

# Working Paper #1\*

## Strategic Sourcing: Lessons from Outside Healthcare – and Internal Healthcare Scenarios -

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The aim of this paper is to provide a tool to help determine a sourcing strategy for health care delivery organizations (HDO) based on the organization's goals, mission, role in the community and the structure and resources within the organization. We will discuss and define strategic sourcing, mention the advancement within strategic sourcing in various industries with a view towards implementation in the healthcare industry and list the unique features of the health care supply chain that have to be considered during implementation. We will conclude with two activities that will help organizations improve the sourcing process: (1) scenario analysis of different approaches towards supply chain management and (2) an assessment of where your organization is in relation to best practices in strategic sourcing.

### **What is sourcing?**

Literature is rife with many definitions that illustrate the extent of disagreement regarding the nature and range of sourcing. Sourcing is seen somewhat narrowly as “finding sources of supply, guaranteeing continuity in supply, ensuring alternative sources of supply, gathering knowledge of procurable resources” (Vollman, Berry, Whybark, 1984, p. 148). A rather broader definition of sourcing views it as “the entire set of business processes required to purchase goods and services including the selection of suppliers, design of supplier contracts, product design collaboration, procurement of material and evaluation of supplier performance” (Chopra and Meindl, 2003, p. 387-388). Obviously, all of these are functions that a HDO must fulfill in order to provide the goods and services to those who provide care. Yet, in such an undisciplined context, it is difficult to grasp the essence of the sourcing concept.

A four part functional definition, consisting of four activities that are normally performed in a step wise fashion, helps to better understand sourcing in the realm of healthcare supply chain management. These activities in order of performance include:

- understanding and defining the needs of the organization
- analyzing the market for potential suppliers
- evaluating supplier selection and performance programs
- building long-term relationships with supply chain partners

The key aspect of this definition is that these activities should be performed in a recurrent manner and assessed in terms of their effectiveness to produce the best results.

### **What makes sourcing strategic?**

Harvard University Professor Michael Porter (1980) was instrumental in introducing the concept of power of the buyers and the suppliers (two forces among a total of five forces) in shaping the competitive forces surrounding any industry. When the environmental and cross-functional components of an organization are added to sourcing, the resulting activity may be termed strategic sourcing. Strategic sourcing does not follow an “all or none” principle but requires the organization or a focused/autonomous unit within an organization, to move from one level to another until the sourcing process

becomes truly strategic. There are four levels of organization strategy (Figure 1) with each level requiring change in order to accommodate the framework of the next level. (Please note that each level has a strategic function in itself but our focus is on strategic sourcing at the highest level – the healthcare value chain.).

LEVEL OF STRATEGY	TYPE OF STRATEGIC CHANGE
1. Intradepartmental	Strategies involved with the actual strategic sourcing function itself
2. Interdepartmental	Strategies involved with working with the needs of different departments
3. Corporate	Strategies involved with sourcing as part of the broad corporate strategy
4. System	Strategies involved with improving the efficiency and performance of the entire value chain

Figure 1: Levels of Organization Strategy and Change

It is noteworthy that a strategy that works well within one level may not work well at another level. Possible solutions to this include forming different strategies at each level or forming one overarching strategy that can be applied at all levels. The latter solution, however, may be difficult to create and maintain in the long run.

### **Strategic Sourcing in Other Industries**

Outside of the health sector, strategic sourcing has been an invariable focus for organizational advancement. The following are the broad categories under which these ideas have been classified (Carter and Narasimhan, 1995):

A. Organizational structure – In the traditional structure, the supply chain management function was relegated to a materials management department with no representation at the senior management level. This resulted in the supply chain management function lacking a direct contribution to the overall corporate strategy. The trend across many sectors of the economy is changing and it is very common to find a Chief Purchasing Officer/ Chief Procurement officer within various industries. Let us focus on some of the characteristics of such a change in the organizational structure:

- Firms that value the strategic sourcing/purchasing function tend to have policies and procedures in place to systematically evaluate suppliers and classify them according to performance (Carr and Pearson, 1999)
- Firms that integrate supply chain management with other departments within an organization will eventually foster synergies within the organization (Ellram, Zsidisin, Siferd and Stanly, 2002)

