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# Review Paper on Supply Chain Management Strategies in Hospitals

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**Abstract:** *The study aims to explore and measure the effect of supply chain management's dimensions (relationship with suppliers, compatibility, specifications and standards, delivery and after-sales service) on the quality of health services' dimensions (responsiveness, trust, and security) in private hospitals . The study also aims to clarify the differences between supply chain management and quality of health services due to some demographic variables such as (gender, age, education level, and years of experience in the field of supply).*

*The present supply chain practices will have been selected because they have the potential to improve efficiency, reduce costs and improve patient safety within hospitals. Due to the diverse nature of hospitals and a unique product profile, there is no “one size fits all” supply chain solution that can be implemented. Therefore, product specific characteristics will discussed that can be used by hospitals in order to develop segmentation policies.*

**Keywords:** *Supply Chain management, Healthcare Supply Chain management, Quality management.*

## I. INTRODUCTION

Hospital supply chains present healthcare systems with a prime opportunity both to mitigate increases in expenses and help improve patient care. The greatest opportunity is for hospitals to transform their supply chains into a vital, collaborative, and strategic function. As such, administrators and clinicians would collaborate on anticipating and ordering all medical and non-medical items, such as drugs, diagnostic machines, gloves, and sheets. This process would curb costs—but also yield more far-reaching benefits, such as creating a system that provides and validates product information and drug specifications and effectiveness.

Healthcare supply chain management(Figure 1) (herein referred to as HSCM, HC refers to Healthcare, SC refers to supply chain) is a set of approaches to link medicines, equipment, laundry, food, suppliers, vendors, hospital and transport for efficient and effective use of resources to achieve Total Quality Management.

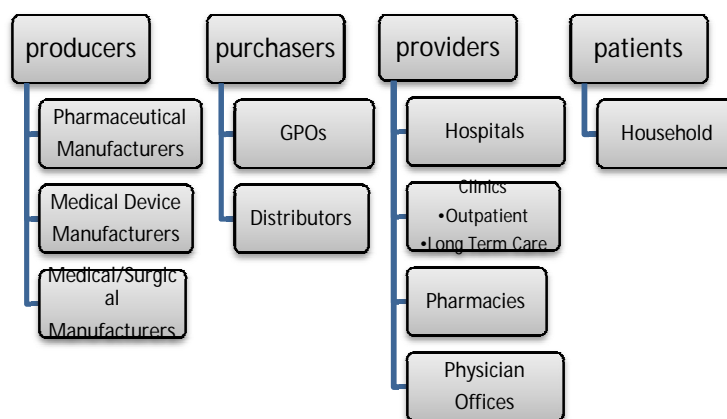


Figure 1 hospital supply chain management

The healthcare supply chain is composed of three major players at various stages: producers, purchasers, and healthcare providers. Producers include pharmaceutical companies, medical surgical products companies, device manufacturers, and manufacturers of capital equipment and information systems. Purchasers include grouped purchasing organizations (GPOs), pharmaceutical wholesalers, medical surgical distributors, independent contracted distributors, and product representatives from manufacturers.

Providers include hospitals, systems of hospitals, integrated delivery networks (IDNs), and alternate site facilities (Burns, et al., 2002, pp. 11-12). At a broader level, healthcare supply chains are very fragmented. The three players are largely operating independently from one another and coordinated supply chain management hardly exists.

**A. Benefits Of Hscm**

- 1) Inventory reduction
- 2) Productivity Improvement
- 3) Personnel reduction
- 4) Procurement Cost reduction
- 5) High customer satisfaction
- 6) Increased profit
- 7) On-time delivery fulfillment
- 8) Revenue/profit increase
- 9) Better cash management
- 10) Better order management

**B. Supply Chain Management (Scm)Process**

Supply Chain Management (SCM) (figure 2) is the process of planning, implementing and controlling the operations of the supply chain with the purpose of satisfying the customer requirements as efficiently as possible with a continuous eye on operating cost reduction. SCM encompasses the planning and management of all activities involved in sourcing and procurement, conversion and all logistics management activities. Supply Chain Management can be defined as the management of flow of products and services, which begins from the origin of products and ends at the product’s consumption. It also comprises movement and storage of raw materials that are involved in work in progress, inventory and fully furnished goods. The main objective of supply chain management is to monitor and relate production, distribution, and shipment of products and services. This can be done by companies with a very good and tight hold over internal inventories, production, distribution, internal productions and sales.

