

ADVANCEMENT IN SUPPLY CHAIN IN HEALTH CARE INDUSTRY: AN EXPLORATORY STUDY

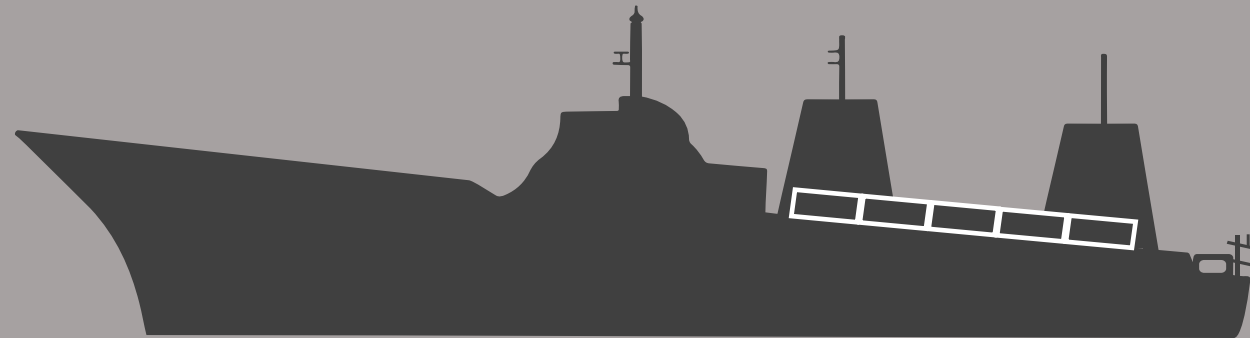


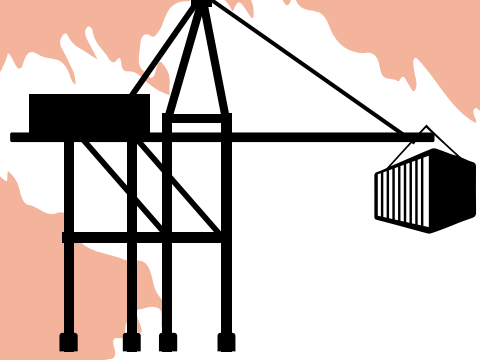
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INTRODUCTION

- A supply chain is a group of people and businesses responsible for **producing a product** and **getting it to the consumer**.
- The **raw material producers** are the first links in the chain, and the last is the van that **delivers the finished product** to the customer.
- The importance of supply chain management may be seen in the **reduced costs** and **improved productivity** that come from an optimized supply network.
- Companies work to enhance their supply chains in order to **lower costs and maintain competitiveness**.