- Firms that exhibit a positive supply management orientation strive to create an environment that would stimulate interaction between the buyer and the supplier (Shin, Collier and Wilson, 1999)
- Firms that focus on supply chain management overcome integration issues within the value chain by building strategic alliances with suppliers and distributors thereby eliminating waste and improving efficiency (Tan, 2002)

B. Policies, Practices and Procedures – In the traditional structure of an organization, the materials management department was not involved in a strategic effort to perform the sourcing/purchasing function. Ironically, the introduction of a supply management orientation at the corporate level frequently resulted in dysfunction and lack of coordination among the different departments within the organization. The requisite response from the senior management was to put policies, practices and procedures in place that would orient the personnel to a course that gives supply chain management its due position within the organizational structure to achieve predetermined outcomes. . Scrutiny of the characteristics of such changes to the existing policies, practices and procedures in the non-health sector suggest that:

- Firms that involve suppliers in purchasing/sourcing activities demonstrate a positive impact on strategic purchasing/sourcing activities that ultimately impacts the overall financial performance at the corporate level (Carr and Pearson, 2002)
- Firms that indulge in strategic purchasing/sourcing activities ensure a higher level of quality and customer satisfaction (Carter and Narasimhan, 1994)
- Firms that channel their energy towards the identification of future customer requirements, the commitment required for the evaluation of performance across the supply chain and the analysis of the strategies of competitors in the market significantly improve corporate performance (Tan, Kannan, Handfield and Ghosh, 1999)
- Firms that do not place an emphasis on choosing their suppliers only on the basis of cost but stress the use of stringent selection criteria based on quality, customer service and delivery, the need to build long-term relationships with their suppliers and the necessity to encourage their involvement in the supply chain performed better in their respective industries (Tracey and Tan, 2001; Vonderembse and Tracey, 1999; Wisner and Tan, 2000)

C. Education and Training needs – the organization that has become complacent in its business practices will (1) not be open to change in its day-to-day operations and, (2) frequently not have the needed competencies to engage in strategic sourcing. Education and training should not be confined only to the purchasing/sourcing department but should be open to the entire organization if the planned change is expected to be successful. Before training the employees to function within an organizational structure that values strategic sourcing and purchasing, the organization should not institute practices, policies and procedures to implement the change.

- Firms that concentrate on improving the purchasing/sourcing skills of its employees have a positive impact on the strategic purchasing function, overall firm performance and supplier responsiveness (Carr and Smeltzer, 2000)

**Benchmarking Strategic Sourcing Progress:**

Research has shown that increased investment in the integration of supply chain management provides a better rate of return on the investment in purchasing/sourcing practices (Narasimhan and Das, 2001). Figure 2 demonstrates how progressive firms have put into place metrics, to assess the far reaching implications of a supply management orientation and, corresponding, how suppliers evaluate the performance in the marketplace (Tan, Lyman and Wisner, 2002; Wisner and Tan, 2000):

<b>Metric and Areas for Consideration</b>	<b>Metrics from User Perspective</b>	<b>Metrics from Supplier Perspective</b>
Overall competitive position	X	
Overall customer service levels	X	
Market Share	X	
Return on assets	X	
Average Selling Price	X	
Logistics and Delivery		X
Capacity		X
Information Sharing	X	X
Needs of the End Producer		X
Level of communication	X	X
Level of Trust	X	X
Quality	X	

Figure 2 – Moving toward integrative metrics.

**The Idea of Smartsourcing**

In advancing the idea of strategic sourcing and alliances, a number of authors have introduced the idea of “smartsourcing” as a comprehensive business strategy that transcends the issues embedded in strategic sourcing. According to Koulopoulos (2006a, 2006b), smartsourcing differs from other sourcing strategies to the extent that its intention is to:

1. Cut Cost & Increase Innovation
2. Streamline the Value Chain
3. Partner to define what you don't know: helps to define all processes
4. Differentiate
5. Strategic Excellence – Align with shifting markets
6. Continuous – Thoughtful leadership combined with innovation buffer business process from change
7. Trust-based partnership” Engenders trust and collaboration leading to greater value

Perhaps the most important aspect embedded in the idea of smartsourcing for our discussion here is not the extent to which organizations outsource to achieve advantage but rather the importance of advancing one's thinking beyond the mere acquisition of products to the consideration of the relationships that are embedded among those organizations that are part of the value chain.

