

Study on Current Processes of Logistics and Supply Chain Management in Public Sector in Gujarat

By

Manali Sahu

*Dissertation submitted for the partial fulfillment of the
MBA Pharmaceutical Management*

Academic year, 2014-2016



The IIHMR University, Jaipur

1, Prabhu Dayal Marg, Sanganer Airport
Jaipur-302029, Rajasthan
Ph: 0141 3924700, Fax: 3924738
Website: www.iihmr.edu.in

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Ms. Manali Sahu** student of MBA Pharmaceutical Management from THE IIHMR University, Jaipur has undergone internship training at **Gujarat Medical Services Corporation Limited Gandhinagar (Gujarat)** from Feb. 1, 2016 to April 30, 2016.

The Candidate has successfully carried out the study designated to her during internship training and her approach to the study has been sincere, scientific & analytical.

The Internship is in fulfilment of the course requirements.

I wish her all success in all her future endeavours.


Col. (Dr.) Ashok Kaushik
Dean (Academics & Student Affairs)
The IIHMR University, Jaipur


Prof. Dr. S.K Puri
Professor
The IIHMR University, Jaipur

The certificate is awarded to Ms. **Manali Sahu** In recognition of having successfully completed her Internship in the department of **Market intelligence** and has successfully completed her Project on **A Situational Analysis Of The Current Processes Of Logistics And Supply Chain Management In Public Sector In GANDHINAGAR (GUJARAT). 1 Feb to 30 April at Gujarat Medical Services Corporation Ltd. Gandhinagar (Gujarat).** She comes across as a committed, sincere & diligent person who has a Strong drive and zeal for learning. We wish her all the best for future endeavors.


Mentor (IIHMR Jaipur)


Dr V S Dhruve
DGM (DS)

THE IIHMR UNIVERSITY, JAIPUR

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled **A Study on Current Processes of Logistics and Supply Chain Management in Public Sector in Gujarat** and submitted by Manali Sahu under the supervision of Brig.(Dr.) S.K. Puri for award of MBA in Pharmaceutical Management of the University carried out during the period from 8st February 2016 to 18th May 2016 embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.



Signature

ACKNOWLEDGEMENT

The success of any task would be incomplete without the expression of appreciation of gratitude to the people who made it possible .Though words fall short to express the sincere gratitude towards everyone who helped directly or indirectly in my endeavor. It is a pleasant aspect that I now have the opportunity to express my gratitude for all of them. This is a humble attempt in this regard. I would like to render my sincere thanks to GMSCL for providing me with such unique learning experience.

I convey my deep and sincere thanks to Dr. Ashok Kaushik (Dean Academic and Student Affairs) and My Mentor S.K Puri (Brigadier), for being helpful, supportive and receptive.

Furthermore my earnest thanks to all the staff of Hospital without whose support it would not have been possible to understand the hospital to the extent as I have now.

I am highly grateful to all the departmental heads especially all the staff or coordinator, for giving me time in spite of their hectic schedule. Without their co-operation and warm attitude this project would have been a distant dream.

Manali Sahu

TABLE OF CONTENTS

Contents

Institute of Health Management Research, Jaipur

ACKNOWLEDGEMENT	2
ABBREVIATIONS	5
DISSERTATION REPORT.....	6
EXECUTIVE SUMMARY:	7
INTRODUCTION.....	8
LITERATURE REVIEW	8
OBJECTIVES	9
METHODOLOGY AND DATA COLLECTION	Error! Bookmark not defined.
PROCESS FLOW	10
ORGANIZATON STRUCTURE	10
Various processes involved in Supply Chain Management.....	13
BUDGET ALLOCATION.....	14
Receive of medicines as per the approved purchase order	15
:Medicine distribution from DWH to sub store	16
DATA ANALYSIS:.....	18
Data analysis for Annual demand 2016-2017:.....	19
Total available drugs.....	20
Details stock verification	21
Gaps identified and analyzed:	24
1.8 RECOMMENDATION.....	26
1.9 LIMITATIONS	27
1.10 CONCLUSION	28
1.11 REFERENCES:	29
1.12 ANNEXURES:	31

Tables:

Table 1: Total manpower available in OT.....	13
---	-----------

Figures:

Figure 1: Annual demand 2016-2017	15
Figure 2: Data analysis.....	17
Figure 3: Detail stock verification	19
Figure 4: Analysis support system	20

ABBREVIATIONS

DWH	District warehouses
PHP	Primary health centre
CHC	Community Health centre
TPA	Third party Administrator

DISSERTATION REPORT

**A STUDY ON CURRENT PROCESSES OF LOGISTICS AND SUPPLY CHAIN
MANAGEMENT IN PUBLIC SECTOR IN GUJARAT.**

EXECUTIVE SUMMARY:

The importance of dissertation was such that it was the second interface with any organization after the summer training and it was altogether a different experience because this time there was an idea about the organization atmosphere and its working. .