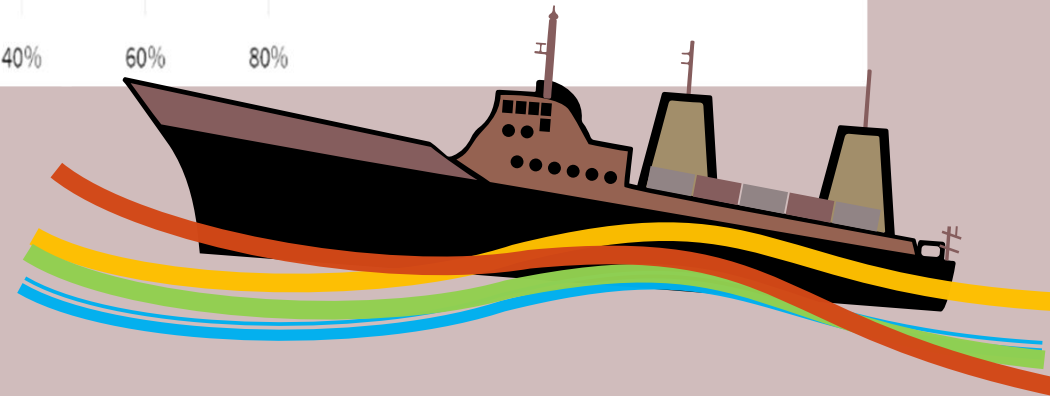
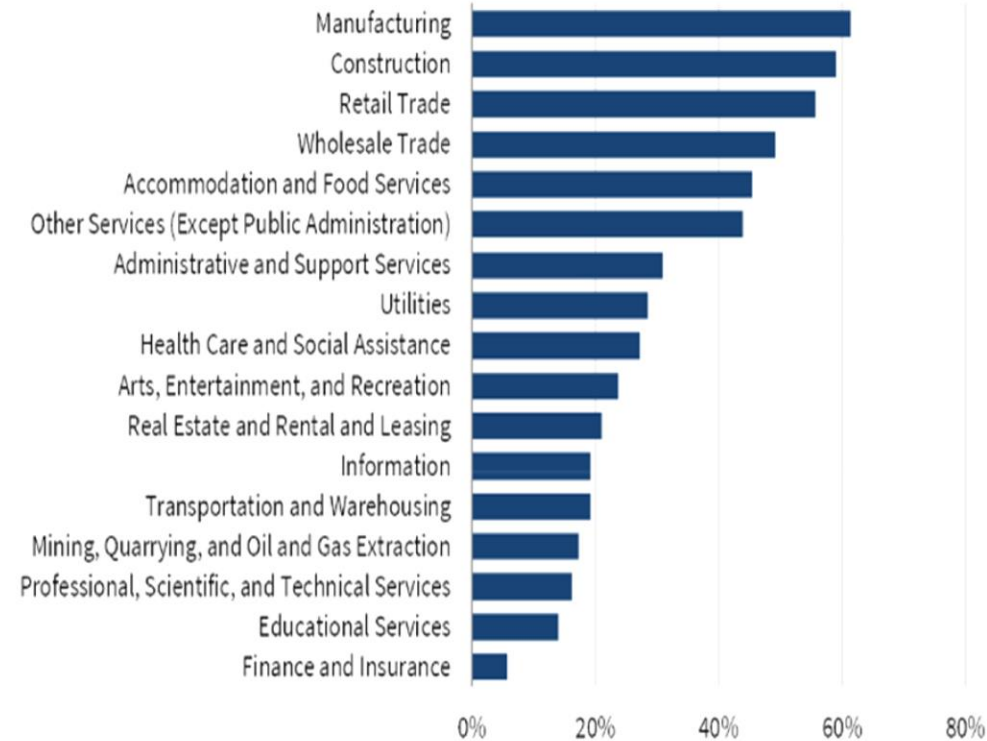
UNDERSTANDING A SUPPLY CHAIN

Every step taken to deliver a finished good or service to the consumer is included in the supply chain. The process may involve **locating raw materials**, delivering them to the **production site**, and then transferring the final goods to a **warehouse or retail** location where they can be shipped **to the consumer**.

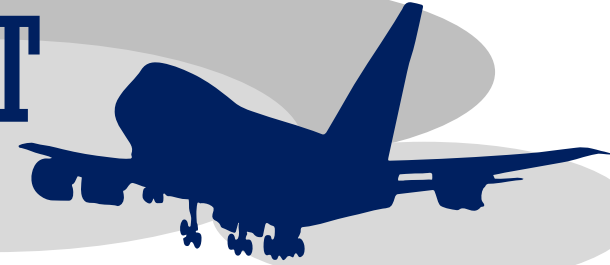
- **Producers, Vendors, Warehouses, Transportation Companies, Distribution Centers, And Retailers** are among the organizations participating in the supply chain.
- When a company receives a customer order, the supply chain gets going. Product development, marketing, operations, distribution networks, financing, and customer service are thus among its core duties.
- Effective supply chain management can **reduce a company's overall costs and increase profitability**. It can have an impact on the rest of the chain if one link breaks.



