharmaceutical products in government hospitals. Duclos, (1993) performed a study that demonstrated that point-of-use safety stock was much less effective than central store safety stock in preventing stock-outs during shock demand situations. In her model, as emergency demand is a characteristic of many hospitals business model, the study's conclusions are cause for concern and question the stockless model.

CHAPTER THREE **RESEARCH METHODOLOGY**

3.0 Introduction

In this chapter, details on how the research was conducted have been presented. This includes: research design, population, sampling frame, sampling and sampling technique, research instruments, data collection methods, data analysis and presentation.

3.1 Research design

Descriptive research design was used in this study. Descriptive research design was considered best for it is a scientific method, which involves observing, describing recording, analyzing and reporting conditions that exists without alterations. It can be used to obtain pertinent and precise information concerning the current phenomena and where possible to draw valid general conclusions from the facts discovered (Lockesh, 1984). The research design adopted was a case study method where the researcher focused on a single organization; It made the findings a good representation of real situation. The researcher used both primary and secondary data.

3.2 Population

The target population included the hospitals top management, pharmacy personnel, nurses, the head or heads of procurement department and other staff in the procurement department. 100 questionnaires were distributed and only 42 respondents handed back their filled questionnaires representing a 42% response.

3.3. Sampling frame

The population was identified as the most relevant group to obtain data from; because of the direct or indirectly involvement in the procurement process. In this case, therefore they could avail the required information.

3.4 Sampling and sampling technique

The researcher used stratified random sampling; whereby the strata encompassed the personnel of various levels cadre in the hospital in relation to procurement; management of the hospital, head of procurement department and other staff in the procurement department. To get the sample size from each stratum, simple random sampling was used.

3.5 Instruments

The research main instruments for data collections were structured questionnaires, unstructured interviews and secondary data collection.

3.6 Data collection methods

The research involved data collection from primary and secondary sources. The primary data was collected through questionnaires (both open and closed ended) and unstructured interviews. Personal interviews gave an in depth into the information; and eliminated misinterpretation. Questionnaires had the advantage that the respondent had adequate time to respond to questions and free from bias because the respondents were guided and interviewer did not influence answers. The secondary data were obtained from hospital records, published material, journals and internet sources.

3.7 Data analysis and presentation

The data collected was analyzed by both qualitative and quantitative methods. A quick impressionist summary used where the results were obvious and require no further analysis. Quantitative techniques such as percentages and frequencies were used. Tables, graphs and charts were used to present findings where applicable.

CHAPTER FOUR RESEARCH FINDINGS AND DISCUSSION

4.1 INTRODUCTION

This chapter presents the report of data analysis; interpretation and summary of findings. As indicated in chapter three, the study utilized descriptive statistics. As such, frequency tables were generated to highlight the percentage scores and cumulative percentages for variables of interests. For pictorial presentation, bar graphs and pie charts were drawn to enable users to conceptualize the results.

From the sample size that was selected, the returned questionnaires whose response were used in further processing of the data to come up with the research findings included five (10) managers/supervisors, four (4) pharmacists, twenty (25) nurses, three (3) procurement personnel.

4.1.1 Personal and general information analysis

The researcher undertook to obtain the personal information on the respondent who participated in the study. It was important for the researcher to know the particulars for the participants in order to be able to have an objective assessment of the findings. Knowing respondents' information greatly promoted reliability of the data obtained for that reflected how well they understood the institution hence a greater level of accuracy and restored researcher's confidence of dealing with the right group. The underlying information concerning the respondents who availed their details formed part of the research findings.