#### Unique features of the healthcare supply chain:

The healthcare supply chain and needs of health delivery organizations are best considered within the context of three general macro processes (Chopra and Meindl, 2003) and a fourth more specialized macro process (Schneller and Smeltzer, 2006):

- Customer Relationship management – all of the processes that focus on the interface between the organization and its customers
- Internal Supply management – all of the processes that are internal to the organization that focus on supply related activities (for example, inventory management policies)
- Supplier Relationship management – all of the processes that focus on the interface between the organization and its suppliers
- Purchasing Partner Management - a wide variety of intermediaries (distributors, information intermediaries, GPOs) that bridge the gap between suppliers and the hospital.

The healthcare supply chain requires the manager to be aware of several factors that can affect the macro processes at any point in time. The important factors that have to be taken into consideration are:

1. The customer factor – The healthcare industry is unlike most other industries in that it has both internal (the physicians, nurses and allied health professionals) and external (the patients) customers with varying demands and expectations. The

healthcare system has to please both of these customer groups as customer loyalty is reserved for the health delivery organization that best caters to their needs

2. The physician factor –Physicians have strong preferences and opinions about materials. They are often trained to use a specific item or have a relationship with a particular supplier and they are often reluctant to switch. Choices made as a result of this training and relationships may preclude aspects of internal supply management
3. The industry factor – Healthcare strives for consistency and stabilization and is generally perceived to be reluctant to change; yet, we see huge R&D investments in both the public and private sector and rapid introduction of new products and services in certain specialties (cardiology). A point to note is that change does not sweep the entire spectrum of delivery of care within a hospital (internal medicine vs. cardiology). In somewhat different terms, health care is characterized by multiple “clockspeeds” in terms of products, processes and its organization (Fine, 1996; Schneller and Smeltzer, 2006)
4. The environment factor – The healthcare environment is highly regulated, has complex and changing reimbursement policies, and customer preferences-physician and patient. Furthermore, product standardization is independent of a single healthcare system or a single hospital. The supply manager has to understand these aspects of the external environment and coordinate with the internal environment.

With all of the above information, it is possible to differentiate organizations and be able to work towards improving supply chain performance through strategic sourcing. In the previous section we introduced the idea of smartsourcing. Koulopoulos (2006b) has pointed out that smartsourcing has very special applications in the health care industry where the challenge is to move beyond cost cutting in the organization’s competency and to innovate and “steer resources toward what the organization does best to support that mission”. In the strategic sourcing of key products and services, this is a goal worth keeping at the forefront of health care strategic sourcing decision making. We observe that many HDOs have been very reluctant to form such strong alliances – and even when such alliances exist, for many reasons there is reluctance to full-engage the partners who can make one truly strategic. This includes partners in sourcing such as group purchasing organizations as well as distributors (Schneller and Smeltzer, 2006). The extent to which GPO participating HDOs continue to engage the marketplace for goods and services, independent of their GPOs reflects the mixed utilization of these organizations in the strategic sourcing process.

The field of healthcare supply chain management does not have to reinvent the wheel and formulate sourcing guidelines and practices from scratch. Rather, best practices and effective guidelines in supply chain management can be garnered from other industries. What is required is a willingness to “source” ideas and tools from other industries and tinker with them to make those strategies applicable to healthcare. Strategic sourcing is a critical component of the improvement of quality in healthcare

delivery while reducing costs and stabilizing the financial well being of the healthcare organization.

To advance our discussion, we have crafted three scenarios depicting health delivery organizations followed by an Organizational Status Assessment of strategic sourcing. These scenarios are rarely pure – with any HDO having one or more features of any one scenario. However, this allows for the identification and analysis of pathways toward supply performance excellence through strategic sourcing.

