

Supply Chain Solutions for Healthcare Providers – Part 2 - supply chain improvement opportunities



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Our Insight.
A UPS Supply Chain Solutions White Paper

Overview of the supply chain for healthcare providers

As noted in part one of our healthcare provider whitepapers, healthcare providers are lagging other industries in adopting leading supply chain applications.

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Many healthcare providers have hesitated to implement leading edge supply chain processes because a perception exists that major improvement opportunities are primarily in clinical application areas. However, if the goal is to improve the overall operations of the health care system, then solely focusing on clinical applications can be short-sighted. Numerous providers are discovering that significant savings and operational improvements reside in the hospital's supply chain.

Healthcare providers need to gain a full appreciation of the systems and processes that should be reviewed and analyzed to determine the potential impact of supply chain savings opportunities. Solutions that deal with product sourcing, order management and fulfillment can create improved processes that will enhance the hospital's operations. Many of the savings opportunities do not require significant technological improvements and rely upon a more disciplined way to source products and manage product replenishment more efficiently.

However, the financial imperative for improving hospital operations is becoming critical. In 2003, the Healthcare Financial Management Association stated that the median hospital operating margins were running at a 1.8 percent deficit. Consequently, hospitals must look for new and aggressive ways to reduce operating costs.

As noted in the first health care provider whitepaper, providers are facing numerous challenges in adopting supply chain management solutions such as:

- Competing resources and funding for supply chain related improvements
- Lack of supply chain management vision and presence within the organization to develop an integrated strategic plan between the supply chain and clinical operations.

...the supply chain accounts for the second largest spend area in a hospital...

Supply Chain

Previous efforts to reduce health care costs in hospitals have been largely focused on reducing staff because this represented the largest expense area. Decreasing labor expenses has proved challenging from a people and “change management” perspective. An area that has not received a significant amount of attention is supply chain operating expenses. This represents a major opportunity for hospitals to reduce operating costs because supplies and related areas typically represent between 25 to 30 percent of a hospital’s budget.

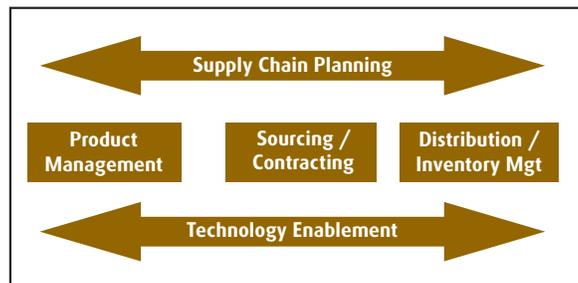
Information Technology

Healthcare lags other industries in supply chain efficiencies because the industry does not historically spend much on information technology as compared to other industries. Healthcare investment in information technology for all processes (i.e., not just supply chain) occurred at only 3.9 percent of revenue in 2003, which is significantly less than other industries.¹ Consequently, healthcare providers are ripe with opportunity for realizing the benefits that can come from implementing improvements in the supply chain through enabling technologies. These enabling technologies can come later in the improvement process after the hospital system first focuses on improving its business processes and uncovering quick hit improvement opportunities. More advanced stages of improvement can consider enabling technologies such as barcoding and radio frequency identification technology (RFID).

Supply Chain Management Focus Areas

Hospital systems are finding it extremely challenging to maintain profitability. Lack of investment in information technology and declining Medicare reimbursements are negatively impacting profitability. As a result, hospitals need to consider the following areas for increasing profitability and improving operations:

- Supply Chain Planning
- Product Management
- Sourcing and Contracting
- Distribution and Inventory Management
- Technology Enablement



¹ "Under the Knife," Business 2.0, Melanie Warner, February 2004.

Healthcare Supply Chain Approach

Supply Chain Planning

Even though the supply chain accounts for the second largest spend area in a hospital, executive leadership at hospitals typically do not fully coordinate materials management operations with business operating plans. The hospital executive management team needs to elevate the level of contact and influence that supply chain leadership has with a hospital.

