Internal Control Systems Employ to Overcome the Challenges Confronting Inventory Management in the Service Providing Industries

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Abstract

The major aim of inventory management is to ensure availability of materials to user department without delay and the prevention of stock out. The control of inventories has become such a heavy task that needs the attention of not only inventory staff but also top management to provide the right structures for inventory operation. This has become more prevailing in today`s strategic management decisions, which is geared towards profitability and adding value. Bozarth and handfield (2007), inventory is such a critical resource in many organizations and efforts must be made to devote tools and techniques to manage it. In service providing industries, the desire is to implement the right policies and procedures that will best determine and regulate production schedules to establish requirements, parts, and materials needed to support service delivery and improve upon efficiency. Best practices in the management of drugs and non-drug consumables as well as information flow are the cardinal points in achieving quality health care. The surest way to maintain these critical factors is the proper management of inventory both within the firm and all its supply chain actors. This is not the case in in most public hospitals in Ghana. Inventory management in New Edebiase Hospital is not smooth. Poor inventory control has led to many problems which has affected the quality of health care in the hospital over the past years. Drugs and non-drug consumables availability has been below 60% in the hospital over the years according to statistics from the non-drug consumables and pharmacy unit of the hospital. This has resulted in prolonged sickness and in some cases death of the innocent patient. Shortages of essential drugs, non-drugs consumables and even oxygen for resuscitation account for about 15% of deaths recorded in the hospital (Hospital annual report, 2010). Moreover improper procedures for receiving, issuing, and disposal of non-drug consumables, and medicine have been the order of the day. This has contributed to increased patients dissatisfaction, prolonged illness, and increased needless death and has resulted in a decline in out-patient attendance. The challenge facing inventory is compounded as a result of rampant thievery and pilfering and serious audit queries over the years. (Hospital survey report, 2013).

I. INTRODUCTION

To guarantee improved health care delivery, inventory management cannot be relegated to the background. Lackadaisical attitude to the management of inventories in health care often result in cost to the hospital, uncured illness, preventable death of innocent patients, poor reputation and low quality of service. The rising cost of goods, materials, and services warrant judicious management of resources in the hospitals of which inventory account for the biggest chunk. It is very reasonable for management of public hospitals and inventory managers who have a responsibility for inventory and to have adequate knowledge on inventory management in a more scientific way. The issues concerning inventory management have taken a center stage because it has a direct effect on productivity.

The psychological and behavioral attitude of employees will be revealed to help management to provide the right tools to develop a good inventory policy to help provide better health care to the people of Ghana. It will also add to the existing knowledge on inventory management and it effect on performance most importantly in the health dispensation. The work was carried out at Services Industry because the researcher wants the inventory management of the hospital to be abreast of current trends. The work focused on inventory management. All information was gathered from the stores section and other related department. The population for the study included all workers of the case study area.

According to Lambert et al (1998), inventories account for the greatest investment and can represent more than 50% of wholesalers' total assets. Effective inventory management is about aligning internal and external resources with corporate strategy to optimize quality, value and cost to be able to achieve competitive merit and profitability in service organization. According to Rushton et al (2010), the inventory function has moved from being perceived as an administrative support where there was little or no support and comprehension of the importance of good inventory management by top management in the past to the contribution that it could make to corporate success as more

enlightened organizations are beginning to accept that inventory management is a vital ingredient to overall business success. This chapter will review related literature that are related to the subject of this study highlighting some of the current strategies that are assisting practitioners to increase performance in the area of inventory management. The chapter will consider empirical and theoretical literature involve in the subject matter.

A. Meaning of inventory

According to Frazelle (2002), 'inventory ensures smooth running of logistics and that the planning, storing, and accounting for inventory are the primary aim for all logistics. The customer service goal is that he is served with his/her order'. According to Lambert et al (1998), inventory is huge and expensive and thus to enhance positive cash flow and return on investment calls for good management of inventory. A lot of organizations suffer as a result of inventory because they lack a comprehensive understanding of the techniques used in the management of inventory resulting in customer dissatisfaction. The stores carries inventory items with the intention of satisfying customers demand as they arise, Quayle (2006). Inventory also called stock is the accumulation of all kinds of incoming consignment needed for production which can be in the form of solid, liquid, gaseous, semi-finished or components parts from outside suppliers, stored, and issue out as and when they are needed, Slack et al (2007). Inventory function in any organization is for the purpose of assisting in the production of goods or services and because of this, no organization of any significant size can be efficiently managed without it. The primary aim is to provide a service to the point of operation and this aspect must always be the focus.

B. Meaning of Management

Mullins, (1999) defines management as 'the process common to all functions carried out within an organization with objectives which are the end result that the organization is trying to achieve'. Wit and Meyer (1999) define management as an art of skillfully handling a process. Management thus means to guide or control something or an activity well or to narrow it down to inventory, to succeed in the efficient operating of inventory. This makes management the act or skills of controlling and making decisions about a process. It embraces organizing, planning, controlling and directing the resources of a company in order to fulfill objectives of a policy.

