Logistics Management and its Roles in Hospital Management Focus on Health Insurance in Egypt 2022[1]

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ABSTRACT

The goal of this article is to look into the logistics of hospitals in Egypt. It specifies the many types of activities that a logistics division is responsible for. The application of information and communication technology (ICT) for logistics reasons, as well as inventory management policy, are also highlighted. The nature of strategic alliances in Egypt's healthcare industry is examined in this study. The data was gathered using a methodology, which included pre-testing the questionnaire and conducting interviews. The questionnaire was created after reviewing a variety of relevant literature. According to the findings of this study, logistics divisions engage in a variety of connected operations, and some even supply engineering services. ICT is used in hospitals. The hospitals are organized into numerous categories in order to reduce operating costs, particularly logistics expenditures. Hospitals, on the other hand, do not view supplier alliances as a strategic option, preferring to outsource logistics services. The findings also demonstrate that Egyptian hospitals have a good stocking policy for both medical and non-medical commodities, allowing for easy handling of fluctuations in patient mix. Egypt's healthcare industry is constantly improving, and the findings will aid hospitals in other regions in adopting some of the practices, such as focusing on local vendors, outsourcing, clustering, and maximizing the use of information technology as competitive factors that can improve service and lower operating costs. The study discusses what motivates people to use ICT in logistics in healthcare, as well as what prevents them from doing so.

***Keywords**: Healthcare Management, Logistics Management, Hospitals Management.*

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1. INTRODUCTION

The medical department is unquestionably the most difficult to manage in a hospital. The use of drugs and medical equipment in teaching hospitals is intertwined with healthcare functions such as teaching and research (Granlund & Wiktorsson, 2019).

When it comes to quality of life today, a person's financial condition — his or her salary and net worth, the availability of health care, the strength of family ties — all play a role. In the year 2020, Martinez-Martin and associates A person's quality of life is influenced by many factors, including the quality of their health care and the length of their waiting list. Conversely, a number of variables such as the rate at which the desired service is provided, the length of the patient's hospital stays, the mortality rate, and patient satisfaction affect the overall quality of health care. Many of the present health care system's issues arise from long waiting lists, which can be the result of systemic inefficiency. To meet consumers' expectations (Kidd, 2019), healthcare providers must improve existing processes and discover ways to employ available resources such as diagnostic devices as well as skilled medical staff as well as financial restraints، and other types. The health care system faces these challenges. The medical logistics system may be optimized to help health organizations address this issue by using approaches like continuous improvement or optimization on a regular basis. When it comes to enhancing health 'organizations bottom lines through medical logistics system optimization, it's not just about bettering people's lives. Providing medical supplies is the responsibility of medical logistics, which is in charge of supporting all parts of the healthcare process (Moschuris & Kondylis, 2018).

In this study, we'll look at how hospitals in Egypt are dealing with the coronavirus COVID-19 pandemic and how logistics techniques are being implemented. This serves

This document demonstrates how the logistics idea can be made understandable and beneficial to enhancing cases flow. It continues directly from the licentiate thesis. (Young, 2017), This serves as a beginning for the contents and method. The allowed dissertation commenced with the problems of health-care. Noted, the barriers for health-care corporations and western culture stated lower back for then maintain to exist (Swinehart & Smith, 2018). Demographics, growing expenses, sturdy era and clinical advancements, new kinds of affected person wish, employees limit, and avoidable detrimental occurrences are examples of those barriers. Moreover, there's set choice for healthcare to be greater cost-powerful at the same time as pleasant necessities concerning ready times,quality, and accessibility. Increasing sources is a not unusual place strategy to those barriers, along with a number of time for ready, expanded affected person call for, and insufficient accessibility. However, research has proven that a loss of sources is frequently now no longer the reason of prolonged wait times. (Marriott & Renault, 2019). Instead, the number one reason of ready intervals is that sources are used inefficiently and are not adaptable to bobbing up variations. (Kriegel & Dieck, 2019). Therefore, the expanded call for care ought to be addressed with powerful changes. Enhancements in order that greater sufferers can be dealt with in much less time at the same time as keeping or improving quality. (Granlund & Wiktorsson, 2019). The obstacle is to find out a fulfillment software program of inexperienced care Delivery, Flexible model to fluctuating sufferers' desires and efficiently looking after sufferers at some stage in the whole duration of care. Experience from

modifications in one-of-a-kind contexts offers motive to be high-quality approximately the functionality for logistics upgrades with inside the healthcare region as well. It is a hassle of making plans and organizing reasserts without a doubt so bottle-necks and their related Queues may be minimizing and reasserts are Given better precedence for use with inside the active affected individual time (Brodhag & Taliere, 2020). However, it could be assumed that logistics control information implemented to healthcare can bring about decreased costs, shorter ready times, stepped forward affected person service, shortened remedy intervals, and better capability.

Healthcare from a logistical standpoint in terms of logistics, the objec tive of healthcare organization is to satisfy consumer demand when p eople want assistance with a health condition. Patients pass via variou s care roles, units, organizations, and health facilities from a logistical standpoint.
Traditional logistics management focuses on the movement of produ cts, but the center of healthcare organization is the flow of people (Be aulieu & Roy, 2020). Multiple viewpoints exist on a patient's way through a health-care system.

The focus of this dissertation is the progression of Patient Cases thro ugh theprocess.

It willcover the period between the First Contact and the Last Contac t with Health-care, i.e. the Episode of Care.(Azzi & Persona, 2020).

2. PURPOSE AND RESEARCH QUESTIONS

The idea of that reason and The cause of this document is to research how is logistics managing theories which can be operationalized in the health-care environment as a manner to be understand the effect of Care Chain. The software of the Logistics to manage theories in

explaining or describing located or professional Phenomena of cost-effective delivery provider manage may be evaluated. Moreover, the licentiate thesis (Logistics manage in The health-care context – Methodological development for describing and evaluating a health-care business enterprise as a logistics system) describes one way to provide an explanation for the impact of logistics manage theories to reason them to applicable in the health-care context.

In the Licentiate thesis and this dissertation, systems idea is used to installation fitting amongst logistics manage theories and the healthcare environment. This is consistent with the multidisciplinary individual and generalizability of Bertalanffy's actual General Systems Theory. (Aptel & Pourjalali, 2021).