COVID 19 & SUPPLY CHAIN

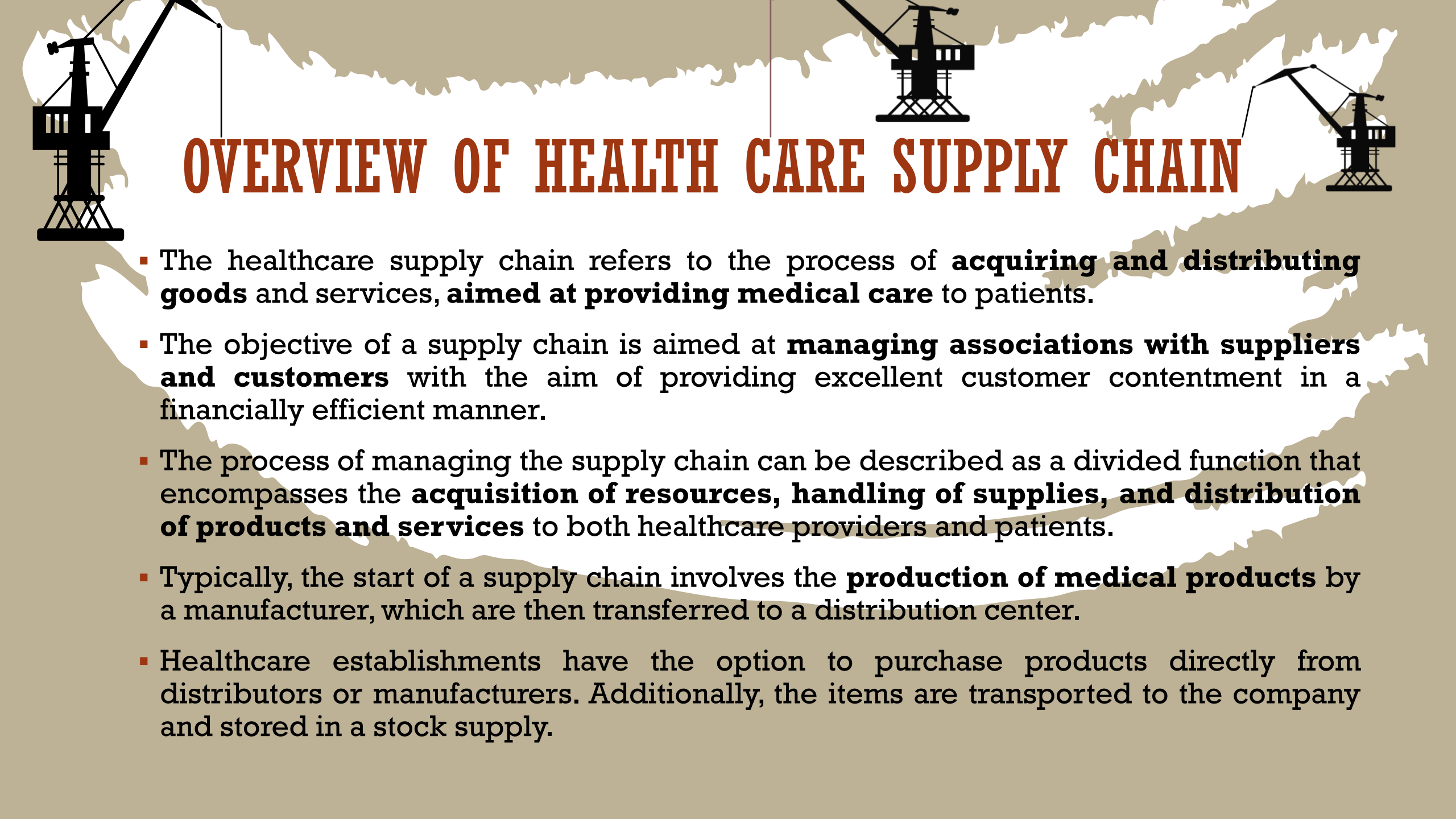


SUPPLY CHAIN MANAGEMENT



- The management of the processes that turn raw materials into finished goods that are then sold to end customers is known as supply chain management (SCM).
- The importance of supply chain management may be seen in the reduced costs and improved productivity that come from an optimized supply network.





OVERVIEW OF HEALTH CARE SUPPLY CHAIN

- The healthcare supply chain refers to the process of **acquiring and distributing goods** and services, **aimed at providing medical care** to patients.
- The objective of a supply chain is aimed at **managing associations with suppliers and customers** with the aim of providing excellent customer contentment in a financially efficient manner.
- The process of managing the supply chain can be described as a divided function that encompasses the **acquisition of resources, handling of supplies, and distribution of products and services** to both healthcare providers and patients.
- Typically, the start of a supply chain involves the **production of medical products** by a manufacturer, which are then transferred to a distribution center.
- Healthcare establishments have the option to purchase products directly from distributors or manufacturers. Additionally, the items are transported to the company and stored in a stock supply.

