Opportunities for Supply Chain Improvement

Highlights and Expert Insights Regarding HFMA's 2008 Supply Chain Survey

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healthcare financial management association

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Realizing significant improvement in a hospital's supply chain can be a somewhat daunting task. From its beginning with various product manufacturers to the time it ends with the patient, the healthcare supply chain is estimated to have more than 650,000 links, as all of the distributors, group purchasing organizations (GPOs), hospitals, and users are sandwiched in between.[1] Adding complexity to these many interactions is a convoluted regulatory environment, the interdependent nature of many medical products and equipment, and a lack of data standardization.

For those executives up for the challenge, however, the effort is often well rewarded. Pursuing supply chain opportunities can be integral to an organization's success, especially in light of today's tightening pressures on the bottom line. By some estimates, just a 5 percent to 15 percent savings in supply chain costs can equate to a 1 percent to 3 percent increase in a hospital's operating margin.[2]

With this in mind, HFMA recently conducted its 2008 Supply Chain Survey. The survey, which was sponsored by Amerinet, sought perspectives from a broad cross-section of the nation's senior financial executives and supply chain leaders about effective supply chain practices and areas of opportunity for improvement. This educational report details the survey's findings with analysis and examples of how various organizations are leveraging physician strategies, metrics and benchmarking, and technology investments to contain costs and create efficiencies in the supply chain. It also explores the roles that CFOs and supply chain leaders must play within their organizations to achieve strategic cost containment.

About the Survey

HFMA received 225 responses to its online 2008 Supply Chain Survey. Of these, 111 responses were from supply chain leaders and 114 were from financial leaders. The survey was conducted in February 2008, with some portions of content similar to surveys conducted by HFMA in 2005 and 2002.

See www.hfma.org/2008supplychainsurvey for a full breakdown of respondents by position, hospital bed size, and case-mix index; a discussion of methodology; and additional research insights, including key comparisons between 2005 and 2008 data.

Key Areas of Opportunity

As it did three years ago when HFMA last conducted its survey, gaining physician/clinician buy-in represented the greatest opportunity for supply chain improvement among both CFOs and supply chain leaders. Seventy-two percent of the 225 survey respondents indicated it was a "high" or "tremendous" opportunity area, up from 65 percent who felt similarly in 2005.

Data standardization and integrating the supply chain and revenue cycle were seen as the next most likely areas for improvement, ranked as "high" or "tremendous" opportunities by 54 percent and 50 percent of respondents, respectively.

While the perceived opportunity of investment in technology has remained high, it has declined somewhat over the past three years. Nearly half of survey respondents indicated they perceived a "high" or "tremendous" opportunity (49 percent) in IT investment compared with 64 percent in 2005. Over the same period, belief in automation as an opportunity has increased from 23 percent to 37 percent.

Leveraging Physician Support

With physician/clinician buy-in perceived as having such great potential for supply chain improvement, it's useful to consider exactly which strategies are most successful for financial executives in this area.

The top three strategies ranked as "high" or "tremendous" opportunities by survey respondents for garnering physician and clinician buy-in were engaging the executive team in development of a supply chain strategic plan with clear goals and accountabilities (51 percent); sharing data with physicians to increase their awareness (50 percent); and conducting value analysis (49 percent).

However, as individuals' reported experiences showed, implementing such strategies and achieving desired expense reductions generally are two separate matters. Unlike other cost-containment programs, prospects for gaining physician buy-in typically are less clear. There is no definitive software, metric, or formula that will translate into physician buy-in. "A lot of organizations continue to struggle with how to meaningfully and successfully engage clinicians in discussions around procurement matters," notes Anand Joshi, MD, director of clinical procurement, New York-Presbyterian Hospital.

At issue, primarily, are high-dollar physician preference items—stents, replacement joints, and pacemakers, for example—that clinicians will preferentially choose in certain procedures and that often elude hospitals' normal purchasing checks and balances. Many of these items' costs significantly outpace payment rates, severely cutting into the margins hospitals make on procedures involving these devices.

"Managing physician preference items continues to be one of the most pressing issues in the healthcare supply chain," says Jean Sargent, director of supply chain management for University of Kentucky Healthcare and immediate past president of the Association for Healthcare Resource & Materials Management. "Hospitals must do a better job of educating as to the true costs associated with these items, as well as the reimbursements."