3. THE RESEARCH QUESTIONS

A fundamental operationalization of the traits of a logistics machine is to explicit every as the Effect of Care Chain characteristic. It can be, to instance, a characteristic to the shape of the care shipping machine, a characteristic to call for control inside healthcare organizations, or a characteristic for measuring care chain overall performance to be able to obtain excessive care chain effectiveness. Thus, logistics control theories can be similarly operationalized withinside the healthcare placing via way of means of characterizing care chain effectiveness additives and behaviors. This ends in the formation of the subsequent studies question: (Chow & Heaver, 2020):

RQ 1: How the effect of care chain features can be described?

This characteristics target to represent the ideal state for healthcare organizations to address the requirements of patients in a cost-effective manner. By defining the effect of care chain characteristics, The Logistics Management theories can be operationalized further in

a health-care context – the features of logistics system's operationalized to the effect of care chain features., See Figure 1 below.

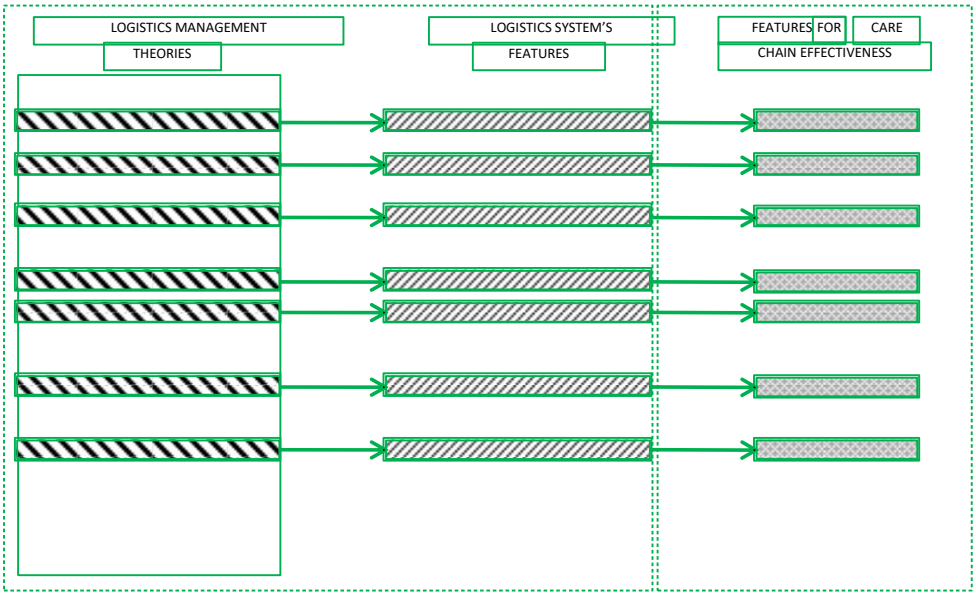

Figure 1: RQ 1 - a logistics system's features operationalized to features of the effect of care chain

As stated at the start of this section, an objective of a complete operationalization it will make Logistics Management Theories sufficiently applicable for empirical research. Therefore, the elements of care chain efficacy must be objectively examined. A further operationalization may be achieved by comparing current practices to these theoretical care chain efficacy characteristics. The current practices (Benanteur & Younes, 2020) may then be studied using these characteristics in order to operationalize logistics management theories completely. Therefore, the second and final

RQ 2: How can features of the effect of care-chain can used in analyzing today's practices?

The next stage in operationalizing Logistics Management Theories in the health-care environment is to analyze current practices. In other

meaning, the effect of care chain characteristics are use to evaluate current procedures. see Figure 2.

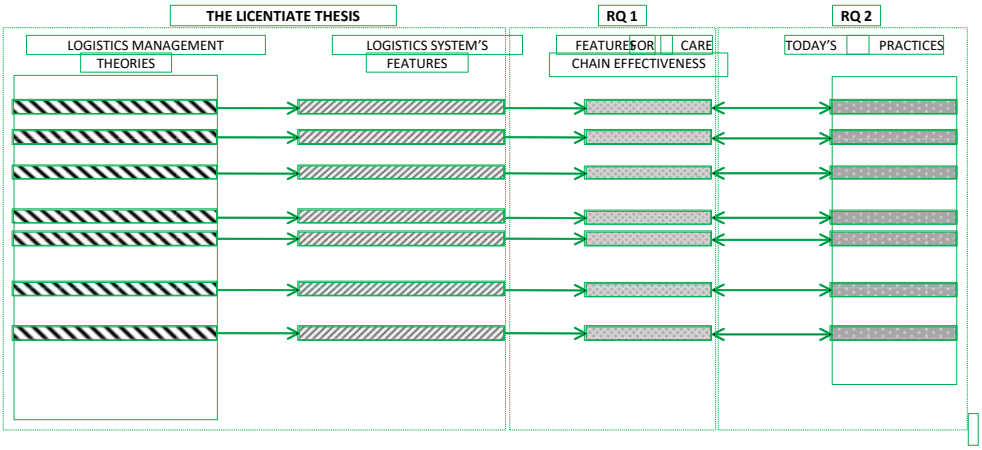

Figure 2: RQ 2 - analyzing today's practices by the meaning of features for the effect of Care Chain

4. THE DESIGN OF RESEARCH

The design of research may considered as a strategy to do the study.

The objective way to describe will be achieved.

How the highlighted questions will be answered (Dacosta & Idam , 2019).

The research design also includes inquiry methodologies.

The selection of certain data collecting and analysis methods (Granlund & Wiktorsson, 2019)

This document's research design will examine how Logistics Management Theories will be operationalized in a health-care environment in order to comprehend the effect of Care Chain. This is shown in Figure 3 which may be seen below.

The design thus influences how the research is conducted.

how the purpose may be addressed, and what can be learned (Dacosta-claro, 2019).

This document seeks to investigate how logistics management theories may be used to enhance our knowledge of the efficacy of the Care Chain.