The key is to enlist physician support by trying to standardize even on high-dollar physician preferred items.

Collaboratively producing a supply chain road map showing how the organization plans to source, distribute, and replenish supplies will enable hospital personnel to properly manage human and capital resources. In many cases, hospital leadership will need to make carefully weighted decisions about pursuing leading practices which can be costly, but can provide superior patient benefits. For example, should a hospital invest in clinical applications for an electronic chart review system; a revenue management system that tracks patient accounts from pre-admission to billing versus; or make a non-clinical investment in a bar-coded inventory management system? These are costly investments and hospitals must prioritize between clinical and materials management investments. While clinical applications are needed, investments in materials management can produce significant benefits and yield saving of three-to-four times the initial investment. Hospital leadership needs to apportion investments into materials management since it represents a significant spend area and substantial savings opportunity.

Product Management

Providers are typically burdened with a proliferation of items and vendors. Lack of effective product standardization results from clinicians using similar supplies that could be standardized to leverage better prices from suppliers. For example, does a hospital need five orthopedic implant providers when the price of a hip replacement may vary from \$4,000 to \$7,000 depending on the vendor and type of hip?

Hospitals can significantly reduce their operating costs by critically evaluating suppliers and finding opportunities to pare down the number of similar or redundant supplies. Key steps in addressing this involves understanding what items account for the overall supply chain spend. Reviewing the item master and receipts file for a year can provide significant insights into the purchasing patterns of a hospital. Hospitals can pursue efforts to categorize the supply chain spend to determine how many vendors are supplying like items

that could be consolidated. If hospitals can standardize their supplies and substitute like items, then they can leverage the increased volume and spend with suppliers to obtain a greater percentage of cost savings.

The challenge arises when dealing with high-dollar physician preferred items. These items represent significant spend areas. Therefore, the key is to enlist physician support by trying to standardize on as many items as possible. Involve physicians early and often in the process and support any claims with statistical analysis to improve product savings opportunities.

Moreover, multiple hospital systems experience pricing parity challenges. Analysis of spend data will typically reveal that the cath lab and operating room may be ordering similar or the same stents, but pricing will differ across departments and across hospitals within the same system. This conveys a lack of communications within the system and can be addressed through active product management protocols. Analyze the data and involve the sourcing and contracting department to help drive the analysis and negotiate better deals with suppliers and group purchasing organizations (GPOs).

Sourcing and Contracting

Product management efforts lead directly toward negotiating more favorable pricing with suppliers and/or by using GPOs. Standardizing on items enables the provider to increase volume with the GPO or supplier and offer better pricing.

Many hospitals prefer to maintain multiple GPO relationships thinking they can selectively obtain the best deals. This viewpoint can be myopic and is directly opposed to the advantages of maintaining a relationship with one strong GPO which can be a superior way to achieve longer-term and more consistent pricing concessions. Multiple hospital systems will receive much better pricing when they use a primary GPO and strive to reach the more favorable tiered pricing levels that can be achieved by meeting the higher product commitment levels.

Another opportunity area for reducing spend resides in conducting a contract review analysis. Consider how many of top spend accounts are under contract? When do the contracts renew and do they renew on an “evergreen” basis without explicit review? If this is the case, then hospitals are missing out on significant opportunity areas by letting contracts renew automatically. Review contracts and determine if more favorable pricing can be negotiated with increased service.

Another opportunity area for reducing spend resides in conducting a contract review analysis.

Hospitals also need to analyze whether or not they are actually paying the contracted price for items. Hospitals can overpay suppliers for contracted medical and surgical products from 2-7 percent of the available contract price.² Materials managers need to audit their payments to make sure that they are paying the correct contracted amount.

Examining the purchasing patterns also enables materials management to understand how much maverick purchasing is occurring. Maverick spend, if unchecked, leads to proliferation of items and suppliers. This drives up product acquisition costs and needs to be reigned in.