To better inform physicians on preference item costs, supply and materials managers are recognizing the importance of being inclusive with physicians on decision-making activities in these areas. New York-Presbyterian made great strides by developing its Clinical Resource Initiative, a committee-based effort to get physicians more involved in the procurement process, and in particular, sourcing high-quality products at the best price. "This physician-led initiative then evolved into a hospitalwide approach to strategic sourcing based on close collaboration between administration and clinicians," Joshi says. The result was a $25 million reduction in operating expenses between 2005 and 2007.

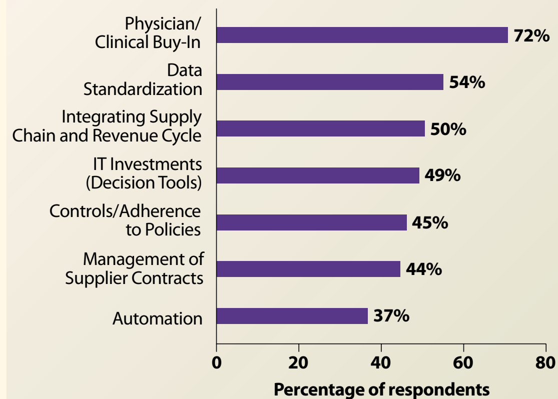
Particularly notable is the fact that CRI became the core foundation for how the procurement department conducts business. "It served its purpose by teaching us to do on a day-to-day basis what historically we would have formed a committee to do," Joshi says. "Now we routinely engage physicians in procurement across the entire hospital—every discipline and specialty."

At University of Kentucky Healthcare, one approach to cost containment is to determine how each new product will affect the bottom line and share this information with physicians. In addition, the organization has developed a physician-led value analysis committee that considers several metrics when parlaying data into significant cost savings: whether the item has been approved by the FDA to be used as intended, what the item costs, how much of the item will be needed for use on a monthly or annual basis, what reimbursement will be for the item, and the difference in cost between the item and one that it replaces.

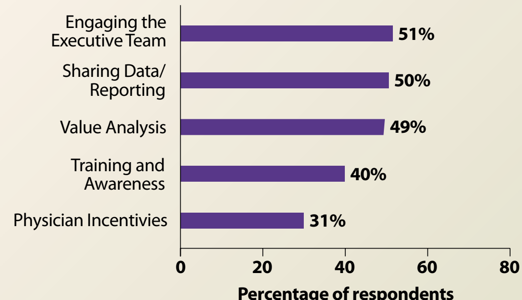
Often, however, it's not as easy to get physicians to abandon a preferred item in favor of one that is less expensive, particularly when they've grown accustomed to certain products. "Physician preference items are not all the same," notes Joane Goodroe of Georgia-based supply chain management consultancy Goodroe Healthcare Solutions. "There are different clinical advantages to different types of items." Additionally, Goodroe says, physicians become comfortable with certain devices because they've received training on the item and have experienced good quality outcomes.

One option may be trying to work on a solution that acknowledges the physician's comfort with a particular product or relationship with a supplier. Sometimes a hospital will negotiate ceiling prices with those suppliers, with physician understanding that purchasing is unlikely with those that refuse to meet the price.

Supply Chain Areas of "High" or "Tremendous" Opportunity



Areas of "High" or "Tremendous" Opportunity for Physician/Clinical Buy-In



Organizations also may step up efforts to help physicians anticipate the specific types of pressures they are likely to encounter to go outside of purchasing controls. As one respondent from a 300-bed facility noted: "We capped spending on ortho implants by sharing cost and performance data with our physicians and then coached them on the marketing techniques often used by vendors to sway them. Results were an increase of net income for this service line of almost 100 percent."

Another option for limiting supply costs is use of gainsharing. Although such incentives were not seen as a top opportunity by survey respondents, changing regulatory rules may increase use of this strategy.

Goodroe acknowledges that gainsharing is difficult to do and requires good data regarding cost savings measurements and targets. However, she says when it is executed properly, hospitals often will achieve a new level of savings. "If you have a diverse medical staff, it's hard to get all physicians going in the same direction," she says. "We find that gainsharing is very effective at this."

Even organizations that aren't comfortable splitting financial savings with their physicians still can provide incentives to physicians for cutting costs such as adding staff or compromising on equipment purchases, notes Goodroe.

In addition, some hospitals are leveraging physician peer pressure to limit supply costs. One supply chain executive for a 13-hospital system described how his organization publishes a quarterly resource guide internally with data by payer and by vendor, which shows how the hospitals stack up against one another and how different vendors compare. "Making this information available paves the way for discussions with physicians because they can see how they compare with their peers based on the vendors they use. They're not going to switch brands just because you want to save money, but no one wants to be the one with the highest costs."

