

IMPLICATIONS OF SUPPLY CHAIN MANAGEMENT MODEL IN PAKISTAN'S HEALTH CARE SYSTEM: A PROPOSAL**Muhammad Altamash¹**

Scholar, Department of Educational Sciences, National University of Modern Languages, Karachi Campus.
Email: altamash021@gmail.com

Saad Muzaffar²

Coordinator / HoD Department of Educational Sciences, National University of Modern Languages, Karachi Campus. Email: saadmuzaffar@numl.edu.pk

ABSTRACT

The management of all business operations, from suppliers to customers, is known as supply chain management. According to experts from the Supply Chain Management Council, supply chain management is the coordination of planning with the management of other operations including procurement, sourcing, and logistics management. The various channel managers' cooperation and partnership are key supply chain components (Ramanathan, 2014). These managers may also collaborate with suppliers, customers, middlemen, and service providers. The management of supply and demand, as well as their market projection, is a component of supply chain management's incremental activities (Fliedner, 2003; Ireland & Bruce, 2000). Modern supply chains are focused on efficient consumer response (ECR) (Ireland & Bruce, 2000). A crucial component of reaction efficient consumer response (ECR) is the focus of modern supply chains (Ireland & Bruce, 2000). An important element of the response of efficient consumers is collaboration between suppliers and retailers. Vendor Managed Inventory (VMI), Point of sale systems (POS), and Electronic Data Interchange (EDI) are the tools modern technology has made available to support the collaboration between retailers (Buyers) and manufacturers (suppliers). Under the implementation of such a developed supply chain structure and a clear understanding of the business practices. With the strategic units, a collaborative plan in the organization gets developed. The supply chain process is redefined to reduce the level of inventory, and lead timing, and improved responses towards deviation of customers' demand. To establish effective collaboration these factors must be implemented effectively and are the subject of research for this project. In developed countries, the pressure to be highly competitive and efficient has helped in promoting collaboration between retailers and their suppliers. The advent of similar business culture and availability of technology is likely to promote a high degree of similar collaboration in Pakistan too (Sunil, 2010). This research project proposes to investigate the factors that are going to influence a successful collaboration program in Pakistan. We propose to explore the determinants of a successful collaborative effort and the likely success of a program such as a Supply chain management offering in the healthcare sector implemented in Pakistan.

KEYWORDS: *Supply Chain Management Model, Health Care System, Implications*

INTRODUCTION

Since managing the supply chain and its skills are frequently used globally and strategies are frequently gradually evolving daily, generally. Low-emission economies rely on financial strategies that are frequently straightforward and efficient to influence their labor markets and manage consumer spending. These countries' health sectors have challenges not just in administration but also concerning the procedures used, which has an impact on the services provided directly to patients in terms of treatment quality, etc.

The supply chain itself incorporates various parameters and factors that can be used to verify the specifics of that product, including the overall verification process of the goods in front of final consumers and other things like transfer transactions, logistical features, etc. If we discuss the health industry in the documents crucial as the sector health, offer management is used to ensure that the procurement operations are carried out without difficulty and administrative functions are carried out in nursing homes where they have removed equipment should be done properly to provide quality care.

This study focuses on the discussion of the parts and pieces of the supply chain for the necessary materials, together with efficient software in the field of medical center administration, with a focus on long-term planning and innovative design aspects. Supply chain management is a challenging industry, especially in nations with relatively low levels of construction. We have conducted several literature studies as part of this function's research and looked for general information about the range of supply chain management (SCM) practices in the medical industry. There is now a concern with applications that the wellness business is using to provide timely delivery in connection to customer satisfaction.

Although the operational strategy of a healthcare facility and the background of medical center management both exhibit complexity, variability, and unpredictability due to the nature of the patient population and the high demand for care and attention (Wieser 2011; Bourlakis et al. 2011), supply chain and logistics are widely acknowledged to play an important role in these processes. Management operations involve the supply since overall management tasks with the daily supply chain and operational logistics in hospitals have other management techniques that were not the exact as per older routine, as the satisfaction of the individual interest throughout the specific health care process steps. Managing the impacted individual incorporates a measure of points of clinical related guidance and managerial multidisciplinary notwithstanding reliant which are expected to have a dealt with in addition to synchronization interconnection in pay for to stay away from the issues they face corresponding to sticking around examples for people in addition to abuse of clinically related sources and lacking administration concerning the legitimate removal of waste materials components and reusing focuses.