This means that the setting does not decide the area to which the document belongs.
But rather the theoretical foundation that defines the subject of the research of logistics management.
In summary, the objective of this research is to investigate how logistics management theories might be operationalized in a healthcare environment in order to comprehend the efficacy of the care chain. In turn, the objective was developed into specific research questions that served as a guide for the study's design and specified how the purpose was met. How may the characteristics of care chain efficacy be described?
RQ 2: How can the characteristics of Care Chain efficacy be used to the analysis of current practices? (Kherbach & El Alami, 2019)

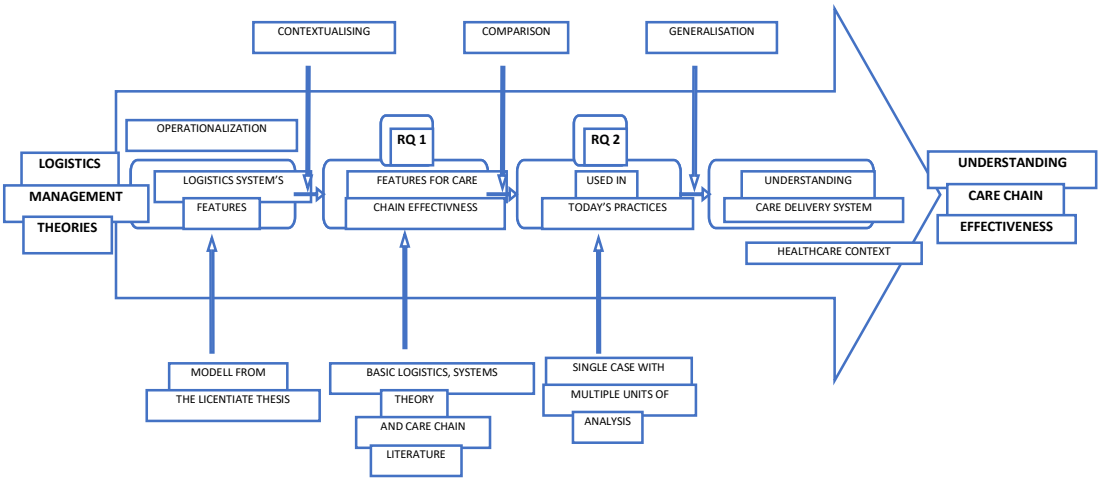

Figure 3: The research design to answer the purpose of this dissertation

As proven with inside the discern above, the studies layout is made out of some of essential additives that, whilst combined, represent the studies layout of this dissertation - Model from the licentiate thesis.

Contextualizing, Basic literature on logistics, structures theory, and the care chain. Research query 1, Comparison, unmarried case with numerous devices of analysis, Research query 2, and generalization. Each of those additives could be mentioned in similarly element with inside the sections that follow. The theoretical version of a logistics system's traits serves as a manual for the theoretical framework, the process of data collection, and therefore the analysis and conclusion of the dissertation. Hence, the function of the model from the licentiate thesis will be discussed first.

Hospital Logistics

As their functions have developed, the logistics departments of medical facilities have expanded from essentially hotel activities to incorporate more and more responsibilities (Kidd, 2019).

Depending on the research mentioned, healthcare logistics may have number of forms and include a vast array of procedures. Costin (2018) explains that health institutions vary greatly in terms of size, capacit, activity, and internal culture. According to (Kriegel & Jehle , 2019).

Logistics operations comprise responsibilities such as procurement, distribution, inventory management, and packaging in addition to planning, designing, executing, and regulating material flows in a supply chain. According to (Kriegel & Jehle , 2019).

When it comes to hospital logistics, services such as meal service and transportationare just as crucial as buying and receiving. Numerous authors have tried to classify logistical jobs using categories, grouping them into blocks of similar activities.

According to (Kriegel & Jehle, 2019) there are three significant acts in this context:

Procurement encompasses the purchasing and inventory management of a variety of products. Managing activities such as cleaning, cooking,

and sterilizing is an example of production management in action. Distribution entails the delivery of items from storage facilities to various consumption locations, or the conveyance of waste to shipping areas from where it may be shipped further. Transportation activities, which include the movement of goods (mail, samples, etc.) and people (staff or patients) inside healthcare facilities or between sites of a healthcare facility, have been included to this categorization (Moschuris & Kondylis, 2018). (Figure 4).

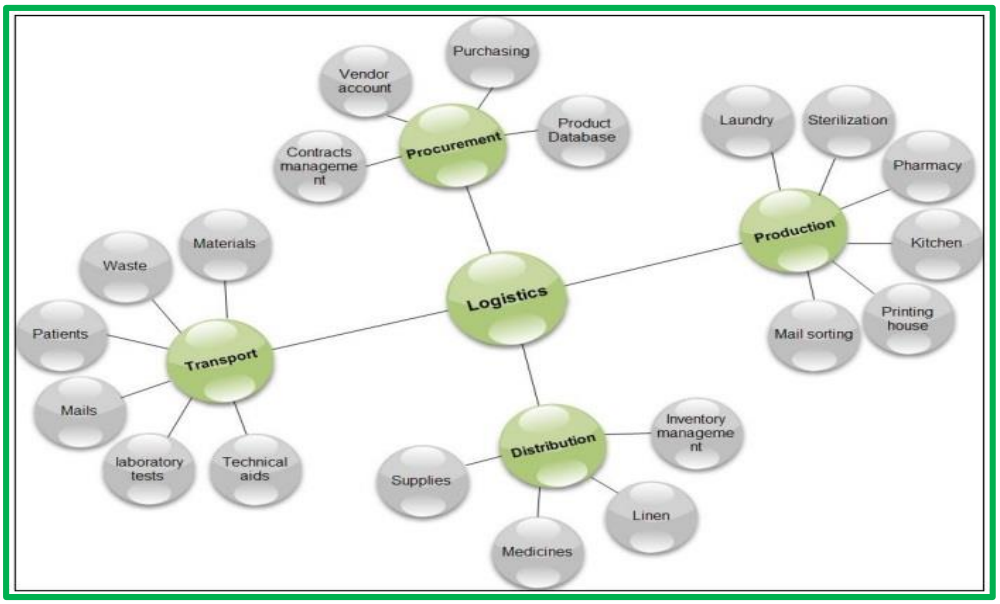

Figure 4: Hospital logistics dimensions

5.THE DATA COLLECTION

The key element in gaining credibility for case study research is to make the strategies and its method explicit, just so the stableness and appropriateness of the technique can be judged. A case study investigator need to have methodological versatility and need to observe advantageous formal strategies to make sure best control with inside the direction of the information collection. Therefore, description of the case and selection, the contacting of key informants

and area artwork arrangement, development of interview questions, case study protocol, the interviews, processing of information, and reflections of the interviewer are furnished with in the following sub-sections.

The empirical information collection method is illustrated with in the figure below.