4.1.2 Gender of respondents

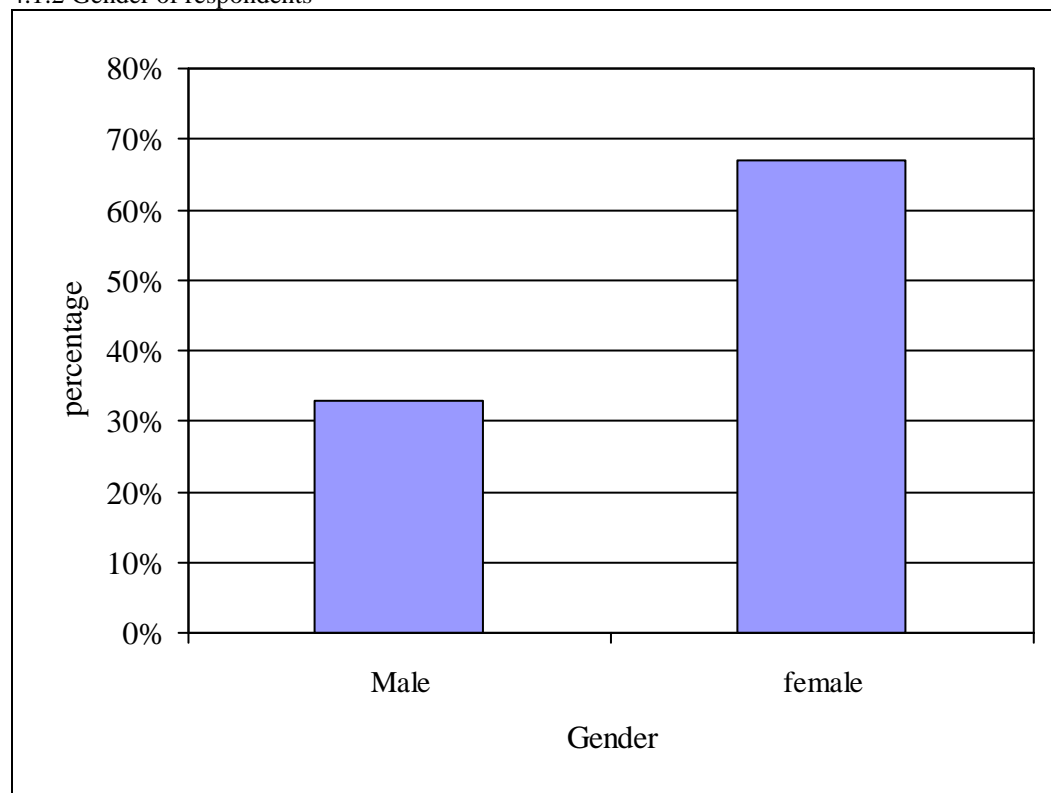


Figure 4.1 Distribution of respondents according to gender

Most of the respondents 67% were females and 33% were males. It was observed that in every department, although females were many compared to males, males were found to be busier than females and were not willing to participate in the study hence the great difference between males and females who participated in the study.

4.1.3 Job positions

The respondents were asked to indicate their job position, 24% of the respondents were head of section/managers, 10% were pharmacists, 59% were nurses, and 7% were procurement officers. Nurses formed the largest group of 25 respondents; this directly corresponded to their big population in the hospital of one hundred and eighty six.

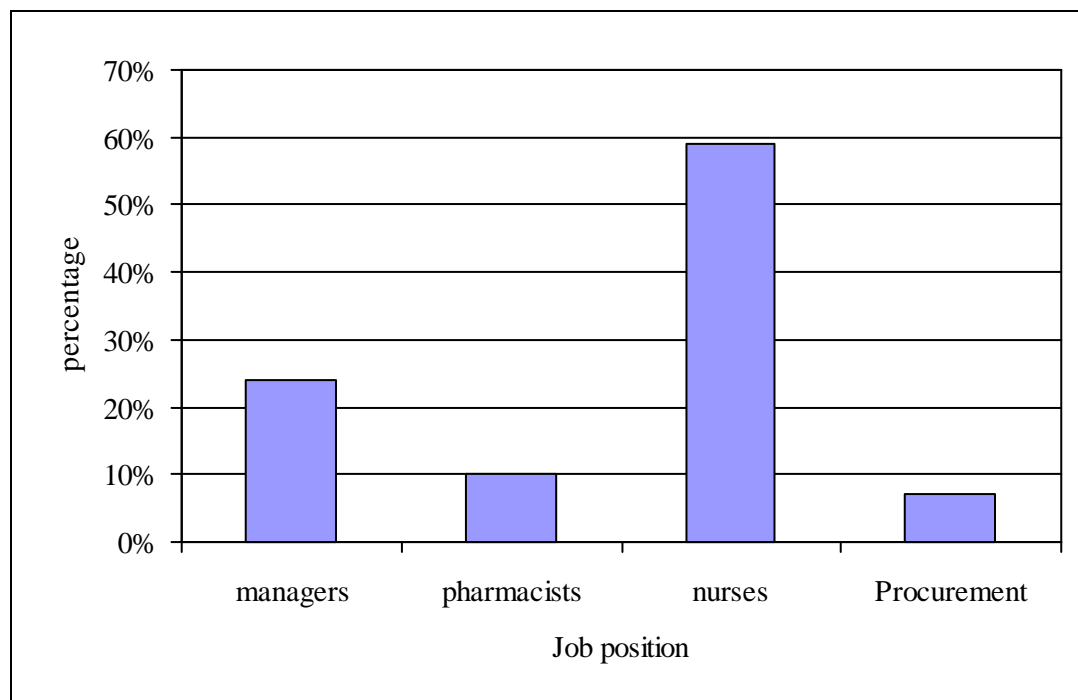


Figure 4.2 Job positions of respondents

All the procurement officers gave their response 100% and they formed the smallest number in the organization of three individuals. This information showed that data was obtained from the right individuals and were distributed across the hospital departments to minimize biasness. In addition, the researcher was able to identify the number of procurement personnel.

4.1.4 Work experience

The researcher identified that employees work experience had direct influence to the performance of the procurement function as a whole. The respondents' working experience was in 4years range from 0 years to 20 years and over. Most of the respondents were within the reproductive group of 5 and 16 years of experience.

Table 4.1 work experience of respondents

Age group	Frequency	percentage
0-4	4	9.5
5-8	10	23.8
9-12	12	28.6
13-16	10	23.8
17-20	4	9.5
20 and over	2	4.8
Total	42	100

This finding indicated that Majority of the employee were well experience therefore, they understood the operations of the institution and their information reflected the true state of affairs in the hospital. In addition, it displayed the rate at which the government employed new staff to the hospital. The more experienced one is, is attributed to performance hence directly having an impact on the consistency at which suppliers were availed.

