

Kenya APHIA Financing and Sustainability Project: Guidelines for Reviewing and Improving a Centralized Hospital Supplies Management System

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GUIDELINES FOR REVIEWING AND IMPROVING A CENTRALIZED HOSPITAL SUPPLIES MANAGEMENT SYSTEM

INTRODUCTION

Simply defined, a centralized supplies system or materials management is an integrated system of functions and departments responsible for getting materials from the point of origin (manufacturer) to the point of use and ultimate disposition. The objective is to provide the right items, in the right quantity, to the right place, at the right time, for the right (lowest total) cost. It is critical to note the interdependence of the facets of supplies management and the hospital departments and functions that must apply the concepts and meet the objective. The complexity of these interrelationships should indicate that supplies management could have a profound effect on the entire organization or at the very least on the budget. The mission of supplies management is to provide services (procurement, inventory management, storage and distribution) to customers (users, physicians, and ultimately the patient) in a timely and efficient manner, so that the quality and profitability of the total organization are achieved.

The supplies management program needs to target the volume and frequency, as well as the systems/procedures used to minimize the staff resources required to support patient care. Staff mix must be considered. Supply clerks are able to deliver all these items much more cost effectively than nurses or technicians. The economic impact of supplies management and systems on a hospital is substantial, but it is minuscule when compared to the impact on the quality of patient care provided. Without the necessary materials, surgery cannot operate, emergency/trauma cannot treat and/or stabilize patients, and radiology cannot diagnose. As hospitals and their clinical and management teams are learning, a mediocre supply system and management program will add costs and actually dilute the quality and service they provide.

The material presented herein is a macroscopic tool for managing a hospital supplies system.

CENTRALIZATION

The interrelated nature of the facets and components of supplies management supports the argument for centralizing responsibility and accountability. Simplification of communications; continuity of approach and systems; cross-utilization of personnel, space, and equipment; and it minimizes finger pointing when performance is deemed inadequate and/or when customers have a problem to be solved. Services are enhanced when under the management of one department and one manager.

QUALITY IMPACT

Good customer service and satisfaction are necessary to develop the mutual respect and trust needed to help the supplies management program achieve its mission of service and cost-effectiveness. The following can be used to keep customers satisfied:

- Be open and accessible to department managers and staff
- Meet with customers regularly and informally in their departments
- Do not become too enamored with the supply department's solutions or systems
- Know the supplies department's customers and their needs
- Identify areas for improvement
- Maintain and reinforce performance
- Develop standards and accountabilities

Policies and procedures are an important management tool in any organization. They provide a mechanism for training new employees and coordinating the activities of all employees. In the supplies department policies and procedures can serve as a means of informing supply customers how to best use its services to ensure that value is added to the purchase process. For example:

- By providing the supplies department adequate lead time to investigate alternatives and negotiate contracts
- By communicating specifications to supplies in a way that maintains the flexibility necessary to generate competition among potential suppliers/vendors
- By allowing supplies to coordinate the purchasing activities of various departments in order to maximize opportunities for consolidating orders to the same vendors

BUYING METHODS

A major part of the supplies department role in the hospital is to ensure good value for money spent. To a large extent, the success of the department in carrying out this role depends on the "buying methods" used by the buyer(s). The prudent buyer uses sound buying methods to ensure good value for money spent, and s/he budgets time to spend more effort on purchases having the greatest potential savings (right item, at the right time, at the right price).

ROUTINE PURCHASING

The majority of a hospital's purchases are routine and should be purchased under pre established contracts (contracts that provide some concessions in purchase price or terms for awarding all of the hospital's business for an item or group of items to a single vendor). If not, the prudent buyer asks these logical questions:

- Why not?
- Is this a routine purchase? That is, will the hospital be buying more of this item or a similar item during the year?
- If so, can a contract be established?
- Is the hospital eligible for the lowest pricing available through the contract?
- If not, why not? How can the hospital become eligible for lower pricing?
- Is the hospital eligible for any rebates from the vendor or manufacturer?

NONROUTINE PURCHASING

(amounts given are examples, actual levels to be set by management)

- For purchases under 9500Ksh, the prudent buyer may contact only one vendor, selecting the one that historically has provided the best prices for the type of product being purchased
- For purchases between 9500Ksh and 25,000Ksh the buyer may contact several vendors, soliciting verbal quotes over the telephone.
- For purchases over 25,000Ksh, the buyer may send a written request for a quotation to one or more vendors. Often it is useful to send a written request even when there is only one acceptable vendor. If the request is written in generic language, the request may make the vendor assume that there is competition and thus may result in a lower price

PRODUCT STANDARDIZATION AND EVALUATION

The hospital will develop a policy for establishing a Product Evaluation Program in an effort to reduce costs, standardize and improve products used, and evaluate current products for quality and cost effectiveness. A Product Evaluation Committee, chaired by the supplies officer, meets at least monthly to review hospital products and equipment.

