NEW TRENDS IN HEALTH CARE SUPPLY CHAIN

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ABSTRACT

This paper focuses on the impacts of health care on operating costs, patient care and new trends in healthcare supply chain process, use of RFID technologies. How the application of RFID techniques can provide affordable healthcare solutions in developing countries was discussed.

KEYWORDS: Healthcare supply chain.

INTRODUCTION

In the present world no industry can survive without considering much about reducing expenditures. The same is true for health care industry, which is witnessing sharp rise in price in almost all its products and services. The alarmingly high pace of upward movement of cost is making the produce of the industry beyond the reach of the mass. Supply chain in this industry being a significant driver of cost is therefore grabbing all the attention from industry stakeholders. This paper also talks about the new strategy emerging in this sector and is contributing towards efficient SCM practices is RFID. The RFID helps attaining inventory visibility and accurate counts at every stage of the supply chain and also helps reducing shrinkage and shipping errors.

REVIEW LITERATURE

The following literature reviews showcases the current status of the healthcare sector relative to barriers and practices for implementation of SCM principles.
Heinbuch described an approach for meeting the challenge of healthcare cost reduction through hospital material management function. This highlights the value of taking a proactive reaction to meet the challenge of transferring technology across industry sectors.

Alverson discussed the importance of disciplined inventory management for hospitals, and suggested some consequences for the lack of inventory control, missed contract compliance, frequent stock-outs and costly emergency deliveries, workflow interruptions, expensive rework, and increased health system labor requirements.

Burns discussed aggregation of suppliers and their products through electronic catalogues, visibility of orders, materials, and efficiency in procurement.

Schneller and Smeltzer suggested to reduce purchasing costs through the supplier networks and creation of supplier partnerships. And also suggested that transaction, administration costs can be reduced through the use of ERP systems, which provide an autonomous information flow throughout an organization.

HEALTHCARE SUPPLY CHAIN PROCESS

1. In the hospital, when GSI bar coded materials are used in scanning by which auto update of the product will be done in the inventory system. As the GSI system allows secondary information to be appended to the GTINs, the hospital can easily determine the inventory in the hospital and also in each supply cabinet on every floor.

2. When a inventory threshold is reached on a particular item, the hospital’s inventory system can automatically create an electronic order that is sent to the hospital’s purchasing department to initiate a reorder.

3. Once the order is released from the hospital, it is sent electronically to distributors and manufacturers. Additionally appended to the electronic order- such as order fulfillment, location and pricing.

4. A quick scan of the bar coded products as they are picked, packed, shipped and delivered on their journey through the healthcare supply chain enables rapid and accurate processing of shipments.

5. When the shipment is delivered to the hospital, a quick scan of the GSI bar codes allows instant and automatic reconciliations of the order, complete with granular ‘put-way’ information the specific location inside the hospital walls where the item should be stored.
FIGURE 1: HEALTHCARE SUPPLY CHAIN PROCESS

THE IMPACT ON HEALTHCARE SUPPLY CHAIN COSTS

Inconsistent data standards for product, trading partner and customer locations translate into substantial inefficiencies in the healthcare supply chain, where manual data processing is typically required as orders and product shipments travel through as many as 17 different locations. Inefficiencies may start inside the hospital at the beginning of the demand cycle, where inventory management procedures require workers to collect information on paper that must then be entered into the computer a double touch of data that introduces ample opportunity for errors. Orders are compiled using product identifiers from the first distributor in the supply chain. As the order continues its journey, lack of standardized identifiers forces distributors and manufacturers in any particular ‘order chain’ to manually translate the incoming product numeric identifiers to their own legacy identifiers. Time, cost and errors are
added into the end-to-end order fulfillment process- from pricing discrepancies that delay payments, to the delivery of wrong products, or address errors that result in costly mis-shipments and late deliveries.

THE IMPACT ON PATIENT CARE

The paper based processes and the lack of data standards related to office operations are affecting the quality of patient care by making them stand in queues, identification of products that should be retrieved from the medical device for medication. The delay in process is directly related to the delay in transferring information between manufacture and the healthcare provider resulting in use of tainted medication which again creating health hazards.

RFID APPLICATIONS IN HEALTHCARE

Radio Frequency Identification (RFID) is a technology that connects objects to the Internet, by which products can be traced and companies can share data about them. In contrast to bar codes application, RFID tags are robust and do not require line-of-sight identification, so man power required can be reduced. The tags are programmable and contain information regarding destination, weight, and a time stamp which allow automation throughout the supply chain including warehouse space optimization and efficient goods tracking in order to bring down the cost.

The tracking of goods throughout the supply chain can improve customer service. The real-time information on delivery time supports Just-in-Time (JIT) manufacturing and retailing, enabling organizations to make strategic decisions. By using RFID, the following can be achieved:

- Tracking value of items/assets.
- We can reduce shipping and shrinkage errors in the supply chain inventory visibility, accuracy and efficiency at each stage.
- We can Improve production planning and recalls for effective scheduling and technology standards to drive down costs.
FIGURE: 2 RFID APPLICATIONS

CONCLUSIONS

Due to increasing competition, government rules and regulations, increasing costs, demand for high quality of service etc hospitals are in higher pressure zone as they should maintain the collaboration between the locations. Healthcare organizations must strive for value addition across entire supply chain by monitoring supply chain performance. The specific benefits that RFID tags offer over bar codes present an entirely new way of working in the competitive business environment.

To summarize: the health care industry is highly interdependent and only one part can’t attain efficiency leaving behind others. So the industry has to look forward to each and every minute development in the supply chain of related industries to reap the benefit of being alert and quick to adapt to.

REFERENCES