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## **Scenario A**

Health Delivery Organization 1 (HDO1) is keen on improving its bottom line by cutting costs and increasing revenues. The organization has contracted some of the top physicians in the city to utilize their health delivery organization for patient care. The physicians have made their expectations clear to the organization that they require unimpeded access to needed materials to maintain the highest quality of patient care. HDO1 has promised to meet these requirements and has given the physicians the freedom to request any products, commodity or physician-preference items, needed and these products will be made available through the organization's inventory. Additionally, the physicians will be the sole source of contact with the supplier for physician preference items (PPIs). HDO1 does not have a computerized system to monitor the inventory level across the different departments within the organization. The inventory is managed by a small materials management department, a section within the overall operations department, by collecting purchase orders. Substantial aspects of inventory are managed by vendors and there is relatively little attempt to track or manage vendor behavior. On the commodity side, HDO1 follows a policy of placing a bulk order at the distributor when the inventory falls below the reorder point in order to maximize the quantity discounts and reduce transportation costs. On the PPI side, the organization anticipates increased costs due to stocking of multiple brands, and unknown costs associated with vendor managed inventory. However, HDO1 plans to compensate for this new cost by increased revenues due to increased patient flow. HDO1 is part of a GPO but may choose to place direct orders (for both PPIs And commodity items)with the manufacturer or through the distributor as and when the need arises. HDO1 takes pride in its new strategy because it believes that the strategy results in efficient transaction-based supply chain management within the value chain and involves low management (thereby manpower) requirement.

## **Scenario B**

Health Delivery Organization 2 (HDO2) is preparing to improve its revenue stream and its cost structure by improving its supply chain practices. The organization has recently appointed a Vice-President of supply chain management who was employed in different industries and has achieved tremendous success. The organization has embarked on a restructuring program beginning with the creation of a supply management department with personnel hired from different industries. The department personnel are assigned to the different divisions of the organization including ambulatory, inpatient, emergency, Operation Theater and so on in order to closely monitor the sourcing practices. The individual departments have computerized systems that are monitored by non-clinical personnel to place orders to the centralized supply management department. The Vice-President of Supply Chain Management meets with the supply management team to decide which products to purchase for the whole hospital based on price. PPI and commodities are treated in the same manner and the same brands are purchased for the whole organization. The organization is interested in innovative supply chain technology and has recently participated in an online reverse auction to obtain the best product at the lowest price. This is an effort to compliment contracts with GPOs and distributors. The organization has been considering implementation of lean supply management principles, Just-in-time (JIT) inventory management system and supplier assessment programs in the long run. The supply management department closely monitors the contracts and tries to limit the contact between physicians and manufacturers. HDO2 places a great emphasis in managing the supply chain activities as a well-oiled machine with regular market assessments for the best price, close monitoring of suppliers and their contracts and standardization practices across the organization.

## Scenario C

Health Delivery Organization 3 (HDO3) is planning to improve its bottom line by restructuring its internal/external business practices and overall organizational structure with a focus on gaining a long-term competitive advantage. HDO3 has created a senior management position in supply chain management (along with a separate supply chain department) to incorporate supply related activities into the overall corporate strategy. The purchasing/sourcing functions have been centralized for the entire organization and financial and operational targets have been established for the new supply chain department. The management has also formed value analysis teams (one, at the corporate level and several, at the departmental level) comprised of senior management personnel, physicians, business managers and other healthcare professionals. They utilize information from the GPO and distributor to evaluate the market for new products and technologies and also rate the performance of its current suppliers. The suppliers have been encouraged to seek the value analysis teams as the point of initial contact and exposure to individual physicians has been limited. The strategy is to reduce the supplier base, achieve consensus on physician preference items and measure the performance of supply activities within and without the hospital while reducing overall supply chain costs. When this strategy does not work, HDO3 attempts to utilize their strong alignment with physicians to capitate prices. The organization has also introduced a vendor managed inventory system and encouraged frequent dialogue between the GPO/distributor and the value analysis team. HDO3 finds satisfaction in the high level of management (high manpower) of the supply chain and the effective collaboration-based supply chain management.

## Organizational Status Assessment

Please state the performance level of your organization based on the following functions.  
 If the function is not part of your organizational structure, please leave the column blank.  
 If the function is irrelevant to your organization, please enter N/A

Broad categories	Functions	High	Moderate	Low
Organizational Structure	Existence of a formed strategy for sourcing within the organization			
	Clear linkage between sourcing strategy and overall corporate strategy			
	Presence of supply chain personnel within senior management			
	Creation of a separate sourcing group of employees within the supply chain function			
	Integration of purchasing/sourcing activities across the different departments within the organization			
	Interaction between supply management and other areas of the organization			
	Evaluation of suppliers on a regular basis based on select criteria			
	Classification system for suppliers based on their performance			
	Stimulation of interaction between buyer and supplier			
	Establishment of strategic alliances with suppliers and distributors			
Policies, Practices and Procedures	Involvement of suppliers in purchasing/sourcing activities			
	Participation of medical professionals in supply activities (Value Analysis Teams)			
	Systematic identification of future customer requirements			
	Technology assessment of the products available in the market and the new products to be introduced			
	Commitment towards implementation of feedback from supplier performance report			
	Analysis of the strategies of the various competitors within the market			
	Implementation of selection criteria for suppliers based on quality, customer service and delivery			

