



Fixing the Healthcare Supply Chain

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With limited hospital budgets, supply chain inefficiencies consume resources that could be used to bring important therapies into more widespread availability.

by Jonathan Byrnes

The paradox of healthcare supply chains is that they are the home of some of the best and worst practices in supply chain management. This problem affects us all: about 25 percent of hospital costs are supply-related.

The opportunity costs of this inefficiency are enormous. With limited hospital budgets, supply chain inefficiencies consume resources that could be used to bring important therapies into more widespread availability.

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The healthcare industry has developed some of the most important supply chain innovations. In the mid-1980s, federal regulations severely crimped hospital budgets. In response, a particularly innovative hospital supply company developed one of the first powerful vendor-managed inventory systems, which greatly reduced costs and increased service at the same time. (See *Profit from Customer Operating Partnerships*.)

Now conditions are right for another round of major healthcare supply chain improvements. Healthcare budgets are very tight, supply chains have critical vulnerabilities, and providers have significant opportunities for much-needed process improvements.

Supply chain improvement opportunities

These process improvement opportunities are rooted in five key areas: (1) disaster recovery; (2) supply chain integrity; (3) network complexity; (4) disintermediation; and (5) value visibility.

Disaster recovery. I recall talking to a friend, who was one of the top officers of a major Wall Street financial institution, about the aftermath of the World Trade Center disaster. He was relieved that no one in his company was hurt and that the company was operational the next day. Fortunately, the company had an IT disaster recovery plan, and was able to convert an administrative department into a temporary trading floor in New Jersey.

Increasing network complexity is presenting materials managers with a new set of supply chain challenges.

In most companies, supply chain disaster recovery planning has seriously lagged behind IT planning. This is a pressing problem in healthcare because lives can be at stake. Most current planning focuses on emergency response to a short-duration event, such as September 11, but some of the most serious issues concern disasters with long-duration effects. For example, some critical drugs are made in only one factory. If the factory were destroyed, it would take two to four years to relaunch. Similarly, some companies have consolidated

their distribution systems, centralizing key products in one or two giant facilities. If one of these were destroyed, product flow could be severely hampered for a long time.

The answer is not simply to carry large amounts of product inventory, because healthcare supply chains have critical choke points. The most effective action is to develop systematic contingency plans, including factors like alternative production sites, manufacturing flexibility, factory-direct shipping capabilities, offsite backup distribution center capacity, and critical safety stocks.

Supply chain integrity. Quality assurance, such as lot integrity and tracking, is a crucial healthcare supply chain function. It ensures that patients receive safe therapies, and that problems are contained and minimized. Healthcare companies have careful procedures and safeguards in this area, yet the FDA has

recently levied some enormous fines for regulatory violations.

As products move through healthcare supply chains, quality assurance becomes increasingly difficult. Factories and distribution centers are self-contained and relatively few workers handle the product. Cases are clearly labeled. By contrast, the control environment within hospitals and clinics is much more complex and difficult. Numerous individuals handle products, and often products are hard to identify because they have been removed from their packaging.

Grey market diversion raises another important healthcare supply chain integrity problem. Many pharmaceuticals and medical devices are very valuable, and prices vary considerably from country to country. This has created problems that go far beyond economic issues: where diversion occurs, it is not possible to be certain that product integrity has been maintained.

New technologies, such as radio frequency identification (RFID), offer the prospect of ensuring supply chain integrity. However, these new technologies require pervasive, costly changes throughout the supply chain, involving systems, procedures, facilities, and management. These changes require early planning and careful management. (See [*Who Will Profit from Auto-ID?*](#))

Network complexity. Healthcare supply chains are becoming increasingly complex. Many major hospitals are combining with clinics and other providers under common management. Some hospital groups are buying medical practices to secure their patient inflow. Increasingly, outpatient procedures are being performed in offsite clinics, and more patient care is being shifted to the home.

Traditionally, hospital materials managers have focused on managing within a single hospital. The newly increasing network complexity is presenting these materials managers with a new set of supply chain challenges. The skills and experience base necessary to successfully manage a complex, geographically scattered supply chain are fundamentally different from those typically possessed by even highly skilled, single-site managers. Hospital materials managers can succeed in this new environment, but they will require new training and education covering supply chain design, complex process management, and change management.

At a broader level, healthcare supply chains are very fragmented. Manufacturers, distributors (including wholesalers), group purchasing organizations, and providers largely operate independently from one another. The channel is often characterized by forward buying in anticipation of price increases. There is little upstream demand signaling. For example, most manufacturers learn about actual demand by subscribing to a third-party service that reports usage up to six weeks after actual customer sales are made.