THE CHAIN OF SUPPLYING PHARMACEUTICAL PRODUCTS (MEDICAMENTS)

- Effective supply chain management plays a crucial role in hospitals, as it ensures the availability of medications in a timely fashion while keeping costs at a minimum.
- The process of managing supply chains encompasses a range of activities, such as negotiating agreements with various suppliers and vendors, soliciting bids through the tender process, and determining the most effective means of product delivery.

THE CHAIN OF SUPPLYING MEDICAL DEVICES

- The provision of healthcare related equipment and supplies through a coordinated system of production, distribution, and delivery is known as the medical devices supply chain. Sophisticated equipment such as **X-rays, MRIs, and mammograms** demand expert handling and are easily prone to vulnerability.
- It is crucial to collaborate with manufacturers and logistics providers who possess extensive knowledge and expertise in handling and transporting delicate goods in the appropriate state to their final location.

TRADITIONAL CHALLENGES IN HEALTH CARE SUPPLY CHAIN

- INACURATE INVENTORY DATA
- WEAK SUPPLY CHAIN
- DELAYED SUPPLIES
- LACK OF INNOVATIONS
- SHADY ORDERING & BIDDING PROCESSES



Inaccurate Inventory Data

- The most significant challenge for supplies management is the limited visibility into the hospital's inventory.
- Hospitals that continue to use outdated software to manage inventory, procurement, logistics, and other operational tasks often struggle to perform these tasks with optimal efficiency.
- Regularly updating and sharing inventory data is essential to efficiently redistribute medical resources amongst different healthcare facilities.

Weak Supply Chain

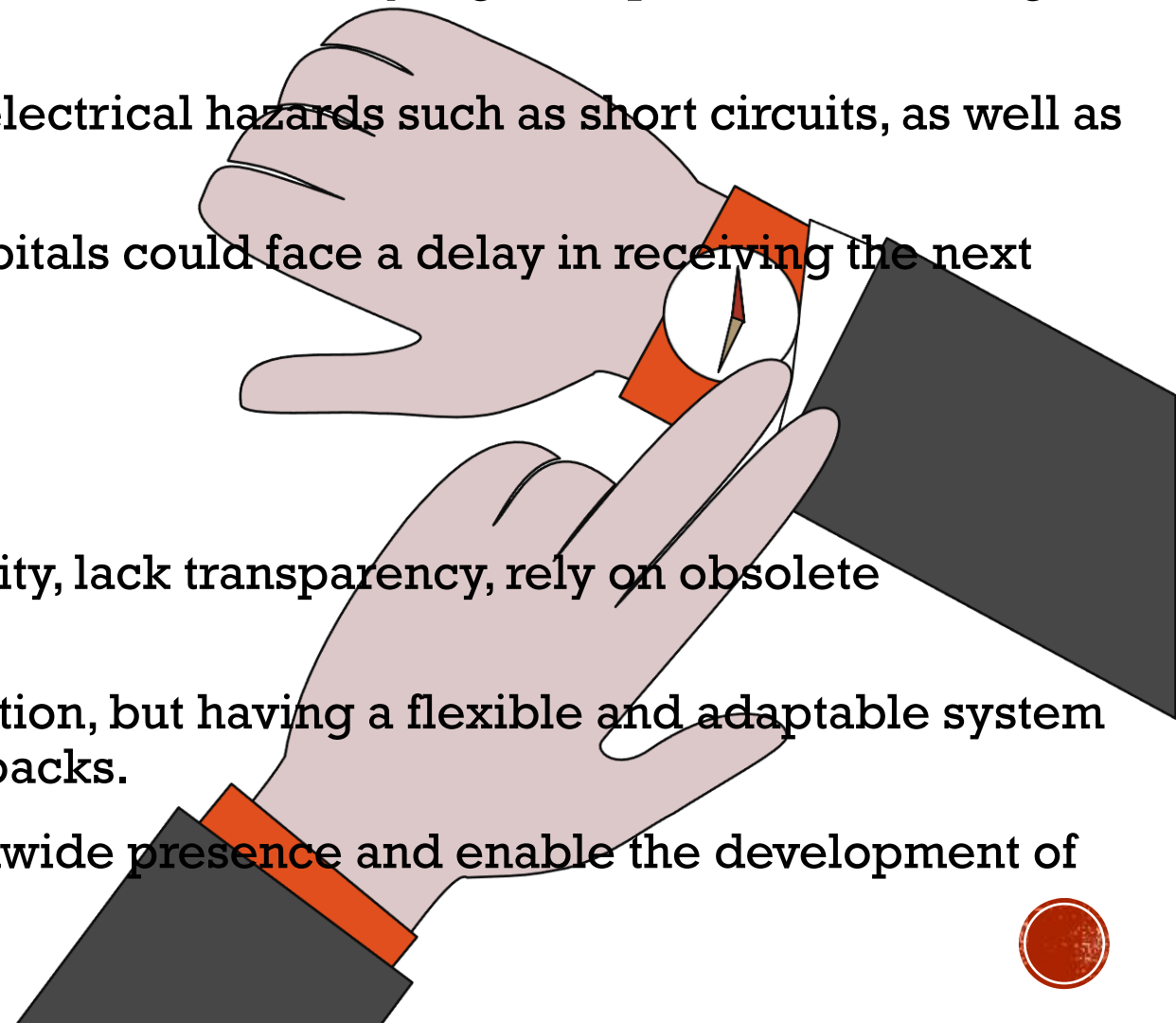
- Upon careful examination of the medical supply chain, it becomes apparent that hospitals rely excessively on external logistics providers.
- A decline in the procurement process results in reduced ability to promptly respond to a crisis.
- Insufficient transparency and responsibility are the primary causes of an ineffective supply chain.