As a Pharmaceutical management student all the required information as per knowledge was collected to start the work. The study started with the literature review & understanding of its process. Data collection was started to see the trend of problematic areas. Along with this, probable reasons for problematic areas were being tracked on daily basis.

Moreover, training in a reputed and GMSCL having high standard quality of Medicare is not an easy task to get through in which we can expose and gain knowledge and skill to be administrator. The study on this subject gave a great exposure and helped to obtain a vast knowledge of ideas and information about the system.

1.1 INTRODUCTION

In health care organizations, supply chain is a new way of conceptualizing medical supply management. A supply chain is defined as “a virtual network that facilitates the movement of product from its production, distribution, and consumption” (McFadden and Leahy, 2000). The supply chain associated with pharmaceutical products is critical in ensuring a high standard of care for patients and providing adequate supplies of medication for pharmacies. In terms of cost, it is estimated that supply accounts for 25-30 percent of operational costs for hospitals (Roark 2005). Therefore, it is essential that this is managed effectively to ensure both service and cost objectives are met.

In considering supply chains, health care managers are not only concerned with how much of each type of supply, and when, they need to purchase and carry in their stockrooms (inventory) to effectively serve their patients; they also are concerned with their relationships with the companies at the upstream source of the products to minimize their overall costs in supply management. The health care manager, as a leader of the provider link in this chain, is in a strategic position and should facilitate collaborative partnerships with the adjacent links of the chain. Let us closely examine the various links in a supply chain from the prospective of a health care provider.

1.2 LITERATURE REVIEW

Heinbuch (1995) described an approach to meeting the challenge of healthcare cost reduction through the hospital material management function. The work highlights the value of taking a proactive stance to meet the challenge of transferring technology across industry sectors.

Alverson (2003) discussed the importance of disciplined inventory management for hospitals, and suggested serious consequences of traditional hospital purchasing including lack of inventory control, missed contract compliance, excess inventory levels, frequent stock-outs and costly emergency deliveries, workflow interruptions, expensive rework, and increased health system labor requirements.

The literature on information technology (IT) provides some solutions to material management in the healthcare sector. Burns (2002) discussed aggregation of suppliers and their products through electronic catalogues, visibility of orders and materials, and efficiency in procurement.

Schneller and Smeltzer (2006) suggested that e-procurement systems can help to significantly reduce purchasing costs through the consolidation of supplier networks and

creation of supplier partnerships. They also suggested that transaction and administration costs can be reduced through the use of ERP systems, which provide an automated and paperless format for information to flow throughout an organization.

PROBLEM STATEMENT:

There exists various issues in the entire system of supply chain management.

Existing at the distribution element, particularly from the wholesaler to the hospital , issues are as follows:

- Forecasting: It is difficult to predict the exact demand for medicines. One of the issues is the availability of accurate data on consumption, especially in public health care sector. However, the lack of standard nomenclature for healthcare products, plus the preferences of clinicians creates further uncertainties (Lauer 2004).
- Lack of supply chain management education: Awareness of the concept of supply chain management, particularly within public hospitals, is low (Lauer 2004). Therefore, managers are not properly equipped to control the supply of medication. Given this context, a number of initiatives have been undertaken over recent years with a view to improve supply chain management processes.
- Also, there is a requirement for improved information and communication technology (ICT) systems to support this, along with automated processing of orders and suppliers (mainly wholesalers) close to the government hospital to enable rapid replenishment to cater to the massive load at the government facilities.