Data and Decision Making

One challenge to data-focused utilization discussions with physicians is the sheer amount of information that supply chain leaders must manage daily. According to the 2008 survey, the median number of items in respondents' supply item master was approximately 10,000, and one-quarter of respondents indicated their supply item master contains about 20,000 items.

Supply chain leaders not only must be adept at managing these data, but also must be able to vouch for accuracy. Hospital supply chain data are often full of errors, duplication, and outdated information. In addition to weakening utilization discussions with physicians, such data problems can significantly affect product pricing, delivery times, and inventory levels.

According to a 2003 white paper from Sterling Commerce, up to 30 percent of the data in most purchasing systems are inaccurate and up to 60 percent of all invoices generated contain errors. In total, erroneous data increase supply expenses by 3 percent to 5 percent with each erroneous transaction costing between $60 and $80 to correct. Further, hospitals spend large amounts of money and a significant number of resources to scrub their data on a regular basis—to the tune of $2 billion to $5 billion annually.[3]

If health care is serious about supply chain improvements, data quality is a fundamental place to start. "It's critical for providers to have a clean, consistent, and updateable materials management information system," says Lawton Burns, PhD, director of the Wharton Center for Health Management Economics at the University of Pennsylvania. "The goal should be to implement processes and systems to eliminate errors so you don't need to devote valuable personnel resources or hire an outside firm every two or three years to clean up the data."

Many gains in data accuracy can be made through effective deployment of technology. Information systems are becoming more sophisticated all the time with tools to eliminate errors and real-time reporting functions that can provide utilization details to clinicians and enhance the organization's decision making. Most enterprise resource management vendors offer supply chain modules that handle the day-to-day tasks of planning, scheduling, and procurement. These systems also include reporting functions that help decision-makers identify purchasing trends and fluctuations in vendor pricing.

But the most complex systems aren't always most effective. New York-Presbyterian's clinical procurement team manages about $450 million in annual supply expenses. While his department maintains an enterprise resource planning system, Joshi says one of the best day-to-day resources for decision support and contract management is a simple spreadsheet.

"What's most important for us is simply having all the important information about our contracts in one place," Joshi says.

Included in the spreadsheet is information related to supplies under contract and with whom, as well as when the contracts are expiring—data points that help monitor contract performance.

That said, when it comes time to negotiate a contract, having the most accurate and up-to-date contract performance and spend-analysis information can be helpful. Information systems can help providers monitor activity and spot trends in volume and pricing, for instance, which is critical leverage for gaining better rates and conditions. One supply chain survey participant noted that by injecting such improvements into the negotiation process with medical device vendors, his organization was able to slash $300,000 from the hospital's supply chain costs.

New Frontiers in Benchmarking

Another area where data quality is particularly important is in applications toward benchmarking. Great strides in improving data accuracy and comparability are being made by trade groups, purchasing organizations, technology vendors, and academic institutions as they work toward advancing today's benchmarking tools. Many organizations rely on multiple sources for tracking and comparing supply chain performance metrics.

University of Kentucky Healthcare has a bevy of resources at its disposal for benchmarking, including an operational database from the University HealthSystem Consortium, notes Sargent. In fact, University of Kentucky Healthcare was recently recognized by UHC along with Denver Health and the University of Wisconsin Hospital & Clinics for "excellence in supply chain management" based on its supply, pharmacy, cardiology, and surgery services expense management.

"We are continually trying to improve our cost per case," Sargent says. "Utilizing these data, we are able to drill into each case to determine how we can be more efficient. We get reports from UHC that help us monitor where we are contractually compliant and where we have opportunities for improvement."

Sargent's team also recently began participating in a new benchmarking tool that was developed by the W. P. Carey School of Business at Arizona State University and AHRMM. The tool tracks financial performance metrics as well as degree of observance to specific organizational best practices, such as how well a hospital is working with physicians to drive supply expense reductions or how automated the supply chain process is. "Many of the standard supply chain metrics have focused simply on unit measures such as inventory turnover," says Eugene Schneller, professor, School of Health Management and Policy with the W. P. Carey School of Business, where he directs the Supply Chain Research Consortium. "Our goal is to look at relational measures that indicate how well a supply chain department

Synchronized Data for Supply Chain Success

The healthcare industry may soon have the federal government to thank for significantly cutting costs and improving inefficiencies in its supply chain—if providers, suppliers, and distributors come together to support a project for product data standardization.