Broad categories	Functions	High	Moderate	Low
Policies, Practices and Procedures	Identification of the need to build long-term relationships with suppliers			
	Encouragement of supplier involvement in supply related activities			
Education and Training needs	Training of employees in sourcing/purchasing related activities			
	Assessment of employee skills in supply management			
	Emphasis on employee education related to supply chain management			

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## References

Ellram, L.M., Zsidisin, G.A., Siferd, S.P., & Stanly, M.J. (2002) The impact of purchasing and supply management activities on corporate success *The Journal of Supply Chain Management* February 4:17

Carr, A.S., & Pearson, J.N. (1999) Strategically managed buyer-supplier relationships and performance outcomes *Journal of Operations Management*, 17, 497-519

Carr, A.S., & Pearson, J.N. (2002) The impact of purchasing and supplier involvement on strategic purchasing and its impact on firm's performance *International Journal of Operation & Production Management* 22(9), 1032-1053

Carr, A.S., & Smeltzer, L.R. (2000) An empirical study of the relationships among purchasing skills and strategic purchasing, financial performance, and supplier responsiveness *The Journal of Supply Chain Management* Summer 2000, 40-54

Carter, J.R., & Narasimhan, R. (1994) The role of purchasing and materials management in total quality management and customer satisfaction *International Journal of Purchasing and Materials Management* Summer, 3-13

Chopra, S. & Meindl, P. (2003) *Supply Chain Management: Strategy, planning and operations* Upper Saddle River, New Jersey: Pearson Prentice Hall

Fine, Charles. (1998) *Clockspeed: Winning Industry Control in the Age of Temporary Advantage* New York: Persus Books.

Kannan, V.R., & Tan, K.C. (2002) Supplier selection and assessment: Their impact on business performance *The Journal of Supply Chain Management* Fall, 11-21

Koulopoulos, Thomas. (2006a) Value Creation Through Smart-Sourcing. *Value Creation Through Smart-Sourcing*, March 2006, Issue 53  
[http://www.optimizemag.com/showArticle.jhtml?articleID=180207019&cid=ms\\_licence](http://www.optimizemag.com/showArticle.jhtml?articleID=180207019&cid=ms_licence)

Koulopoulos, Thomas. (2006b) *Smartsourcing: Driving Innovation Through Outsourcing*. Platinum Press.

Narasimhan, R., & Das, A. (2001) The impact of purchasing integration and practices on manufacturing performance *Journal of Operations Management* 19, 593-609

Porter, M. E. (1980) *Competitive strategy: techniques for analyzing industries and competitors* New York City, New York: Free Press

Schneller, E. S. & Smeltzer L. R. (2006) *Strategic management of the healthcare supply chain* San Francisco, California: Jossey-Bass

Shin, H., Collier, D.A., & Wilson, D.D. (2000) Supply management orientation and supplier/buyer performance *Journal of Operations Management* 18, 317-333

Tan, K.C. (2002) Supply chain management: Practices, concerns, and performance issues *The Journal of Supply Chain Management* Winter 42-53

Tan, K.C., Kannan, V.R., Handfield, R.B., & Ghosh, S. (1999) Supply chain management: an empirical study of its impact on performance *International Journal of Operations & Production Management* 19(10), 1034-1052

Tan, K.C., Lyman, S.B., & Wisner, J.D. (2002) Supply chain management: A strategic perspective *International Journal of Operations & Production Management* 22(6), 614-631

Vollmann, T. E., Berry, W. L. & Whybark D. C. (1984) Manufacturing planning and control systems Homewood, Illinois: Dow Jones-Irwin

Vonderembse, M.A., and Tracey, M. (1999) The impact of supplier selection criteria and supplier involvement on manufacturing performance *The Journal of Supply Chain Management* Summer 1999, 33-39

Wisner, J.D., & Tan, K.C. (2000) Supply chain management and its impact on purchasing *The Journal of Supply Chain Management* Fall, 33-42