PREAMBLE

Although in previous years, the supply chain and logistics function and operations have gained a strategic place in the management of hospitals (Volland et al., 2017). In present days, we are also observing different strategic decisions related to the supply chain and logistics such as the outsourcing of certain activities in the hospital supply chain (purchasing equipment and other stuff related to interest and supply management, sterilization, stock management, or intra and inter-site transport, etc.). Hospital management has also implemented various tools and methods related to management allowing a continuous improvement towards the approach of implementation of supply chain management. Therefore, significant results were achieved in reducing errors; improving process quality, and reducing wait times (Mazzocato et al., 2010). Against the background of the complexity of the hospital management system, the variability and unpredictability of the patient profile, and the high demand for care (Wieser 2011; Bourlakis et al. 2011), the supply chain is considered an effective solution in the health sector because due to the tough working time, they should care for staff by offering them the opportunity to concentrate on their core activities and improve patient care conditions (Landry and Beaulieu 2001).

The dream is to revolutionize the health sector by taking a step regarding implementing the best logistic practices and methods that are sufficient for adaptation time and feedback from the government and other stakeholders to be able to concretely evaluate its contributions (Mazzocato et al. 2010). Although till now very few health establishments have been able to generalize these methods across their entire health sector. In addition, an efficient and effective approach is also based on the qualifications and skills of top management (purchasers, logistics managers, nurses, etc.). Hospitals should improve this aspect by creating an awareness campaign and a recruitment policy regarding these practices should be adapted according to the requirements.

Earlier supply chain and logistics operations functions had implied a critical significance in catering health care needs (Volland et al., 2017). In current times, we are in addition observing different tactical decisions linked to the supply chain and logistics like the outsourcing of specific activities in a healthcare facility supply chain (acquiring equipment along with other stuff linked to the interest and offer management, sterilization, inventory management or intra and inter-site transfer, etc.). Medical center managements also have implemented various resources and methods linked to management allowing a continuous improvement for the approach of execution of supply chain management. Therefore, substantial results were attained in reducing mistakes; improving process top quality, and reducing wait-around instances (Mazzocato et al., 2010). Contrary to the background from this complexity of a healthcare facility management technique, the variability and unpredictability of the individual profile along with the popularity for attention (Wieser 2011; Bourlakis et al. 2011), resource chain is recognized as an effective choice in the medical sector because of the tough working moment they ought to care for staff members by providing them the chance to focus on their core things to do and improve individual care problems (Landry and Beaulieu 2001). The aspiration is to revolutionize the medical sector by firmly taking a step to put into practice the very best logistic tactics and methods which are sufficient for version time and feedback from the government along with other stakeholders to concretely assess its efforts (Mazzocato et al. 2010). Although till right now very few health establishments have already been able to generalize these procedures across their complete health sector. Furthermore, a competent and effective tactic is also in line with the qualifications and expertise of top management (logistics professionals, nurses, etc.). Nursing homes should enhance this feature by creating a knowledge campaign along with a recruitment policy concerning these practices that ought to be adapted based on the requirements.

RESEARCH PURPOSE

The main purpose of this exploration would be to conclude the significance of supply chain management in the well-being sector such that the consultant of that business can comprehend it. Although this study will be completed through various literature evaluations and topics beneath the umbrella of Supply Chain management. This exploration aims to produce knowledge of the want of source chains in medical center management in Pakistan. The goal of this considerable exploration would be to build knowledge of the want of supply chain in medical center management in

Pakistan. Because since Pakistan is an underdeveloped country, the significance of SCM continues to be neglected over the board in almost every aspect.

The hospitals that happen to be following the conventional patterns which contain storing, purchasing, and transporting because of these traditional methods there is no innovative solution that ought to be adopted to avoid losses like monetary and materials. Since around the world, the procedures of Supply chain management are properly and efficiently carried out in hospital management in this analysis we will make an effort to elaborate on the issues which are confronted by the medical sector because, in these modern times, the populations of metropolitan areas and country happen to be increasing speedily so there's intense stress on public well-being sector to provide for these situations about hospitals minus the implementation of resource chain practices the grade of treatment through diverse drugs wouldn't normally be labeled as quality care and attention because there are many processes by which items and equipment's linked to the hospital management are purchased that happen further make use of for medical services of the general population in private hospitals in some other services. This means this is the period where the company should place an effective department that oversees acquiring equipment and medicines along with other actions linked to the external in addition to internal matters linked to material handling.

RESEARCH QUESTIONS

After the comprehensive study of the backdrop of this subject matter and observing the issues regarding this research we have produced some research queries which can only help us in additional research and by taking into consideration the consequence of this study, we are in a position to conclude that whether these outcomes can be carried out or there may be a far more broader solution to increase the understanding of resolving and conquering the issues.

By taking which steps will the supply chain management be carried out in hospital operations?

Where will it contribute to public well-being interest?

What will be the resource chain implementation in these circumstances?

What will be the approaches by which the obstacles present in the implementation of the supply chain are to be overcome?

RESEARCH OBJECTIVE

The purpose of the research objective would be to carry out the primary points or aims which are needed for research to be completed in the precise area. Since we have been studying the execution of supply chain techniques in the well-being sector to be able to attain insights into issues that are confronted during the execution below are a few objectives we have observed which should be related in this particular study to be able to implement or even to apply the procedures.

