Best practices for managing cost in the healthcare supply chain

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Healthcare will consume 18 percent of U.S. GDP in 2015 and is projected to grow to 26 percent in 20 years’ time. In addition, all areas of the healthcare industry are becoming more competitive whether big pharma, medical device manufacturers, healthcare retailers, or healthcare distributors.

The simultaneous overall growth in healthcare overhead costs, as well as the increasing competitive intensity is putting healthcare supply chain costs under scrutiny like never before. Maybe this is why, in the seventh annual UPS Pain in the Chain study, “managing supply chain cost” was identified by survey respondents as the least-met supply chain need.

Five to ten years ago, the supply chain component of the healthcare cost structure was not on the radar screen in many firms even though it consumed 50 percent or more of total cost. This lack of focus resulted in the average healthcare supply chain having a lower maturity level than the supply chains of other industries. Today, there is a growing recognition that a lot of low-hanging fruit exists for those healthcare firms that aggressively embrace excellence in managing their supply chain costs.

Some healthcare firms have gotten the message and are leaving no stone unturned. They are looking to third-party logistics providers (3PLs) to bring best practices from other industries. And in general, companies in the healthcare field have found a major opportunity for cost reduction lies squarely within their supply chain.

Supply chain professionals in most industries are traditionally charged with controlling and cutting costs, and managing the company’s cost structure. Healthcare firms are realizing that a 15 percent reduction (or more) in cost is very feasible in the short run with much more possible.
For purposes of this white paper, I chose five areas of supply chain cost on which to focus.

- **Inventory and Order Management Cost**
- **Supply Chain Security and Regulatory Compliance Cost**
- **Procurement Cost**
- **Warehousing Cost**
- **Transportation Cost**

Part Two of this paper drills deeper into each of these five areas and provides a range of specific ideas to apply as you attack cost in the healthcare supply chain.
Best practices for managing cost in the healthcare supply chain, Part 1

Managing orders and inventory should be an efficient, error-free function of the supply chain organization. However, many healthcare providers, distributors, and manufacturers seem to struggle with a large error rate. That often translates into major cost issues.

While other industries have implemented product scanning, electronic ordering, order accuracy controls, and other technology, the healthcare industry lags behind. Order management in particular is one of the biggest costs in the healthcare supply chain, burdened in many cases by manual processes.

Imperfect order management invariably causes problems with inventory accuracy, resulting in a failure of the supply chain to provide the right product at the right place at the right time.

Companies react to failures like this the only way they can in the short run: they increase inventory—sometimes to astronomical levels. Even among the best companies in this field, too much inventory exists. For example, in the Gartner Annual Healthcare Supply Chain Top 25, one company in the top five is turning its inventory less than three times annually (i.e., it retains over four months of supply) and the 11th ranked company turns inventory only 1.6 times (i.e., it retains over seven months of supply). The healthcare distributors and retailers in the field do a better job at around seven to ten turns, but even those firms do not compare to the best in other industries.

The average company in the Gartner Top 25 Supply Chains turns its inventory 28 times, vs. eight times for the Gartner Healthcare Top 25.
How you pay for inventory twice: it costs money and also absorbs money

When inventory is added to the healthcare supply chain to compensate for errors and inefficiencies, it requires out-of-pocket cost to store and manage it. These costs include:

- **Capital**
  to finance the inventory

- **Storage**
  to cover costs of warehouse rent or mortgage, lighting, heating, cooling, and moving materials in and out of the warehouse

- **Service**
  to cover insurance and taxes

- **Risk**
  of theft, shrinkage, and obsolescence/spoilage, all of which are major issues in the healthcare supply chain

Ignore the impact of inventory on the balance sheet at your peril

All of these items negatively impact the income statement, and are costs like any other. Inventory increases working capital and depresses cash flow (i.e., it absorbs money). The stock market focuses heavily on cash and for good reason. It tells the other side of the story and indicates how well the healthcare firm is managing its overall financial health.

When it comes to managing inventory, establish multiple ways to reduce it as far as you can without jeopardizing service to your customers.