C. Meaning of Inventory Management

According to Lowe (2002), 'inventory management is the prudent management of raw materials, parts, works in progress, and finished goods, that is necessary to ensure capital investment returns and the visible availability of stock levels to prevent opportunity cost'. Inventory, also known as stock, is 'the stored accumulation of transformed resources in a process; usually applied to materials resources but may also be used for inventories of information', (Slack et al (2007). To operate successfully, it is impossible to negate inventory to the background. Materials are needed to ensure continuous operations to satisfy the numerous customers. Inventory has a purpose why it is held and this purpose is very useful to all organizations. According to lambert et al (1998), the purpose of inventory in any organization be it manufacturing, service, not for profit or government include:

- o Enabling firms to achieve economies of scale. This is where the firm in questions procures needed supplies in large quantities, reducing the unit cost or enjoying quantity and cash discounts.
- o Balancing supply and demand because supply and demand cannot be perfectly synchronized due to reasons such as strikes, sickness, unplanned rapid request and seasonal materials.
- o Providing assurance against unknown demand in order cycle
- o Serving as a buffer within the channel of distribution.

Inventory function is concerned with having in excess a level of stocks, under the correct storage conditions, for future use by other departments. To realize these objectives, inventory management has a number of duties, including receiving, storing, and issuing stock, controlling the movement of stock, controlling all storage units, controlling material handling procedures, overseeing quality and quantity control, overseeing staff training, and implementing clerical and administration duties. The inventory function provides a service to the company as a whole and to individual user departments. Inventory function provide services to the production departments to ensure that materials are available as and when needed, distribution departments, to ensure that all finished products are marshaled and ready for dispatch, sales departments, to ensure that stocks for sale are stored and issued correctly and accounts

departments to ensure that information on the value of stock, goods received, and invoice queries are provided promptly.

D. Types of Inventory

Companies have different stock types within its supply chains and they are held at various points within company logistics network beginning with the supplier and ending with the customers. Rushton et al (2010) grouped inventories into the following:

- o **Raw material, component and packaging stocks** – this is used to feed into a production or manufacturing process.
- o **In-process stocks** – this is called work-in-progress (WIP), and it includes partially finished stock found within the different manufacturing processes.
- o **Finished products** – stocks that come of the production ready for supply to customers.
- o **Pipeline stocks-** These are held in the distribution chain for eventual transfer to the final customer.
- o **Spare parts** –They serve as back-up to machinery or plant during breakdown. They are also stocked by service and maintenance companies for their customers in service contracts and include maintenance, repair and overhaul (MRO). They include nuts, bolts, and and repairable parts that require periodic maintenance repairs.

In the opinion of lambert et al (1998), inventory is grouped as a result of the rational for which they are assembled. They are made up of cycle stock, which are replenishments made as materials are used in production when there is certainty in demand. In-trans inventories on the other hand are materials en route from one location to another, safety or buffer stock is held as a result of uncertainty in demand or the lead time may fail, speculative stock is held for other reason outside of satisfying demand, seasonal stock is stocked accumulated during seasonal period.

E. Reasons Why We Hold Inventory

According to Lyons and Farrington(2012), some of the reasons for keeping inventory are to reduce the risk of supplier uncertainty, meet unexpected demands and protect against lead time uncertainties. According to Meng (2006), all firms (including JIT operations) keep a supply of inventory for the following reasons:

- o *To maintain independence of operations.* A supply of materials at a work center allows that center flexibility in operation because there are costs for making each new production setup and this inventory allows management to reduce the number of setups. Independence of workstations is desirable on assembly lines as well. The time that it takes to do identical operations will naturally vary from one unit to the next. Therefore, it is desirable to have a cushion of several parts within the work station so that shorter performance times can compensate for longer performance time. This way, the average performance can be fairly stable.

- o *To meet variation in product demand*. If the demand for the product is known accurately, it is then possible to produce the product to synchronize with demand, however demand for a product is not known so a buffer must be kept to cater for variations.

- o *To allow for flexible production schedule*. Stock of inventories relives pressure on production due to long lead time that allow for lower cost, smooth flow and larger lot size.

- o *To hedge against variations in raw materials delivery time*. Suppliers can delay delivery of materials for a variety of reasons such as shortage of materials at supplier site, accidents, shipments of incorrect order, and lost order.