RATIONALE:

Public sector SCM offers a reference framework for the composition of public sector supply chains and multilevel networks (Migiro&Ambe, 2008). Actors in public sector supply chain comprise (1) private firms which receive orders from public sector agents, (2) accounting officers and (3) policy-makers. The SCM in the public sector not only concentrates on the question, which institutions cooperate in goods and services, but also how these enterprises are involved with enterprises operating at other levels. Thus, analyses of intra-network relationships as well as analyses of inter-network-relationship are essentially necessary elements of public sector supply chain management.

OBJECTIVES

- 1) To study the organizational structure related to supply chain management at Gujarat ?

METHODOLOGY AND DATA COLLECTION

STUDY TYPE: Descriptive cross sectional study.

STUDY AREA: Warehouses in Gujarat.

SAMPLING METHOD: Non probability sampling

STUDY DURATION: February 2016 to April 2016.

SAMPLING TECHNIQUE: Selection of state and district is purposive(warehouses).

SAMPLE SIZE : 30

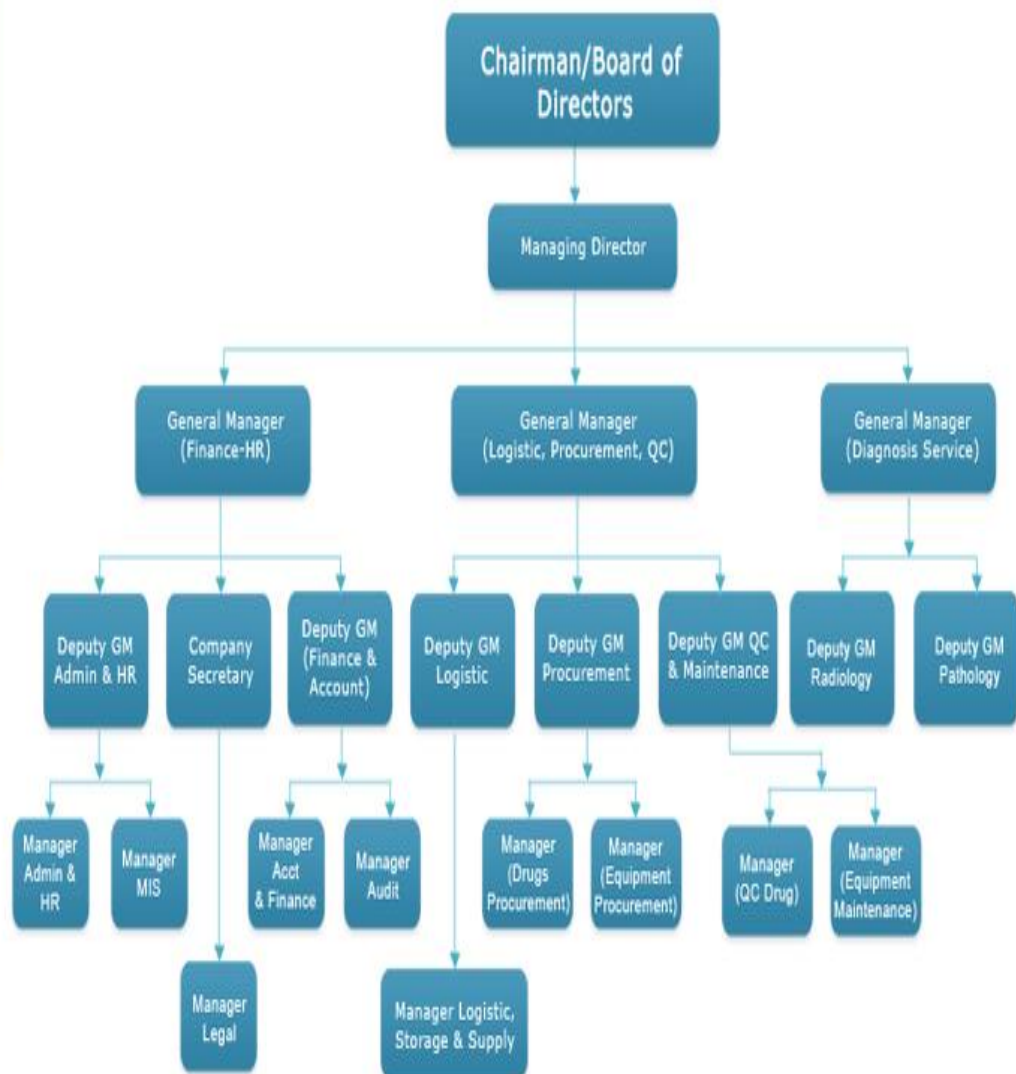
- **Primary data collection**

- Raw data (also known as primary data) is a term for data collected from a source. Raw data has not been subjected to processing or any other manipulation, and are also referred to as primary data.
- Primary data collection is observed and recorded directly from respondents. The information collected is directly related to the specific research problem identified. All the questions that one asks the respondents must be totally unbiased and formulated so that all the different respondents understand it.