Distribution and Inventory Management

Providers face numerous challenges with distribution and inventory management. While distributors offer a valuable and necessary service, providers should explore the option of a multi-channel distribution strategy and evaluate whether it makes financial and operational sense to source select products directly from the manufacturer.

But how can a hospital system pursue a multi-channel distribution strategy? Setting up a distribution center is one avenue and it requires that the hospital system have a critical mass of facilities. Hospital systems with only a few hospitals may find it difficult to justify building a distribution center because they just do not have the required economies of scale. One option is for the hospital system to consider using a third party logistics provider.

However, hospital systems with a large number of facilities (e.g., 10 or more facilities) may be candidates for evaluating the advantages and costs related to supporting their own distribution center. Multiple facility systems should continually evaluate the costs and benefits associated with warehousing, distribution, and logistics. Evaluating alternatives requires a comprehensive review effort to ensure that the distribution center costs are comparable and service levels must equal or exceed previous performance levels.

A logical extension from operating a distribution center relates to establishing a multi-channel purchasing approach and bypassing the GPO for selected products in favor of adopting a self-contracting approach. Pursuing this strategy requires a contracting and purchasing staff that is adequately trained to handle negotiations with suppliers. Pursuing a carefully thought out multi-channel

² Anderson, Jane. "The Value of eCommerce in the Healthcare Supply Chain: Industry Study Report," June, 2001.

purchasing strategy is highly recommended to make sure that a provider system can effectively handle the demands that sourcing and contracting provide.

Additionally, many providers are not considering total landed costs when evaluating what they are paying for their supplies. The cost of freight is generally not listed or captured as a separate line item in the price of products which makes it difficult to isolate how much a hospital is actually paying in freight costs. Materials managers should strive to break down their freight costs so that they can be isolated and identified. Successfully identifying freight costs will enable the materials manager to negotiate improved “freight collect” terms with top vendors to reduce freight costs. At the very least, materials managers should be able to persuade vendors to reduce handling charges. Most providers do not pursue this cost saving strategy which is a ripe opportunity for cost savings.

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Technology

Providers typically do not have the most up-to-date technology in the materials management functions. Providers who have limited technology investment dollars will typically rely upon manual systems to place and process orders. Manual processes typically result in data entry errors and inaccurate information for order status and actual inventories. A point-of-use inventory tracking system that effectively uses barcode technology could greatly improve the replenishment process as would existing wireless technology that enables improved par level management by using hand-held barcode devices to check quantities and support supply replenishment.

Much discussion is centered on the next generation of technology, RFID, because of its potential applications in the hospital. While RFID has the benefit of working in difficult environmental conditions and does not require line-of-sight to work, it is still a costly technology. While hospitals may be attracted to this leading edge technology, it is new and currently more costly than barcode technology.

While RFID technology could significantly improve the materials management function in the distribution center, barcode technology may be all that is needed to enable a hospital to operate efficiently. In addition to materials management, RFID has other applications within a hospital that relate to patient and asset tracking. For example, three hospitals with Bon Secours Hospital System are conducting a pilot to track 10,000 pieces of equipment to determine where equipment is located and if repairs are needed.

However, due to the tremendous advancements and pace of changes with the technologies, if a provider is beginning to look at barcoding as an option, they may want to consider RFID in the analysis. There may be advantages to bypassing the barcoding technology and utilizing RFID.

