

MAKING THE CASE FOR CONSOLIDATED SERVICE CENTERS

Original Research supported by the Health Sector Supply Chain Research Consortium

April 2016

Abdulsalam, Yousef, Mohan Gopalakrishnan, Arnold Maltz, Eugene Schneller. 2015. **The Emergence of Consolidated Service Centers in Health Care.** *Journal of Business Logistics* 36, 321–334.

ABOUT THE PROJECT

This project began with the intent of investigating the self distribution phenomena that has been getting increased attention in recent years. Many “shades” of self-distribution have emerged, different governance structures, strategies, and supply management philosophies [1]. Many times self-distribution strategies are executed through consolidated service centers. This study addresses the two related research questions.

APPROACH

We apply the theory of complex systems to health care supply networks in order to better understand the extent to which *consolidated service centers* (CSCs) reduce supply chain complexity for hospitals and move them towards more efficient supply chain management.

Three case studies are conducted in order to identify the common themes and strategies that different CSCs undertook to succeed in their mission.

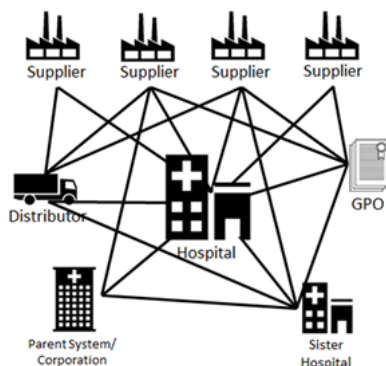
How do Consolidated Service Centers manage the **supply chain complexity** of their healthcare organization?

What **characteristics** of Consolidated Service Centers differentiate them from other distribution models?

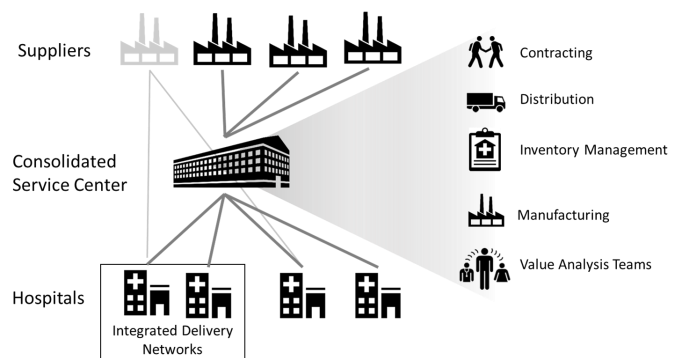
IMPLICATIONS

Self-distribution is an evolutionary trend, with over 75% of surveyed health industry distributors believing that there will be more self-distribution in the coming years [2]. Studying the self-distribution strategy and CSCs with academic rigor can bring insights to health providers looking to improve their supply chain performance. Furthermore, national distributors, group purchasing organizations (GPOs), and other health sector supply chain intermediaries can integrate features of CSCs into their organizations in order to deliver higher levels of service to their customers.

Healthcare Supply Chains as Complex Systems

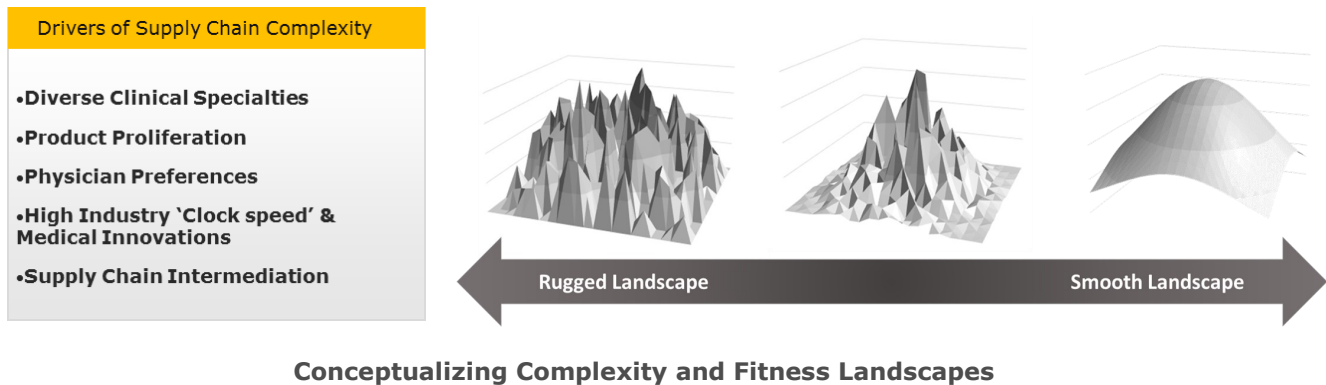


The Role of Consolidated Service Centers



We would like to thank the organizations represented in this study for welcoming us into their facilities and granting us valuable time with their top executives.

