

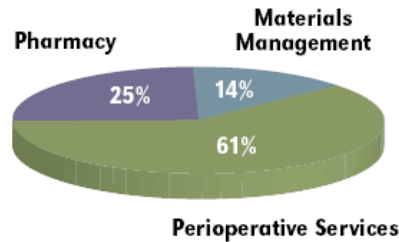
Healthcare Supply Chain: The Hidden Treasure

Overview

The healthcare industry, particularly in hospitals, is experiencing unprecedented pressure to improve operations with the dual goals of service enhancement and cost reduction. While improved revenue management is often the focus, cost management is equally important. Supply costs are second only to those of labor, and represent up to 40% of hospital expenses per case. Small improvements can decrease supply chain costs by as much as 10% to 12%.¹ The key is a simple and low-cost approach, which involves organizing data that is already available and gaining meaningful collaboration of those with a stake in the area. After a survey of the problem, we recommend some first steps.

Supply Chain Management: What is it, really?

Management of materials in hospitals has historically had a very transactional focus, often centered on tracking of physical inventory in the areas of Pharmacy, Materials Management (non-Pharmacy), and requirements for Perioperative Services. For example, a recent report shows how a typical inventory dashboard tracks targeted range of inventory:²



Source: PricewaterhouseCoopers

In addition to high-level tracking visibility, there is often a culture of surplus ordering based on an extremely low probability of stock-out for key items.

Supply Chain Management (SCM) expands the view beyond inventory, including activities and processes in getting supplies and equipment from the manufacturer (vendor) to the patient location (customer), specifically:

- Detailed management of tangible or physical items (procurement, inventory, quality assurance, issue/delivery, consignment)
- Relationships with suppliers/vendors
- Relationships with patients or their direct care providers (customers).

¹ Not Your Father's Supply Chain (2010)

² Ibid. p.2

One widely accepted definition of SCM is that it “encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third party service providers, and customers.”³ Materials management, or the management of inventory, is only one dimension of SCM.

Capturing the Gains

From the above definition of SCM, there arise two main principles to guide improvement:

- 1) Seek collaboration across all parties involved through inclusion, collaboration, and communication
- 2) Capture or use more existing information, observing the adage, “You can’t improve what you can’t measure.”

Some high-value areas of hospital management have already benefited from SCM technologies borrowed from other industries:

- Asset Management: RFID to improve location-based management
- Clinician Data Entry: Point-of-use data entry and retrieval.

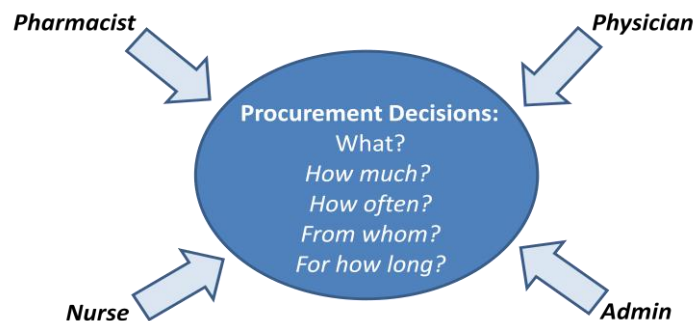
In the short to medium term, the goal is to build solutions that are flexible and scalable to support the longer-term goals – but also to deliver some hard business benefits to justify the investment (or *quick wins*).

Challenges in Capturing SCM Gains

Once a definition of SCM is accepted, it becomes easier to identify major challenges. Here are two we have found to be most common:

Procurement Influencers: Little Collaboration with Divergent Incentives

Hospitals are unusual in that they include many groups placing demands on the supply chain, and those groups, in turn, can place different values on products based on the perceived contribution to the clinical outcome.