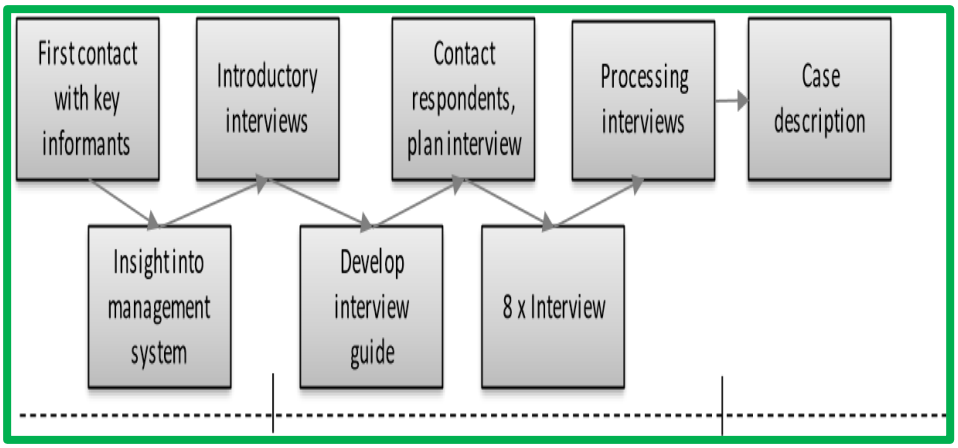

Figure 5: The Emperical Data Collection Process

5. 1 Description and Selection

The case blanketed on these studies is six care clinics belonging to the Department of Obstetrics, Gynecology, ENT, and Eyes with inside the Nuns Hospital (Saba Banat Hospital - Clot Bey - Old Cairo). The medical institution gets ladies in want of gynecological outpatient and inpatient care, maternity care, obstetric care, postpartum care, and fertility treatment. The branch is likewise chargeable for cervical screening and contraceptive advice. Pregnant ladies and obstetrics constitute the most important organization of sufferers with inside the branch (inner). Highly specialized care is supplied together with obstetrics, most cancers surgery, complicated gynecological instances and crucial ear operations. Gynecological surgical procedures may be completed throughout the day and in inpatient surgical management. The branch includes seven clinics, 4 of which might be indexed as

evaluation units. The obstetrics health center, the outpatient health center for ladies' care, the obstetrics health center for inpatients, the outpatient gynecology health center, the inner gynecology health center, and the ear, nose, throat and eye health center as well. The relaxation is a reasonably small specialized unit targeted on fertility treatment. And the 4 clinics with inside the case, with inside the obstetrics branch and clinics in gynecology, ear, nose, throat and eye illnesses as well.

5. 2 Case Study Protocol

A case examine protocol has been set up for the case examine on this dissertation, and includes:

- Research layout for key informants
- Link among description factors of a logistic machine and evolved interview questions
- The interview questions
- Invitation to the respondents, letter of creation and evaluate of the research. All respondents have voluntarily participated with the aid of using answering an invite dispatched with the aid of using email for my part from the researcher. The invitation consisted of exact data approximately the purpose of the research, heritage data approximately the project, the purpose of the interview, presentation of me as a researcher, commands approximately the manner of the interview and all interview questions. The individuals have been blanketed from deception with the aid of using sending them the part of the case document that they corresponded. Additionally, not one of the respondents are stated with the aid of using name.

5. 3 The Interviews

Interviews are the primary technique of the empirical statistics series for the studies on this dissertation. Interview as a way changed into selected for numerous reasons. Especially, a case takes a look at with in-intensity interviewing yields detailed, thick descriptions. It is appropriate while in search of to apprehend conduct in phrases of the context wherein the studies are carried out. Additionally, through locating out how and why humans do what they do, the machine they are inside and of which they are an element may be captured. This may be performed through interviews given that an interview is visible as an inter-view, in which expertise is built with inside the interplay between the researcher and the respondent. Furthermore, the researcher has to apprehend and be touchy to specific situations dealing with care carriers and the studies therefore needs to be carried out with an open lens to those issues. This is taken into consideration to be captured through the interviews for the studies on this dissertation with a mixed method of in-intensity, centered interviews and semi-based interviewing.

5.4 Processing of Data

The processing of records is of significance in view that a properly informed and documented tale opens the window into the sector of case studies. Further, a following evaluation relies upon at the particularity and first-class of the outline of the case. The case document for this reason has a critical assignment to fulfil those insistences. Recordings, notes, drawings of the affected person instances via their sanatorium made with the aid of using the respondents, files and insights into the enterprise device gave collectively inputs to the case document. All interviews have been

processed with the aid of using writing down the content material of the interviews with the aid of using listening them via. The interviews have been systematically summarized into thick condensations via systematically. Each interview ended in a man or woman case document that became dispatched with the aid of using e mail to the respondent to check it. This may be regarded as a draft overview with the aid of using key informant, and a detail to assist assemble validity. Two respondents commented at the facts of their case document, and their document have been delivered to and changed.

6. METHODS

Research philosophy is a set of ideas on how to collect, evaluate, and utilize data to better understand phenomena. There are many research method philosophies that fall under the umbrella word of epistemology (what is known to be true as opposed to what is thought to be true). The aim of science is to convert doxa (belief) into episteme (knowledge). There are two main research approaches in Western science: positivist (often known as scientific) and interpretive (also known as anti-positivist) This section covers the research techniques, tools, community, and data sources utilized in the area of analysis. The primary goal of this study is to validate a sustainable growth model for the Egyptian healthcare sector. Qualitative methods were used in the present study to help achieve this goal (Pokharel & Sheref, 2018). This section covers the research topic's methodology, study tools, study communities, and data sources that are currently accessible. The primary goal of this study is to perform preliminary validation of an Egyptian healthcare sector sustainable development model. This was accomplished via the use of qualitative research techniques in the present study (Swinehart & Smith, 2018).

The study's methodology is based on a review of scholarly papers and theses that focus on healthcare logistics. This synthesis does not include book chapters, dissertations, or conference papers. Many internet databases were utilized to find relevant keywords containing phrases such as logistics activities in hospitals (hospital logistics), logistics management (logistics management in hospitals), hospital, etc. in both French and English. The emphasis is on works published between the years 2000 and 2019. Some older articles, on the other hand, have been included because of the significance of the information they contain. More than 60 papers dealing with hospital logistics and administration were included in the proceedings. The articles that were chosen dealt with hospital logistics and highlighted some of the operations that fall within its purview, including but not limited to:

- According to the hospital logistics definitions.
- healthcare logistics operations are described and identified.
- The logistics department's operations and duties will be shown via case studies.
- A specific problem with hospital logistics is addressed, along with suggestions for change (Young, 2017).