Delayed supplies

- Delays in supplies mostly occur due to product damage or blockages within the supply chain.
- An instance of this is when electronic devices encounter abnormally high temperatures, leading to a decrease in their battery life.
- Excessive moisture or condensation can result in electrical hazards such as short circuits, as well as a host of other potential damages.
- The manufacturer receives faulty goods while hospitals could face a delay in receiving the next shipment.

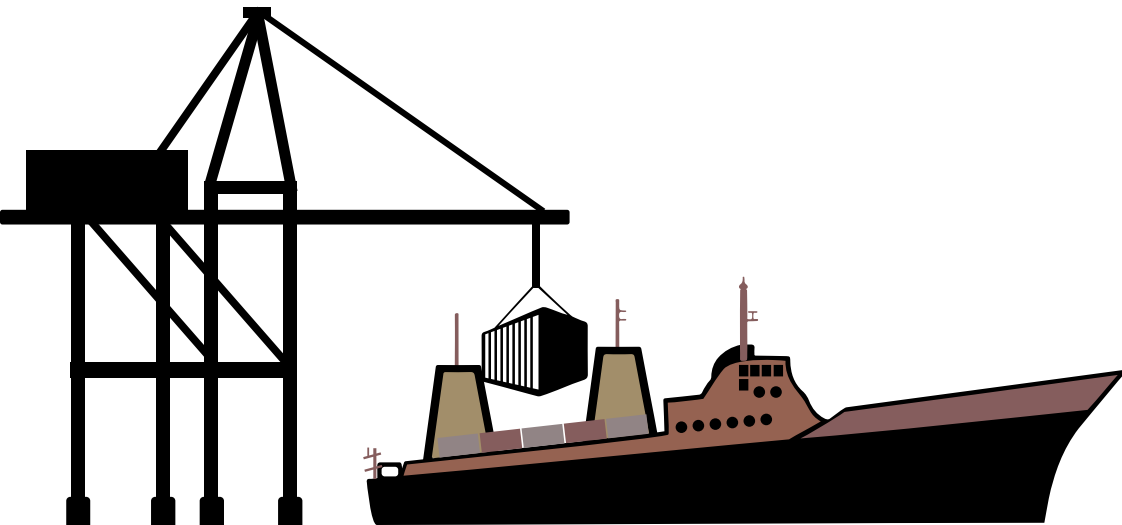
Lack of innovation

- These systems have insufficiency in storage capacity, lack transparency, rely on obsolete operational strategies and technologies.
- One cannot fully anticipate every unforeseen situation, but having a flexible and adaptable system can aid in swiftly recovering from unexpected setbacks.
- Innovative technologies facilitate attaining a worldwide presence and enable the development of affluence, essential aptitudes, and proficiency.