³ Council of Supply Chain Management Professionals (see Appendix 2 for full definition)

Often, hospitals are frustrated around supply-related issues by the inability to influence a subset of clinician behavior – most commonly termed *Physician Preference Items*. Of the factors considered by surgeons in product selection, price and hospital contracts consistently rank lowest.⁴

Traditional materials management has been isolated from suppliers by:

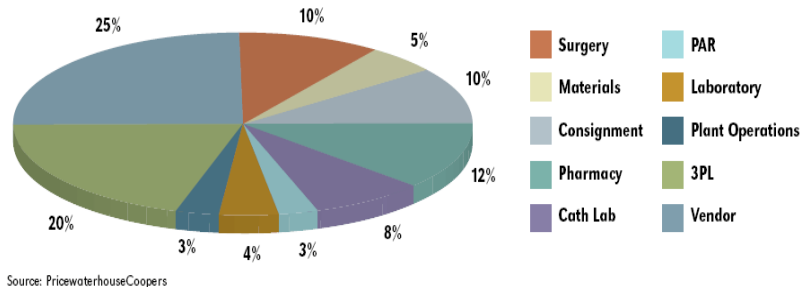
- Unique purchasing arrangements, such as GPOs
- High status of clinician end users
- Strong relationships between clinicians and suppliers via R&D “finds.”

Creative solutions have involved managing physician preferences as a customer group. Collaboration and engagement are key in setting parameters for all parties to work together. Reconciliation of different perceptions of value involves creating a process of *value analysis* for greater product standardization, with equal involvement of all parties. Value analysis relating to clinical outcomes is now well accepted as a healthcare industry tool, and includes elements of enhanced collaboration and more detailed information. Importantly, value analysis should be facilitated by the SCM area to unify the collaboration – but according to a recent survey, 71.3% of hospital supply chain managers did not have that responsibility.⁵

Complete Information: Capturing Total Cost of Ownership

Two dimensions here need to be covered:

- 1) Breadth of what product is covered, given that supplier and customer linkages fall in scope. Referring to the previous dashboard breakdown of product, this is a leading practice example of a more detailed breakdown of product inventory location:



- 2) Inclusion of all components of the total cost of ownership for decision-making:

- Purchase costs (paid to the vendor for acquisition)
- Transaction costs (transaction-specific contracting preparation, fees, and commissions)
- Administrative costs (overhead of AP/AR, sourcing, negotiating, contracting⁶).

⁴ Schneller (2006) p.77

⁵ Yoki (2010)

⁶ See Appendix 3 for detailed activity list

Overcoming Challenges to Achieve Results

The journey to SCM maturity is an iterative and step-wise path. A recent study sets out a four-level progression⁷:

- Level 1: Managing Operational Supply Support
- Level 2: Managing and Monitoring Operational Supply Support
- Level 3: Supply Chain Management Strategy Development and Implementation
- Level 4: Supply Chain Integration.

Progression along these levels depends on increasing levels of integration/collaboration, which in turn facilitates better quality data (specifically valuations) as more data is collected.

In terms of collaboration, engagement of physicians from the beginning of the process — and specifically, *how* they are engaged — cannot be undervalued. A recent study showed that while hospital executives felt clinician involvement was the number one area where they had achieved success, supply chain managers rated that success as number five (out of seven).⁸ The key is a consistent strategy for involving physicians, and the Healthcare Financial Management Association sets out a suggested methodology that explicitly defines that involvement:

Key Components	Operational Stages of Supply Cost Reduction			
	Assess	Design	Implement	Sustain and Accelerate
Compelling Case	Recognize “burning platform”	Translate “burning platform”	Communicate “burning platform”	Celebrate new paradigm
Data	Demonstrate need and opportunity	Develop customized Profiles Compare against benchmarks Explore alternatives	Track compliance Demonstrate value gained	Continuous scanning for new opportunities
Senior Mgmt Involvement	Create the vision	Integrate perspectives Develop the model	Devote resources Institute agreements Monitor process	Recognize “wins” Prevent slippage Live the new paradigm
Physician Involvement	Buy-in from representatives Identify physician champions	Participate (PROD) -Preferences -Review Information -Ownership -Decision making	Adapt behaviors Influence others	Maintain new behavior Ongoing participation
Supplier Involvement	Profile existing and potential suppliers	Provide cost and quality information	Identify value-added services Provide support	Partner for new initiatives
Incentives	Identify differing perspectives “What is in it for me?”	Balance trade-offs	Plan for savings allocation Realize value	Seek triple-wins