To comprehend the significance of Supply chain Management in health care management.

To create awareness for the execution of the supply chain management.

To look for possible benefits of Supply chain management in hospital operations.

To determine methods of how exactly to overcome the obstacles faced in execution.

SCOPE

The idea of the supply chain is pushed to play a role advantageously to the well-being industry. The significance of the supply chain that is commuted to give to well-being is fielded advantageously. Through supply chain management medicines along with other products linked to health could be monitored and made secure. Due to supply chain management medication along with other merchandise linked to well-being could be generated and supervised anchored. To avoid critical situations like insufficient medicine etc. and these kinds of situations could occur because of a lack of administration.

The opportunity for supply chain and logistics within this field is huge and it performs a vital purpose with regards to the public interest in the same way if we discuss the health field which provides well-being solutions to people in types of hospitals medical centers and exploration laboratories by which the patients happen to be treated. Since resource chains can be used in every company to be able to overcome having less management with regards to monitoring and analyzing the requirements of the company although they will have boundaries that happen to be restricted to resources but perhaps the boundaries happen to be vast enough.

LIMITATIONS

Majorly, in order to be able to discuss the problems issues or even simply the is the constraints usually first of all begin with not much little cost-effective method because when an individual is usually creating a new department therefore requires human resource including offering up area and equipment connected with the conclusion final outcome associated with his department should have had their own tasks for the specific organization, this will surely be paying out to who are doing work in that the reason that particular department will therefore will raise costs , in addition this would not actually end up being the same as like it was to initially before and even though certainly require software which often could record the specific precise activities which are in each routine to satisfy examining

plus the addition to the balance associated with your own job , so basically it's not just a lucrative technique, but it offers reliability to the particular system and boost the value of life.

JUSTIFICATION

It is assumed that the study of the health field benefits in numerous phases and determines the value chain management provides relative to the eye of public health. The research will even help deter my inconvenience possible plus problems faced during the implementation planning of the management of the provide chain including the ownership of practices that are usually related to this place plus the solution needed to be able to counter these issues.

LITERATURE REVIEW

This study aims to create awareness of the purpose of Supply chain management (SCM) and its effectiveness in the healthcare industry of Pakistan. Therefore, the following review of available literature was studied to understand the current situation in this field of Pakistan. In the healthcare system, supply chain management is crucial to delivering high-quality care to patients. A set of organizations that are connected by a few of the upstream and downstream movements of products, services, finances, and data from a source to a customer is what supply chain management refers to. (Mentzer et al., 2001). There are many definitions of Supply chain management.

Although in the upcoming recent years, Supply chain management has been an integral part of the healthcare industry since supply chain management plays an important role in hospital performance in terms of controlling waste management, preventing medical errors, upgrading the quality of care and service, and increasing operational efficiencies (Byrnes, 2004; Schneller and Smeltzer, 2006; Kowalski, 2009; Shih et al., 2009). Supply Chain Management in hospitals also includes the internal parts (e.g. patient care unit, hospital storage, patient, etc.) and the external chain (e.g. vendors, manufacturers, distributors, etc.) (Rivard-Royer et al., 2002; Schneller and Smeltzer, 2006).

A hospital purchases goods and services from suppliers and other vendors, stores them, and then distributes them to each of its departments in accordance with its administrative and operational procedures and departmental hierarchies. However, supply chain management also encompasses business-related activities and processes that incorporate a constant, seamless flow of products and services for healthcare delivery e.g., procurement, distribution, vendor management (Rivard-Royer et al., 2002; Shih et al., 2009).

The term 'Supply Chain Management' (SCM) was introduced by consultants in the early 1980s. (Lambert-Cooper 2000) It has its origins in logistics literature (Bowersox et al. 1999) and logistics has continued to have a significant impact on the concept. The scope of SCM has widened over time from an intra-organizational focus to more inter-organizational issues (Dubois et al. 2004).

Basically, various forms of innovation are significant in healthcare systems, according to literature reviews: integrator, centered on the customer, and utilizing technology (Herzlinger, 2006). The customer-focused technique focuses on reducing patient waiting time and minimizing the medical expense including the average cost burden of patients. The technology-which is based on innovation for making proper improvements to the delivery system that relies on the supply chain so that upgraded processes can deliver high-quality treatment, different and newly improved types of treatment, and prevention of diseases.

Another innovation is the integrator, which increases efficiency in healthcare services and the majority of group purchasing, as well as the integrated network for IT and supply chain. These three categories of innovation can receive help from information technology-related applications. In the healthcare sector, supply chain innovation has been viewed as a crucial success element for organizational performance (Byrnes, 2004; Herzlinger, 2006; Schneller and Smeltzer, 2006; Singh et al., 2006). SC innovation refers to tools that can improve organizational processes needed for effective SCM through seamless interactions with suppliers, manufacturers, distributors, and customers (Lin, 2008). So, although supply chain innovation enables a significant decrease in cost and the time it consumes, the creation of new operational strategies, provision of consistent quality, and development of flexibility for dealing with rapid changes in the business environment (Stundza, 2009).