- **Secondary data collection**

Secondary data is data collected by someone other than the user. Common sources of secondary data for social science include censuses, organizational records and data collected through qualitative methodologies or qualitative research. Primary data, by contrast, are collected by the investigator conducting the research

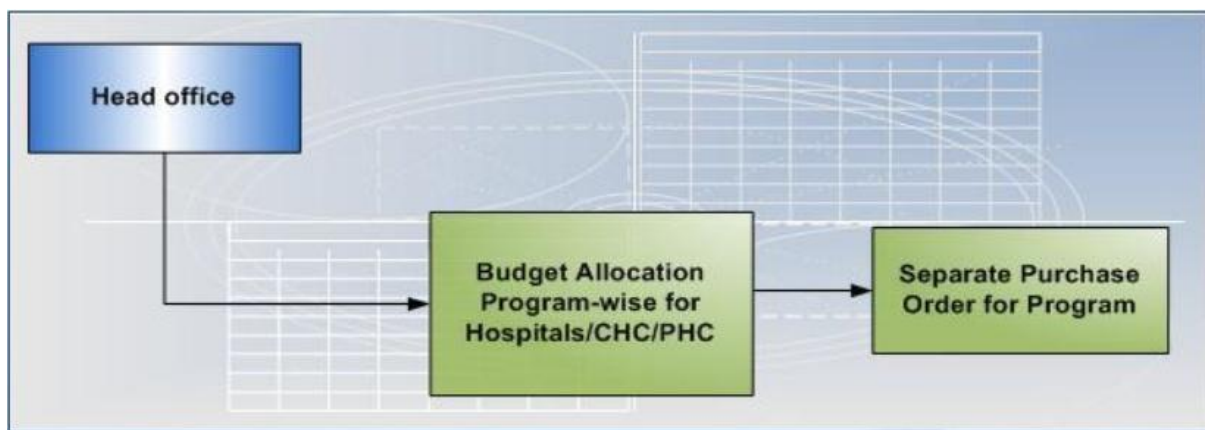
ORGANIZATION STRUCTURE



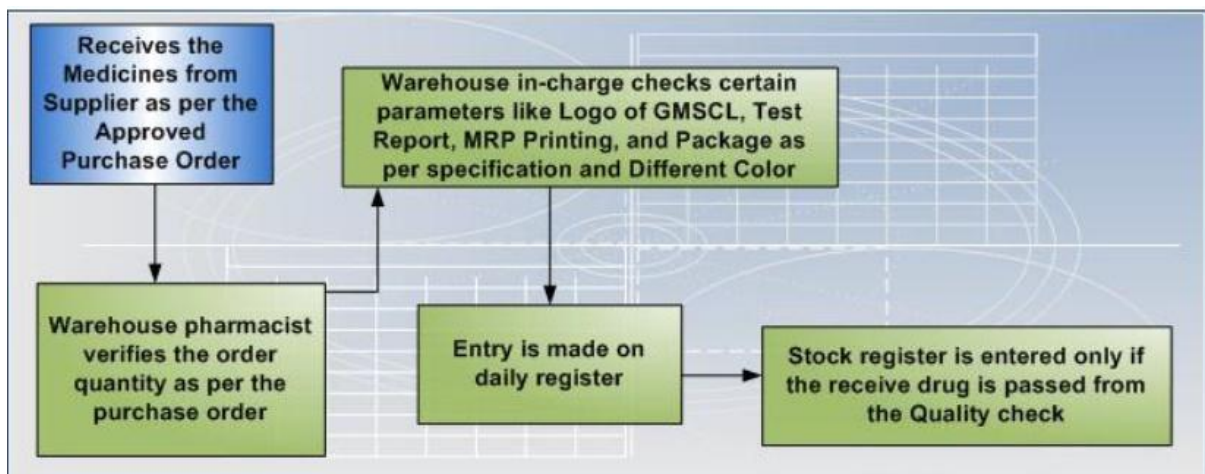
Various processes involved in Supply Chain Management