- o *To take advantage of economies of scale*. Placing an order comes with an attached cost such as labor, phone call, typing, posting, inspection, and offloading cost. A larger order reduces the frequency of order, thus saving cost. Shipping cost favors larger order as the larger the order, the lower the shipping charge per unit

F. Procedure Manual

According to Jessop and Morrison, (1994), procedures are instructions and rules on how the work of stores must functions. This means that procedures are systems of segregated steps and methodical approach to roll out the services of stores. If employees do not follow these procedures, they are, in effect, transgressing a moral code. Cohen (1995) A procedures manual is thus a step by step procedure which in the opinion of Donaldson (1984) "constitutes a combination of "technical" (what people should do) and "prudential" (what attitude should be adopted) imperatives, and they also involve a moral imperative where employees should follow the procedures contained within the code". In any stores operation, there should be some discipline as well as routine and instructions must be given about procedures. Verbal instructions have limitations and at such some amount of written guidelines are necessary. The bigger the organization, the more important is written procedures and as time goes on, it is necessary to revise, extend and standardize all existing instruction to produce a comprehensive document called inventory manual.

G. Inventory Control

Lowe (2002), inventory control is simply keeping materials in good condition so that it is not stolen, or pilfered and that it is supplied when it is needed. Controlling inventory is a daunting task as a well-controlled inventory can positively affect the fortunes of the company and vice versa. Inventories are held because demand and supply cannot be perfectly matched, however stocking too inventory result in a high holding cost and having not enough results in an increase in the cost of order. There is no need to stock large quantities of goods which are available at short notice. Quayle (2006). Inventory control is necessary because of budgetary control, and financial accounting. Some philosophies such as just in time (JIT) advocate that inventory should not be held at all, however stocking inventory is vital for some industry including health facilities and at such must be controlled to minimize cost and enhance service delivery. In a health facility, the attitude to inventory is to be proactive as needs are not usually known in advance. Drugs and other consumables must be available before a patient set foot into the hospital to receive health care. The management of inventory in a hospital is not the same as that of a manufacturing company because the hospitals do not seek for a greater profit from drug sales but rather emphasis is placed on enhanced service level before a consideration is given to minimization of cost and losses.

H. Inventory Control Techniques

Inventory control is the activity of ensuring that customers are served with their need. It organizes purchasing, manufacturing and distribution functions to meet customer needs. Stock control seeks to balance inventory such that each item is held within its proper limit to ensure that items do not run out of stock. Stock is controlled by means of fixing for each item, stock level which are recorded in stock control system and used as a means of when action should be taken Appiah-Mensah (undated p 25-31) opine that the following stock levels are used mostly in the control of inventory are:

o **Safety stock: Safety stock** this is held because demand cannot be predicted perfectly. Safety stock is the spare material between supply and demand. It helps in the maintenance of customer service and help manufacturing to operate without stress, wild (1997). It is simply the quantity of stock held to cover variations in demand or delivery delays.

o **Minimum stock level**: This is the lowest level that materials should not normally fall below because if inventory fall below this level, there is the possibility of incurring excess stock out cost. The minimum stock is usually kept as a buffer to cushion the organization from having no stock at all. The minimum stock is calculated as minimum stock level= reorder level- (average consumption × average lead time). Minimum stock represents the danger level that can lead to stock out.

o **Maximum stock level**: This is the highest point which stock should not be allowed to exceed because exceeding the maximum stock level will incur cost such as capital tied up in stock, damages to stock, theft, more storage cost and insurance premium increase. Maximum stock level is calculated as maximum tock level = reorder lever – (minimum usage × minimum lead time) + reorder quantity.

o **Re-order level**: This is the quantity of stock expressed in unit of issue at which ordering action is initiated before stock fall to the minimum stock level.

I. *Inventory Control Approach*

Inventory practitioners must make decisions concerning stock such as how much to order and when to order? How many suppliers and transport operators do we use? These, helps in making decisions concerning inventory control approach. Organizations must select approaches that serve them best as defined by the corporate goals such as:

o **Independent demand inventory items**: This is demand for an item that is independent of the demand for any other item. Demand for independent items is seen as a forecasted demand and they are mostly finished goods. Rushton et al (2010)

o **Dependent demand inventory items**: Inventory items whose demand is as a result of some other item. Such demand is thought of as derived demand and mostly is not finished goods but rather materials, parts, sub-assemblies and accessories that make up the finished good. Waters (2003).

o **Just In Time (JIT).** The principle behind just in time (JIT) is to order the items only when they are needed and not to place order when they are not needed or simply due to uncertainties. This is a simple idea as JIT has given the opportunity to eliminate stockholding without affecting customer service. Wild (1997). JIT is a philosophy of eliminating all waste to focus on productivity improvement. Inventory is brought in only when it is needed. To successfully implement JIT, is to embrace the supplier in a co-makership agreement such that the supplier is seen as an extension of the company. It involves having only stock when it is needed to upgrade quality to zero defects. This means that there should be a reduction in lead time, setup time, queue length and the size of lots, and all these must be achieved at the minimum cost. Yielded advantage includes stock reduction, inventory level reduction, less need for materials handling equipment, less time needed between production and delivery, immense quality improvement and employee inclusion in continuous quality improvement. Muller (2003).