The goal is not to find as many papers as possible or to examine the most recent developments in hospital logistics, but rather to define the subject of hospital logistics and establish the breadth of its use.

7. RESULTS AND ANALYSIS

Health care costs the average Egyptian family 9.2 % of their income each year, or 2, 416 EGP. These funds are used for medical equipment, out-patient clinics, and hospitalization services, and are split between public and private spending.

The greatest yearly spending rates are observed in urban governorates, at 33,718 EGP.

Many chronic diseases that can be passed from person to person or animal to person are now more common than previously thought. These include cancer, diabetes, and obesity as well as chronic lung and respiratory ailments (Beaulieu & Roy, 2020).

The following table provides more information about these ailments:

Table 1: Prevalent Diseases

Persisting Communicable	Persisting non-Communicable	Prevalence of Non-Communicable Diseases	Common Types
Hepatitis B	Hypertension	26% of Egyptian Adults	
Hepatitis C (increasing)	Diabetes Mellitus	9% of Egyptian Adults	
	Cancer	110-120 cases/100,000 people	Breast, Liver, Bladder &Lymph Node
	Blindness	1% of thepopulation	

There were 643 government hospitals, with 98,319 beds according to the Egyptian Ministry of Health, 19 general hospitals, 38 hospital insurance authority facilities, and 74 public university facilities, while there were 926 private facilities with 25,827 beds.

The government intended to build and remodel 70 hospitals in 2018 and 2019 to assist the sector to grow and improve services (Chow & Heaver, 2020).

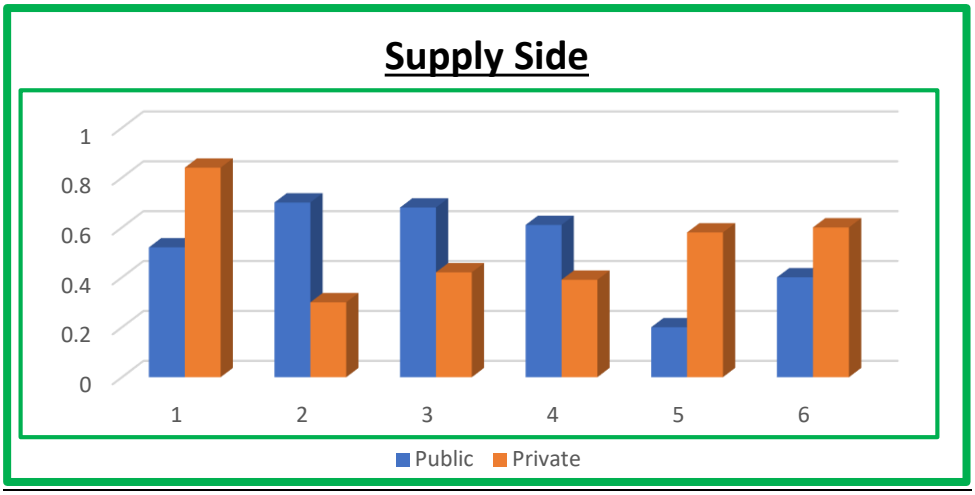

Figure 6: Implemented Investments in Health Care Sector

Health care spending by governments as a percentage of total sector spending is also indicative. In 2015, it was 40.7%, 39.4%, 41.3%, and 39.0% accordingly, according to the World Bank (Granlund & Wiktorsson, 2019).

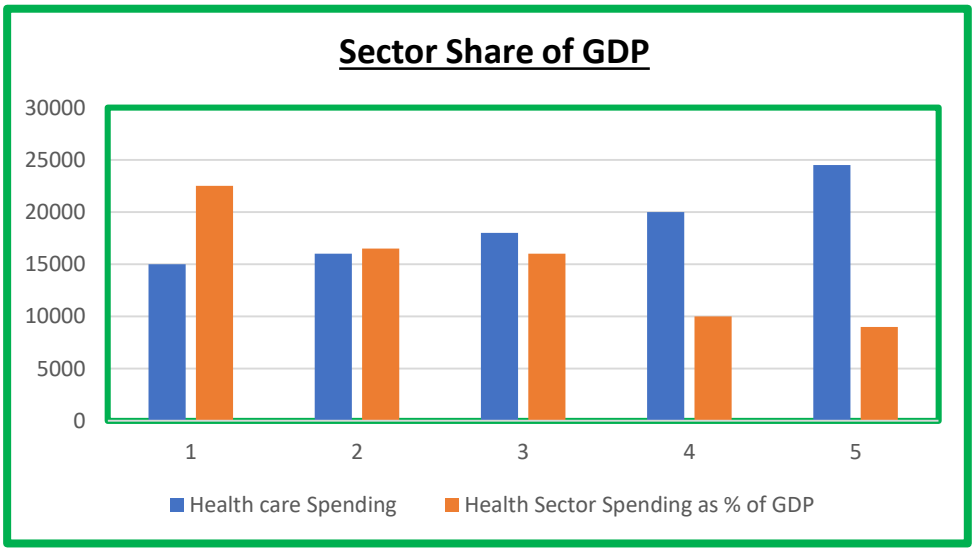

Figure 7: Sector Share of GDP at Factor Cost

Despite an increase in government spending on the healthcare sector, healthcare spending as a percentage of GDP has been declining over time.

Furthermore, healthcare spending, as a percentage of total government spending, is far lower than the global average. This is highlighted much further in the next table.

Health insurance

The New Rural Cooperative Medical Scheme (NCMS) covers rural residents; the Urban Employees Basic Medical Insurance (UR-BMI) covers urban employees; and the Urban People Basic Medical Insurance (UR-BMI) covers unemployed urban residents; (UR-BMI). In terms of funding and management, the three strategies are distinct (Figure 2). There were only 333 counties that were members of the NCMS in 2003, but there were 2176 counties participating by 2009.

