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TO STUDY THE PURCHASE PROCESS, LEAD TIME AND BOTTLENECKS IN PURCHASE OF DRUGS/ ITEMS IN DRUG AND PHARMACY DEPARTMENT OF A TERTIARY CARE TEACHING HOSPITAL.

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ABSTRACT

Lead time is one of the most important factors that drive procurement cycle and buffer stock, and tremendous gains can be realized by focusing on reducing lead times.

Materials and methods: The present study was a retrospective one. A standardized proforma was used to collect the data. The internal lead time was calculated from the time the requisition is sent to purchase department up to placement of supply order. The external lead time included the time from placement of supply order up to receipt of supplies.

Results: It was observed that for majority of drugs internal lead time was 20 to 30 days viz. 40%. It was observed that majority of drugs/items were received within forty days viz. 74% from date, the order was placed against the supplier. Average Internal lead time calculated was 27 days. The average total lead time calculated was around 61 days.

Conclusion: The aim should be to provide right item, at right price at right time. The purchase process has to be streamlined by removing various bottlenecks.

KEYWORDS :

INTRODUCTION

Pharmacy forms one of the essential and critical support services for any hospital; therefore, effective drug management becomes necessary.

The main objectives of purchase department can be enumerated as procurement of materials and supplies of right quality, right quantity, at right price from right source, at right place and at right time.[1]

Pharmaceutical procurement is a complex process that involves many steps, agencies, and manufacturers[2]. Proper drug management, can save money, which can be used for other health care needs, as it decreases maintenance, ordering, and other indirect costs associated with procurement. Procurement lead time is defined as the average duration of time between the placing of the order and receipt of material. It may be divided into internal lead time (time required for organizational formalities to be completed for placing the order) and external lead time (time interval in placement of order and receipt of drugs).[3] Lead time is one of the most important factors that drive procurement cycle and buffer stock, and tremendous gains can be realized by focusing on reducing lead times. Variability in lead time performance can lead to either excess or shortage of inventories, and sometimes both.[4] Long procurement lead times result in capital being locked in the inventory to meet any unforeseen demand that could occur during the time, when supplies/items are being ordered, procured, and delivered. The time, it takes to replenish the supplies directly determines the size of the inventory the health care organization must hold.[5]

It is easier to reduce internal lead time as factors affecting the same are under the control of the health care organization, and it can be reduced by 40% by streamlining the processes. External lead time cannot be avoided, but it may be minimized by timely reminders, judicious use, penalty for delayed supplies, etc.[3] As there is little or no scientific literature on the lead times of procurement in Indian setting, this study was conducted to calculate lead time in drug procurement at a teaching tertiary care hospital of north India.

The present study was carried out in drug and pharmacy department of SKIMS, one of the largest tertiary care institutes of North India. The drug and pharmacy department of SKIMS is responsible for storage and supply of all the hospital drugs and some surgical items. For this purpose the department is divided into various stores viz a iz free drug store, sales drug store, cath lab store and surgical store.

MATERIALS AND METHOD:

The present study was a retrospective one, carried out for a period of one month from Ist feb 2020 to 29th feb 2020. A total of about 210 drugs/items purchased during the previous year 2019 and for which rate contract was already existing were included in the study by simple random sampling. The drugs which were not in rate contract or for which new tenders were to be floated were not included in the study. A standardized proforma was used to collect the data. The purchase process included projection of requirement by user department, verification by the concerned person in pharmacy department, transfer of requirement to purchase department, placement of supply order and receipt of supplies. The tenders for drugs/items at SKIMS are usually floated every two years and suppliers supply the drugs on rate contract basis so there is usually no delay in tendering process in most of the items. The internal lead time was calculated from the time the requisition is sent to purchase department up to placement of supply order. The external lead time included the time from placement of supply order up to receipt of supplies. The data were analyzed using Microsoft Excel software.

RESULTS

It was observed that the purchase process has been streamlined to a large extent. As a result the unnecessary increase in the lead time due to tendering process has been reduced to great extent. This has reduced the internal lead time considerably as for majority of drugs tenders are floated before the expiry of rate contract. Moreover in the tendering process a clause is added that if the supplier fails to provide the drugs/items in due time (42 days), penalty may be imposed on the supplier or alternative supplier may be asked to provide the supplies. Moreover suppliers which are chronic defaulters are even blacklisted sometimes.

Internal Lead time:

It was observed that for majority of drugs internal lead time was 20 to 30 days viz. 40%. For about 26% of drugs it was 30 to 40 days (Table 1)

Table 1: Shows Internal Lead Time Of Various Drugs/Items

S. No.	No. of days	Number of drugs (N)	Percentage of drugs (%)
1.	0 to 5	5	2.4
2.	6 to 10	11	5.2
3.	11 to 15	13	6.3
4.	16 to 20	21	10
5.	21 to 25	36	17.1
6.	26 to 30	49	**23.3**
7.	31 to 35	45	21.4
8.	35 to 40	9	4.3
9.	> 40	21	10

External Lead Time:

It was observed that majority of drugs/items were received within forty days viz. 75% from date, the order was placed against the supplier. For some drugs there was considerable delay in receipt viz. >40 days(25%). However majority of items/drugs were received within time.(Table 2)

Table 2: Shows External Lead Time Of Drugs/Items

S. No.	No. of days	Number Of Drugs (N)	Percentage of drugs (%)
1.	0 to 10	5	2.4
2.	11 to 20	26	12.3
3.	21 to 30	82	39
4.	31 to 40	44	21
5.	41 to 50	23	11
6.	50 to 60	11	5.2
7.	>60	19	9.1

Total Lead Time:

It was observed that average internal lead time was 27 days. Average external lead time was 34 days. The total lead time calculated was 61 days.

The internal lead time was mainly due to calculation of demand, projection of demand to purchase department, completion of all the formalities and issuance of supply order.

The reasons for increase in external lead time were problematic suppliers, increased demand of product in market, road blockade, unforeseen circumstances like strikes etc.

This delay can be reduced to some extent by proper inventory control measures, identifying the suppliers which are habitual of delaying the supplies, computerization of records, timely reminders etc

CONCLUSION:

It was found that drug procurement process is a vital component for smooth functioning of hospital. The aim should be to provide right item, at right price at right time. The purchase process has to be streamlined by removing various bottlenecks. Although the process has been streamlined to a great extent still it can be reduced by some simple measures like identifying good suppliers, good inventory control measures, using modern technologies for procurement, avoiding red tapism etc.

REFERENCES

1. D C Joshi, Mumta Joshi . Hospital Administration. Jaypee Publication edition 2009
2. Operational Principles for Good Pharmaceutical Procurement. Essential Drugs and Medicines Policy Interagency Pharmaceutical Coordination Group Geneva; 1999. Available from: http://www.who.int/3by5/en/who-edm-par-99-5.pdf.
3. Gupta SK, Kant S. Hospital stores management – an integrated approach. New Delhi: Jaypee Publisher; 2007.
4. Chandra C, Grabis J. Inventory management with variable lead-time dependent procurement cost. Available from: http:// cat. inist. fr/? a Modele = affiche N&cpsidt=20072514.
5. Engelbeck RM. Acquisition management. Available from: http:// books. google. co.in/ books? id= il AMF vx7r QkC & printsec = frontcover & dq = R. + Marshall+Engelbeck+acquisition+management&hl=en&ei=k-.