o **Materials requirement planning**: Materials requirements planning (MRP) is a "push-through" system where finished inventory are based on forecast of demand. MRP is able to forecast each stage of production requirement through demand forecast of the final product producing a detailed bill of materials for each final product which is commensurate with the available inventories of materials, components, and products. Maintaining accurate inventory records and costs is critical in an MRP system. Horngren et al (2012).

o **Two-bin system**. According to Arnold and chapman (2004), in a two bin system, materials required is ordered in two fold for the first time and divided into two. One is set aside and not touched until the first one is completely used up. Immediately the first bin is used up, order is placed to refill it while the second bin is in use. The quantity of item in the first bin serves as to order quantity to be ordered. The two-bin system is the ideal method of keeping control of items of low value so that enough time is concentrated on critical items.

o **Periodic review system**. Arnold and chapman (2004), the periodic review system predetermines the quantity to order mostly at fixed-time intervals. The review period is fixed and the order quantity is allowed to change each time it is desired. The quantity in stock and the quantity ordered must be adequate until the next order t is received.

o **Economic Order Quantity**. Kinney, and Raiborn (2011), the economic order quantity (EOQ), is a model which represents the least costly number of units to order that will balance the cost of ordering to the cost of holding the said goods. The EOQ dictate the optimal balance between ordering and carrying costs by mathematically equating total ordering costs to total carrying costs. EOQ is a very common inventory control tool that is very easy to use. Even though the EOQ is relatively very easy to use, it relies on some assumptions.

According to Arnold et al (2008), the assumptions on which the EOQ is based are as follows:
o A constant fixed and known demand.
o The item is produced or purchased in lots or batches and not continuous.
o Costs of raising order and cost of holding the order do not change and known.

   o   Order is received promptly or immediately there is a call for it.

These assumptions are mostly ideal to finished goods whose demand pattern is independent and uniform, however there are times where the assumptions are not feasible and the EOQ concept cannot be put into practice. For instance, there is no reason to calculate the EOQ for made-to-order items in which the customer specifies the order quantity, Arnold et al (2008),

According to Quinn (1993), EOQ formula is given as $*Q = (2DCp/Ch.)\ 1/2$
Where $*Q$ = Economic Order Quantity
         D = Yearly demand
         Cp. = Cost of Placing an order
         Ch. = Carrying cost per unit year

The EOQ decision involve identifying an optimal cost compromise between low inventory holding cost and high ordering cost.

J.   Inventory Cost
Inventory always comes with cost as the organization that need the inventory must always procure the needed materials. The cost of inventory must be known so as to determine it relationship within the organization.
Rushton et al (2006), 'opined that there are four principal elements of inventory holding cost and they are:
 ▪ **Capital cost**: The cost of the physical stock. This is the financing charge that is the current cost of capital to a company or the opportunity cost of tying up capital that might otherwise be producing a better return if invested elsewhere. This is almost always the largest of the different elements of inventory cost.
 ▪ **Service cost**: The cost of stock management and insurance.
 ▪ **Storage cost**: The cost of space, handling and associated warehousing costs involved with the actual storage of the product.
 ▪ **Risk cost**: It occurs as a consequence of pilferage, deterioration of stock, damage and stock obsolescence. With the reduction in product life cycles and the fast rate of development and introduction of new products, this has become a very important aspect of inventory cost. It is one that is frequently underestimated by companies. It is particularly relevant to high-tech industries, the fashion industry'.

K.   Classification of Inventory
All items held in inventory do not have equal weight with regards to the potential to generate profit, sales rate or usage volume. This calls for the classification of all inventory held in stock. The ABC analysis, also called Pareto analysis or the 80/20 rule according to waters (2007), presents a way of describing different categories of risk based on the observation that 20 percent of the risk causes 80 percent of concern while the remaining 80 percent of risk only cause 20 percent of concern.
Arnold et al (2008), the ABC inventory classification determining the merit attached to items and allow diverse modes of control based on the different levels of importance attached to each items. The classification is necessary due to the large number of items in stock. To achieve optimum cost, it is insightful to group the items based on their importance which is mostly based on yearly dollar usage, or other usage that the company concern find useful. The ABC principle classifies inventories into three groups namely:
 ▪ *Group A which account for 20% of the items in stock and 80% of the dollar usage.*
 ▪ *Group B which account for 30% of the items in stock 15% of the dollar usage.*
 ▪ *Group C account for 50% of the items in stock and 5% of the dollar usage.*
An items are very important items and close attention is given to it while C items receive lose control. This does not mean that C items are not vital; however the value of C item is not as huge as compared to A items. B items must have control that lie between A and b items.