Committee membership includes:

- Supplies officer
- Nursing service representative(s)
- Operating theatre supervisor
- Medical staff representative
- Infection control nurse
- Guest members- as items pertain to their area

The Product Evaluation Committee reviews products at each meeting. It may ask a vendor/supplier representative to present a product to the Committee. Generally, the department or person requesting evaluation of the product will present it to the Committee at the meeting. A department seeking evaluation of a product will complete a Request for Product Evaluation form or Request for item additions to / deletions from / changes to supplies inventory, and present it to the supplies officer who will bring the request before the Committee.

Standardization simply means the use of the same products to accomplish the same purpose in all areas of the hospital. Product standardization is the primary objective of the buyer/dept. manager.

Benefits realized through standardization:

- Reduction of inventory requirements
- Reduction in purchase prices
- Savings in staff training time
- Stabilization of purchase prices- ability to negotiate long term contracts
- Consistency in supply prices and inventories

Product standardization also applies to equipment purchases. These benefits include:

- Reduction of maintenance- when identical equipment is used throughout the hospital, maintenance contracts can be written with a single company to cover all equipment. In some cases, standardization can even make it cost-effective to train an in-house biomedical engineer to maintain equipment, significantly reducing the cost of maintenance.
- Consistency in supply prices and inventories- with multiple units in use throughout the hospital, supplies required to operate the equipment and equipment repair parts will be consistent throughout the hospital. This reduces the inventories necessary to support the equipment and provides higher volume purchases that can be used to negotiate lower purchase prices.

CAPITAL EQUIPMENT PURCHASING

Purchasing capital equipment can be the most rewarding activity performed by purchasing or the supplies officer; it can be both personally rewarding to the purchasing professional and financially rewarding to the hospital. Because capital equipment purchasing can be rewarding, department managers and administrators want to do it themselves. Or perhaps department managers do not trust their purchasing/supply department to do it the way they want it done.

To ensure that the hospital follows prudent purchasing practices for capital equipment, detailed, specific policies and procedures are needed to define the steps in the capital equipment acquisition process. Key steps include:

- User department, with help from purchasing, as needed, prepares a justification for the capital equipment, which is based on objective criteria that include:
 - potential revenue generation
 - potential cost savings
 - the marketing value (including attracting patients, new physicians, and new services)
- Administration decides the capital equipment to be purchased, that is, develops and approved list of capital equipment to be purchased in the next year (as approved by hospital board)
- Purchasing prepares and distributes a written request for bid containing generic specifications, even if the bid is sent to only one vendor. Specifications should include space requirements, electrical and mechanical (engineering) data, compatibility with current hospital systems, modifications necessary, and technical/operating manuals.
- Purchasing arranges for evaluations of equipment. Equipment from the lowest cost vendors should be thoroughly evaluated before equipment from higher cost vendors is considered
- Purchasing, in cooperation with the user, selects the successful bidder and presents the information to administration for the final selection.
- Purchasing and the user should jointly meet with the successful vendor to arrange for installation and training
- Purchasing follows up to ensure that the user is satisfied

INVENTORY MANAGEMENT

Effective inventory management depends on the application of a number of inventory concepts and techniques that involve:

- Examining ordering/buying approaches
- Quantifying inventory levels
- Monitoring inventory variance- usually refers to the variance between the perpetual inventory balance (from bin cards or computerized inventory) and the physical inventory by monthly monitoring of selected high volume-high cost items and at the end of the fiscal year with adjustments to the inventory value. Inventory variances should be tracked and explained.
- Measuring product availability
- Developing inventory turns ratios- an inventory turns ratio is a macroscopic tool to measure and manage inventories. It represents a benchmark calculated by dividing the annual throughput by the physical inventory value. For example,

$$\frac{\text{Annual throughput of } \$4,000,000}{\text{Physical inventory of } \$500,000} = 8 \text{ Turns}$$

The number of inventory turns ratio of 8 means that the on-hand inventory is consumed and replaced an equivalent of 8 times in a year. The higher the inventory turns ratio, the lower the on-hand inventory and the lower the inventory holding costs.

There are several inventory buying approaches used to manage the inventory levels of individual items. Macro approaches to inventory management include:

- Lead time- this is the time between placing an order and receiving the product
- Demand- this is the amount of usage over a specified period of time
- Safety stock- this is a level of inventory set aside to reduce the possibility of a stock-out during lead time
- Order cycle- the lead time defined above plus the time between the identification of a need and placing the order- usually expressed in days or weeks
- Reorder point- the level of inventory on hand at which point a replenishment order is identified- may be set based on experience
- Reorder quantity- this is the amount ordered each time the reorder point is reached- based on experience

SUPPLY VENDOR RELATIONS.

The hospital will develop a policy to govern the activity of all sales and service representatives who do business with the hospital. For example:

1. All sales representatives wishing to contact hospital departments and personnel must do so through the supplies officer. Representatives are not to contact supervisors, department heads, medical or nursing staff members directly. Request for appointments and statements of reason for business are to be made through the supplies officer.
2. Sales representatives include those individuals who market products to the hospital. Service representatives are those who provide warranty or repair service to specialized equipment.
3. Sales representatives will not be allowed at the hospital after 4:00pm, unless prior arrangements have been made.
4. All representatives will report to the supplies officer, sign a register, and pick up a visitor pass before proceeding to other departments.
5. All representatives must turn in hospital passes and sign out in the register before leaving the hospital