Source: HFMA (2008)

⁷ Schneller (2006) Chapter 7: “Levels of Development for the Health Care Supply Chain”

⁸ Healthcare Financial Management Association (2002), see Appendix 4

In terms of information, financial data and reporting are crucial. Milestone data analyses can mark progression in the area of sourcing not only with more data captured but also in the ability to report, analyze, and ultimately predict.

For instance, progressive organizations can perform the majority of the following activities with their own data:

1. Category and Spend Analysis
2. Market Analysis
3. Strategy Development
4. Supplier Relationship Strategy
5. Supplier Analysis
6. Cost and Price Analysis
7. Fact-Based Negotiation.

Where to Start on Your Hospital Supply Chain Challenge?

Focus Areas

Initial steps start with basic efforts targeting data completeness, accuracy, and often some type of cleansing. Pricing and item masters most often offer the best *quick wins*.

One Hospital's Challenge

*David Belkoski, Chief Financial Officer of a university hospital in Augusta, GA: "Our goal was to cut costs without bleeding the organization. We knew we were successful on the revenue side. Now it was time to move on to the supply chain."*⁹

Identified Goals of UHA's Supply Chain Challenge

- Become process- and cost-efficient without impacting clinical staff
- Double-check that product is ordered correctly by nursing staff
- Honor physician preferences while controlling costs
- Achieve sufficient inventory space
- Set up satellite storage in nurses' offices.

⁹ University Healthcare System (2008)

Pricing and Contract Management

Typically, pricing issues (negotiate, monitor, and control) provide the fastest results. A number of situations recur in the hospital environment:

Multiple Vendors:

On average, hospitals overpay 2% to 7% on contracted medical-surgical products¹⁰ because of such errors as buying similar products from multiple manufacturers.

Example Engagement #1:

1. Spend by category report reveals that the hospital spent \$100,000 annually on non-surgical procedure gloves.
2. Breakdown by attribute reveals 80% of that spend was on non-latex vs. latex gloves, with non-latex gloves costing 10 to 20 times as much.
3. Re-education switched 50% of the previous demand from non-latex to latex, with a net savings of \$30,000 per year.

Product Validity:

Often products will have contract validity dates, meaning that start and end dates need to be monitored against contracts.

Example Engagement #2:

1. Report on contract products that have been activated, and those that have not.
2. For off-contract purchases, use product attributes to find functionally equivalent versions that are on-contract; flag recurring incidents for investigation and differences in gross off-contract order acquisition cost.

Price Verification:

For vendor or GPO invoices, there is often no direct reconciliation with pricing rules of the purchase contract and/or reference to a single standard pricing record across the organization.

Example Engagement #3:

1. Establish a real-time cross-system price validation routine based on accounting data (in the absence of available ERP).
2. Create a unique reference price record or ensure a real time push of pricing data to disparate systems.
3. Run a daily exception report for manual processing.