4.2 PROCUREMENT PROCESS AND ITS MANAGEMENT

4.2.1 Organizational chart

100% of the respondents indicated that they had no organizational chart of the procurement department. In such case therefore, the researcher found out that the hospital had only three procurement personnel who were answerable to the hospital administrator. The administrator assigned their duties. This was found to directly affect consistency in that there lacked well-designed positions of operations and hierarchy of procurement personnel.

4.2.2 The extent to which procurement process was observed

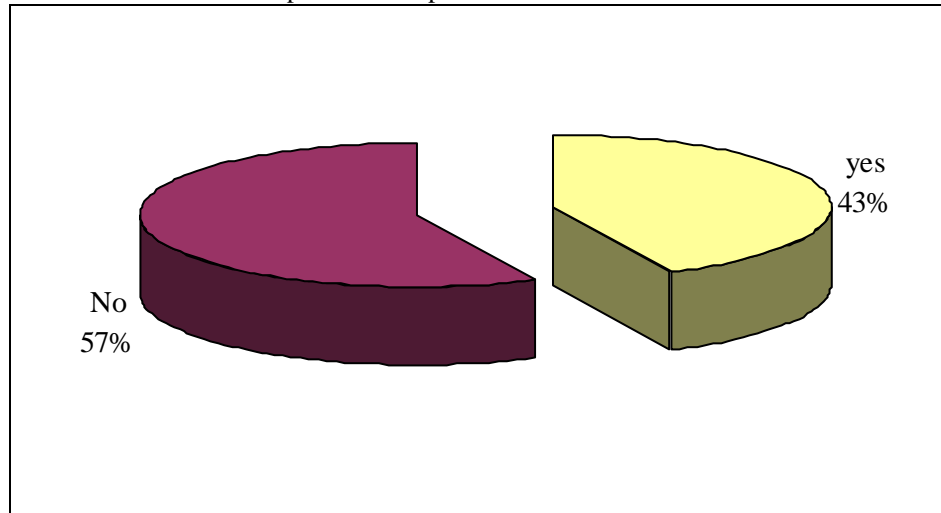


Figure 4.3 level of adherence to procurement process

A majority respondent of 74% indicated that the institution had a well-documented procurement process and 26% indicated no. The respondents were asked whether they fully observed procurement process, 57% of the respondents indicated yes, while 43% indicated no; citing the lengthy and bureaucratic nature of the process. These findings are supported in the report by WHO, (2008) which identified that all organizations had a well outline procurement process and was not fully observed. This had a direct link to consistency at which supplies were made available because when the process was observed, delays were experienced while when procured through short cuts immediate delivery was attained.

Inconsistency was evident where by some suppliers were requested through the phone and delivered supplies before a local purchase order was prepared. Such cases were necessitated by the urgency of the matter. In addition, the procurement department failed in tracking the stock levels hence running into abrupt purchasing due to stock outs thus avoiding the documented procurement process. These findings are supported by a study on cost containment on pharmaceutical procurement by Huff, (1996); where maintaining an up to date inventory record ensure that enough supplies are at hand and minimize stock outs. More over it was found out that the government at times used push system and brought to the hospital what it had in stores without consulting the hospital whether they needed it or not. Maintaining consistency in supplies was not easy while the hospital operated in such situations.

4.2.3 Procedure used in procurement of pharmaceutical products

Respondents indicated that they used several procedures for procurement, 62% of the respondents indicated that they used request for quotation, 23.8% indicated that they used open tendering and 14.2% indicated direct tendering was used.

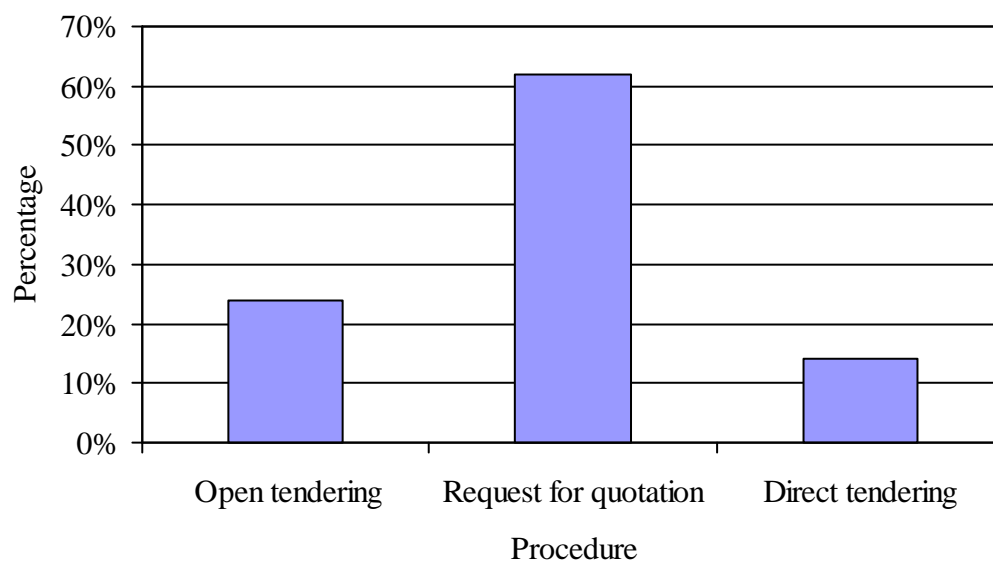


Figure 4.4 procurement procedure used

Request for quotation was used mostly because it provided the best avenue for the procurement department to compare prices and it was fast to carry out. Using different procurement procedures brought in inconsistency for each procedure required different time frames and processes to be observed. Open and direct tendering were least preferred due to their lengthy process which was time consuming these has been supported by MOH, (2004) report which indicates the several steps to be followed in the tendering processes.