The SCM framework by Lambert & Cooper (2000 70) is mentioned below and is challenging as it explains the interrelated nature of SCM and the need to proceed through multiple steps to handle a supply chain.

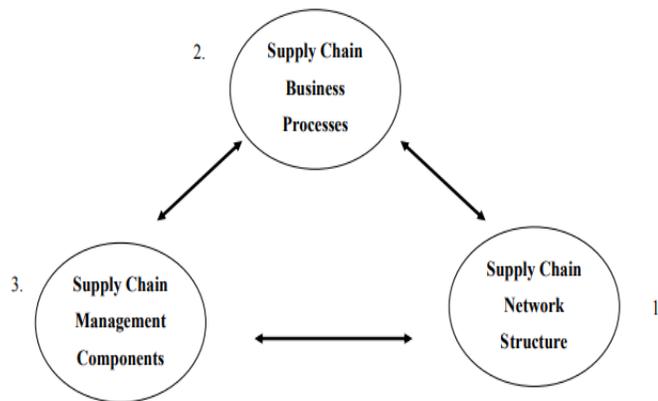


Fig:2.2.1 SCM framework by Lambert & Cooper (2000 70)

Supply chain management has the unique feature that it connects the other departments within the organization. Since on the worldwide platform, Global Supply Chain Forum has the following definition:

The integration of essential business processes from the customer through the original suppliers to deliver products, services, and knowledge that add value for clients and other stakeholders is known as supply chain management. (Lambert-Cooper 2000, 66).

Miles and Snow (1978) introduced four kinds of strategies: prospectors, defenders, analyzers, and reactors. Walker and Ruekert (1987) claimed that a reactor is not an active strategy in the business surroundings. They also observed and believed that defender strategy must be separated into the low-cost defender and differentiated defender. Thus, these four types of strategy are defined (Slater and Olson, 2000):

Prospectors: These companies are pioneers in breaking into new markets by launching new products. They have no qualms about entering markets that appear to be advantageous. They also concentrated on delivering fresh products with fresh capabilities. Their objectives are to produce and offer the most effective products possible while drastically reducing costs and improving performance.

Analyzers: These companies occasionally pioneer new and developing markets. Although improving customer benefits and total cost reduction might be the prospectors' quickest follower with improved objective framing and accurate monitoring of competitors' actions and consumer reactions to them.

Differentiated defender: Although in this scenario with maximum protection of their product market position attempt to sustain a stable market. They are rarely the first in developing new products and are rather focused on providing better quality and superior products. Their product's prices are usually higher than the industry average price.

Low-cost defenders: In this scenario with maximum protection of their product-market position attempt to sustain a stable market. The business is well-focused on capturing its et share in existing markets by introducing products at an affordable cost for the public.

Nowadays companies that are national or at a multinational level are focusing on maintaining their advantage over other companies through edge differences and in this scenario, the suppliers and vendors play a key part. The suppliers should maintain an edge advantage and key position against their opponent and improve performance through efficient supply chain operations Fisher (1997) introduced the efficient supply chain to minimize expense with upgrade performance with the help of effective supplier channel selection. Cigolini et al. (2004) suggested that an efficient supply chain minimizes expense burden and increases the performance of service and quality.

Chen (1997) focused to maintain the flow of cost and knowledge to achieve supply chain upgraded performance in the further process. Although supply chain efficiency refers to the simple process with suppliers readily available for various categories, reliability is concerned with the PLC (Product Life Cycle) of the product and the management of waste disposal, which can vary for each organization that offers the best support to further improve operational processes and accelerate delivery or customer requests using information systems.

In almost every sector and especially in the healthcare industry and hospital management areas where managers have the responsibility to deal with the public and to provide them with the best quality care that concern the most in this sector the supply chain always creates and adds superior value to the consumer-related products and their services and the expense on components (e.g. production cost, logistics and transportation, and handling of material within an organization, etc.) perform its part as an operational process (Chen, 1997). Although the cost can be incurred by a wrong order-to-delivery cycle, t difficulty will be created due to the complex nature of the transportation process and