¹⁰ Lacy (2001) p.6

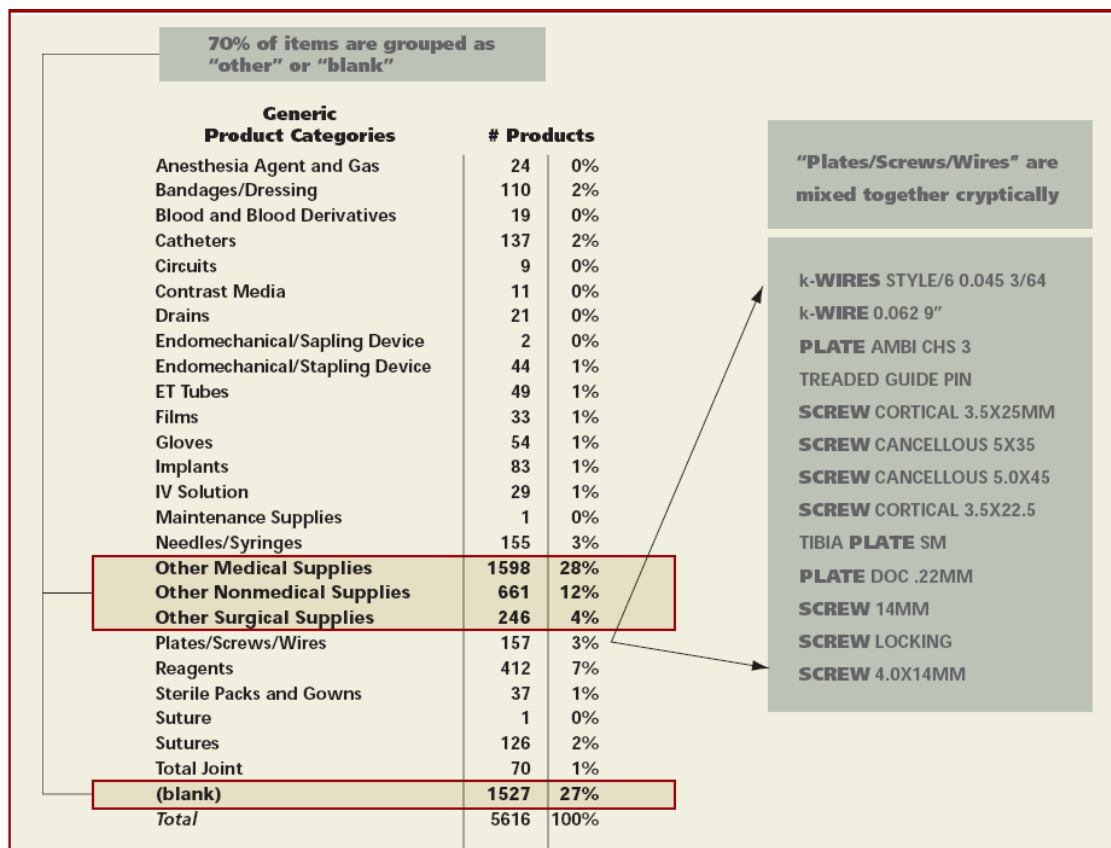
Duplicate, Incomplete or Mis-Classified Items

Common item-related problems include:

- Duplicate item records
- Incomplete vendor and/or product information
- Nonstandard vendor names
- Vendor product numbers with missing information or additional characters
- Overly abbreviated product descriptions
- Product descriptions that are not normalized or have missing attributes
- Unclassified products – need to determine and enforce a comprehensive classification system (e.g. U.N. Standard Product & Services Code)
- Classification lacks functional equivalency.

The impact of these problems can be very costly. Healthcare eBusiness Collaborative indicates up to 80% of all transaction errors are directly related to inaccurate (system stored) product information.¹¹

Impacts of a Problematic Classification System



Source: Kamani (2004) p.5

¹¹ Kamani (2004) p.3

About Organon Professional Services

For the past 14 years, Organon has focused on building custom Decision Support, Business Intelligence, and Supply Chain Optimization solutions that have not only resulted in exceptional returns for our customers but have also improved our customers' competitive and strategic positions within the healthcare marketplace. We bring to our projects a diverse set of skills that include industrial engineering, financial analysis, and statistical analysis. Organon is a small and nimble organization, working collaboratively with our clients to deliver real ROI in short and contained engagements.

Why Organon?

Our heritage is in distribution, which encompasses many of the complexities within the supply chain. The healthcare industry can borrow from other industries for savings and improvement strategies. Pharmaceutical distribution was the first to recognize this area of opportunity, driven by massive volumes and constant structural changes to the market. Organon has worked with some of the largest pharmaceutical companies to streamline their supply chains. We are well positioned to carry our expertise to the hospital community and achieve exceptional results.