BUDGET ALLOCATION

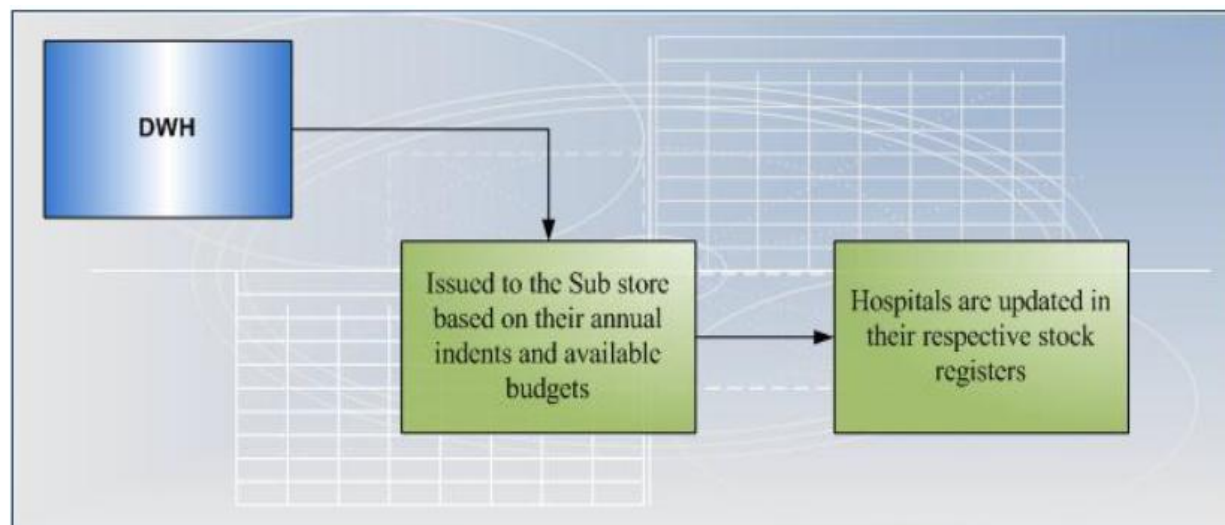
Budget is maintained and checked at the headquarter level. Purchase order level should not exceed the budget allocated for the programme



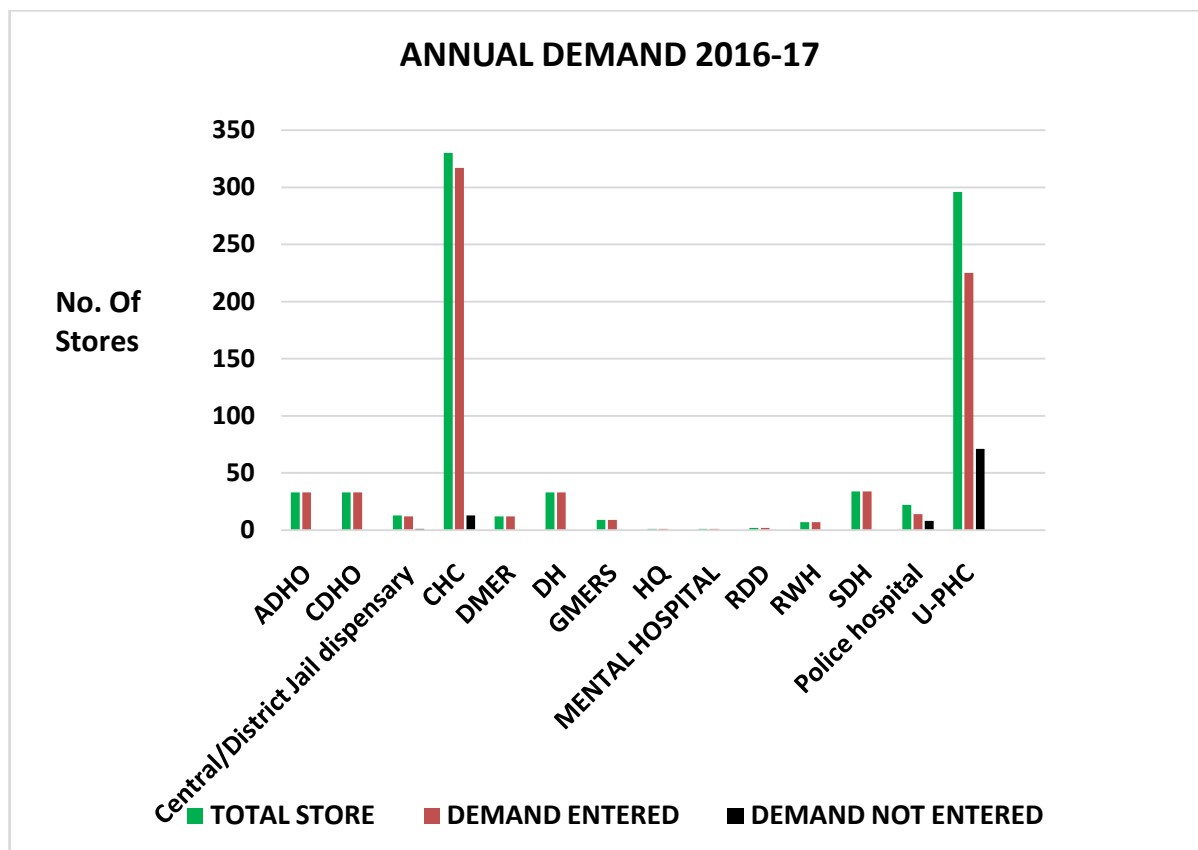
Receive of medicines as per the approved purchase order