handling of the products which will be stored in a specific area of the hospital. In this scenario, the information networks provide a bridge to develop a positive relationship between consumers and suppliers (Heikkilä, 2002). In a global context the companies which are worldwide spread, and work based on performance-improving results and networks which are handling the information. Since the ability to handle the modern process of continuous replacement and logistics functions that depend on upcoming orders. Nowadays all companies which are related to supply chain or have departments that are working in functions that are connected to supply chain management and transportation process including logistics are now working on different techniques to gain outcomes that would be better than their competitors through implementing techniques like radio-frequency based identification (RFID) for transportation means and tracking including sharing the real-time databases and for placement of order and invoicing things related to it are now based on electronic data interchange (EDI). Meanwhile, networking is done through the Internet and GPS and these facilities are also being used to make the performance of communication with customers. In recent years around the world, there is an expanding and upcoming emphasis related to the innovation of organization needs which is almost based on the modern sharing of information and communication technologies (ICTs) for supply chain management and quality management business process re-engineering, enterprise resource planning (ERP), and customer relationship management to improve competitiveness (Lin et al., 2005; Flynn and Flynn, 2005; Flint et al., 2008). Although to create uniqueness and to have an edge advantage organization need to improve to provide better quality services and quality care which can be done with supply chain efficiency and customer-based satisfaction based on the core competencies. Quality management has an important role to play in the field of supply chain management because it provides value to the high-quality products and services which are related to it. Implementing the practices of quality management in the supply chain as a result will minimize the process variance including shipping damage and the delivery cycle time on the supply chain (Flynn and Flynn, 2005; Lin et al., 2005). To minimize the steps included in the process of variance the improvement of quality management will include the time of delivery and the efficiency at which operation is done thus reduction of cycle stock and their related waste and close relationships with respected suppliers and customers.

In today's world trends are rapidly changing in multiple sectors in which supply chain management is also a part of it since the practices around the globe to proceed with the supply chain functions are now considering to include green logistics in which the main focus is on those products which are to be produced in a sustainable way that it would not harm the environment and should be in a green perspective. This perspective is not only in logistics or supply chain management but across all the areas which come under the manufacturing process. Environmental sustainability is now considered a priority at every step and the different measures related to safety procedures have also been considered to make the product more environmentally friendly.

Since a green perspective in any aspect of industry can be termed as thinking green or being environmentally friendly. Although green Logistics is therefore referring to the green 'perspective' on logistics and can be described as concerned with producing and distributing goods sustainably, taking account of environmental and social factors (Egglese, 2007).

Even though the ideology's definition's explanation notes that logistics is at the core of modern transport systems, As has been shown, the word suggests a level of planning and management of goods movements that only modern technology could have made possible. One of the most significant advances in the transport sector has occurred as a result. Being green has come to represent a variety of environmental issues and is typically viewed positively. It is used to imply environmental compatibility and, like logistics, is advantageous (Slack, 2001).

Many businesses all over the world have effectively implemented supply chain management, and this system is assisting in achieving organizational performance through the application of supply chain operations and management. The structure of each organization in Singapore's hospitals is the same, with the exception of the size of their structure buildings and enterprises in terms of business, which depends on their scale and the number of employees. Other factors to consider include the building, equipment, manpower, layout, and floor area. Singapore is a country in the Asia Region. Especially in hospitals, there is a department that plays a key role which is named as Center for Sterilization Service Department (CSSD), although the main functions which are related to this department are materials management, receiving instruments, decontamination, packing, sterilization, and instrument distribution. The health sector is trying to reduce the increasing operating expenses by implementing the best practices and innovative ideas in their existing supply chain management. Since the reduction in expenses regarding different operation measures, Batchelor et al. (1995) suggested alternatives such as outsourcing the function of logistics and centralizing distribution centers. Many examples of these methods exist in the international market such as Johns Hopkins Hospital, USA, etc.

In Pakistan, the health industry is composed of two sectors recognized by the government that are private sector and the public sector in which some hospitals come under government management and some of them are operational

under the private sector. Although both are working hard to achieve the highest standard of quality care and quality management for the patients according to researchers there are hardly any hospitals that are focused on implementing the supply chain, especially government departments. Since the focus is to conclude our study about the techniques related to the international practices of supply chain management and how to implement them so that the health sector of our country may be benefited from this study through which the awareness of supply chain would be increased. Although in our country a small number of research conducted on the implementation of supply chain management and its functions in hospital management and there are a small number of figures research papers that could be identified for the health industry. Therefore, we have decided to pursue the topic of supply chain management in the healthcare sector of Pakistan by analyzing the XYZ organization.

METHODOLOGY

RESEARCH DESIGN

Although the research on which the topic is based is related to the qualitative technique and the strategy that we will adopt will be exploratory. The study which we will be doing is the secondary type and to understand the reasons for a particular process that is to be a part of the system also, we can identify the problem by gathering subjective data i.e., thoughts, opinions, or beliefs (Wyse, 2011). Furthermore, this study is a single method i.e., only qualitative techniques and procedures will be adapted. Therefore, data collected in this research will be done with the help of observations and data collected with the help of a questionnaire. The carried-out research will be analyzed to gain insight to find the issues which are there during the implementation of supply chain management through procedures done by management and their strategies, customer relationship, and the performance of the organization. Since there are necessary benefits that will be obtained from supply chain efficiency like speed in response and the control over waste elimination and the networks of information that are in between suppliers and the customers. (Fisher, 1997; Pin, 2001; Heikkila, 2002; Cigolini et al., 2004).