Part Two of this paper will provide a list of eleven ideas for how to cut inventory painlessly.
The costs of maintaining security and global regulatory compliance exist in most supply chains in most industries. But these factors are magnified by an order of magnitude in the healthcare arena.

The Pain in the Chain study, sponsored by UPS, has consistently pointed to regulatory compliance as the number one concern of healthcare supply chain professionals, followed by security. Healthcare-oriented regulations impacting the supply chain are often unclear and, to make things worse, those regulations frequently change between countries and regions—often in unpredictable ways.

There are multiple handoffs in a global healthcare supply chain coupled with a lack of visibility. Theft is a constant threat, especially with very high-value healthcare shipments. Law enforcement is inconsistent at best and corruption is rampant in some parts of the world.

Having people with special expertise in regulatory compliance and security in the healthcare supply chain is essential.

Over half of the companies in the UPS Pain in the Chain study use regulatory consultants. Many such firms are also looking to hire in-house expertise. This can be expensive, but is often unavoidable. In the global environment, almost 40 percent of healthcare firms set up partnerships with local distribution companies to address regulatory and security challenges.

To have a secure supply chain, each step in the chain must be made more secure, and each action carries a cost. Insurance can be considered and well over half (60 percent) of Pain in the Chain respondents use shipment coverage.
8 ways to make distribution centers more secure

Even warehouse operations can be a major security concern for healthcare companies. Use these guidelines to ramp up security.

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<td>1.</td>
<td>Front-end screening of all new employees must be very aggressive. Include polygraph or voice-stress analysis.</td>
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<td>2.</td>
<td>High-theft items must be placed in their own secure areas. Only certain employees should be able to enter secure areas and break seals.</td>
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<td>3.</td>
<td>Modern, hard-to-defeat electronic alarm systems are a necessity.</td>
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<td>4.</td>
<td>High fences, even guard dogs, around a warehouse perimeter help.</td>
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<td>5.</td>
<td>There should be a rigorous sign-in/sign-out procedure and badging program.</td>
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<td>6.</td>
<td>High-resolution cameras, metal detectors (for everyone—even visitors and management), and turnstiles can be essential security devices.</td>
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<td>7.</td>
<td>There should only be one way in and out of a distribution center, barring an emergency. That should be manned by staff with appropriate detectors (e.g., metal detectors).</td>
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<td>8.</td>
<td>Trailer yards can be vulnerable. Tractors and trailers have been stolen from secure fenced-in areas. Consider extending cameras, guard dog patrols, etc. to these areas.</td>
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Clearly, healthcare supply chain professionals are faced with major decisions with cost implications to deal with regulation and security issues. This calls for a strategy with a prioritized, multi-year action plan.

There’s a lot to do here and a lot of cost associated with all of the actions. You can’t do it all at once. So make sure you have a plan giving you the greatest return on your regulatory compliance and security project investments.
Part Two of this paper will give you ten specific ideas on how to optimize procurement cost.

Procurement cost

The average healthcare firm has 60 percent or more of its cost in purchases from suppliers. With a cost level this high it is critical to follow best-in-class procurement principles. Of course cost is not the only variable that must be managed. Cost must be balanced against delivery that is fast, on time, and complete.

Though it may not fall within the area of responsibility of all supply chain managers, procurement is a supply chain function, and is critical to all firms in the healthcare field whether medical device, big pharma, healthcare retailers, or healthcare distributors.
More than half of the respondents in the UPS Pain in the Chain study cite labor cost as a major challenge. The lion’s share of supply chain labor often resides in warehouse operations.

Do you farm out your warehousing and transportation operations to a 3PL? Or do you manage logistics operations in-house? In the UPS Pain in the Chain study 78 percent of respondents said they were using logistics partnerships to manage cost. If you use a 3PL be sure to understand that 3PL’s value to determine the best short- and long-term approaches to reducing cost. To have an effective partnership you should embrace and fully understand the details and the basics of managing cost in a healthcare distribution center.