4.2.4 Major hospital suppliers and how they performed

Competence of the suppliers greatly determined consistency in the availability of the supplies. The hospital major suppliers were Kenya medical supplies agency (KEMSA), meds and medisel. Kemsas had the big share in supplying the hospital these findings were confirmed by CBS and MOH, (2004) which cited that kemsas was established by law as the primary public procurement agency for medical supplies. 100% of the respondents indicated that the suppliers delivered the products to the hospital premises. however responses where varied on timely delivery with 38% indicating that there were delays in delivery, 24% indicating that some delayed and others where delivered on time and 38% indicating that delivery was made on time.

Frequent delays lead to inconsistency in obtaining supplies. Delays were caused by the processes of initiating a request for supplies to the supplier, non availability of some pharmaceuticals from the Kenyan market or in the global market, legislation issues also come in to play as these products had to be authorized to be used in Kenyan market hence delays while awaiting approval and other logistical issues .

It was found out that some supplies took less than 48 hours to be delivered at the hospital premises when contracted courier services were used thus being fast enough to avert any shortages. At times suppliers failed to supply goods order due to lack of payment by the hospital in the previous deliveries made and stock-outs, which was most experienced with KEMSA. These factors lead to great inconsistency in obtaining supplies. All the respondents felt that products supplied corresponded with the specifications given to suppliers; were of good quality and at no time did the user department reject them. In addition, products were not tampered with on transit and delivery was made at the hospital as dispatched by the supplier.

4.2.5 Factors considered in Supplier evaluation

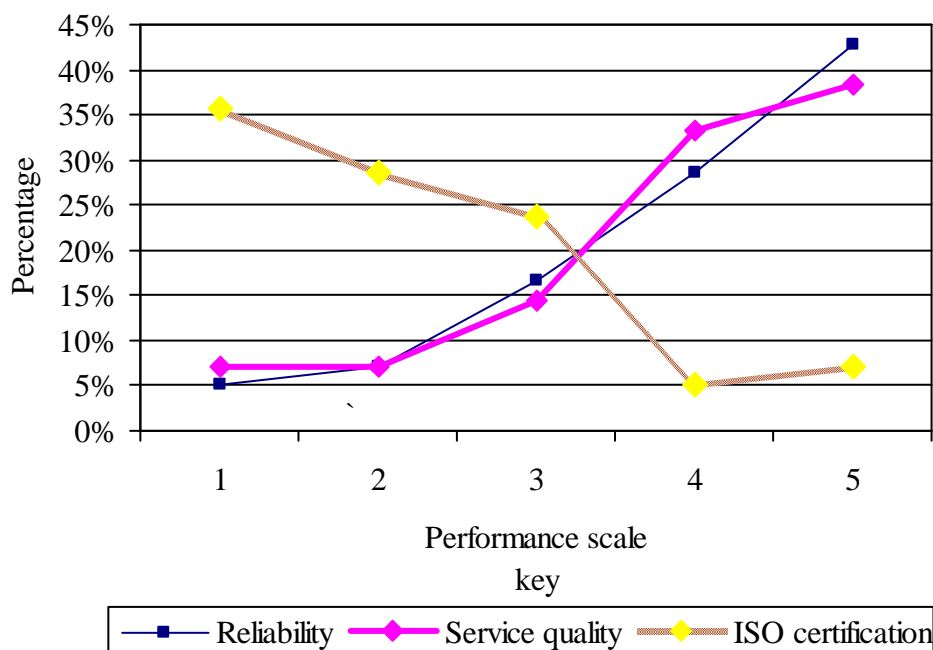


Figure 4.5 supplier evaluation factors

Performance indicators were given the scales of 1, 2, 3, 4 and 5 with 1 being not important factor toward 5 the extremely important factor to consider. Supplier's capacity to supply had great impact on consistency in supply of pharmaceuticals to the hospital. Majority of the respondents, 42.7% indicated that supplier reliability to supply was a key factor for consideration when evaluating suppliers; and 5% indicating that it was not an important factor to consider. 38.4% of the respondents indicated that supplier's service quality in terms of flexibility, responsiveness and availability; and at least 7% indicating it was not an important factor. On ISO certification, a majority of 35.7% indicated that it was not an important factor to consider when evaluating a supplier; and a 7% indicating that it was an important factor.

These findings confirm a report by WHO, (1999) where several parameters are used in supplier evaluation. These clearly depicted that the hospital was to some extent concerned about suppliers ability to supply. They had little concern on ISO certification of supplier because they viewed it as less importance and of non-value adding to supplier's ability to supply. Other factors identified as considered included the pricing of the supplier products, (where by the lowest was selected), ability of the supplier to supply on credit, the suppliers past records, honest and efficiency of the supplier.