BACKGROUND & RESEARCH METHOD

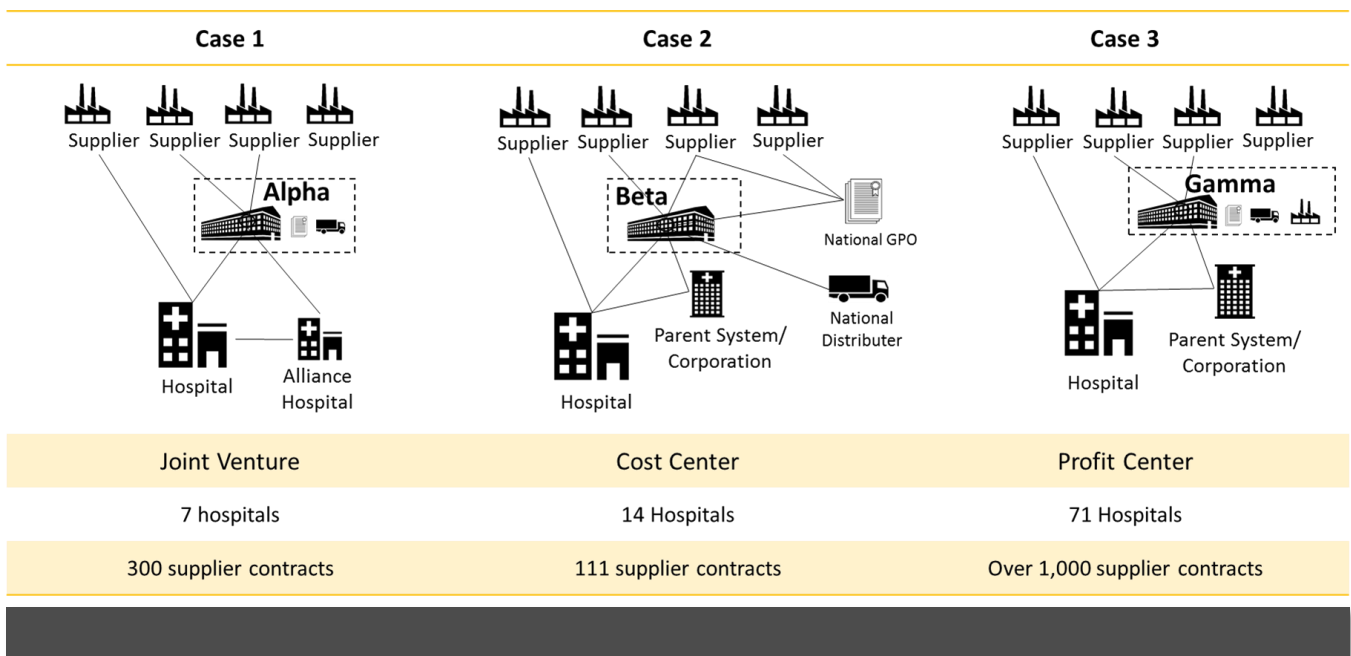


COMPLEXITY SCIENCE The theory of complex systems has been applied to many natural and social phenomena, such as bird flocks, molecular formations, and economics. A **complex system** is defined by a set of **components (N)**, and the **interrelatedness of these components (K)** [3]. Together, the N and K can be used to conceptualize a complex system as a **fitness landscape**. The vastness and ruggedness of a fitness landscape are defined by N and K, where peaks and valleys represent varying magnitudes of system performance [4].

In the supply chain management context, supply networks have been conceptualized as complex systems where the number of entities in the network (buyers, suppliers, intermediaries, etc.) and the level of interrelatedness between them represent the **N** and **K**, respectively. The peaks and valleys represent supply chain performance outcomes.

Through strategic decision-making, decision-makers steer their organization through this landscape with the purpose to reach the highest peak possible. However, on highly rugged terrains, it is difficult identify the highest peak and navigate towards it, keeping in mind that the terrain is not static but continually changes as the N and K of the supply network changes. Decision-makers also attempt to first smoothen the landscape (by adjusting N and K) in order to identify and reach an acceptable peak more efficiently.

RESEARCH METHOD A qualitative research approach was adopted to address the exploratory nature of our research questions. Three cases of self-distribution strategies were selected for examination, each implemented in a different manner. Information about the cases was obtained from several sources: documents, field visits to the CSCs, interviews with key executives who represented the CSC, and interviews with executives who represented customers of the CSC.



ANALYSIS & INSIGHTS

Key CSC Characteristics that Enable them to Smoothen the Fitness Landscape for Hospitals

Characteristics	Description	Example quote
Selectivity of customers	All three CSCs were very cautious about expanding their customer base, opting instead to grow through increasing volume with their existing customers.	"We never go to find new customers, if they come to us we sit with them and think carefully about [adding them as a member]."
Enforcing high contract compliance	In the examined cases, over 80% of hospital supply spend is through the CSC. Conversely, a typical hospital routes 50-70% of supply spend through direct contracts.	"The major difference between us and a GPO is that we were able to get a high level of compliance on purchasing agreements [over 90%] from the hospitals."
Realignment of the Reporting structure	Reporting structure for hospital Supply Chain Director changed to a matrix structure that included reporting to CSC leadership.	"... we realized early on that compromising some autonomy at the lower levels had more benefits for our model to drive down costs and increase service levels."