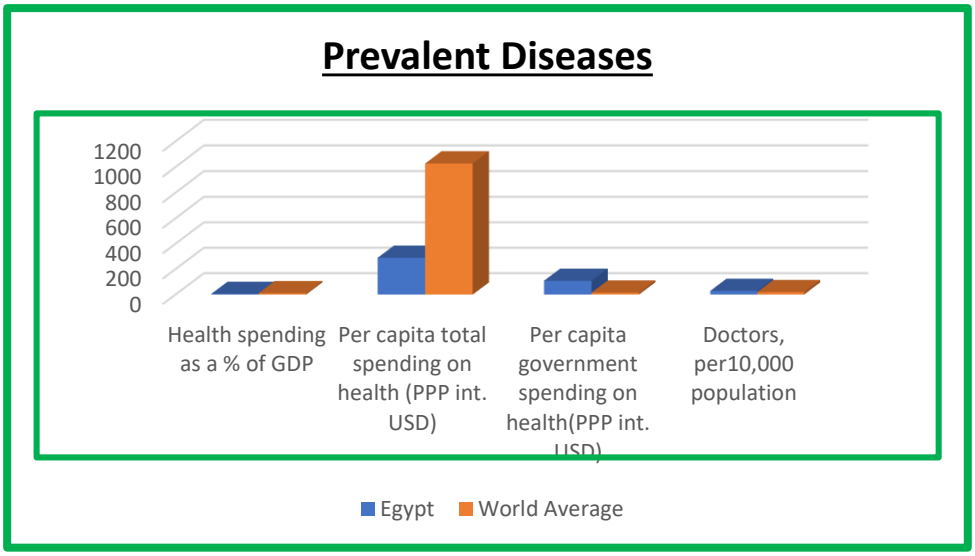

Figure 8: Prevalent Diseases

The NCMS is administered by the Ministry of Health. Rural families' insurance coverage increased sevenfold between 2013 and 2018, from 13 percent to 92 percent. 31 In 2009, 94% of rural people had health insurance, with 90% covered by the NCMS and 4% covered by other government-sponsored programs. County governments created the NCMS to serve a rural population of 840 million people. Nearly 300 million city workers are obliged to participate in the UE-BMI

program, which was established in 1998 and is administered at the local level. The UE-BMI is estimated to cover about 67% of the urban workforce at this time. About 200 million children, students, the elderly, handicapped, and other non-working city residents will benefit from a new scheme called UR-BMI. After a year of testing in 79 locations, it was rolled out throughout the nation in 2008. By the conclusion of the year, 60.4% of the intended audience had been reached. Municipal governments develop and decide on the compensation methods for the program (Kidd, 2019).

Supply Chain in Healthcare Industry

The healthcare supply chain includes the movement of many different kinds of products and, as a result, multiple parties are involved. The main goal of the healthcare supply chain is to meet the needs of healthcare providers by delivering goods in a timely way.

In the healthcare supply chain, stakeholders will be split into three main categories based on their roles: producers, buyers, and suppliers.

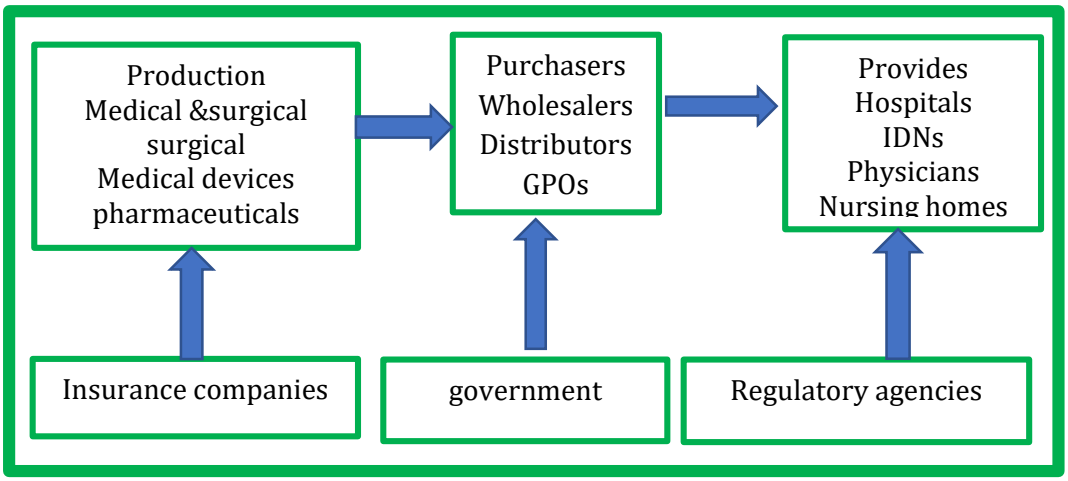

Figure 9: SCM in the Healthcare industry

This procedure involves transporting medications, surgical equipment, and other goods as needed by healthcare professionals, and it is part of the Healthcare Supply Chain Logistics industry as a

whole. Healthcare Supply Chain aims to identify departmental gaps and provide recommendations on how to close them. Targeted health outcomes and increased global health investment will be sought by identifying weak regions. Improved processes, cost savings, happy employees, successful treatment, and satisfied patients are all benefits of Healthcare's efficient supply chain.

The existence and involvement of government organizations, regulatory agencies, and insurance companies all contribute to the system's complexity (Kriegel & Jehle, 2019). The synthesis of the drug's active component is the first step in the manufacturing process. There are lengthy cleaning downtimes in production because of the need to prevent contamination between goods, which results in batch manufacturing (Pokharel & Sheref, 2018). This essentially depicts the process of making anything. As a consequence of secondary manufacturing, which involves converting the active component into useable goods (such as pills and capsules), the number of product lines may significantly increase, particularly when packaging is considered. According to (Swinehart & Smith, 2018), product growth at this point in the supply chain may be 200 times greater. The location of manufacturing facilities is increasingly affected by variables like tax benefits in the pharmaceutical business, which is becoming more global (Marriott & Renault, 2019). Secondary manufacturing, like primary manufacturing, is based in a different geographic area and caters to regional or local markets (Kriegel & Dieck, 2019).

When it comes to the distribution of completed goods, there are many routes to the market to choose from. The wholesaler is the most important middleman (at least in terms of volume). Approximately 80% of the volume in the United Kingdom passes via this conduit (Kriegel & Dieck, 2019). Supplies are sent straight from the

manufacturer's distribution center to hospitals and shops with high demand. hospitals may benefit from economies of scale by pooling their purchasing power, for instance, through group buying organizations (Dacosta-claro, 2019).