4.2.6 Sources of finance and their impact

The hospital received finances from the government, donors and own savings (collections from patients which the hospital sought authority to spend to certain limits). 100% of the respondents indicated that the source of finance influenced timely availability of supplies. Delays culminating from availability of funds were experienced as indicated in table 4.2 below.

Table 4.2 frequency of supplier delays

Extent experienced	Frequency	percentage
Frequently	22	52.4
Sometimes	11	26.2
Rarely	9	21.4
Total	42	100

The respondents indicated that they experienced delays in supply of pharmaceutical products because of the following reasons: late payment to suppliers hence de-motivating them, insufficiency of funds to meet demands, late budgeting and awaiting government approval to spend the funds hence put on hold the procurement process.

All these factors relating to the source of finance directly influenced the consistency level of supplies. This findings are supported by the study by CBS and MOH, (2004) which identified that based on available funds essential medicines can not be purchased due to financial constrains.

4.2.7 Buyer Supplier relationship

The majority of respondent ranked low relationship between the institution and suppliers with 50%, which had a direct negative influence towards consistency in supplies, 31% moderate and 19% ranking the relationship as high. This has been represented in the figure below.

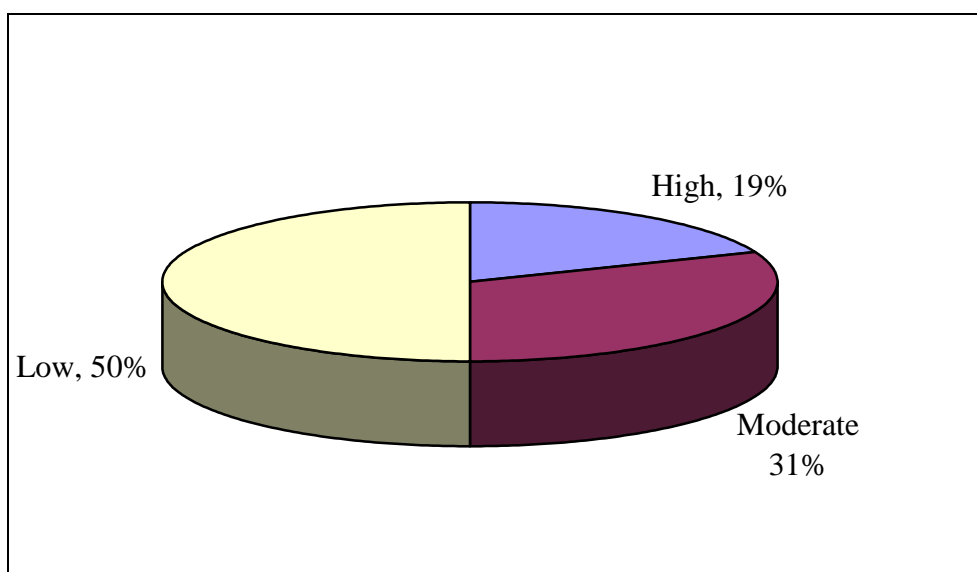


Figure 4.6-buyer supplier relationship

They gave the following as the reasons for ranking the relationship low between them as: payments to suppliers were always delayed hence de-motivating the suppliers, there was no personal relationship between the procurement personnel and the suppliers due to the organizational setting and in most of the cases there were no repeat suppliers except KEMSA.

4.3.1 INFLUENCE OF LEGAL POLICY ON PROCUREMENT

90.5% of the respondents indicated that the legal requirements lengthened the procurement process negatively affecting the consistency levels. The government financial regulations required that no expenditure would be incurred without authority to incur expenditure. In that regard therefore, at times the hospital had to wait for the official communication from the relevant authorities to spend money on purchases. No orders would be made in anticipation for money to be availed for that was against the financial regulations. Where by the A.I.E would be availed early enough but the funding would delay or at times never be funded these seriously interfering with the consistency of obtaining supplies.

In addition, the hospital was not supposed to incur expenses that surpassed the government funding. In that case therefore, it was found out that the hospital had to request for approvals and funding at any time the institution had to incur un allocated expenses in procurement. 95% of the respondents felt that they observed to the later government regulations in relation to procurement while 5% viewed that the regulations where not fully observed.

4.3.2 Challenges faced in complying with legal requirements

Several challenges identified included; delays in obtaining A.I.Es' (authority to incur expenditure) or delayed funding, insufficient funding, bureaucracy in the legal requirements, and dealing with exploitive prequalified suppliers. Operations at the hospital could have been smoother if these problems were put to rest. These challenges were found to have contributed to the high level of inconsistency experienced in the hospital.

4.3.3 Role of legal regulations in procurement process

The government legal regulations were found to have an influence on the level of consistency of supplies experienced in the hospital. The legal policies have enhanced accountability for they outline and government spending of public funds and realizations of value for money spend. These findings support a study by Rafael and Ernest, (2002) which pinpoints out that legal framework help in minimizing public funds embezzlement. In addition, they give out a well-outlined procurement procedure that had to be followed by all hospitals in procurement. Transparency was also enhanced in all procurement dealings. It was found out that government polices and regulations provided timelines for order fulfillment. 90.5% of the respondents indicated that the government policies and regulations provided concrete guidelines on pharmaceutical procurement while 9.5% indicated that they did not. Public procurement and disposal Act 2005 came in to play as the basis of all public procurement.