Shady ordering and bidding processes

- The absence of a clear source tracing mechanism within supply chains has resulted in instances of fraudulent behavior due to the lack of openness and visibility.
- To prevent unethical behavior, customers can place their trust in end-to-end delivery tracking systems that utilize Blockchain technology.
- It is crucial for all stakeholders to have access to the complete visibility of the supply chain in order to guarantee a strong and effective workflow.



ADVANCEMENT IN SUPPLY CHAIN

Quality Customer Service

The management of the supply chain is focused on the **requirements of the customers**. It is all about providing the **proper volume and quality of the goods for the right price**. All of this occurred at the ideal time and place.

- Customers have a variety of preferences; therefore, we must always adapt to their needs. Having the ability to offer distinctive solutions to clients makes a huge difference. The businesses who make an **effort to learn and invest in new technologies** are the ones that genuinely succeed in this industry.

Cost

Due to economic restrictions, the **prices of labor, raw materials, and energy have all gone up** on a global scale.

- The best way to deal with this problem is to **strengthen your cost control** through effective plan execution and ongoing monitoring. **You would be able to do this by making an attempt to provide efficient warehouse operations.**

Risk Management

Due to the market's ongoing shift, which results from a range of **causes including consumer wants, political agendas, and international sourcing**, the business would face serious difficulties.

- Always have a risk management strategy in place that outlines how your business will handle disruptions to regular operations. You might handle these problems successfully and with less work on your part if you hired a **logistics software development business**. After all, effective logistics management is essential to the whole enterprise.

Supplier Connection

You will be able to supply your consumers with **high-quality goods on schedule if you establish a mutually beneficial and peaceful connection** with your partners or suppliers. This enables you to develop opportunities for performance improvement.

- You would be able to operate effectively and provide a superior product if you developed a solid working relationship with your supplier short period of time.



Qualifications

Finding qualified personnel who are enthusiastic and engaged in this line of work has grown more difficult over time. Employees hired for this position must be aware of the duties and responsibilities required.

- Their market value will start to increase because it is getting more and harder to recruit devoted workers for this industry.

Unexpected Delays

Although obtaining products and supplies may be simple, there is a chance that they won't always arrive on time, especially given time zones and the range of shipping options available.

- Always keep a reserve of goods. You can schedule the delivery of certain materials and include a time cushion to ensure everything goes according to plan by using an effective warehouse management system.

Changing Markets Quickly

It is exceedingly challenging to keep up with and adjust to the range of developments in the industry because technology advancements are constantly changing our markets.

- Change will always occur. There is little doubt that employing logistics management software will help us manage the way we adapt to change. We are able to adapt to the situation and raise our overall productivity.



BENEFITS IN ADVANCED HEALTH CARE SUPPLY CHAIN SYSTEM

Reduce Operational Costs

- The medical industry is dependent upon supply chain managers to develop and establish networks that are aligned with the objectives of their customers whilst minimizing the overall expenditure incurred.
- Healthcare institutions sometimes encounter situations of overcharging stemming from pricing variances and inaccuracies in instances of delayed deliveries, culminating in unforeseen shortages and lack of adequate inventory management.

