

## **Original Research Paper**

Radiology

# Evaluation of Procurement Issues and Assessment of Lead Time in a Government Medical College

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## **ABSTRACT**

**Introduction** The overwhelming increases in indents are dealt by the insufficient procurement department staff, ultimately leading on to increasing internal lead time (ILT). Stocks of pharmaceuticals are also getting depleted on and off due to inconsistency in supply, more requirements, improper stock control, newer drugs, changing market trends and changing clinical quidelines.

**Aim** To measure category wise procurement lead time which can affect hospital functioning, to identify causes and corrective measures for increased procurement lead time and to identify the influence of legal policy on consistency in supply and procurement system in government

**Methods** Observational study was conducted district government hospital after getting authorization. Data collection was done by primary (personal interview, questionnaire) and secondary (hospital records) sources.

Results 9% (4/45) of respondents, even though belonged to the procurement related works, were unaware of the procurement section in office. The section is maintaining ledger for procurement details. Out of the respondents, 60% (27/45) were not satisfied with staff adequacy in the procurement department; but 90% thought that the work done by them was satisfactory.

Conclusion In order to decrease procurement lead time these have to be managed promptly and effectively. A good monitoring system at Government level can function as a connecting link between individual Hospital and Government.

## KEYWORDS: Procurement, Supply chain management, lead time

### Introduction

Supply chain management is a cross-functional approach that includes managing the movement of raw materials into an organization, certain aspects of the internal processing of materials into finished goods, and the movement of finished goods out of the organization and toward the end consumer.1 As organizations strive to focus on core competencies and become more flexible, they reduce their ownership of raw materials sources and distribution channels. These functions are increasingly being outsourced to other firms that can perform the activities better or more cost effectively. The effect is to increase the number of organizations involved in satisfying customer demand, while reducing managerial control of daily logistics operations. Less control and more supply chain partners lead to the creation of the concept of supply chain management. The purpose of supply chain management is to improve trust and collaboration among supply chain partners, thus improving inventory visibility and the velocity of inventory movement. In the current competitive scenario supply chain management assumes a significant importance and calls for serious research attention, as companies are challenged with finding ways to meet ever-rising customer expectations at a manageable cost.<sup>2</sup> To do so, businesses must search out which parts of their supply-chain process are not competitive, understand which customer needs are not being met, establish improvement goals, and rapidly implement necessary improvements.3

## Aim

To measure category wise procurement lead time which can affect hospital functioning, to identify causes and corrective measures for increased procurement lead time and to identify the influence of legal policy on consistency in supply and procurement system in government sector

#### **Material and Methods**

Observational study was conducted district government hospital after getting authorization. Personal interviews were conducted with administrative authorities of the hospital and those involved directly with procurement procedures. They include Medical superintendents, Nursing Superintendents, Store Superintendents, Lay Secretary & Treasurer, Purchase section officer, Head Clerk and Head Nurses. The aspects covered in interview include:

- a) Problems in procurement
- Views on present procurement system
- Suggestions for betterment of existing system

Indents generated from the hospital for past one year were analyzed for measuring procurement lead time. The indents were categorized to four groups.

**Group 1- Medicines** 

Group 2- Furniture

Group 3- Equipment

**Group 4- Stationary** 

Lead time were sub-classified to internal and external lead time; Lead times charted separately for each category.

## **Results and Discussion**

Out of 100 questionnaires distributed among concerned staffs, 45 returned the questions after answering. Among the 45% respondents, 35 % were males and 65 % were females.

Among respondents, 25% (11/45) were Office staff, another 25% were head nurses, 33% (15/45) belonged to store & Pharmacy. The Procurement section had only 2 staff (one clerk and one assistant). Considering work experience under Government. Sector, 20% (9/45) had only less than five years experience, 19% (9/45) had 5-10 years experience, 28 % (12/45) were having 10-20 years experience and 33% (15/45) had more than 20 years experience.

**Table 1 Job position of respondents** 

Job position	Respondents	
Office staff	25% (11/45)	
Head nurse	25% (11/45)	
Pharmacy & store	33% (15/45)	
Dental Office	17% (7/45)	

The Hospital has a procurement section in office with a head clerk and an assistant. But 9% (4/45) of respondents, even though belonged to the procurement related works, were unaware of the procurement section in office. The section is maintaining ledger for procurement details.