4.4 METHODS OF ENHANCING PROCUREMENT PROCEDURES

4.4.1 The extend of internal tools usage towards increased performance.

Table 4.3 Internal tools level of usage

level of usage	Not	Rarely	Often	Usually	Core	total
Attempting to contribute to R & D	10%	20%	6%	6%	0	100%
Attempting high employee productivity	14.3%	19%	42.9%	19%	4.8%	100%
Attempting E-procurement	95.5%	4.8%	0	0	0	100%
Minimize ordering time	7.1%	23.8%	50%	14.3%	4.8%	100%
Optimizing the amount of contract	57.1%	21.4%	12%	9.5%	0	100%
Minimize amount of suppliers	23.8%	50%	19%	7.2%	0	100%
Emphasizing buyer supplier relationship	7.1%	11.9%	42.9%	26.2%	11.9%	100%
Minimize maverick spending	5%	9.5%	57.2%	16.3%	12%	100%

Several internal tools were posed to respondents to indicate to what level do they apply/ use them to improve the performance of procurement system. The level of usage were not used, rarely used, often, usually, and a core tool. The responses were as follows: 20% majority indicated that rarely did they attempt to contribute to research and development. To some extend the institution often attempted achieving high employee productivity. 42.9% of the respondents indicated often. That was an indication that some effort was being put in place to improve performance. It was identified that the hospital never attempted e-procurement where 95.5% indicated not used.

50% of respondents indicated the hospital was attempting to minimize the period from receiving the purchase order to submitting the purchase order to the suppliers. A minimal of 4.8% indicated that this was a core tool to the hospital. The hospital did little to attempt to optimize the amount of contracts as per product group with a 57.1% indicating not used and 9.5% indicating usually used. A majority of 50% indicated that the hospital rarely attempted minimizing the amount of suppliers as per product group and 42.9% and 57.2% majority indicated that often the hospital attempted emphasizing the importance of the buyer supplier relationship and attempted minimizing maverick spending(purchasing outside the preferred contracts) respectively. To an extend implementation of these tools helped improve the level of consistency and vice versa. these findings confirms a study by Rafael and Ernesto, (2002) and Cohen, (2008) which provides many tools for improving health system performance.

4.5. Problems facing procurement process

100% of the responded cited that the hospital lacked enough staff to carry out procurement roles. It was observed that the procurement department had three (3) personnel. Every individual in this department was forced to do extra different duties to meet the demands of the department. The researcher found out that the individual who was in charge of goods verification from the supplier was also in charge of releasing products to the pharmacy and writing and issuing of local purchase orders to suppliers. In this case therefore, little or no control was exercised in the procurement process. In addition, delays occurred for such an individual had a lot of work to do. These problems led to great levels of inconsistency of supplies in the hospital.

4.6. Recommendations for improvements of procurement process

Respondents suggested for a committee to be formed that would oversee and evaluate all the suppliers and prequalify them every six months, they pointed out that the procurement process was left to certain individuals.

20% of the respondents cited that the procurement procedures were bureaucratic and needed review to enhance flexibility and quick purchase of pharmaceuticals when needed. Majority of the nurses felt that the procedures of procurement were not clear, in that case therefore they needed some training to help them to fully understand them.

100% of the section heads/managers who gave their response pointed out that it was difficult to manage the stock levels and procurement process because it was not automated thus led to an anticipated shortages of stocks. Several loopholes led to embezzlement of funds and unnecessary delays were experienced. They felt that if automation was put in place it would eliminate such delays and improve the performance of the procurement department. In addition, they needed more training of all staff in relation to procurement.

The availability of funds needed to be addressed to improve the operations of the procurement process, because in most cases funds were the major impediments to timely supply of pharmaceuticals. Moreover, as identified by CBS and MOH (2004), insufficiency of funds needed to be addressed by the government for in most cases fund could not meet the demands of the hospital. The following areas were identified as the areas that needed to be addressed: reliability of suppliers, emergency kitty for emergency cases, increasing the number of procurement staff and training of staff in relation to procurement. If these recommendations were addressed, inconsistency would have been eliminated or minimized to negligible levels and boost service delivery of the institution.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter deals with summary, conclusion and recommendations. Conclusions were drawn from the answers that the research sought to understand. Recommendations were based on the conclusions drawn while assessing the factors affecting consistency in supply of pharmaceutical products in government hospital.

5.2 Summary

The study set out to establish the factors that affected consistency in supply of pharmaceutical products in government hospitals, with a case study of Maragua district hospital. The research involved use of qualitative and quantitative research method to achieve the objectives. The researcher used both primary and secondary data. The sample size selected of 100 individuals had a 42% response that formed the researchers' database.

5.2.1 Summary of procurement process and its management

The researcher found that the hospital had a well-documented procurement process, which was not fully observed. The procurement department was understaffed with only three personnel who were in charge of all the hospital procurements. Mostly the hospital used request for quotations to procure pharmaceuticals along side direct tendering and open tendering. At times, these procurement procedures were not followed and shortcuts were used to obtain supplies. The researcher found that some supplies delayed while others were delivered on time. However, in some cases, the suppliers never supplied at all the products ordered due to stock-outs in the market and unpaid previous supplies made caused by lack of funds in the hospital or delayed funding. Record keeping was poor and manually done. Quality of products was good and at no time did the user department reject them.

