

To Assess the Internal Lead Time and External Lead Time for Procurement of items for Ayushman Bharat Beneficiary in Tertiary Care Institute of Northern India

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Abstract

We study internal and external lead time patterns in various departments of Tertiary Care Institute Of Northern India. We have a shortlist Pt. B.D. Sharma PGIMS, Rohtak Tertiary Care Institute. Procurement is a difficult process that involves many steps, agencies, and manufacturers.

Procurement lead time is defined as the time required to acquire the supplies and services and then placing them in the hands of the user. This study was done to study the internal and external lead time in items procurement for the beneficiaries of Ayushman Bharat Yojana at Pt. B.D. Sharma PGIMS, Rohtak. It was aimed at calculating the internal and external lead time in the procurement of items from the month of March 2021 to May 2021(3 Month) in the central Store. Observational study along with retrospective record analysis was done to calculate the internal and external lead time. Identical format was used to retrieve data from the

Procurement records. Total department involved in procurement are 31 during

3 month out of which neurosurgery and Cardiology had indented the most ie8 times (25.8%)

Some reasons were noted for a longer duration of internal lead time and every

Effort should be made to bring it down to the minimum, so as to ensure the availability of the right me for beneficiaries of AB-NHPM

Keywords: Ayushman bharat, Internal lead Time, External lead Time, Central Store, Tertiary Care Hospital

Introduction

The Government of India has launched Ayushman Bharat Yojana of Pradhan Mantri Jan Arogya Yojana which is a medical insurance scheme providing benefits of up to Rs 5 lakh per family unit per annum to eligible beneficiaries.⁽¹⁾

All public sector hospitals are deemed empaneled under this scheme. Pt. B.D. Sharma PGIMS, Rohtak

Tertiary Care Institute which is thus deemed empaneled has signed a Memorandum of Understanding (MOU) with National Health Agency (NHA), Government of India for the implementation

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of Ayushman Bharat National Health Protection Mission (AB-NHPM)(2). AB-NHPM beneficiaries are eligible to receive treatment free of cost under the said MOU for all such ailments covered under the scheme but within the limit/sub limit and the sum assured. For treatment purposes, 2200 packages have been identified and package rates have been approved by the National Health Agency (NHA).(2) On completion of treatment, a claim for reimbursement will be raised with the respective state health agency and the approved package rate will be transferred to the treating hospital Ayushman Bharat (AB-PMJAY) has been implemented in PGIMS Rohtak from 10th September 2018. There are 02 facilitation counters of AB-PMJAY in PGIMS Rohtak staffed with 07 Ayushman Mitras, AYUSHMAN CELL, functioning from D- Block PGIMS supervises day to day activity of existing Ayushman Counters including procurement of medicine/consumables, coordination with NHA and record maintenance. The department of central store serves the institute by helping to provide medicine and consumable to the patients. The central store of PGIMS Rohtak has been appreciated by the dignitaries in various fields. The central store PGIMS

Rohtak is procuring the items demanded by the user department for Ayushman beneficiaries. There is rete contract with various vendors from outside which provide medicine and consumable for patients admitted in PGIMS Rohtak under Ayushman Bharat (AB-PMJAY) scheme.

Inventory Management/Inventory Control is an especially important factor for the healthcare system.(3) The aim of inventory management is to increase service provisioning while decreasing inventory investment without affecting customer satisfaction level.

There are certain terms which are important in inventory control:

1. Lead Time (LT): It is the amount of time between initiation of the process and its completion. (Internal Lead Time, External Lead Time) (4)
2. Buffer Stock: It is the minimum stock counter to demand variation and procurement period.(4)

3. Reorder point: It is that point at which the fresh order needs to be placed.
4. Economic Order Quantity (EOQ): It is the amount of order placed which reduces the total carrying cost and ordering cost of inventory.(4)

Need for Study

Pt. B.D. Sharma PGIMS, Rohtak is a tertiary care institute working round the clock for patients care in northern India. In this regard there is a need for timely purchase of goods and services for efficient functioning of the hospital. Any delay in the supply of goods and services to the hospital can disturb patient care. Purchasing process is a complex process. Lead time plays a significant role in maintaining the stock in the hospital. In view of procurement from different platforms like Rate contract and spot purchase this study is conducted to calculate Internal Lead Time, External Lead Time for satisfaction of the stakeholders.

AIM

To analyze the Internal Lead Time, External Lead for procurement of medicine and consumable on rate contract/ spot purchase from various vender from outside for patient admitted in PGIMS Rohtak under Ayushman Bharat AB-PMJAY scheme.