Cost reduction best practices in distribution centers fall into 6 areas:

1. Receiving
2. Picking and order fulfillment
3. Lean warehouse management
4. Warehouse information systems
5. Warehouse space optimization
6. Warehouse network optimization

I’ll summarize specific cost reduction ideas in Part Two of this paper.
Receiving

Based on statistics from my studies, receiving and put away consume 24 percent of the cost in the average healthcare distribution center. Below are some best practices for controlling that cost.

Implement ASNs
An ASN (automatic shipment notice for inbound receipt) notifies the distribution center of a pending delivery and is usually sent in an electronic data interchange transmission. This improves inventory accuracy and greatly reduces receiving costs. Cost reduction estimates are in the 40–50 percent range.

Fast put away
Best-practice distribution centers put away product quickly to avoid unproductive congestion and enhance security. Companies should measure “dock-to-stock” time to help facilitate this process. Goods should be placed in the best locations to minimize the travel distance and time of distribution center personnel.

Returns
More companies should pay attention to returns. Instead, reverse logistics is often treated as an afterthought and managed in a highly disorganized manner. When it comes to handling returns, many companies leave a lot of money on the table.

Costs must be carefully balanced against customer convenience. A return may be a second opportunity for your company to succeed at delivering a product to a dissatisfied customer, or it may be connected to remanufacturing or refurbishing. Opportunities exist to streamline and save on reverse logistics. A little attention here can pay big dividends.

Cross docking
Cross docking is the process of receiving product and shipping the product out the same day without putting it into storage. Since picking and put away consume most of the cost in a typical warehouse operation, productivity rockets if those two activities can be eliminated. As firms look to make the next big advance in distribution center productivity, cross docking merits a very close look.

Picking and order fulfillment

According to my statistics, picking and order fulfillment consume 54 percent of the cost in the average healthcare distribution center. Below are some best practices to control cost in this area.

Profiling/slotting (ABC zoning)
It goes by various names but, regardless of the moniker, profiling is a prerequisite to efficient fulfillment operations. Best-in-class distribution centers ensure that high-velocity SKUs are placed in convenient, easy-to-reach areas to minimize pick times.

Automation/systems
There is a great deal of technology available to assist the order-picking process including technologies like pick-to-light and voice-picking. The key is to select the appropriate level of automation and systems to accurately and efficiently fill orders.

Many of these systems must interface with bar codes and bar code standards (GS1 standards) especially in the medical device supply chain. This enhances visibility across the many handoffs in the end-to-end supply chain.
Lean warehouse management

Lean concepts originated in the 1950s in Japan and developed and matured in Toyota factories over several decades. Many firms are now aggressively rolling out Lean in their warehouse operations. In the process, they reduce cycle times, speed up customer responsiveness, and reduce waste throughout their operations. Huge paybacks are being seen with Lean implementations. It is safe to say that if a medium or large warehouse operation is not implementing Lean, it is falling behind its competition. Useful starting points for research include:

- Distribution Center Management: A Best Practices Overview (pp. 13-16) (www.bit.ly/10aSQ7z)
- How to Create a Lean Warehouse Culture (www.bit.ly/169Fv8d)

Warehouse information systems

A modern warehouse management system (WMS) is critical to the efficient management of any medium to large warehouse. Ninety-five percent of all warehouse management system users find that their WMS is critically important to effectively manage the big 4 activities of receiving, put away, picking, and shipping.

To get the most out of a WMS, there must be consistent data standards for product, distributor, and customer. Otherwise, manual processing is required, adding cost inefficiencies and potential for inaccuracies. As mentioned previously, a single data standard (GS1) will go a long way to providing a foundation for healthcare supply chain automation and WMS implementation.
Warehouse space optimization

Productivity declines exponentially if distribution centers become too crowded and docks, staging areas, and aisles become congested with product. In addition, overcrowding often drives a company into extremely expensive overflow warehousing. Therefore, it behooves any firm to make warehouse space optimization a priority. This requires addressing aisles, docks, racks, mezzanines, office areas, etc.