The researcher established that supplier reliability to supply and supplier service quality measured in terms of flexibility, responsiveness and availability were key factors considered in supplier evaluation; whereas the hospital did not consider ISO certification of suppliers as an important factor. Other factors considered included, pricing, honesty and efficiency of the supplier. Government funding, donations and own collections were the hospital sources of finance. The source of finance and legal requirements greatly determined the timely availability of supplies following the availability of money and the required procedures observed towards spending respectively.

5.2.2 Summary on influence of legal policy

It was evident that the legal policy requirements were bureaucratic, lengthened the procurement process and led to delays in obtaining supplies for the relevant procedures had to be observed especially in obtaining and spending of money. Delays in obtaining A.I.Es and their funding was a major challenge. However, the legal policy requirements provided well-stipulated guidelines on public procurement.

5.2.3 Summary on methods of enhancing procurement procedures

The researcher identified that the institution was doing little on; contributing to research and development, attempting e-procurement, optimizing the amount of contracts and suppliers as per product group. In addition, the hospital often did attempt to; achieve high employee productivity, minimize the period from receiving purchase order to submitting the purchase order to the supplier, emphasize the importance of the relationship with suppliers, and minimize maverick spending.

5.3 Conclusions

Procurement process was well documented as was evident with a 100% response, but was not fully observed at times short cuts were used in obtaining supplies; and its management was wanting as indicated by 57% of the respondents. Short cuts were used to ensure replenishment of stocks was achieved by evading the procurement process. Stock records were not fully kept and the rate of consumption was not closely monitored which lead to stock outs due to delays in placing an order; this was evidently pointed out by the supervisors/managers who gave their response. Operations of the procurement department could not be any better due to the level of understaffing observed. Inconsistency in supply of pharmaceuticals was widely experienced culminating from bureaucratic procurement procedures and legal requirements whereby 90.5% indicated that the legal requirements lengthened the procurement process. 52.4% of respondents indicated frequent delays were experienced in obtaining supplies, which was because of; delayed funding, insufficient funding, and shortage of staff to carry out the procurement function as identified in the findings in the previous chapter. Low buyer supplier relationship existed as indicated by 50% of respondents. Lack of e-procurement which could have been fast, and stock-outs on the suppliers side or in the global market. It was evident the institution was not making great efforts in using internal tools towards improving procurement performance for none was a core tool. Training was also required to all stakeholders in the hospitals on matters of procurement for majority of the nurses and supervisors cited that they needed more training to boost performance.

5.4 Recommendations

To enhance consistency the study recommends to the Ministry of Medical Services, Ministry of Public Health and Sanitation, and other stakeholders to:

- i. Enforce the laid down procurement procedures in all hospitals by conducting regular audits. It was evident that at times, the procurement procedures were not fully observed and short cuts were used to ensure products reached the hospital.
- ii. Ensure that all public health hospitals adequate personnel, for the researcher identified that, there were only three procurement staff and the department had no organizational charter. Mostly the head of departments had to follow up on what their department needed.
- iii. Reduce bureaucracy and try as would be practicable to minimize the lengthy legal requirements. Majority of the respondents cited that the legal requirements were lengthy and bureaucratic to follow.
- iv. Increase budgetary allocation and facilitate timely availability of funds for use to the hospitals, because the researcher identified that the funds channeled to the hospital were not enough and in most cases delayed in funding.
- v. Instill and develop a culture of good buyer- supplier relationship in the hospitals. It was evident that the buyer supplier relationship was low and in most cases there was no repeat supplier except KEMSA.
- vi. Train all staff in the hospital on matters of procurement to enhance the performance of the procurement function.

5.5 Suggestion for Further Research

- i) There is need for a study to determine to what extend do all the hospital procurement players understand the procurement function.

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APPENDICES

APPENDIX I: QUESTIONNAIRE

Dainiel Muia Mutua,
Jomo Kenyatta University of agriculture & Technology
P.O. BOX 6200-00200,
Nairobi.
Mobile No. 0726 130 906

Dear respondent,

I am a student of the above mentioned University and pursuing a Master's Degree in Procurement and Logistics. I am requesting for candid information on the attached questionnaire to facilitate my research on "*factors affecting consistency in supply of pharmaceutical products in government hospitals: A case study Maragua district hospital*". Duly completed questionnaires can be handed back to me.

I look forward for your favourable response and I pledge utmost confidentiality to information given. Thanks in advance for your time.

Yours sincerely,
DANIEL MUIA MUTUA

QUESTIONNAIRE FOR DATA COLLECTION

The information that will be obtained from this questionnaire will purely be used for writing research project and necessary confidentiality shall be accorded to it.

(Use ticks where appropriate)

PERSONAL AND GENERAL INFORMATION

1. Name of respondent (optional)

2. Gender: Male Female

3. Age: (21 -30) (31- 40) (41-50) (51 & above)

4. Job Position: manager supervisor Nurse

Pharmacist Procurement officer Accountant

Others specify.....