(Moschuris; Sely, et al. 2018) goes into great depth on the features of these supply networks, including the usual levels of performance. In order to satisfy the entire supply chain, goods need between 1,000 and 8,000 hours of lead time. Stock rotations take between one and eight weeks, which suggests that inventory levels are already high. There are studies that show hospital storeroom stock turns last four to five weeks, such as (Brodhag & Taliere, 2020). Authors have also discussed the topic of demand amplification (Beaulieu & Roy, 2020). This is probably to be anticipated, given the number of intermediates in the supply chain and, as a result, the use of batching during primary production.

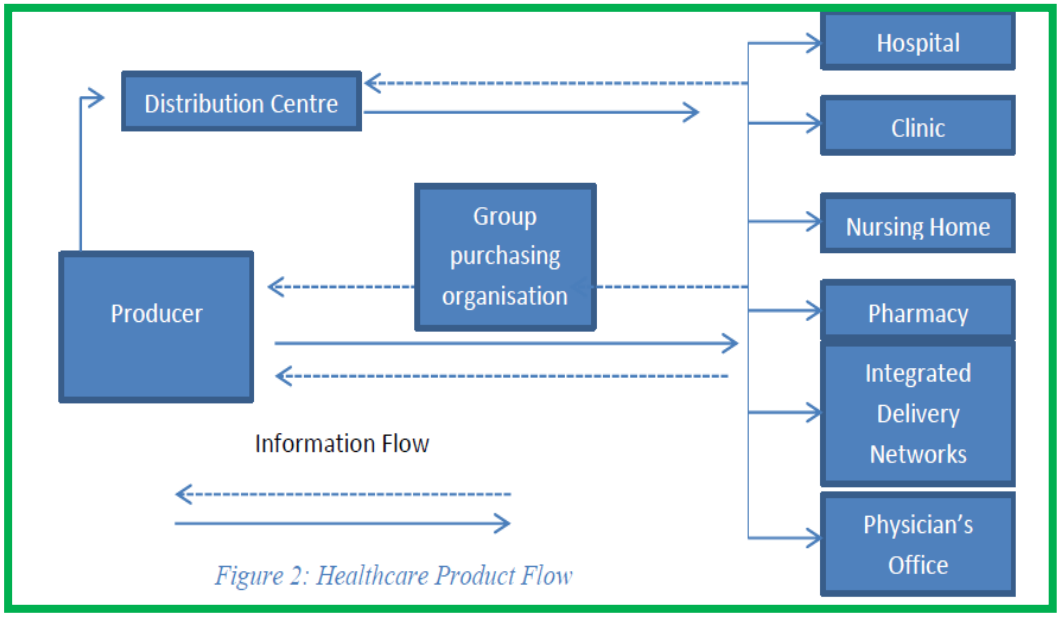

Figure 10: The product flow

It is the healthcare provider who is both the beginning and end of the manufacturing process. According to their form, goods are delivered

straight from the supplier to the healthcare provider or go via a distributor before reaching the healthcare provider. The healthcare supply chain is often described as being highly integrated but also as being inefficient (Azzi & Persona, et al., 2020). The conventional health care supply chain has fundamental flaw:each step functions independently, resulting in conflicting goals and priorities that prohibit the supply chain from functioning as a network. These conflicting objectives, among others, made it difficult to implement SCM techniques.

7. DISCUSSION AND CONCLUSION

Hospitals' primary responsibility is to treat and care for patients. As a result, a slew of related tasks will need to be considered. It's possible that many of these factors go unnoticed by patients, yet they have a major effect on how patients perceive a hospital visit. Many of these tasks go under the umbrella of hospital logistics, which encompasses everything from buying to transportation to catering and everything in between. Such tasks are often delegated between several departments for management's convenience. Despite the fact that most hospitals have a department solely devoted to logistics, these tasks are still spread over several divisions. For instance, it was discovered that stock replenishment operations and related procedures sometimes required up to five different teams of workers (Azzi & Persona, 2020).

When transportation operations are split between multiple departments, the effort is multiplied, and no synergies between the various transportation circuits can be taken advantage of, and the total cost of such procedures is not known (Aptel & Pourjalali, 2021).

Most of the time, the pharmacy department is in charge of medication management, including negotiations, purchases, distribution, storage,

and preparation of pharmaceuticals goods in the amounts required by the care facilities (Swinehart & Smith, 2018). Due to laws requiring that drug control be performed by the pharmacy graduate, this is the case (Kriegel & Dieck, 2019).

Service providers, in addition to hospital departments, may be tasked with managing logistical operations (figure 10). Hospitals have the option of outsourcing logistical operations, where a private sector expert is tasked with managing and executing certain activities, like as catering, laundry, cleaning, and so on, completely or partially (Moschuris & Kondylis, 2018), in their study of a Swedish hospital, for example, state that a transportation department, working as an external part and from which the hospital buys services, ensures all transportation activities (transports of waste material, laundry, food, pharmaceuticals، and patients). Outsourcing logistical operations have become management strategy in Morocco. Hospitals have been known to contract out hotel services including cleaning, laundry, security, and catering to other parties (Pokharel & Sheref, 2018). The Kriegel group (2018) asserts that the variety of externally provided services will expand and that higher-ranking hospital logistic sectors (such as medicines and sterile products) will be outsourced as a consequence (Young, 2017).

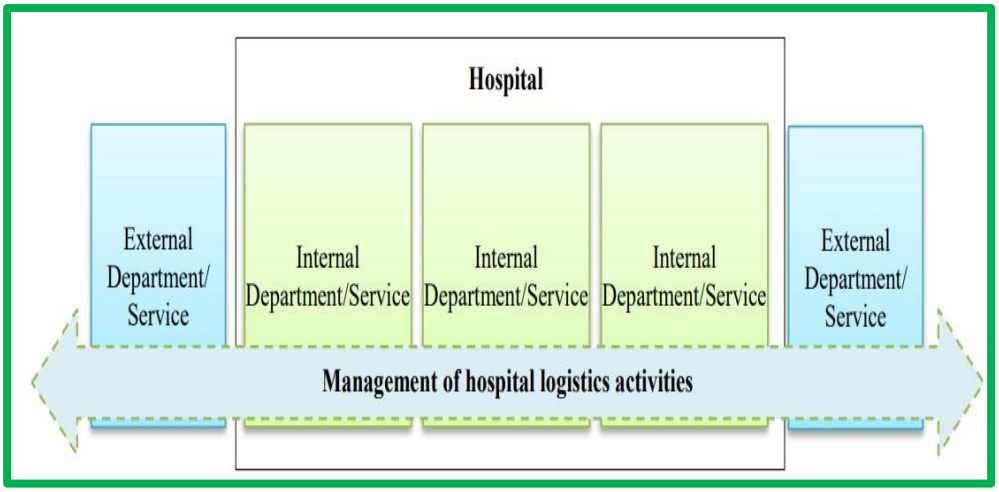

Figure 11: department responsible for hospital logistics planning and implementation

8. CONCLUSION

As a result of this research, we now have a better knowledge of the logistical factors in Egyptian hospitals. Only eight Egyptian hospitals and specialized care facilities were included in this research. For these reasons, we think that the information provided here fairly represents hospital logistics. The research was conducted on a voluntary basis, and some hospitals were public healthcare providers.