Warehouse network optimization

Supply chain professionals routinely tell me, “If you haven’t completed a network optimization study recently, you are probably leaving a major savings opportunity on the table.” I agree. This is a strategic activity, and can result in a major breakthrough in the total distribution center network cost structure.

A network optimization answers questions such as:

- How many distribution centers should you have?
- Where should they be located?
- Which customers or locations should each serve?

Both retailers and manufacturers can evaluate and change the structure of their distribution center network to produce major savings. Some firms carry out a network optimization review on a periodic schedule, usually every two to five years.
Headwinds facing transportation professionals as they manage transportation cost

Driver shortage
Some estimate the shortage today is about 50,000 and growing rapidly. Another estimate has the shortage growing to over 300,000 drivers before it peaks in 10 years, which borders on catastrophic. This would be close to a 20 percent gap between demand and supply. And driver turnover exceeds well over 100 percent for the average company.

Rail, port, and highway capacity
By 2020, truck traffic is predicted to be up 75 percent, rail up 44 percent, and containerized cargo up 350 percent. Planned infrastructure investments will begin to fall behind.

Government regulations
A myriad of government regulations impact the healthcare supply chain globally. And the healthcare supply chain must also contend with the additional regulations that impact all companies, such as hours of service (HOS), compliance, safety, accountability (CSA), and environmental regulations.

Security
These issues continue to grow and add cost to the healthcare transportation system.

A major cost management challenge cited by 63 percent of the respondents in the UPS Pain in the Chain study is transportation cost. One solution is to simply wash one’s hands of this issue and depend on an outsourced supplier, or a 3PL.

Yet, 68 percent of respondents indicated that they have significant concerns about their distributors. Ironically, 3PLs yearn for a closer partnership with their customers. They want customers who understand the business and who can work with them to invest in real breakthrough solutions. Whether a 3PL is used or not, companies must understand how to manage transportation cost in the healthcare supply chain.

For years, pundits have been predicting that a perfect storm was about to hit transportation cost. A combination of factors was expected to converge simultaneously, led by fuel prices. The surprising relief in fuel prices has altered this landscape somewhat. Many now believe that fuel cost will be the least of our worries going forward, although the debate continues.

Part Two of this paper will give you thirteen ideas for how to cut transportation cost without impacting your customers.
Conclusion

Healthcare supply chain professionals are often on the front line when it comes to managing costs in their companies. That role will only intensify as healthcare costs become even more visible and the industry becomes more competitive. If managing costs were the only thing we had to do, life would be challenging enough. But we have two other big things on our plate, both equally important to cost management.

One, we manage our firm’s inventory and therefore we have a major impact on its cash flow. And two, we’re responsible for customer service—getting the product to the right place on time. Because the supply chain is the key to dealing with this critically important three-legged balancing act, more and more companies understand that supply chain excellence is essential to driving shareholder value.
Cost Management: As UPS sees it...

Given sufficient time and resources, healthcare supply chain managers should be able to derive savings from Paul Dittmann’s advice. And since the healthcare supply chain can consume as much as 50 percent of total costs, the potential savings are enormous.

As Paul concedes, however, supply chain managers are simultaneously managing their companies’ inventories and the process of getting product to the right people, at the right time, in just the right condition. The pressure on these professionals is tremendous. Most are already working to tackle the complexities of the healthcare supply chain—navigating regulatory compliance, managing product protection, scaling for growth, and expanding into new markets. For most, it will prove to be difficult to realize the cost savings they would like.

The truth is, many companies can no longer manage every challenge and solve every problem by themselves. And the most successful supply chain managers are turning to partnering and collaboration with experts to address their biggest challenges. In fact, six in every ten Pain in the Chain respondents are collaborating, and one in five is outsourcing 75 percent or more of its supply chain to reduce costs.

In summary, managing increasingly complex global healthcare supply chains may ultimately require collaboration. If your supply chain professionals are already spread thin then I invite you to make my team your team. Let UPS help you identify savings in your supply chain and free you to accelerate growth by focusing what you do best: innovating for human well-being.

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