RESEARCH APPROACH

In this research, we would approach the concerned people of that department and gain insights and knowledge by interviewing high profiles and filling out the questionnaire through staff persons. In this way, we will be analyzing whether the models which have been made by us can be applied or need some changes. All data which has been gathered through a questionnaire have been implemented in the case study through subjective analysis (content analysis) as the study has a qualitative approach. This analysis technique is used to make valid and replicable inferences by interpreting and coding subjective data i.e., text and other non-numerical information (Terry College of Business, 2012).

CONCEPTUAL MODEL

The conceptual model is used in this study to understand the system that was adopted, and this model is implemented in the health sector of Singapore. In the below fig, they have elaborated the conceptual model on which they are trying to work by taking three different examples of three different hospitals

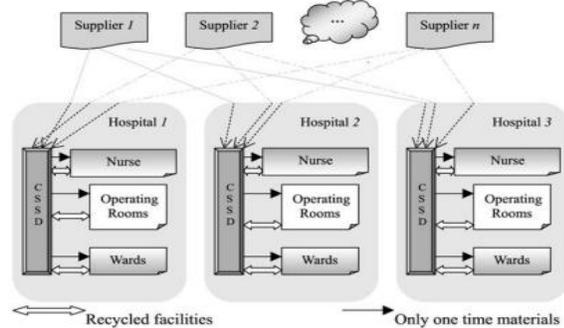


Fig:3.3.1 This conceptual model is adopted from “Supply chain redesign in the healthcare Industry of Singapore” Author: Arun Kumar, LinetOzdamar and Chun Ning Zhang

The three hospitals’ scales are large, medium, and small. Periodically, the suppliers separately meet the requirements of the CSSD in each hospital according to orders and emergency needs.

A PROPOSED THEORETICAL MODEL APPROACH

In our country, the health sector has been divided into two components mainly, which are the public and private sectors. Since these sectors are constructed to provide quality care to the patients but according to observations and current scenarios most of them are not relying on or focusing on the implementation of supply chain management and through which they will be provided reliable and add value to the public health interest. Since we will conclude our study with the techniques through which the awareness of the supply chain would be increased so that the health sector could improve much more.

The most typical issue of hospital management in public and private hospitals and other areas related to it in developing countries is the rationale and the expense of logistics support services. They are expensive because of their services. In our country, the health industry especially related to the public sector constantly stands at the forefront of their financial problems. Keeping in mind the financial issues and to provide a support model for a limited number of resources, a proposed model is drawn which is designed to make hospital management more reliable and efficient. The hospital sectors are not doing enough work to prioritize techniques and tools including models, so focusing the study on the supply chain concept and their productive results as of time value and efficiency. Considering organizations that are small and medium in size which takes place in supply chains and thus displaying them conceptually and systematically model through which they will boost up their system regarding output and increase development and bringing them applicable towards practical protocols of the system in the sector is an important approach.

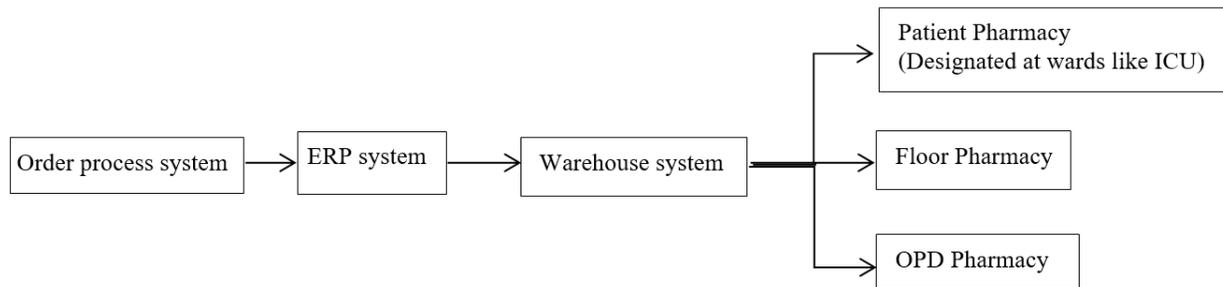


Fig 3.4.1 Order Process Chart

Since the market, there is a competitive environment around the globe and the organization are now trying to be more efficient by making their department and human resource much more aware and to kill full regarding new techniques and set, Although innovation related to the supply chain will also be added and the quality management practices would also prefer so that it would increase the service quality and products related to them so it will achieve the customer satisfaction level

The organizations that are trying to develop and make new techniques to become efficient in these areas by applying proper tools will result through collaborative innovations along with their suppliers to enhance the customer satisfaction level and their performance.