L. Valuation of Inventory

Inventory valuation methods are used to determine the cost of goods sold and closing inventory at the end of the day. The method is used only to account for usage of goods held in inventory. Arnold et al (2008), there are four methods of accounting used to value inventory and they are:

o **First in first out (FIFO)**. FIFO method says that the oldest (first) item brought in stock is the first to be used or sold. The cost of the first goods received is charged against the cost of goods sold first and the closing stock reflects goods that are purchased later. In rising prices, replacement is at a higher price than the assumed cost. This method does not reflect current prices, and replacement will be understated.

o **Last in first out (LIFO).** This is the reverse of FIFO here the newest (last) item in stock is the first sold. In rising prices, replacement is at the current price. In a falling price market existing inventory is overvalued.

o **Average cost**. This method assumes an average of all prices paid for the article. The problem with this method in changing prices (rising or falling) is that the cost used is not related to the actual cost.

o **Standard cost**. This method uses cost determined before production begins. The cost includes direct material, direct labor, and overhead. Any difference between the standard cost and actual cost is stated as a variance.

M. Placing order for Inventory

The rational for inventory management is to provide a service to meet customers demand. Customers can be served only when there is a stock of inventory. As inventory is demanded at a stated interval, the stock will eventually run out. When the minimum stock is reached, a reorder process is initiated. The basic question to be answered is how much is to be ordered?

Arnold et al (2008) proposes the following to be ordered:

o **Lot-for-lot**. The lot-for-lot rule says to order only what is required. The order quantity changes whenever requirements change. This technique requires time-phased information such as provided by a material requirements plan or a master production schedule. Since items are ordered only when needed, this system creates no unused lot-size inventory.
o **Fixed-order quantity**. Fixed-order quantity rules require a fixed unit is ordered each time an order is placed for the material.
o **Min-max system**. In this system, a new order must be raised when the quantity in stock fall below order point. The quantity ordered is the difference between the actual quantity available at the time of order and the maximum.
o **Order n periods supply**. Rather than ordering a fixed quantity, what is needed within a period is what is actually ordered to satisfy future demand.

N. Receipt of Materials

Stock receipt involves all materials and items supplied to the store or warehouse from either internal or external sources. It is not unusual to find out that materials are sometimes sent to the wrong organization and thus it is very essential to find out if the goods are at the right delivery point and also ascertain whether the materials are the correct one requested. According to Lambert et al (1998), 'receiving activities include the real lifting of materials from the transport mode used, recording into warehouse material books, inspection for damages, and verification of goods against order and transport record details'. Inventory receiving involves all materials supplied from outside suppliers, production, unit, other departments, and other storehouse within the organization. The receipt of materials into a warehouse or stores must be a dutifully organized activity. Inventories may be transported into the stores by hand, post, road, and rail or by air Rushton et al (2006), 'in most large warehouses, incoming vehicle loads are notified in advance for the necessary activity needed to be set in motion before arrival. On arrival, inventory staffs check documentations of vehicle before actual unloading is affected. Documents involved in receipt of goods as put forward by Jessop and Morrison (1994) include copy order, carrier consignment note, supplier advice note, delivery note, supplier package note as well as goods receive note.

O. Coding of Materials

The usual way of describing materials in the store or warehouse is through simple description, however many names exist for the same item and at such there is the need to have some logical basis of identification that is less cumbersome and more precise. The best way to identify materials in stock is through coding. Lyson, (2000) states that coding helps in making location of materials in storehouse easy, promote standardization, reduce variety, help avoidance of duplication, simplicity in avoiding long and detailed item description and reduce cost as it assist accuracy in identification and error avoidance. Jessop and Morrison (1994) states that coding methods includes firstly doing it by the nature of the item or by a consideration of the item own inherent characteristics whereby similar items are collated into groups like raw materials, tools and bought out parts and further sub dividing this group as far as the circumstance require and secondly coding by the end use where code are arranged to meet the purpose for which the item will be used. This method is suitable for identifying materials and equipment in the armed forces and hospitals. Whatever method of coding is employed, symbols used are normally alphabetical, numerical, or a combination of alpha-numerical.

P. Stock Records

Stock keeping and transaction records and reports of consumption and stock holding contain valuable information for the management of health commodities. This is necessary for accounting purposes of funds allocated for inventories. Original forms and their copy must be kept in a manner that makes them easily accessible for routine reference. The aim is to keep bin cards on shelve with commodities, establish and maintain a filing system for all stock and to keep all ledgers up to date. (Standard operating procedure of GHS, 2008). The system of recording in most organizations is the manual system, computerized system or a combination of both the manual system and the computerized system. According to Jessop and Morrison (1994), the manual system employs stock control cards to keep details of stock movement. Every item must have a stock card that is divided into a basic five columns for date, receipt, issue, unit price and balance. Information on the stock card includes location number, stock balance quantity, date and unit of issue, method of delivery, code number and remarks. The computer system on the other hand involves computer software designed to store, recall information and make calculation. Records control using the computerized system is easy, fast and more accurate than the manual system.