In 2003, the Department of Defense began a supply chain improvement effort to synchronize data housed in its materials management information systems and from 35 military hospitals, along with product data from more than 20 suppliers and two major distributors. As of March 2008, the result has been $22 million in savings from product price reductions. Realizing the benefit synchronized data could have for others, the DoD has started pilot tests of the Global Data Synchronization Network® (GDSN), a product-sharing supply chain data platform widely used in other industries around the world that has significant potential for health care. Its promise is based on specific product and organizational identification standards—the global trade item number and global location number—administered by the GS1 supply chain standards organization.

"Finally, the value of standardized and synchronized data in driving efficiencies, reducing costs, and increasing patient safety is becoming clear in the larger healthcare community," says Kathleen Garvin, DoD/Veterans Administration program manager for data synchronization. "So many healthcare industry advocacy groups have now announced their support for GS1 standards that it appears GDSN will be the solution." These supporters include the Healthcare Supply Chain Standard's Coalition, the Association for Healthcare Resource & Materials Management, and the Coalition for Healthcare eStandards.

is working with suppliers, for example, in addition to the financial aspects of the supply chain."

According to James Smoker, director, material resource service for WellSpan Health, which committed its facilities' data to the project, much promise lies in the ability to compare a multitude of facets of a health system's supply chain operations with those of other health systems of similar size. "It provides both output and qualitative input data that aid us in determining supply chain best practices," Smoker says.

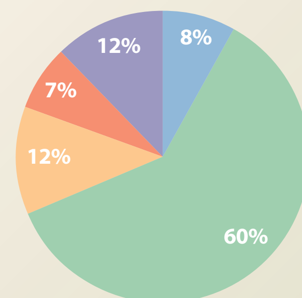
No matter the types of benchmarking tools an organization employs, success largely depends on collecting consistent data across all suppliers, distributors, and provider. The best way to advance an organization's performance, many argue, is use of consistent internal measures and clear communication about goals.

And, of course, identifying optimal, actionable metrics for tracking in the first place will always be key. As an example, consider the success experienced by Seattle's Virginia Mason Medical Center when it replaced its measurement of fill rate—a traditional supply chain metric—with a performance index.

"We began measuring 'defects,' or instances when rework in order processing is required," explains Thomas Nance, the center's director of purchasing, citing examples of pricing error or shipping the wrong number of units. The defects are tracked by hospital and distributor, and the data are translated into a performance index that is available to both.

"This provides us with metrics that are less of a thermometer and more of a thermostat," Nance says. "In other words, numbers are meaningful only if they can lead to a change in behavior." The effort has led to major supply chain improvements by the hospital and its distributor, he says, and has identified several hundred thousands of dollars in expense reduction opportunity that flows directly to the hospital's bottom line as well as increased profitability for the distributor.

Reporting Relationship



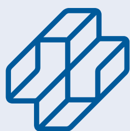
Note: Only includes only responses of supply chain leaders.

Organizational Structure

Ideally, who should be communicating these supply chain metrics and goals? The 2008 supply chain survey found that reporting relationships run the gamut, though a majority of supply chain leaders report to the head of finance. Sixty percent of supply chain leaders said they report to the CFO, 12 percent report to their system's supply chain head, 8 percent report to the CEO, and 7 percent report to the COO (12 percent report to an individual other than those listed).

At New York-Presbyterian, procurement functions report into the finance department, which works well for an organization of its size, according to Joshi. "We have a number of sites, and each facility has its own COO. It simply doesn't make sense to for us to report into several different operations departments. Also, being aligned with the finance department really helps us to develop supply chain metrics that are most important to them."

At Memorial Hermann Healthcare System, a 14-hospital, Texas-based system, the supply chain department was recently placed under the facility services department, due to many purchasing requirements in this area. "There are additional synergies here as well due to the fact that we are doing a lot of construction, which is a huge purchasing arm in itself," according to Daron Whisman, director of finance for Memorial Hermann. He works very closely with the revenue cycle department as well to ensure that the organization maintains an effective pricing strategy. In fact, the supply chain improvement savings goals are tied to his organization's overall operating budget and Medicare profitability.



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Survey respondents indicated substantial potential for improvement through better integration of the revenue cycle and supply chain. It was viewed as an area of "high" or "tremendous" opportunity by 50 percent of respondents. Developing shared goals and accountability to foster collaboration was seen as the most useful strategy in this area.