Although vendors of the products they will be supplying, they can provide a comfort zone or exceed the expectations of customers by providing them with high-quality products along with their best services. Cooperation with reliable suppliers is critical for the sake of improvements in performance and maintaining competitive advantages with others. (Lambert et al., 1997; Lin et al., 2005; Flint et al., 2008). Fisher (1997) suggested that the physically efficient process includes the process of the response of the market which is based on reliable criteria to select the best supplier so that the performance of the organization may go high.

PROCEDURE

The research started with the preliminary literature review of previous studies on the supply chain in the Hospital care sector. The research is already designed problem statement, research questions, and research objectives. After that, our research is supported by justifications and bound by limitations, and scope. Research methodology is developed through different tools like questionnaires (open-ended) and observations. Data collection is done through observations and interviews. The conclusion of the entire study is evaluated after various steps which are mentioned above.

PARTICIPANTS

Since this topic of study will be based on non-probability convenience sampling. This means that the participants will be chosen on the judgment of the researcher in keeping with the requirements of the study as well as availability rather than random selection (Laerd, 2012).

Although for this research purpose, the participants through which data will be collected include professionals that are currently working in the Hospital. Ideally, those professionals are from the supply chain department of their respective organizations or relevant department.

We will try to gain insights through hospital management will be interviewed to gain information related to the issues which they are occurring in their routines management adding the warehouse or store department which is responsible for the products distributions and other aspects which are related to them which face problems due to lack of management skills.

Interviews will be stopped at saturation level, i.e., the point when no new information is obtained from an interview, or the previous information gathered from the interview is now started repeating itself.

Research Instrument

This research is studied by using the Interview technique. The interviews are conducted with the help of a

S.No	List	Numbers	Remarks
1	Patient per year	169,150 approx.	-
2	Basic Inflation rate	12%	11 % in 2016, 10 % in 2017, 9% in 2018, and 8 % in 2019.
3	Revenue per Year	9%	Expected was 15%
4	Operating costs	Rs: 30 million	15 million in 2016, 18million 2017, 23 million in 2018
5	Long-term debt interest rate	7.5%	Annually
6	Gifts for construction /purchasing	Rs:10 million	Zakat/discount fund

questionnaire or interview protocol. The protocol is a checklist or guide for the interviewer to follow during the interview to ensure that all relevant information has been gained (Margaret C. Harrel, 2009).

Data Collection Procedure

The Interview protocol or questionnaire is adopted and modified. Furthermore, the interviews are conducted with each participant. So that the data collection is done through this technique. The ethical protocol will be designed according to the participants understanding level to gain knowledge smoothly without any hurdles.

RESULTS AND FINDINGS

Financial Aspect

Since the Hospital has various techniques to manage funds for the fiscal year below is the detail through which financial planning is being implemented in previous years: Table: Financial aspects

The above-provided record is based on values and information provided by the hospital management in which patients are cured in a year and the inflation rate is based on medical expenses which are increased every year or revised rate. The revenue per year, which was expected by the financial concern, operating cost which is present in day-to-day usage items, and other third-party staff.

To run the hospital and to purchase heavy machinery related to medical care debt has been issued by the institutions and other stakeholders in which interest amount is marked every year with the principal amount. Funds collected through Zakat and donations are also considered for patient welfare and to benefit them with different discount treatments.

The above is the breakeven analysis which is provided by the management, and this is the break-even of their units which are sold like medical items, and the revenue generated from the services they have provided is worth.

Current Scenario

In the current situation, the hospital does have a single pharmacy which is responsible for procuring items that are needed monthly and budget is issued by the pharmacist and the relevant doctors, and a purchaser is hired to purchase and maintain all the records because this helps the department to perform an audit of the funds for the fiscal year.

Finding

From the above analysis and data collected through questionnaires which are filled by the concerned persons we have come to the point that the model we are applying for the XYZ hospital is not completely fit due to extra resources which are used in terms of human

resource and the number of funds which are needed to be spent which would go above approximately Rs: 5 million in which a supply chain department will be established including an IT department through which an ERP system will be implemented for about 50 users and including accounts and finance department will be a part of it for reconciliation in the end of the year and the sake of information regarding transactions to the vendors against the supplies provided by them.

Proposed Supply Chain Department Labor Costs

S.No	Designation	Expected Salary	Quantity
1	Manager	Rs-200,000/-	1
2	Assistant Manager	Rs-100,000/-	2
3	Procurement Officer	Rs-50,000/-	4

4	Computer Operator	Rs-35,000/-	4
---	-------------------	-------------	---

The role of this department would be ensuring that the strategy of procurement and planning of the fiscal year would be done based on forecasting and demand which was in the previous year, although secondary responsibility will be applied that they have to make reconciliation and auditing of the items which have been purchased throughout this year and how they utilized and issue from store department to the floor pharmacies and till the consumer end.