KEY FINDINGS From analysis of the qualitative data, several cross-cutting themes emerged. The table above identifies the common characteristics of CSCs that play an important part in their success. Through interviews, customers of CSCs (i.e. hospitals) confirmed that their supply chain complexity significantly decreased since working with the CSC. From the perspective of the hospital, both the number of components (N) and interrelatedness (K) in their supply network was significantly reduced. The two propositions below generalize how CSCs were able to simplify the supply networks for hospitals.

*The CSC reduces the number of components in the hospital supply chain by facilitating **supply base reduction** initiatives for the hospital.*

*The CSC manages the interrelatedness in the hospital's supply chain by **disintermediation and resource consolidation**, while managing hospital-supplier relationships.*

Impact of Consolidated Service Centers on Supply Chain Complexity

The *expected* change in a 500-bed hospital's supply chain landscape to change one year after engagement with CSC.

	Alpha	Beta	Gamma
a. Percentage reduction in total number of med/surg. suppliers:	Reduce by 10 %	Reduce by 20%	Reduce by 10 %
b. Percentage reduction of med/surg. direct contracts (non GPO).	Reduce by 90 %	Reduce by 10%	Reduce by 50-75%
c. Expected reduction in FTEs at the hospital	5+ FTEs	15 FTEs	3 FTEs
d. Expected additional FTEs needed at CSC to service the hospital	2 FTEs	8 FTEs	1 FTEs

DISCUSSION

SUPPLY CHAIN INFORMING HEALTHCARE

This study highlights the importance of achieving cross-functional integration (i.e. integrating purchasing, logistics, and operations) as a baseline for seeking higher levels of external supply chain integration (i.e. with suppliers and customers) [5]. By aggregating the various supply chain components under one locus of control, the CSC can achieve wider “arcs of integration” with suppliers and customer [6].

HEALTHCARE INFORMING SUPPLY CHAIN

Generally, supply chain functions have had the lowest association with shared service strategies compared to other functions such as finance, IT, and HR [7]. What has been labeled as the “self-distribution” strategy in healthcare can provide lessons to supply chain research about the viability of shared service strategies as a vehicle for achieving cross-functional integration [8].

QUESTIONS TO CONSIDER

1. Where do distributors and GPOs see themselves in the CSC context?
2. What are the most actionable metrics in for evaluating self-distribution?
3. What characteristics of self-distribution can distributors and GPOs adopt?
4. What are the risks associated with a self-distribution strategy?
5. Is the CSC / national distributor comparison equivalent to the regional purchasing coalition / GPO comparison?
6. Under what conditions should hospitals consider transitioning to self-distribution?

REFERENCES

1. O’Daffer, E., and Mooraj, H. 2011. To CSC or Not to CSC, That is the Question for Healthcare Providers. Stamford, CT: Gartner Research.
2. Health Industry Distributors Association. 2012. Evaluating Self-Distribution: A Guide for Healthcare Executives. Alexandria, VA: Health Industry Distributors Association.
3. Simon, H.A. 1962. “The Architecture of Complexity.” Proceedings of the American Philosophical Society 106:467–82.
4. Levinthal, D.A. 1997. “Adaptation on Rugged Landscapes.” Management Science 43:934–50.
5. Flynn, B.B., Huo, B., Zhao, X., 2010. The impact of supply chain integration on performance: A contingency and configuration approach. Journal of Operations Management 28, 58–71.
6. Frohlich, M.T., Westbrook, R., 2001. Arcs of integration: an international study of supply chain strategies. Journal of Operations Management 19, 185–200.
7. Deloitte. 2013. 2013 Global Shared Services—Survey Results. Copyright©2013 Deloitte Development LLC.

HEALTH SECTOR SUPPLY CHAIN RESEARCH CONSORTIUM



ABOUT

The Health Sector Supply Chain Research Consortium (HSRC) brings together health sector organizations and academic researchers to conduct research on topics related to the strategic management of the health care supply chain. In 2015, the Health Sector Research Consortium (HSRC) and its member organizations were integrated into CAPS Research as a CAPS Research industry advisory group, led by HSRC founding director Eugene Schneller, Ph.D. (Arizona State University).

The **mission** of HSRC is to provide actionable research to develop best standard practices for the health care supply chain that reduce risk and cost and to influence policy.

Our **vision** is that HSRC, combined with the resources of CAPS Research, will continue as the thought leader for unbiased research and the strategic resources to improve the performance of the health sector supply chain practice.