OBJECTIVES

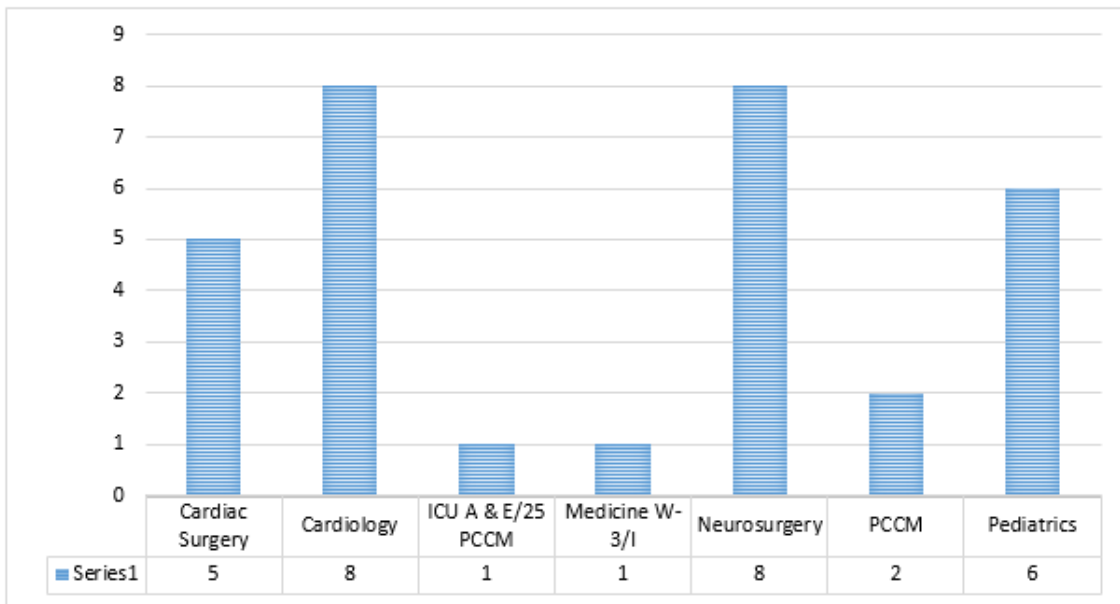
1. To study, total beneficiaries took benefits from AB-PMJAY during the month of March 2021 to May 2021(3 Month).
2. To study M&F ratio who took AB-PMJAY scheme benefits.
3. To study the AB-PMJAY Beneficiary who took benefits in various districts of Haryana during the month of March 2021 to May 2021(3 Month).
4. To study the procurement process and cause delays leading to internal lead time and external lead time.
5. To study the factor which helps in decreasing the internal lead time and external lead time.

Review of Literature

A case study done by Darya Plinere and Arkady Borisov suggested optimizing stock levels by using inventory management and for automation of inventory/stock management processes. Lead Time is one of the major factors that steer procurement cycles and buffer stock, and large gains can be made by focusing on decreasing the lead time. Internal Lead Time (ILT) was found to be about four times the External Lead Time (ELT) in a research paper on LT in

Procurement of Drugs in a Tertiary Care Hospital in Northern India. Lead time is an important factor that helps determine the replenishment schedule. Lesser lead times are beneficial to regulate the replenishment schedule, but the suppliers may not be able to commit to the same. Higher lead times are disadvantageous to any organization as they result in a higher on-hand and in-transit inventory. Undesirably larger volume of on-hand and in-transit inventory blocks the financial resources of the organization.⁽⁵⁾

Materials and Methodology



Cart No 1: Shows that our of total department Cardiology send maximum idents sand Medicine, PCCM send minimum demand.

It is a Retrospective Study. The Study was conducted in March 2021 to May 2021 (3 month), this study was conducted in Pt. B.D. Sharma PGIMS, Rohtak Tertiary Care Institute, Rohtak.

Sample Size: Case was taken from the month of March 2021 to May 2021(3 Month).

Sampling Method: Convenient sampling was done.

Statistical Analysis:

MS Excel sheet, 2016 was used to collate the data. A cleaned master data sheet will be reported to appropriate software for further analysis with (Statistical Package for the Social Sciences) SPSS.

Results and Observation

The results of this study consist of lead time for procurement of items needed during the treatment of Ayushman bharat beneficiaries. Total 31 procurement is conducted in the month of March 2021 to May 2021. The maximum demand is from cardiology and neurosurgery department which is 25.8%.

Table 2: Gender Male /Female Ratio

Gender	Frequency	Percent
Male	11	50.0
Female	11	50.0



Table 2 shows that out of total Beneficiaries male and female are Equal in proportion.

Chart No. 3 Shows that total beneficiaries are from which district.