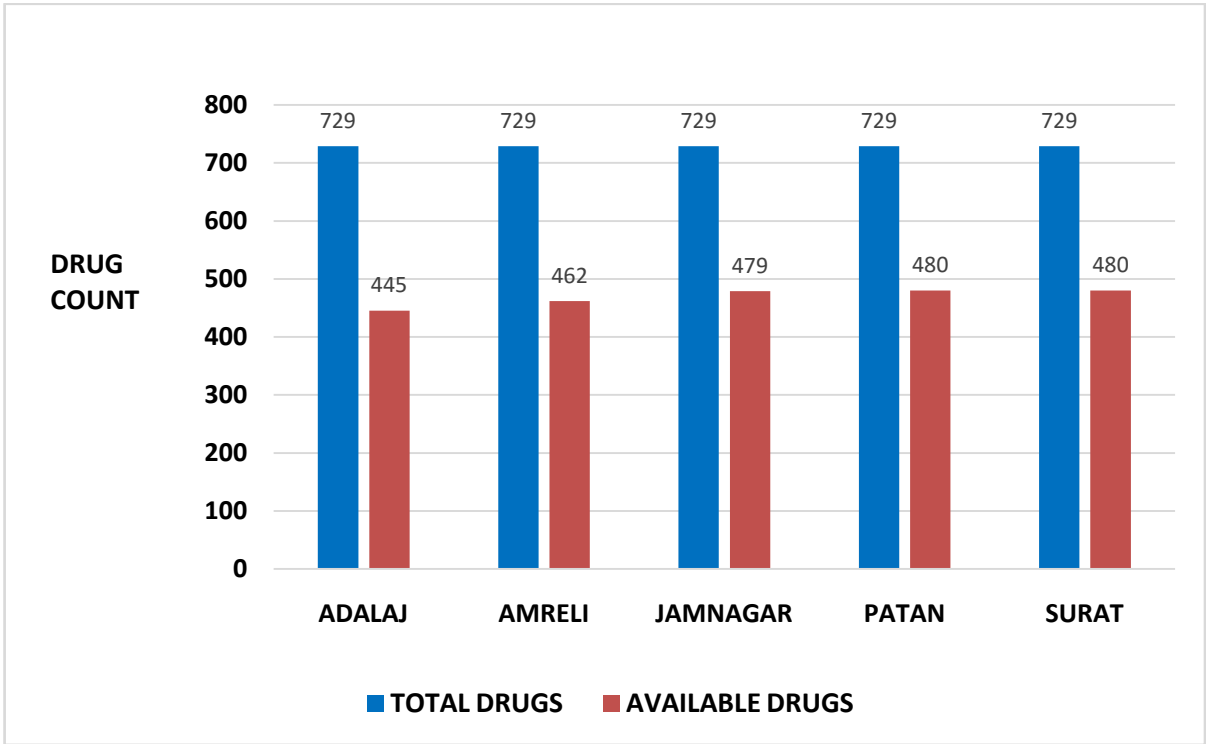
Medicine distribution from DWH to sub store