Better Processes

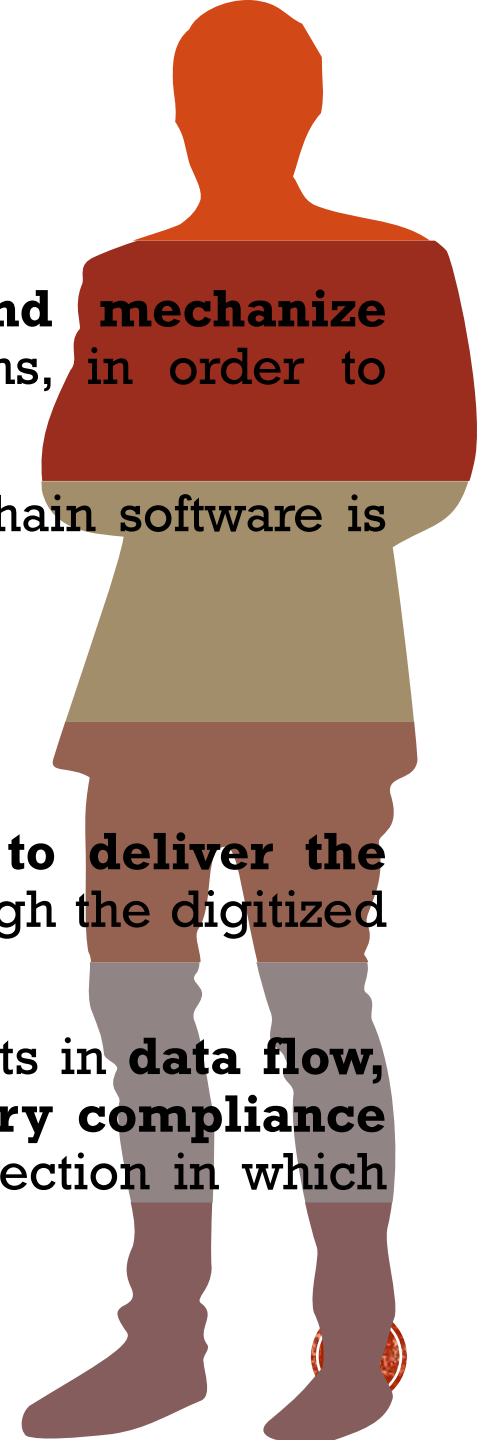
- Among the most prominent challenges within the realm of healthcare logistics are device maintenance, waste disposal, inventory management, and shipment handling.
- Maintaining the operational state and sterility of medical devices, ensuring the proper disposal of waste, effectively monitoring and cataloguing inventory, and ensuring successful transportation of medical supplies.

Help In Automation

- The implementation of supply chain software **aims to streamline and mechanize conventional manual procedures conducted** within healthcare institutions, in order to optimize the efficiency and efficacy of the supply chain process.
- The procurement of aid from firms engaged in the development of supply chain software is progressively gaining significance due to various rationales.

Provides A Competitive Edge In The Marketplace

- Enabled by digitization, healthcare providers are afforded the **capability to deliver the precise product to the patient in a timely and cost-effective manner** through the digitized supply chain mechanism.
- Healthcare professionals can optimize their use of technological advancements in **data flow, analytics, provider-patient communication, asset tracking, and regulatory compliance** by implementing a digital supply chain, signifying that digitization is the direction in which healthcare is headed.



Enhancement Of The Three C's

- The management of the supply chain signifies an emphasis on augmenting the three fundamental components of **Communication, Collaboration, and Coordination** among **vendors, suppliers, transportation organizations, and shipping establishments**.
- Supply chain management employs a centralized distribution approach, ensuring reliability for end users and providing correct output results.