Discussion

Since we have studied different literature on the SCM models and their implementation but still the main gap in this supply chain is that it is not a cost-effective technique it requires a highly skilled and qualified person team to promote and implement the practices regarding the supply chain in health care to meet the total quality management and quality care which is more valuable.

Implications

Although in this sector there should be a change which is needed to provide quality health care without any delayed time because this study is been designed to create awareness regarding the importance of supply chain management in the healthcare sector and especially in hospital management, to serve that purpose we have created a model which is supposed to provide better performance with suitable cost to provide quality care to the patient. In today's world, the traditional procurement terms and procedures are not of much value due to the lack of efficiency and management since new techniques should be adopted to serve the community and patients better.

Conclusion

Although we have developed different stages through which we can improve the way of ordering things and to make things better to keep accuracy in every stage. These include the specialized inventory management computer-aided online ordering system. The developed supply chain methods and their system improve material handling of hospitals, reducing inventory management expense and ultimately improving quality management which results in maximizing the quality care provided to patients. All departments should share information with the supply chain department to forecast the procurement of the upcoming fiscal years and it will help us to fully understand the benefits of supply chain management.

Since the research topic we have studied by observing the organization in which we have suggested the model of the supply chain be implemented to gain performance boost and efficiency related to their task and the process from purchasing to warehousing till providing it to the patient and to keep check-in balance with real-time tracking through the product description. Through this model, the organization will be benefitted in terms of procurement strategies and procedures regarding purchasing with the suppliers, including vendor management in which vendor check and balance will be supervised, warehousing techniques in which cubic utilization and material handling will be optimized through RFIDs, and another perspective. Through this research, we have gained information and observation in a practical environment and learned the role of supply chain management role in hospital management.

In the model which we have proposed though efficiency is improved but the issue would be that there would be a limited number of resources to implement these whole procedures. To do it with a limited number of resources along with less skilled persons who are present in the organization and to make them easily understand the procedures and the strategies which are related to their work in the future after the implementation. But for the sake of future directions some steps should be changed with time that are standards for exchanging information electronically must be established and adopted through the ERP system, Although the hospital is related to the health sector. As RFID (Radio Frequency Identification) technology changes instantly, we hope that the RFID technique will be adopted in the future for the identification of products in supply chain management systems in the healthcare sector.

Limitation

The common issue which we have observed is that the organization does not intend to put such an initial high cost into creating a department. The mindset of small and medium hospitals is not visionary enough for long-term sustainability. They are more profit-focused rather than quality provided to the patients. Although lacking skills is also a major problem and willingness to change the trends. In the current system, organizations tend to operate on low-budget and high-profit strategies and due to this they lack the efficiency of departments. The approval of the

budget for the fiscal year id depends on the amount of revenue which is generated in the previous fiscal year and because of this limitation new technology is a tough task to be implemented for the betterment of the organization.

REFERENCES

- Blandine Ageron, Smail Benzidia& Michael Bourlakis (2018) Healthcare logistics and supply chain – issues and future challenges, Supply Chain Forum: An International Journal, 19:1, 1-3
- Burali, P. S. (2013). Review paper on "Poka Yoke": The Revolutionary Idea in Total Productive Management. ResearchInvety: International Journal of Engineering and Science, 19-24. Retrieved from
- Carl J. McCann Annual Conference (2003): A Supply Chain Revolution: Understanding the Players, Proceedings of HIMSS.
- Chaerul, M., M. Tanaka, and A. V. Shekdar. 2007. "A System Dynamics Approach for Hospital Waste Management." Waste Management 28 (2): 442–449
- Gek Woo Tan, Michael J. Shaw, Bill Fulkerson: Web-based Supply Chain Management, Information Systems Frontiers 2:1 (2000) 41-55
- James H. Greene: Production and Inventory Control Handbook (1997) McGraw-Hill
- Karen Matjucha, Joe Burns, Terrence J. Noetzel, E-Procurement (2002): Energize Your Supply Chain, Proceedings of HIMSS Annual Conference 2002
- Narayana, S. A., R. K. Pati, and P. Vrat(2014). "Managerial Research on the Pharmaceutical Supply Chain–A Critical Review and Some Insights for Future Directions." Journal of Purchasing and Supply Management 20 (1): 18–40.
- Volland, J., A. Fügener, J. Schoenfelder, and J. O. Brunner. 2017. "Material Logistics in Hospitals: A Literature Review." Omega 69: 82–101
- Whitson, D. (1997), "Applying just-in-time systems in health care", IIE Solutions, Vol. 29 No. 8, pp. 32-7.
- WullianallurRaghupathi, Joseph TanACM 45:12 (2002) 56-6: Strategic IT Applications in Health Care, Communications