Healthcare supply chains need to move toward an integrated "demand-pull" model, so that manufacturers have much earlier visibility into actual consumption. In many other industries, this integrated supply chain system has enabled the participants to align production and distribution much more closely with actual demand. All the channel participants can see and understand what they need to do individually and together in order to successfully lower costs and increase service levels. Healthcare supply chains would free up tremendous amounts of valuable resources by adopting this channel model; important elements, such as systems to provide real-time information at point of patient infusion/injection, are now being put in place.

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Disintermediation. The prospect of disintermediation, moving product directly from manufacturers to providers, is growing stronger in healthcare supply chains. This process offers important economic benefits. But it is only appropriate in certain situations, and it requires that manufacturers and providers develop new expertise.

Traditionally, hospitals have focused on patient care, manufacturers on new product development, and distributors have filled in the void. Distributors have always provided important value in the areas of logistical economics, customer knowledge, and product knowledge.

Now, however, hospital consolidations, cost pressure, and industry maturity are driving the supply chain participants toward the sort of differentiated channel structure prevalent in other industries. For example, a \$5 billion retailer typically would source many fast-moving products direct from major manufacturers, while other products would flow through distributors to gain logistical cost-savings. By contrast, a multi-hospital provider

group may well have several billion dollars in supply costs, but would be sourcing most products from distributors.

Most retailers and consumer-products manufacturers consider supply chain management to be a central competence, while most hospitals and pharma/device manufacturers do not to the same degree. Yet, increasingly, the more advanced hospital groups and manufacturers are seeking to do business directly with each other in an effort to avoid distributor markups. In order to do this, they are working hard to develop the supply chain expertise mentioned earlier, and are turning to specialized third-party logistics providers to supplement their capabilities.

At the same time, innovative distributors have created important, value-added services, including highly sophisticated descendants of the vendor-managed inventory system described earlier. These services can be instrumental in creating the sweeping new channel efficiencies inherent in the integrated demand-pull channel model. Some have moved to diversify into related areas such as information systems in order to provide a broader bundle of value-added services. The explosion of network complexity, mentioned earlier, is creating important new opportunities for distributors to develop value-added partnerships with manufacturers and providers.

This process of repositioning will accelerate over time. Those who facilitate the change will gain market share, and those who try to stem the tide will lose both share and profitability.

Value visibility. The current pricing structures and channel policies reinforce the inefficiency of the fragmented healthcare supply chains. Distributors negotiate volume discounts from manufacturers, and offer discounts to providers. Group purchasing organizations have stepped into the fray to provide hospitals with a volume-buying capability. Some distributors have driven up channel inventory by chronic forward buying against expected price increases, and in response, manufacturers have instituted inventory management agreements which limit distributor purchases.

What is lost in this chaos is clear visibility into value creation, which is the precondition for major improvements in supply chain efficiency. In well-functioning supply chains, each participant has an important role in creating unique, visible value as product flows from source to consumption. In return, each can capture a portion of this value as compensation.

It is time to make an investment in developing new supply chain and customer management capabilities.

It is this visibility, coupled with relentless pressure for improvement, that has led to major gains in supply chain efficiency in industry after industry over the past two decades. There is enough potential improvement at stake in healthcare supply chains so that a major participant who steps up to the real, visible value creation that supply chain integration can bring, can change the industry and be rewarded with major gains for years to come.

New management imperatives


The major changes that are sweeping through healthcare supply chains are creating new management imperatives for all of those involved.

Hospital managers are making significant progress toward mastering the buying portion of procurement, but this is just the tip of the iceberg. They need to master extended supply chain management, downstream to the complex networks that are being created, and upstream to the major distributors who are providing their products and manufacturers who are producing their products. The huge potential gains that will flow from supply chain rationalization can provide desperately needed resources to offset major cost pressures coming from obligations such as indigent care.

Distributor managers must aggressively reposition their companies. This involves understanding the differentiated supply chains that must inevitably evolve, and facilitating their development. Some products will experience disintermediation, and value-added services will be created to replace the lost margins. Distributor managers will either surf on this wave of change by working with their channel partners to create powerful integrated channel models, in the process strengthening their company's positioning, or be swept away by it. Profitability management, the theme of this series of columns, can provide an essential pathway through this transition.

Manufacturer managers must shift their strategic perspective. These managers are used to making big bets on R&D. They might develop fifty new products in the hope that five will be blockbuster hits. It is time to make an investment in developing new supply chain and customer management capabilities. And, it's not a big bet: With relentless pressures on pricing and industry maturity, manufacturers have a long-term need to work closely with their channel partners to develop new, enduring sources of value.

In the end, we will all gain from the upcoming major surgery for healthcare supply chains.

See you next month. 

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