Q. Storage

According to Muller (2003), 'every company must have some space set aside for storage of materials'. Materials or documents may be stored permanently or temporally, long time or for a short time. Because supply and demand cannot be met perfectly, materials must be stored for future use. Quayles (2006) storage entails safety keeping and material handling of materials, WIP, parts, components, and finished good. Materials must not be left on the floor but must be protected from damage, or theft, and deterioration. Storage of materials must be done on suitable equipment.

R. Storage Equipment.

There are many equipment used for storage of inventory.
- **Shelving** – Shelves is made up of different height, size, space and depth. Some shelve have sub dividers and it is sued for storing smaller items. Shelves can be placed on the floor, or fixed on the sides of walls.
- **Bins**. Bins are made from materials like galvanized steel, wire mesh and fiberboard and come in multiple sizes and shapes.
- **Drawer units**. Drawer may be fused into shelves, counters and tables and used as safe to secure materials.
- **Carousels**. They are electric driven storage that rotate until the needed is directly in front of the inventory staff and can be vertical, horizontal or conical. Rushton et al (2006).

S. Inventory Issue

The term 'issue' is defined by Lowe (2002) as an express approval for the withdrawal of an item in storage. To issue out materials from the stores, the user must first determine the item they need specifying the quantities. The user then fills a requisition forms giving the details of items requested and get authorized personnel to approve the request before submitting it to the warehouse or store for the needed item(s) to be issued out. The warehouse or store personnel on receipt of the authorized voucher first check the authenticity of the authorization, identify the item(s) by the code

number, select it and prepare stores issue voucher to the requisitioner to sign and afterwards hand over the item(s) to the person who made the requisition. Jessop and Morrison (1994), stress that issues must correspond with the needs of the organization. Some of the commonly used methods are issue on request and scheduled routine issue to production. The documents used in issues include the store issue voucher and store requisition voucher.

T. Stock Taking

Stock taking is the periodic manual count of inventory in stock to determine if actual goods on hand are the same as what is recorded. During stock taking, materials are measured, counted, weighed and checked. According to waters (2003), 'the difference between physical and recorded balance must be close enough. To help unravel weakness in the system, check stock accuracy and disclose the possibility of theft, fraud as well as loss, stock taking should be done at least once every three month. At the health facility, stocktaking exercise should be done monthly to coincide with the monthly requisition. (Standard operating procedure of GHS, 2008). A discrepancy exists if the stock found by the physical examination does not agree with the balance on the stock card Jessop and Morrison (1994). There is surplus if stock found exceeds the recorded figure and a deficiency if the stock found is less than the recorded figure. Discrepancy may come about due to error in simple additions and subtracting while posting, pilfering, issue of incorrect quantity, posting done on wrong card and incoming materials place in bin but material return card not yet updated.

U. Inventory Security

Store security should be of prime concern to all organization that operates inventory. Inventory security must not only cover fraud, theft, and pilfering, but must also cover damage, deterioration, and obsolescence. Organizations may hire specialize security personnel to guard against theft or inventory staff are made responsible for inventory security. The following may be implemented to secure the inventory:
- o Appointment of senior manager with overall responsibility for inventory security
- o Regular allocation of budget to cover cost of security.
- o Regular discussion of inventory security at managerial level meetings
- o Duplicate keys should be kept to a minimum for adequate control.
- o Store manager must be responsible for all keys and locks of inventory house.
- o All keys should be numbered to match keys to correct.

V. Warehouse

Blanchard (2007) Warehousing plays a key role through product storing, loading products onto a truck to final destination, and returns, which is reverse logistics process. Warehouse keep materials, WIP and finished goods and serve as the next point in fulfilling the next customer need in the supply network. Sadler (2007), the main function of a warehouse is for faster access to vitally needed goods. This is achieved by receiving goods in bulk and sorting them into customers' exact requirements. The objective of a warehouse according Arnold et al (2008) to is to greatly reduce cost and increase customer service. These warehouse objectives is achieved through the provision of timely customer service, tracking items to ensure that they can be found readily when needed, minimizing the total physical effort and the cost of moving goods into and out of storage, and the provision of a secure communication links with customers.

W. Types of Warehouse.

According to lambert et al (1998), there are many alternatives to own and operate a warehouse. The major types of warehouse are:
- o Public warehouse. The public warehouse is meant for the general public. It renders services to the public for the payment of rent for the purpose of the commerce.
- o Private Warehouse. This warehouse solely belongs to a private individual or an entity for the exclusive storage of their products.
- o Bonded Warehouses. It is warehouse that stores imported goods for which the payment of custom duties is not yet paid and the owner need permission before he can interfere with them.
- o Government Warehouse. This is a warehouse owned by the government
- o Contract Warehouse. A contract warehouse is a variation of public warehouse between the user of a warehouse and the provider of the facility. Contract warehouse offer unique and exclusive service to one

client where vendor and client associated risk with the operation of the warehouse with a focus on productivity, risk, service and efficiency.