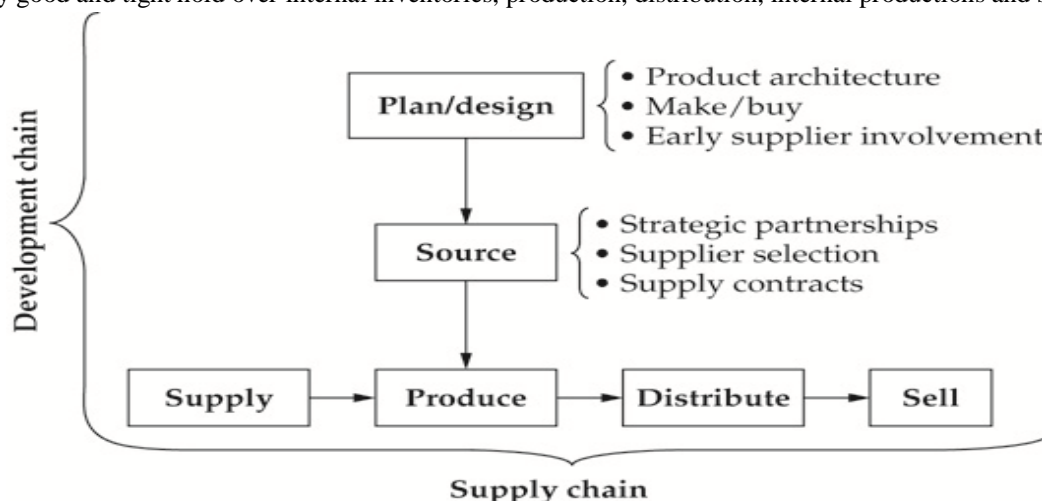


Figure 2 supply chain management

**C. Scm Process Flow**

Supply chain management can be defined as a systematic flow of materials, goods, and related information among suppliers, companies, retailers, and consumers. (figure 3)

**D. Types**

There are three different types of flow in supply chain management:

- 1) Material flow
- 2) Information/Data flow
- 3) Money flow

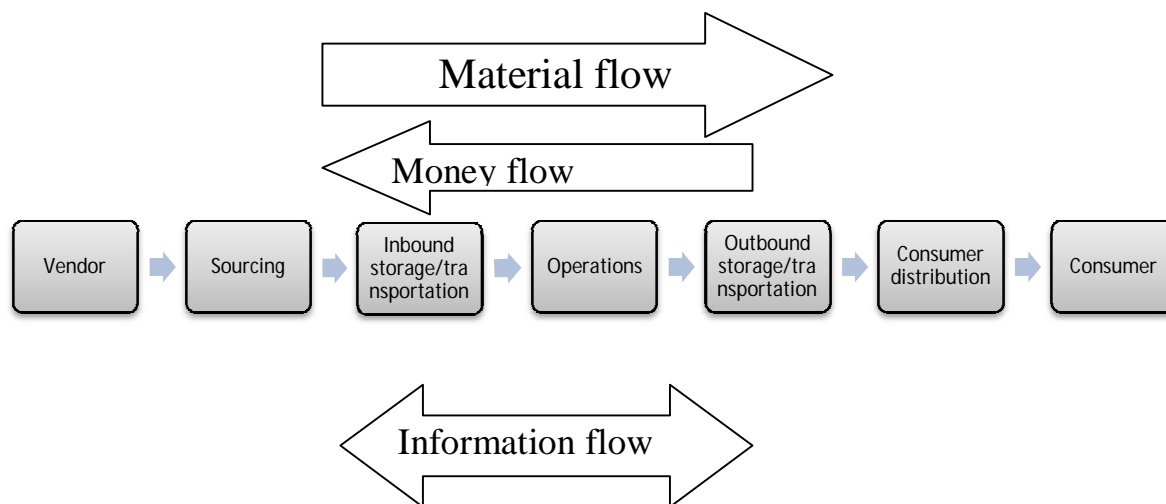


Figure 3SCM process flow

## II. LITERATURE SURVEY

Yao, man and minner et al(2017) observed multi supplier inventory models in supply chain management. and discuss their contributions from different managerial perspectives.