Case Studies

The healthcare industry is able to provide several examples of where improvement projects have redefined supply chain operations and provided cost savings. Crozer-Chester Health System had operating and storage locations at four hospitals and four nursing homes. The health system established an off-site distribution center and saved approximately \$1.5 million annually. Inventory was reduced by more than \$300,000. Consolidating contracts among the facilities generated \$400,000 in savings while item standardization accounted for another \$500,000 in savings.³

Non-clinical areas, such as laundry and linen services, also accounted for significant savings

Technology can provide significant operational improvements and cost savings as evidenced by an implementation of PeopleSoft enterprise resource planning (ERP) applications and handheld scanning devices at Dartmouth-Hitchcock Medical Center (DHMC). Connecting PeopleSoft's Purchasing Module to inventory applications enabled DHMC to scan items for replenishment which involves generating orders to restock inventory as supplies were depleting. The DHMC materials management staff used technology as an enabler to reduce inventory by as much as 40 to 50 percent. Materials management achieved these inventory reductions by working with each department to conduct a thorough analysis for inventory on-hand. Coupled with recent usage reports, materials management established new par levels for each item. Materials management handled the inventory management function for the departments which meant that nurses could devote more of their time to patient care. Thus, technology helped DHMC integrate its business processes to obtain reduced costs and better visibility into supplies and replenishment.⁴

A hospital health system located in the Southeast identified approximately \$3 million in savings in the clinical and support services areas. Materials management led an initiative to identify and implement standardization and substitution initiatives for clinical and non-clinical items. Clinical focus areas included high dollar physician preference items, such as orthopedic implants, where a savings of over \$300,000 was identified by reducing the number of vendors and pursuing demand matching. Similarly, another \$200,000 could be realized through reducing the number of vendors and more aggressively negotiating with vendors.

³ "Do Off-Site Consolidated Warehouses Make Sense?" Hospitalconnect.com, July 1, 2002.

⁴ Danish, Scott A., "Dartmouth-Hitchcock Medical Center Reduces Inventory Management Costs with PeopleSoft," HCT Project Volume 1, July 1, 2003.

Non-clinical areas, such as laundry and linen services, also accounted for significant savings. Adjusting linen change protocols could produce over \$300,000 in savings. Successful implementation of the initiatives will require the support of hospital leadership and effective communications with the clinical staff.

Summary

There are numerous savings opportunities in supply chain management that do not require a large technology investment or capital expenditure. Quick hit improvements can generate the momentum to pursue more involved solutions that will yield significant operational improvements. In order to achieve the savings, providers will need to develop an operational blueprint for how they want their supply chain and business operations to operate in the future.

Change Management

Achieving the future operational blueprint will require involving the clinical staff and relying upon critical data analysis to support the operational improvement initiatives. Physicians and nurses need to be included in discussions regarding savings initiatives. Clinical staff will have valuable input and their participation will facilitate buy-in of the initiatives. Neglecting to involve physicians in upfront meetings about efforts to reduce the number of vendors on high dollar physician preferred items (e.g., orthopedic implants) can have strong negative repercussions.

Efforts to standardize and substitute items can lead to significant cost savings as well. It is important to make sure that staff participates in standardization efforts. One way to involve staff is through Value Analysis Committees whereby functional representatives from key clinical and non-clinical departments can approve standardization initiatives and new product introductions. In some instances, conducting pilots can make sure the suggested changes will work smoothly and positively impact patient care.

Information Technology and Processes

In order to adopt the changes, hospital systems need to evaluate their current information technology systems and determine if investments in technology can improve operations. Reducing reliance upon manual systems in favor of enterprise resource planning (ERP) modules and hand-held devices that utilize bar-coding technology can significantly improve materials management operations. Enhancing operational processes in order and fulfillment helps reduce inventory levels, improve product replenishment, and reduce operating costs.

Investing resources into supply chain management projects can yield significant savings...

Pursing efforts to combat product and vendor proliferation will help hospital systems operate more efficiently. Improving distribution and inventory management processes can occur by creating distribution centers that will enable product to be delivered more efficiently and at lower cost. Hospital systems will need to conduct a meticulous business case to make sure the benefits justify the investments.

Hospital systems should focus on developing an overall business strategy that incorporates supply chain planning because it can provide a competitive advantage. Involving senior leadership in the decision-making process and leveraging technology can make the supply chain a high-performing area. Investing resources into supply chain management projects can yield significant savings and enable hospital systems to run more efficiently.

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