In hospitals, logistics plays a significant role as a back-end for the provision of an efficient service. In order to remain competitive, hospitals must evaluate whether activities should be removed (such as paperwork), outsourced (like accounting), or optimized (like IT). Another possible strategic strategy to improve hospital cost efficiency is risk-sharing among the facilities.

Additionally, this research showed that buying, which is often seen as a non-value logistics activity in clustered hospitals, is handled by a single unit for common goods in these facilities. However, because of the unique character of hospital service offerings, individual hospitals were left to purchase uncommon goods and tiny items. This is smart

decision since buying in bulk on a regular basis will allow you to take advantage of economies of scale. The quality control of the various hospitals may be improved by enabling them to buy tiny and uncommon (unique goods).

Stockpiling is standard practice in Egyptian hospitals, with most keeping two weeks' worth of supplies on hand. When local suppliers' knowledge of hospital requirements improves, partnerships based on trust, efficiency, and effectiveness may be established with suppliers to reduce stock levels to as little as one week's supply. This may help keep logistical costs down even more. The use of vendor-managed inventory may likewise be put to good use in reducing hospital inventory. Because suppliers are nearby and hospitals utilize internet commerce, implementing JIT or VMI should not disrupt the supply chain. Furthermore, according to the findings of this research, outsourcing is common in Egyptian hospitals, and it may not always result in lower hospital product and service prices.

ICT usage was found to be prevalent in hospitals, despite the fact that no-cost reductions could be shown. In hospitals, record keeping and service management are critical for efficient operations.

Due to the fact that this research only offers basic guidelines for the formalization of logistical characteristics in Egyptian hospitals, any conclusions drawn from it should be taken with a grain of salt. This research was mostly based on interviews with MMD executives and gives a comprehensive picture of logistics. As a result of this research, further studies may be carried out in collaboration with hospitals to concentrate on particular topics such as inventory management or the use of ICT. Hospitals not just in Egypt but also in the region and across the globe may utilize the results of logistics-focused research to improve the overall efficiency of logistics operations. It is not necessary

to stress the importance of all hospitals working together on this research.

SUGGESTION FOR FURTHER RESEARCH

Based at the findings from these studies, a few instructions for similarly studies are right here discussed., numerous development guidelines may be located on the subject of the evaluation of today's practices. The consciousness of the dissertation is not always to offer development guidelines for care chain effectiveness however, that step is not always that a way away. It can but be concluded that a number of those enhancements' capacity may be realized without wondering the layout. Enhancements inside the set layout. This is in comparison to machine remodel, in which the layout is to be questioned. Some of the favored capabilities for care chain effectiveness in all likelihood contain remodel of healthcare organizations to be achieved. For example, primarily based totally on a pre-determined affected person provider stage and described lead-instances to make certain that the procedure is designed to stick to them. If the abilities cannot help the requirements, it should be decided whether the care-shipping machine might be redesigned to remedy the gaps.

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الإدارة اللوجستية ودورها في إدارة مستشفيات التأمين الصحي في مصر 2022

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ملخص البحث باللغة العربية

البحث يناقش النظر في الخدمات اللوجستية للمستشفيات في مصر والأنواع المختلفة من الأنشطة التي يكون قسم اللوجستيات مسؤولا عنها. كما تم تسليط الضوء على استخدام تكنولوجيا المعلومات والاتصالات (ICT) لأسباب لوجستية، وكذلك سياسة إدارة المخزون. يتم فحص طبيعة التحالفات الإستراتيجية في صناعة الرعاية الصحية في مصر في هذه الدراسة. تم جمع البيانات باستخدام منهجية شملت الاختبار المسبق للاستبيان وإجراء المقابلات. تم إنشاء الاستبيان بعد مراجعة مجموعة متنوعة من الأدبيات ذات الصلة. وفقا لنتائج هذه الدراسة، تشارك الأقسام اللوجستية في مجموعة متنوعة من العمليات المتصلة بشكل قريب بادارة المستشفيات، وبعضها يزود الخدمات الهندسية. حيث ايضا تستخدم تكنولوجيا المعلومات والاتصالات في المستشفيات. يتم تنظيم المستشفيات في فئات عديدة من أجل تقليل تكاليف التشغيل ، وخاصة النفقات اللوجستية. من ناحية أخرى، لا تنظر المستشفيات إلى تحالفات الموردين كخيار استراتيجي، وتفضل الاستعانة بمصادر خارجية للخدمات اللوجستية. تظهر النتائج أيضا أن المستشفيات المصرية لديها سياسة تخزين جيدة لكل من السلع الطبية وغير الطبية، مما يسمح بالتعامل السهل مع التقلبات والاختلاف فى طبيعة المرضى. حيث تتحسن صناعة الرعاية الصحية في مصر باستمرار، وستساعد النتائج كثير من المستشفيات في المناطق الأخرى لتبني بعض الممارسات، مثل التركيز على البائعين المحليين (Suppliers)، والاستعانة بمصادر خارجية (Outsources)، وتعظيم استخدام تكنولوجيا المعلومات كعوامل تنافسية يمكن أن تحسن الخدمة وتقليلها. كما تؤثر على تقليل تكاليف التشغيل. وتناقش الدراسة ما الذي يحفز الناس على استخدام تكنولوجيا المعلومات والاتصالات في الخدمات اللوجستية في الرعاية الصحية، وكذلك ما الذي يمنعهم من القيام بذلك.

الكلمات الدالة :إدارة الرعاية الصحية ، الإدارة اللوجستية ، إدارة المستشفيات.

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