Santanumandal et al (2017) observed the influence of dynamic capabilities on hospital supplier collaboration and hospital supply chain management.

Marynissen ,joren and emeulemeester, erik et al(2016) reviewed on integrated hospital scheduling problems. In these problems, patients need to sequentially visit multiple resource types in a hospital setting in order to receive full treatment. Therefore, each patient is assigned a specific path over a subset of the resources and each step of the path needs to be scheduled.

Hong et al, (2012) proposed a research model which defines the relationships between drivers of healthcare supply chain management, healthcare supply chain policies and strategy, healthcare supply chain practices, and healthcare supply chain outcomes.

Meijboom, et al. (2011) identified four major problem categories in the healthcare organizations: communication, patient safety, waiting times, and integration. The findings are based on literature concerning country comparisons of patient experiences. The authors argue that the most important problems and the weakest links occur between providers; therefore supply chain management can be used effectively to minimize problems. A number of issues, such the availability of medical records of individual patients and information on provider performance, need to be considered and improved.

### A. Objectives

The objectives of the study are to:

- 1) Identify the current status of supply chain in hospital.
- 2) Measure the effect of supply chain management dimensions (the relationship with suppliers, specifications, standards, delivery, and after-sales service) on the quality of health services dimensions (responsiveness, trust, and safety).
- 3) To assess the availability and affordability of good quality and efficacious pharmaceutical products in the hospital.
- 4) To analyze the challenges and constraints that affect the distribution process of hospital.
- 5) Identification of appropriate Supply Chain Performance metrics and standards in hospital.
- 6) Identification and categorization of risk factors of SCM in Healthcare and development of appropriate response strategies.

The broad objective of this research is to examine the current state of the supply chain regarding pharmaceutical products in Hospital. The specific objectives are to evaluate the Supply Chain Management practices at private Hospital including only the pharmaceutical items or medical products.

The problems and prospects, at various stages, of the pharmaceutical supply chain are to be analyzed and appropriate recommendations are to be offered for improvement of the present system.

### III. METHODOLOGY

This paper is based on the study of private Hospital, which is considered a representative of high end tertiary level hospitals in Sagar in terms of customer type, reputation, operation, performance, facilities, etc. The main data collection tools for the case study are interviews and site observations in the links of the pharmaceutical supply chain in private Hospital. The respondents are mainly suppliers, pharmacists, management executives, doctors, nurses and patients of the same institution. Besides the archives of the hospital, secondary data and relevant information have also been collected from different sources like journals, reviews, books and research papers. Case study analysis involves in-depth and contextual analyses of matters relating to similar situations in other organization. Also, case study analysis is used in understanding certain phenomena and generating further theories for empirical testing. Both of qualitative and quantitative data were collected. Qualitative data were gathered through observations and interviews. We conduct direct observation to know about the system in hospital. By doing observation, we record the behavioral patterns of people, objects and occurrences related to hospital. Semi structured interviews were carried out with various hospital staffs, such as supply chain professionals, pharmacist, IT managers, customer service and nurse. The purpose of these interviews are to achieve a clear understanding of the problems experienced within the hospital setting, collect information about the supply chain process and also discuss possible solutions to the problems. Data analysis was completed in order to illustrate the potential advantages and disadvantages of the proposed solutions that present in the hospital. Data analysis was also examined the benefits of inventory reductions and various cost.

#### A. Future Prospects Of Supply Chain Management In Hospital

Supply chain management strategy in hospitals will open new and exciting gateways in the management of hospitals. Our finding will be helpful for effective and efficient distribution of good and affordable products to the wider population, provides good quality and efficacious medicines and machines that are affordable and available to all level of income earners access to good quality and efficacious medicines and machines at affordable prices. Our finding will be Ensure product availability, Minimize storage space, Maximize patient care and Reduce material handling time and costs for all medical staff.

### IV. ACKNOWLEDGEMENT

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