Increased Transparency

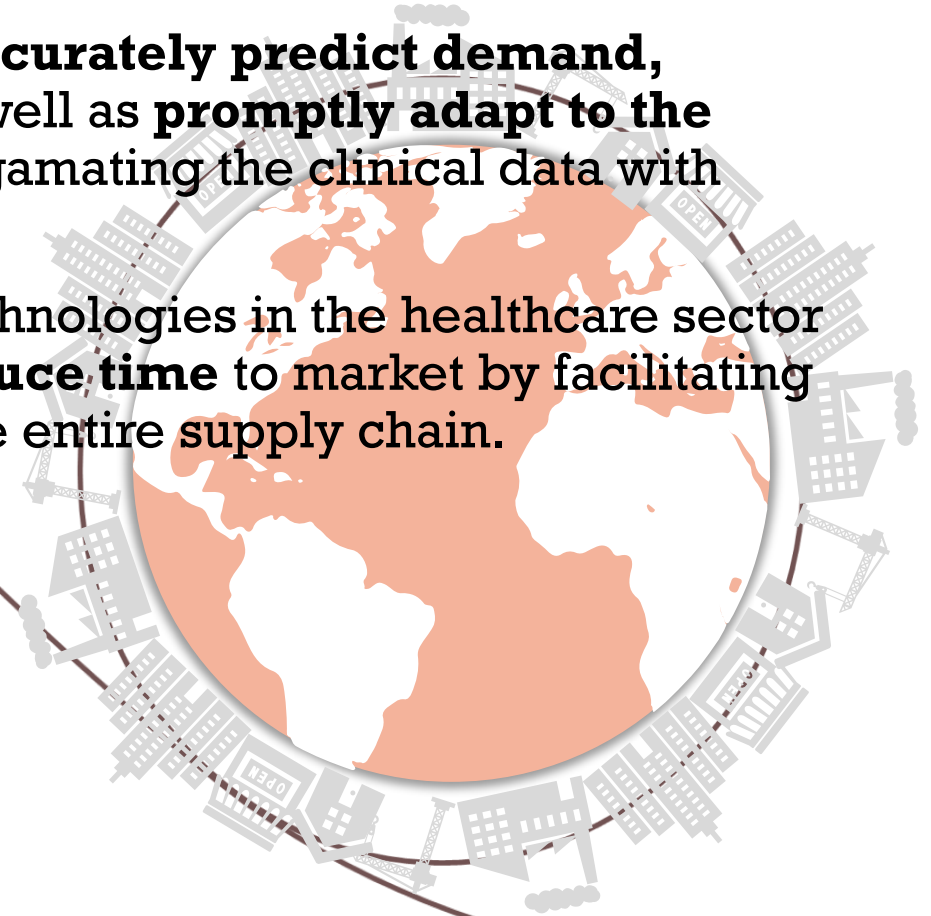
- Logistics holds a significant position in the domain of supply chain management, encompassing crucial responsibilities including the creation of **highly accurate frameworks for organizing and regulating the intricate movement of merchandise**, while simultaneously ensuring the **timely, secure, and consistent delivery of shipments**.
- The provision of logistics services on a daily basis is contingent upon the nature of the enterprise, frequently encompassing activities such as order processing, warehousing and, notably, shipping.



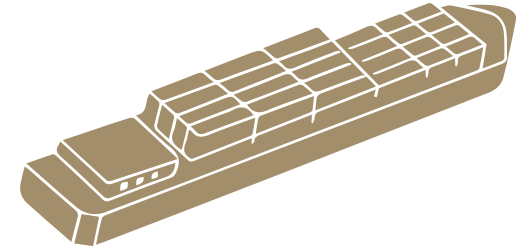


Aids In Demand Forecasting

- Healthcare supply chain analytics can be utilized to **accurately predict demand, enhance inventory planning and management**, as well as **promptly adapt to the dynamic market conditions** by synergistically amalgamating the clinical data with supply chain data.
- The utilization of digital supply chain management technologies in the healthcare sector holds the **potential to enhance productivity and reduce time** to market by facilitating enhanced communication and collaboration across the entire supply chain.



IMPLICATIONS IN HEALTH CARE INDUSTRY



Advanced Software And Solutions

- In a worldwide context, the adoption of supply chain management has gained significant traction as firms incorporate their fundamental business activities spanning from inception to conclusion.
- Advanced software and solutions such as E-procurement and sophisticated supply chain planning systems have been introduced.



Cloud-Based Solutions

- The implementation of cloud-based solutions has become increasingly prevalent in current technological advancements.
- The utilization of cloud-based systems presents **various benefits, such as the reduction of both capital and operational expenses**
- In addition, these **proposed strategies effectively** facilitate the convergence of disparate systems, including inventory control and transshipment expenditure management, which play vital roles in the efficient functioning of supply chain processes.





Inventory Management

- It is important to guarantee that the **quantity of supplies ordered** by your materials department coincides with the amount consumed by your staff.
- It's important to **avoid over-ordering materials** based on intuition, while ensuring that the safety of patients is not endangered.
- Having a comprehensive understanding of the activities taking place in your materials department is of utmost importance.
- It is important to promptly implement any **necessary changes in order to achieve cost savings**. There is room for improvement in the efficiency of the supply chain's materials section.



CONCLUSION

1. Utilize technology to work more efficiently.
2. Examine your consumers and suppliers.
3. Wherever and whenever possible, reduce spending.
4. If necessary, raise your retail prices.
5. Adopt measures to enhance cash flow.
6. Examine the product specification again.
7. Improve the efficiency of shipment.
8. Be reasonable with lead times.
9. Inform and update your customers about problems like delays.
10. Make sure your supply chain and you are compliant.