The CFO's Important Role

Given how significantly supply chain activities can affect the financial success of an organization, it's vital that the CFO's role in advancing improvement efforts not be minimized. Strong leadership toward pursuing the opportunities discussed has the potential to yield significant efficiencies and expense reduction. To this end, the survey participants and experts interviewed provided the following synthesis of advice for financial executives:

Physician Relationships

- Foster executive support and physician involvement in preference item management. An absence of buy-in spells potential failure for many cost-reduction strategies.
- Evaluate the effectiveness of your value analysis structure. Identify barriers and facilitate collaboration among finance, materials management, and clinical areas.
- Encourage finance leaders to cultivate trust and relationships with those in clinical areas through frequent communication, routine presence, and continued openness to understanding practices.

Data Standardization and Benchmarking

- Ensure the supply data are systematically managed to support decision making based on a clean, comprehensive purchase item master.
- Apply external benchmarks where appropriate, but understand the limitations and comparability challenges related to your particular organization's data.
- Challenge suppliers and distributors to adhere to data standards to promote simplification in processes.

Technology Investments

- Ensure an appropriate competitive bidding and request for proposal protocol is in place. For example, establish thresholds for investment where a minimum of two competitive bids is required or where a formal RFP is desired.
- Avoid higher than expected life-cycle costs if frequent software or hardware upgrades are likely or costly disposables are required to use the technology.

How can you work better together?

Consider the following tips for building an effective working relationship with your CFO or materials manager.

Regard the supply chain as being as vital to the financial health of an organization as other revenue cycle management areas. "My CFO visualizes our role in the supply chain as equal partner with accounting, finance, registration, and decision support," says Jean Sargent, director of supply chain management for the University of Kentucky Healthcare. "We're all on the same team."

Leverage the diverse set of skills the supply chain or materials manager brings to the equation. "Supply chain and materials managers have a real opportunity to add value," says Lawton Burns, PhD, director of the Wharton Center for Health Management Economics at the University of Pennsylvania. Whether it is the supply chain leader's comprehensive knowledge of purchasing dynamics or the materials manager's familiarity with a supplier's track record of performance, revenue cycle leadership should rely on such expertise to help inform the decision-making process and advance the organization's financial strategy.

Whenever possible, supply chain or materials managers should explain the supply chain in financial terms that finance executives most closely identify with. Basic measures that the finance department will find meaningful include margin on supplies, expense per net operating revenue, cost versus payment, and volume discount.

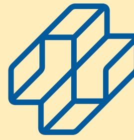
Understand that supplier contracts should not be driven on cost alone. "Don't continually beat your vendors over the head just for the lowest price," advises Daron Whisman, director of finance for Memorial Hermann Healthcare System. Product quality, reliability, overall service, and convenience are just some of the multitude of factors that will shape satisfaction with the supplier. "When negotiating a contract, you must also consider the best partner fit for you, as well as the total cost of ownership of the relationship," Whisman says.

- ➔ Leverage GPOs to optimize pricing, contract performance, and procurement and other processes.
- ➔ Ensure negotiations with technology vendors involve the appropriate team member and are informed by users.

Organizational Structure

- ➔ Evaluate the level and strategic authority of the supply chain leader. The individual should be in an appropriate position to influence others.
- ➔ Routinely review the skills and training needs of supply chain leadership and those in reporting relationships. Additional competencies often are needed as new technologies and systems are introduced.
- ➔ Evaluate staffing levels. Sufficient resources should be available to address analytical needs.
- ➔ Consider the effectiveness with which collaboration is built between the supply chain and other departments that have significant influence on the bottom line. Is revenue cycle involved in value analysis? Are physicians participating in procurement decisions? Are nurse leaders involved in improvement initiatives?

With little relief to the rising cost of medical supplies in sight and a continued tightening of payment rates, healthcare organizations have little choice but to frequently revisit their supply chain processes. Going forward, the best performing hospitals are those that involve the senior financial executive in effectively leveraging physician preference strategies, decision-support technologies, contract negotiations, and optimized supply chain roles as a way to generate greater efficiencies and cost controls in these critical areas.



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Endnotes

1 *Transforming the Global Health Care Supply Chain,* MIT Center for Transportation and Logistics, Cambridge, Mass., July 28, 2006.
2 *Online Healthcare Marketplace,* Millennium Research Group, June 2001.
3 *Data Synchronization: What Is Bad Data Costing Your Company,* Sterling Commerce White Paper, John Stelzer, 2003.

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