X. Challenges of inventory management

Players in downstream distribution channels involve in wholesalers and retailers who face the challenge of not being able to satisfy customers because of incorrect forecast demand, irregular customer expectation and non-availability of products. According to Coyle et al., (2003), the challenge is becoming bigger each day due to products inherent characteristics such as substitutes. Customer's order could be cumbersome, and in various categories and can become complex and time-consuming. Forecasting demand cannot be expertly done naturally and this creates two extreme challenges: overstocking and under stocking of inventory. There is a tendency to overstock because companies always tend to naturally avoid stock out situation. Overstocking brings to the fore the incidence of theft, pilfering, breakages/damages and materials expiring in storage. Under-stocking on the other hand leads to the tendency to stock-out of inventory and reduces the profit margin due to lost sales

II. DISCUSSIONS

Internal Control Systems to Control Inventory

An inventory control system has to do with the mechanism to ensure the availability and judicious use of inventory at stores to meet demand and prevent wastage. Questions asked include departments having requisition books, authorization of requisitions for demand at the stores, honoring emergency request as and when necessary, user units having a place to keep requested items and the speed with which items are delivered by the stores to user units. In all the questions posed, respondents were instructed to indicate their preferred option for each statement by ticking ($\times$) in the right column on the 5 likert scale where 1= Strongly Agree, 2=Agree, 3=Neutral, 4= Disagree, and 5=strongly disagree. The table below is the result of respondents' answers in percentages.

Table Distribution of Responses to determine if all User Units have Requisition Book

RESPONSES	FREQUENCY	PERCENTAGE (%)
STRONGLY AGREE	102	86.44
AGREE	16	13.56
NEUTRAL		
DISAGREE		
STRONGLY DISAGREE		
TOTAL	118	100

Source: Field survey, July, 2016

i. Distribution of Responses to determine if all User Units have Requisition Book

Question 28 asked respondent to answer if all user units have requisition book. The requisition book is a store document in the custody of user department used to formally request for materials from the stores. Responses indicated that 86.44% strongly agree while 13.56% agree that all units have requisition book that they use to request for supplies from the stores.

Table Distribution of Responses to determine if Requisition can be made only on Specific days in the Week

RESPONSES	FREQUENCY	PERCENTAGE (%)
STRONGLY AGREE	24	20.34
AGREE	76	64.41
NEUTRAL	8	6.78
DISAGREE	10	8.47
STRONGLY DISAGREE		
TOTAL	118	100

Source: Field survey, July, 2016

ii.   ***Distribution of Responses to determine if Requisition can be made only on Specific days in the Week***
Question 29 asked respondents to answer if requisition can only be made on specific days within the week and 20.34% of respondents strongly agree, 64.41% agree, 6.78% remain neutral and 8.47 disagreed to that question. The stores personnel revealed that requisition can only be made on Mondays and Tuesdays of every week so that the other days can be used to update ledger books, tally cards and carry out the other activities of the stores.

Table Distribution of Responses to determine if User Departments seek for Authorization before Submitting Requisition book to the Stores

RESPONSES	FREQUENCY	PERCENTAGE (%)
STRONGLY AGREE	64	54.24
AGREE	52	44.07
NEUTRAL	2	1.69
DISAGREE		
STRONGLY DISAGREE		
TOTAL	**118**	**100**

Source: Field survey, July, 2016

iii.   ***Distribution of Responses to determine if User Departments seek for Authorization before Submitting Requisition book to the Stores***
The next question investigated to find out if user department seek for authorization before submitting requisition book to the stores for supplies. This ensures that authorities are made aware of where supplies are sent to be used in the provision of services and also prevent the situation where supplies from stores are diverted for personal gain. 54.24% strongly agreed, 44.07% agreed and 1.69% remained neutral that user department seek for authorization before requisition is forwarded to the stores.

Table Distribution of Responses to determine if items are delivered as soon as they are ordered from the Stores

RESPONSES	FREQUENCY	PERCENTAGE (%)
STRONGLY AGREE		
AGREE	28	23.73
NEUTRAL	6	5.09
DISAGREE	42	35.59
STRONGLY DISAGREE	42	35.59
TOTAL	**118**	**100**

Source: Field survey, July, 2016

iv.   ***Distribution of Responses to determine if items are delivered as soon as they are ordered from the Stores***
This question is posed to determine if requested items are delivered as soon as they are ordered from the stores. The purpose of requesting items may no longer be necessary if it takes a long time to supply the said item especially if it is to save the life of a sick patient. Responses indicated that 23.73% strongly agree, 5.09% remain neutral, 35.59% disagree, and another 35.59% strongly disagree to this question.