5. Work experience (years)

0-4 13-16

5-8 17-20

9-12 20 and over

A. PROCUREMENT PROCESS AND ITS MANAGEMENT

1. Do you have an organizational chart of the procurement department?

Yes NO

2. If the answer to question 1 is yes, briefly outline

3. Do you have a well documented and clear procurement process?

Yes No

4. Is procurement process fully observed?

Yes No

If either yes/no briefly outline

.....
.....
.....

5. what procedure does the hospital use to procure pharmaceutical products?

Open tendering Request for quotation

Restricted tendering Direct tendering

Negotiated tendering

Others specify.....

.....
.....

6. Who are the major hospitals pharmaceuticals suppliers?

i.

ii.

iii.

iv.

7. Does the supplier/s deliver the product to the hospital premises?

Yes NO

8. If the answer to question 7 is yes, is delivery made on time?

Yes No

Briefly outline the reasons?.....

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.....
.....

9. If the answer to question 7 is no, how does the products reach the hospital?

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.....
.....

10. Are there cases where suppliers fail to supply the goods ordered?

.....

If Yes, what are the reasons.....

.....
.....

11. Does the delivery of goods correspond to the specifications given to the suppliers?

.....
.....
.....

12. Are there cases of goods being rejected by user departments?

.....
.....

If the answer is yes, what are the reasons.....

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.....
.....

13. What is your opinion in terms of quality of goods procured?

Good Fair Poor

14. In your opinion, are all purchases made reach the hospital as dispatched by the supplier?

Yes, No don't know

15. If the answer to question 14 is no what really happens on transit of the products from the supplier?

.....
.....
.....
.....

16. Please indicate which is the most important factor while evaluating the supplier's

Performance (on the scale 1-not important; 5-extremely important)

	1	2	3	4	5
Reliability of delivery by our Suppliers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Suppliers' service quality (measured in-terms of flexibility, responsiveness, and availability)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acquired certifications and qualifications (e.g. ISO certification)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. Please indicate and briefly explain other important factors that you use for evaluation of suppliers, which are not mentioned above;

.....

.....

18. What is your source of finance?

Government	<input type="checkbox"/>	donors	<input type="checkbox"/>
Own sources	<input type="checkbox"/>	All the above	<input type="checkbox"/>

Any other specify

.....

.....

19. Does the source of financing influence the timely availability of supplies

Yes No

20. If the answer to question 19 is yes, please specify how?

.....
.....
.....

21. Are there cases where suppliers are requested to supply materials but funds are not immediately available to pay them?

.....
.....

22. If the suppliers are not paid in time they may most likely be unwilling to react faster on future orders. This may cause delay in supply and hence stock-outs. To what extent is this experienced?

Frequently Sometimes Rarely

23. How do you rate the relationship between the hospital and potential suppliers?

Good Fair Poor

What could be the reasons for this relationship?

.....
.....

24. In your opinion, do you believe that your suppliers are satisfied?

Yes No Don't Know

B. INFLUENCE OF LEGAL POLICY ON PROCUREMENT OF PHARMACEUTICAL PRODUCTS

27. In which way do the requirements influence procurement process; in terms of lengthening or shortening the procurement cycle?

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.....
.....

28. Do you observe the government regulations to the later?

Yes No

Briefly explain.....
.....
.....

29. What challenges do you face in complying with legal requirements?

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.....
.....
.....

30. How does the legal regulations play in enhance procurement process?

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.....
.....

31. Do the policies provide time lines for order fulfillment?

Yes No

32. In your opinion do the government policies and regulations provide a concrete guideline on pharmaceuticals procurement?

.....
.....

C. METHODS OF ENHANCING PROCUREMENT PROCEDURES

33. Please, indicate to which extent you agree or disagree with the following statement:

The hospital is very much concerned about our suppliers' ability to fulfill their contractual obligations.

Strongly agree Agree Neutral
Strongly disagree Disagree

34. Please indicate, to which extent are the following internal tools used in the hospital in order to increase the procurement performance

Level of usage Not Rarely Often Usually Core tools

We are attempting to Contribute
to R&D (e.g. by Suggesting
better product available in
the market)

We are attempting to achieve
high employee productivity

We are attempting to buy as
much as possible through
e-procurement auctions

We are attempting to minimise
the time period from receiving
the purchase order to submitting
the purchase order to the supplier

We are attempting to optimise
the amount of contracts (e.g. per
product group)

We are attempting to minimise
the amount of suppliers (e.g. per
product group)

We are attempting to emphasize
the importance of the relationship
with the suppliers

We are attempting to minimise
maverick spend (i.e. purchasing
outside the preferred contracts)

35. Do you have organizational service charter?

Yes

NO

D. PROBLEMS FACING PROCUREMENT SYSTEM

36. Do you have sufficient staff to carry out procurement roles?

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.....
.....

37. Are the procedures used in procurement simple and clear?

**E. RECOMMENDATIONS FOR IMPROVEMENT OF PROCUREMENT
PROCESS**



38. What are your suggestions on how the process can be improved?

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.....

39. Give specific areas, which need to be addressed?

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.....
.....

THANK YOU FOR YOUR PARTICIPATION

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