How we can help

Organon offers an introductory **Supply Chain Assessment** to objectively evaluate the current condition of your supply chain, and provide actionable recommendations. We cover basic industry and cross-industry metrics that are linked to your department and organization goals, providing a 'health check' for further action.

Our recommendations are structured around strict ROI requirements: the first group "quick wins", which can then be used to fund a second group of longer term initiatives. Both are focused on making better use of your current data to facilitate better decision making.

Contact Us:

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Appendix 1:

References

Footnoted:

^{1,2} M. Darling, S. Wise, "Not Your Father's Supply Chain," Materials Management Magazine, April 2010

³ Council of Supply Chain Management Professionals, Glossary of Terms, p.180 (see Appendix 2)

^{4, 6, 7} E. Schneller, L. Smeltzer, "Strategic Management of the Supply Chain," Jossey-Bass, 2006

⁵ R. Yoki, "Is Value Analysis your Responsibility?" July 30, 2010, quoting AHRMM's 2009 Materials Management Survey, <http://savingsbeyondprice.com/savingsblog/is-value-analysis-your-responsibility>

⁸ Healthcare Financial Management Association, "Resource Management: The Healthcare Supply Chain 2002 Survey Results," Chicago: HFMA 2002 (appeared in Schneller [2006] p.34)

⁹ "University Leads State in Clinical Quality," University Healthcare System news release, Feb. 1, 2008

¹⁰ R. Lacy, "The Value of eCommerce in the Healthcare Supply Chain," p.6, June 2001

¹¹ P. Kamani, "Hospital Supply Chain Savings," Montgomery Research Institute/ASCET.com, June 2004

Additional:

Knowledge@WP Carey, "Reducing Healthcare Costs through Supply Chain Management", W.P. Carey Health Management and Policy, March 17, 2010

Healthcare Financial Management Association, "Supply Reform: Are you Ready to Engage your Physicians?" <http://www.hfma.org/Templates/InteriorMaster.aspx?id=1261>, Sep. 23, 2008

Appendix 2:

Supply Chain Management as defined by the Council of Supply Chain Management Professionals

Supply Chain Management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third party service providers, and customers. In essence, Supply chain management integrates supply and demand management within and across companies. Supply Chain Management is an integrating function with primary responsibility for linking major business functions and business processes within and across companies into a cohesive and high performing business model. It includes all of the logistics management activities noted above, as well as manufacturing operations, and it drives coordination of processes and activities with and across marketing, sales, product design, finance and information technology.

<http://cscmp.org/digital/glossary/glossary.asp> (p.180)

Appendix 3:

Self Contracting Activities Identified in Cost Avoidance Study

Activity
Determine Product Requirements
Determine Product Use
Department Meetings User Input
Access Suppliers List
Bid or Request for Proposal Preparation
Send Bid or Request for Proposal
Respond Supplier Questions
Analyze Bid Proposal
Conduct Product Evaluation
Decision Product Selection
Implementation Contract
Record Retention
Monitor Contract Compliance
Monitor Market Competitiveness

Source: Schneller (2006) Study 1: The Value of Group Purchasing in the Health Care Supply Chain p.218

Appendix 4:

Views by Hospital Executives and Supply Chain Managers on Recent Success

<i>Rank of Recent Success Area</i>	<i>Executives</i>	<i>Supply Chain Managers</i>
Involving Clinicians in standardization	1	5
Reducing Operating Room Costs through Standardization	2	2
Investing in Information Technology	5	3
Reducing Labor due to Automation	6	4
Involving Demand Forecasting for the Operating Room	7	7
Lowering Costs due to GPO contracts	3	1
Lowering Operating Room Costs through improved processes	4	6

Source: Joint McKesson HFMA Study – HFMA (2002)