Table Distribution of Responses to determine if Emergency Request is Honored outside days set aside as Requisition Days

RESPONSES	FREQUENCY	PERCENTAGE (%)
STRONGLY AGREE	4	3.40
AGREE	62	52.54
NEUTRAL	34	28.81
DISAGREE	10	8.47
STRONGLY DISAGREE	8	6.78

TOTAL	**118**	**100**

Source: Field survey, July, 2016

> *v.* ***Distribution of Responses to determine if Emergency Request is Honored outside days set aside as Requisition Days***

Question 32 was to find out if emergency request is honored by the stores outside days set aside as requisition days. 3.40% of respondents strongly, 52.54% agree, 28.81% remain neutral, 8.47% disagree and 6.78% that emergency request is honored outside days set aside as requisition days.

Table Distribution of Responses to determine if User Departments are consulted before Procurement of items

RESPONSES	FREQUENCY	PERCENTAGE (%)
STRONGLY AGREE	4	3.39
AGREE	24	20.34
NEUTRAL	26	22.03
DISAGREE	24	20.34
STRONGLY DISAGREE	40	33.90
TOTAL	**118**	**100**

Source: Field survey, July, 2016

> *vi.* **Distribution of Responses to determine if User Departments are consulted before Procurement of items**

Question 33 investigated to find out if user departments are consulted before procurement of items. When user department are invited to make input into items before procurement, issues like these items are not compatible with my machine and i find it difficult using these supplies are always eliminated. Respondents' answers shows 3.39% strongly agree, 20.34% agree, 22.03% remain neutral, 20.34% disagree and 33.90% strongly disagree.it is evident from the above responses that user department are always not consulted before procurement of items**.**

Table Distribution of Responses to determine if User Departments have a place to keep items requested from Store

RESPONSES	FREQUENCY	PERCENTAGE (%)
STRONGLY AGREE	32	27.12
AGREE	78	66.10
NEUTRAL	6	5.09
DISAGREE	2	1.69
STRONGLY DISAGREE		
TOTAL	**118**	**100**

Source: Field survey, July, 2016

> *vii.* **Distribution of Responses to determine if User Departments have a place to keep Items requested from Store**

Questions 34 ask respondents to answer whether user units have a secured place to keep requested items from the stores. Responses shows that 27.12% strongly agree, 66.10% agree, 5.09% remain neutral and 1.69% disagreed that user units have a place to store items requested from stores.

Table Distribution of Responses to determine if there is Satisfaction with the Services provided by the Stores

RESPONSES	FREQUENCY	PERCENTAGE (%)
STRONGLY AGREE		
AGREE	60	50.85
NEUTRAL	56	47.46
DISAGREE		
STRONGLY DISAGREE	2	1.69
TOTAL	**118**	**100**

Source: Field survey, July, 2016

viii.   *Distribution of Responses to determine if there is Satisfaction with the Services provided by the Stores*
Question 35 seeks to examine if there satisfaction of the services provided by the stores to user units and responses indicated that 50.85% of respondent agree, 47.46% remain neutral and 1.69 strongly disagree. Clearly there is some level of dissatisfaction with the level of service provided by the stores to user units.

III.   CONCLUSION

This final section of the study contained the summary of findings based on research questions and objectives. This was followed by the conclusions and then recommendations. The reason for the selection of this research topic was not only the public demand for prompt effective and efficient service delivery in Ghana Health Service Institutions, but to ascertain whether health institutions have embraced good inventory management to aid the delivery of health care to sick patients. Again, the choice of Services Industry for the Study was based on the fact that the researcher will be able to have easy access to required information and data.

A.   *Inventory Management Practice*

The study revealed that the Services Industry practices of inventory management involve a quarterly procurement of major inventory. The inventory is mostly supplied by suppliers and the goods are accompanied by waybill and invoices. The hospital also has an inspection team made up of an account staff, internal Audit and user Department who inspect the goods before they are moved into the stores. Approval is sought from management each time request for replenishment from suppliers. However materials ordered are mostly not received on time, ledgers are not updated promptly upon receipt of goods from suppliers and emergency orders are not given the due attention it deserved.

B.   *Inventory Management Efficiency*

The study revealed that inventory management practices of the hospital are efficient. The hospital has a store room at the premises and it is large enough to accommodate all items needed for by the hospital, and the store room serve multipurpose task such as receipt and dispatch. The store rooms also have pallets, shelves, drawers, and trolleys. There is a good lightening system, and special storage equipment meant to store special commodities at the stores.

C. *Internal Control Measures*

From the study, it was realized that all user department have requisition books, and requisition can be made only on specific day within the week which is between Monday and Wednesday. User department always seek for authorization before submitting requisition to the stores. There are delays in fulfilling users request from the stores. User department are also not consulted before replenishment of the stores. User departments have a place within their wards to store requested items from the stores. The level of satisfaction of the service provided by the stores is good.

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