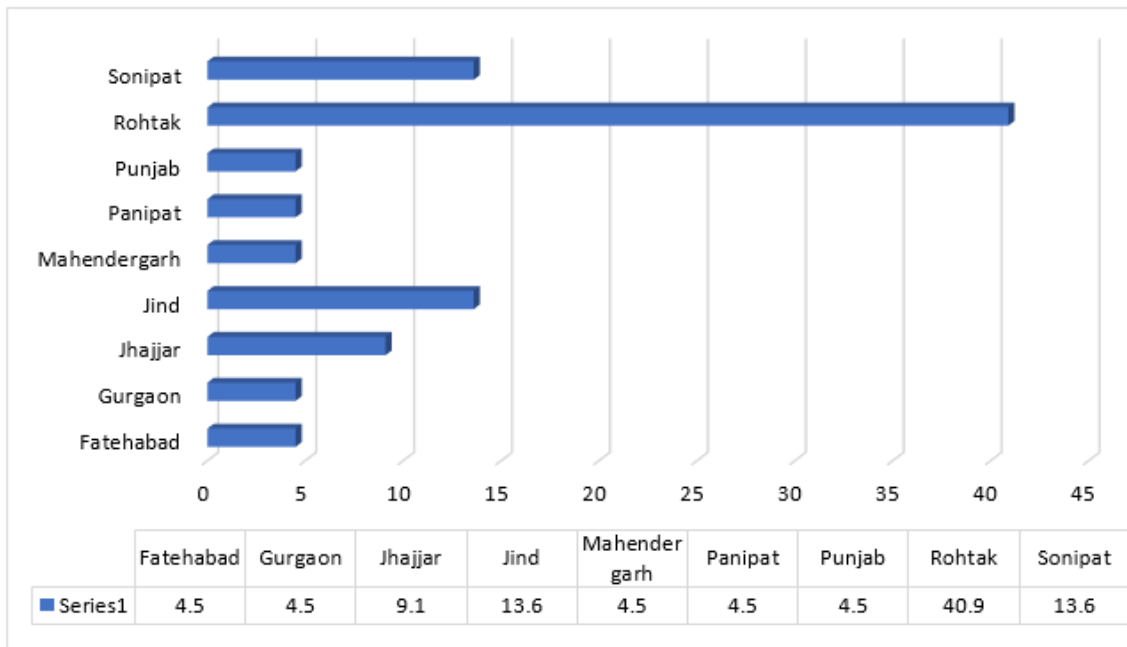
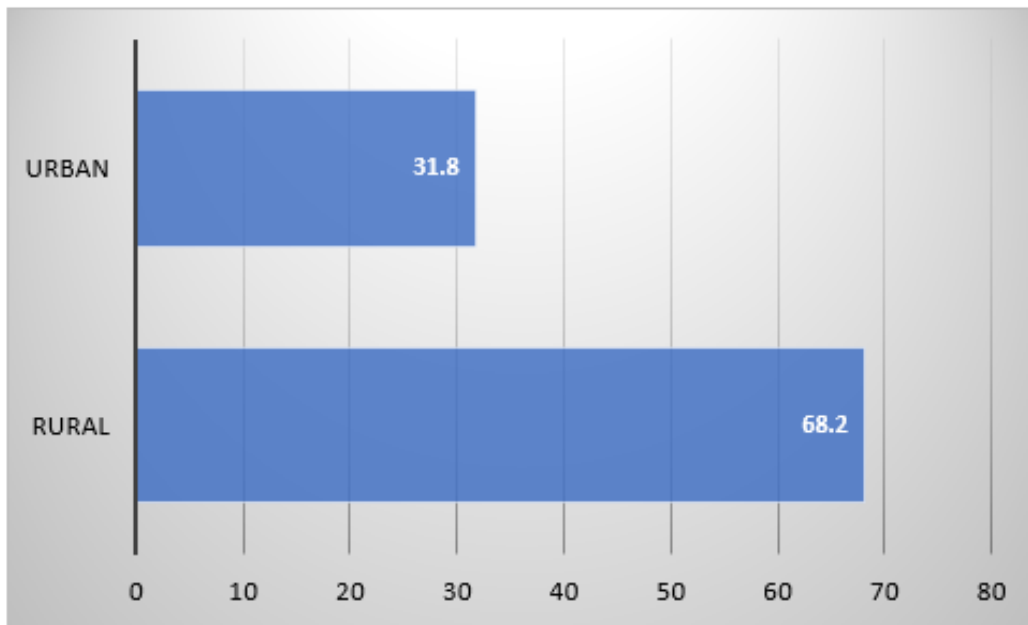


Table No. 3 shows maximum No. of beneficiary which are availing scheme from Rohtak

Rural/Urban Ratio

Table no 4



Department crosstab with internal lead time-This shows how many times demand is generated by each department and how much time is taken for placing orders to vendors.

5 times demand by the cardiology department takes 4 days for placing orders. Which is the highest

internal lead time in the procurement process. But an average internal lead time is 2 to 3 days. It was not found significant with P- Value 0.440 Department crosstab with external lead time.

This shows how many times an item was received by each department and how much time is taken for

placing orders to vendors. The external lead time was maximum on the same day, which means 0.18 times external vendors provide items on the same day. That is why it is found to be a significant value 0.05. It means that vendor is very efficient in his timely supply of medicine and consumables.

Conclusion and Summary

Procurement process is an important part of any institution to provide timely medicine and consumable items to patients. It is to be desired that the procurement process ensures efficiency, economy, and accountability. The present study was designed to assess the factors influencing the ILT (Internal lead time) and ELT (External lead time), in relation to the procurement process in a Tertiary Care Institute.

Recommendation

Based on this analysis, following recommendations have been suggested to further

1. The internal lead time is increased due to the cost of the package being less as compared with cost of treatment. So it recommended that NHA (National Health Agency) should revise the package rate.
2. More IEC material to be put in place so that all beneficiary from all district of this sachem may visit hospital for availing this scheme

Conflict of interest - There is no conflict of interest

Funds- there were no funds raised for this study

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