Table 2 Average Lead Time for Hospital Supplies procurement

Supply	Internal lead time	External lead time
Medicine	1 day	2 days
Equipment	1 week	3 weeks
Furniture	10 days	3 weeks
Miscellaneous	2 days	3 days

84% (38/45) respondents agreed to have delay in settling payments, of which 44 % (20/45) complained of delay most of the time. Local purchase (pharmaceuticals) bills needed an average delay period of 45 days for settlement (even though 20 days is the maximum time allowed as per contract). Furniture and equipments bill payment suffered an average delay of 30 days. Essential stationary goods bill of less than Rs.1000/- were settled immediately by cash. But bill amounts above that bar needed an average 1-2 weeks for payment by cheque.

53% (24/45) respondents' complaints that the delay in payment is affecting the service offered by the consigned company. Most of the time the delay is due to Hospital Management related issues (as responded by 53%) rather than due to supplier related (11%) or due to inadequacy of funds (20%).

Intended medicine supply by local purchase was done in Hospital as emergency and no delay was reported by respondents. Furniture equipments purchase lead time was 20 days on an average, whereas stationary goods suffered an average lead time of only 5 days to reach Hospital Store.

82% (37/45) respondents said that the purchase of certain items didn't occur within expected time because of non availability of the same with the usual suppliers and the inappropriate and unclear details in the intend. The goods supplied usually follow the specifications given in indent (85% respondents agreed). Regarding the quality of goods, only 7% (4/45) were confident on quality and 83% (38/45) felt that the quality was just okay. Remaining 10% were not at all satisfied with the quality

Only 6% (3/45) were aware of e-procurement, though all agreed that the method will help in reducing procurement external lead time and corruption. The hospital procurement department had never utilized this facility.

Out of the respondents, 60% (27/45) were not satisfied with staff adequacy in the procurement department; but 90% thought that the work done by them was satisfactory. All the respondents from office suggested the need for one more clerk in procurement department for categorising intents and issuing purchase orders on time.

### Discussion

The study is being compared to case study done by Mutua Daniel Muia in Maragua District Hospital (MDH) under Kenya Government published in 2013. The difference identified was mainly regarding the adherence to procurement rules as dictated by government which is followed almost regularly in our institution compared to MDH. From this it is clear that Hospital under Government suffers certain com-

mon hurdles in procurement cycle which needs to be addressed for practical solutions at hospital and Government levels. Procurement is a complex process involving many stack holders who can affect it or whose work can be markedly changed by it.<sup>5</sup> Therefore successful hospital procurement must address their specific needs. The key task can be grouped into 1) Transparency, 2) cost containment 3) Technical capability, 4) implementation of operational principles and legal formalities. 5) Purchasing for patient safety 6) Timely and accurate information exchange between concerned. 7) Ensuring quality products 8) Proper budgeting and financing. To sum up, efficient procurement process require proper guidelines, knowledge on guidelines, efficient Procurement Department, proper selection of suppliers, good supplier – institution relationship and effective monitoring system.

#### Conclusion

Procurement process in Government sector need to pass through hurdles at each level of procurement cycle. In order to decrease procurement lead time these have to be managed promptly and effectively. A good monitoring system at Government level can function as a connecting link between individual Hospital and Government.

#### Reference

- Andreas Wieland, Carl Marcus Wallenburg (2011):Supply-Chain-Management in stürmischen Zeiten Berlin
- Harland, C.M. (1996) Supply Chain Management, Purchasing and Supply Management, Logistics, Vertical Integration, Materials Management and Supply Chain Dynamics. In: Slack, N (ed.) Blackwell Encyclopedic Dictionary of Operations Management. UK: Blackwell.
- Cox , (1996), Relational Competence and Strategic Procurement Management, European Journal of Purchasing and Supply Management, 2, pp.57–70.
- Mutua Daniel Muia. Factors Affecting Consistency in Supply of Pharmaceutical Products in Government Hospitals in Kenya: A Case Study of Maragua District Hospital. Developing Country Studies 2013;3(13):21-52
- Ombaka E. Current status of medicines procurement. Am J Health-Syst Pharm.2009;66(Suppl 3):S20-8
- M. Ketkar and and O.S.Vaidya (2012), Study of Emerging Issues in Supply Risk Management in India International Conference of Emerging Economies (ICEE-2012) – Prospects and Challenges
- Yong Lin and Li Zhou (2011). The impacts of product design changes on supply chain risk: a case study, International Journal of Physical Distribution & Logistics Management. 41:2. 162-186.