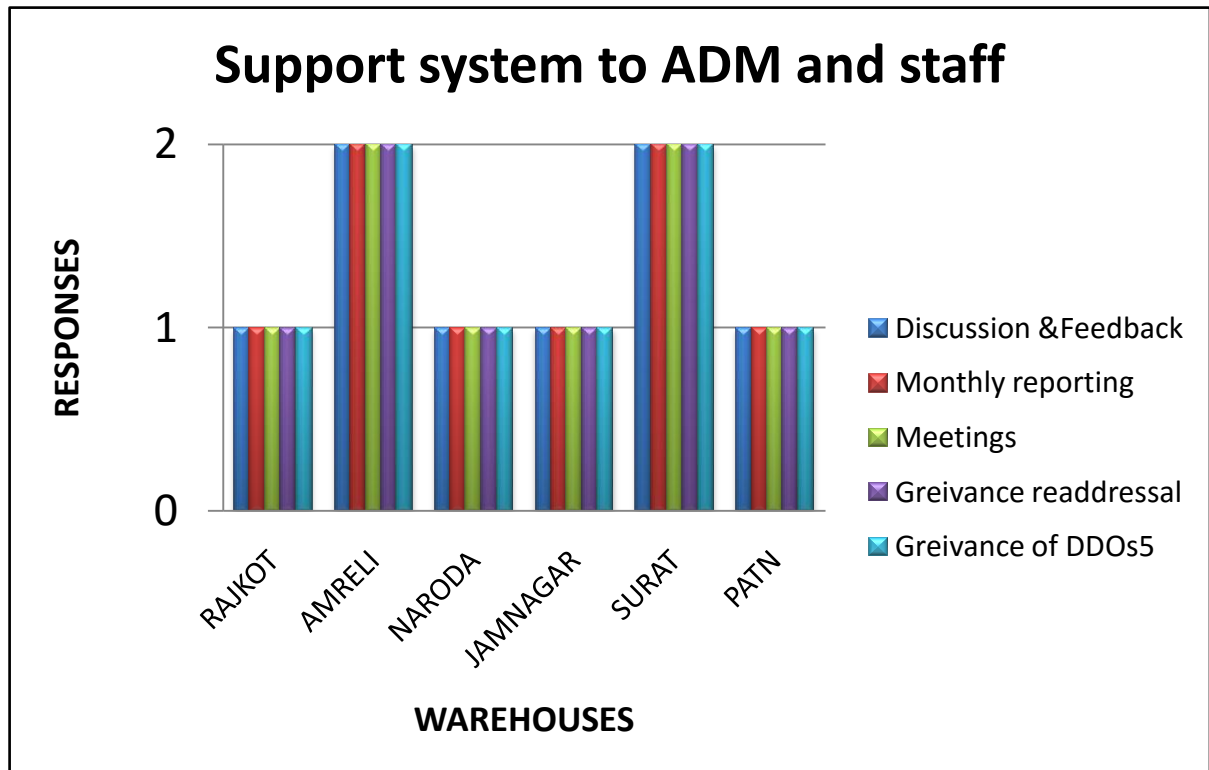
DATA ANALYSIS:



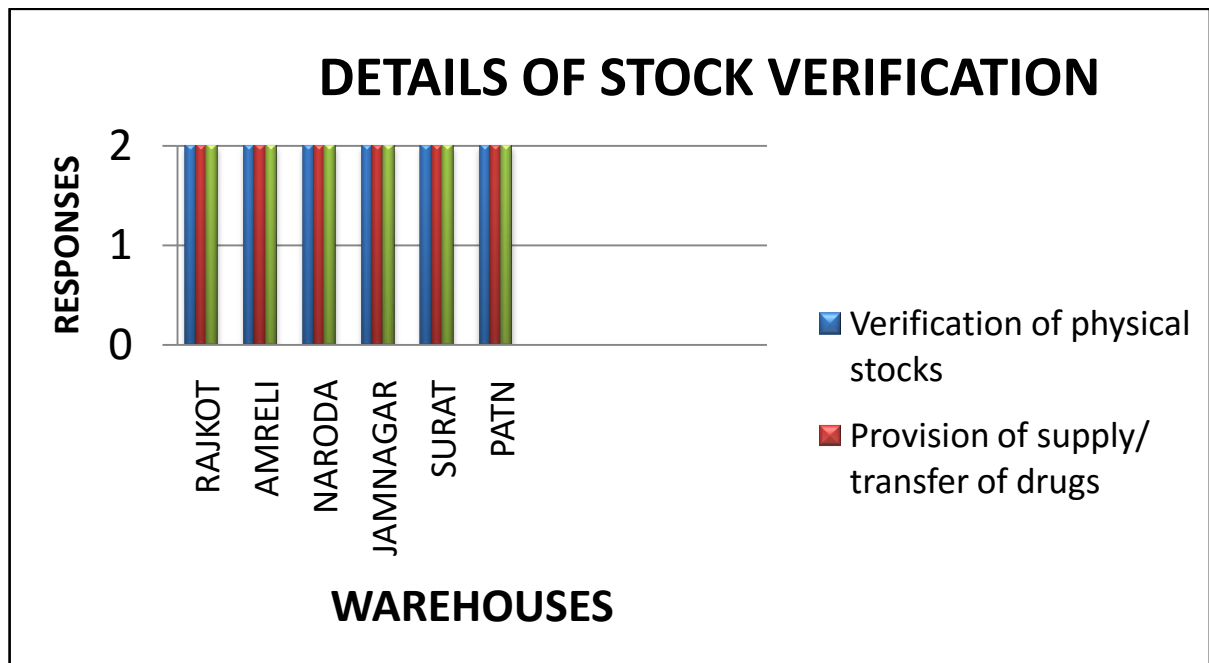
TOTAL AVAILABLE DRUGS



Analysis of Support system to ADM and Staff from GMSCL



DETAILS OF STOCK VERIFICATION



e- AUSHADI – a new platform for supply chain management

- A new Software employed in system .
- This system has eliminated the difficult paper entries.
- Easy monitoring and evaluation of the entire system.
- Eliminates chances of thefts.
- Ready transfer of information to all the levels.

RECOMMENDATIONS

- All the regional warehouses have different number of purchase orders based on their requirements.
- The highest number of purchase orders are associated with Adalaj warehouse.
- The least number of purchase orders are associated with the Vadodara warehouse as it has started working recently.
- Outsiders are moving to the store room frequently
- Spillage of Liquid Drugs inside the Depot
- Workers Sleeping over the Packed Cartons
- Complaint / Feedback register
- Data entry operator

CONCLUSIONS

- As is evident from the analysis, support system from the GMSCL to ADM and staff is inadequate in Rajkot, Naroda, Jamnagar and Patan.
- Supply chain automation of the drug management system provides an accurate view of state of drugs warehouse and inventories across the state.
- Information Technology is a very important step in streamlining the Supply Chain Management of the any organization. Through Information system (e-Aushadhi), the process can be made more transparent and chances of data manipulation and wrong information can be prevented.
- e-Aushadhi can help in streamlining the process of inventory management and can brought more transparency in the system. Different users at all levels have a better and much more accurate view of the state of drugs warehouse and inventories across the state

All the regional warehouses have different number of purchase orders based on their requirements.

- The highest number of purchase orders are associated with Adalaj warehouse.
- The least number of purchase orders are associated with the Vadodara warehouse as it has started working recently.

REFERENCES :-

1. Acharyulu, G. 2007. RFID in the Healthcare Supply Chain : Improving Performance Through Greater Visibility. *Journal of Management*, VI(11): 32-46.
- 2 Altricher, F., T. Caillet. 2004. SCM in a pharmaceutical company.
- 3 \Stadtler, H., C. Kilger, eds. Supply Chain Management and Advanced Planning: Concepts, Models, Software and Case Studies. SpringerVerlag, NY, 355-70.
- 4 Alverson, C. 2003. Beyond Purchasing Managing Hospital Inventory. *Managed Healthcare Executive*
- 5 Macario, A. (2010). Are your operating rooms being run efficiently? *Medscape Anesthesiology*
- 6 J.T. Blake and M.W. Carter. Surgical process scheduling: A structured review. *Journal of Health Systems*, 5 (3):17{30, 1997.[12]
- 7 . Przasnyski. Operating room scheduling: A literature review. *AORN Journal*, 44 (1):67{79, 1986.