

eCommerce in Canada's Healthcare System – Today & Tomorrow.

Discussion paper on the evolution of
eCommerce in the health industry

March 31, 2004



Abstract

Stakeholders in the health sector have expressed a strong need for information to develop their strategies for the full implementation of eCommerce within their organizations. They want to be assured that eCommerce is more “help than hype”—that it is evolving, as anticipated, into a healthcare best practice. To address this need and determine whether eCommerce represents a true value proposition for the Canadian healthcare sector, **Industry Canada**, in consultation with the **Healthcare Supply Chain Network – HSCN**, contracted with **Deloitte Inc.** to conduct a research study. Overall, the results of this study provide encouraging qualitative support for the value of eCommerce in the Canadian healthcare sector. The findings go beyond intuitive confidence in the benefits of eCommerce by providing encouraging empirical support for its value. Through various data sources, it was concluded that hospitals can expect between 2 to 3% savings in their overall supply chain budget as a result of a truly integrated solution, making use of the various eCommerce communication channels. Survey respondents reported that they are confident they can extract additional savings of 4 to 6% in the future. Although, these results may at first seem to be rather conservative, the members of the Expert eCommerce Task Force overseeing this research feel strongly that the anticipated savings will be much higher. These perceptions are supported by the literature—significant quantitative benefits have been realized in other industries in which eCommerce has been fully embraced. The findings in this study also underscore the need for more detailed research. With knowledge comes power, therefore, the importance of additional, ongoing proof of the value of eCommerce to Canadian hospitals cannot be overemphasized. As such, the key recommendations from this study focus on: a) broadly disseminating the results of this preliminary research; and b) conducting additional research with a much larger sample of representative hospitals from across Canada to populate a model that could more accurately forecast what the eCommerce savings could be for various types of Canadian hospitals.

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eCommerce in Canada's Healthcare System – Today & Tomorrow

Is eCommerce Delivering?

During the past decade, eCommerce—defined as any electronic medium (internet based or private network) used to conduct transactions between two or more parties—has been hailed for its potential to revolutionize the healthcare system (additional definitions of eCommerce transactions and communication channels are provided in Appendix A). The Ontario Hospital Association (OHA) November 2001 Task Force Report on Supply Chain Management stated the following:

System-wide implementation of Information Technology (IT), including e-commerce and bar coding of medical/surgical supplies, food and pharmaceuticals, would help to reduce the cost of ordering, distribution and inventory management within the system. It would also have a significant impact on reducing medication errors by enabling, for example, the scanning of the bar code on a patient identity bracelet before a medication or blood product is administered. Confirmation from U.S. hospitals indicates this would reduce the average length of hospital stays, resulting in major systemic savings.¹

Significant savings of time, resources, and dollars—all enablers of improved patient outcomes—were eagerly anticipated by organizations making the investment in new electronic systems. A few years later, with new supply chain processes and technology in place within a number of organizations, and expectations high, the healthcare community is anxious to determine whether eCommerce is delivering on its promises.

The Need for Early Evidence

Within healthcare, a good deal of effort has gone into “*examining*” the various transactions associated with eCommerce (e.g. sourcing, ordering/procurement, shipping/receiving, invoicing/payment, inventory status monitoring, and tracking transaction history), and in “*estimating*” the potential for increasing efficiency and decreasing the cost of materials. However, until now, the post-implementation impact of eCommerce has “*not been measured*”—with good reason, since the sector’s complex and fragmented nature has made industry-wide adoption more protracted than in other sectors. As the OHA Task Force explains in their supply chain report: “...a variety of institutions frequently functioning with different mandates in different locations (means that) the industry lacks the critical mass to drive systemic changes. Unlike other industries, no single driver or large purchaser exists to impose change.”² With so many hospitals still in the initial stages of adoption, and the full benefits not yet realized or measurable, some would question if undertaking an assessment of the value of eCommerce at this time is relevant, however, many would say, the sooner the better.

¹ Task Force on Supply Chain Management, “Improving Supply Chain for Better Health Care.” *A Publications of the Ontario Hospital Association (OHA) and the Efficient – Healthcare Consumer Response (EHCR)*. (Nov. 2001): p.3.

² Ibid, p.12

If health ministries and hospitals are to make informed operational and investment decisions, a preliminary evaluation of the status quo and true value of eCommerce—even one that provides directional learning—is a vital tool. To evaluate whether eCommerce has delivered on its promises, stakeholders want information on the extent of adoption, whether systems are functioning as expected, and whether hospitals are at least beginning to see the benefits of electronic data systems. They want to be assured, in other words, that eCommerce is more “help than hype”—that it is evolving, as anticipated, into a healthcare best practice.

Research Approach

To address this need and determine whether eCommerce represents a true value proposition for the Canadian healthcare sector, **Industry Canada**, in consultation with the **Healthcare Supply Chain Network – HSCN**, contracted with **Deloitte Inc.** to conduct a research study. Their first step was to commission a survey of large, medium and small hospitals across Canada. Because this electronic survey, conducted by Deloitte, was based on a relatively small number of respondents (n=28; additional demographics provided in Appendix C), the findings were validated against, and supplemented by:

- data from previous customer studies conducted by an electronic data interchange (EDI) provider CareNET³ and eMarket Global Healthcare Exchange (GHX)⁴;
- surveys and interviews conducted by GHX with nine hospitals of various sizes from across Canada (see Appendix D for listing of hospitals’ names);
- the expert perspective of an eight-member eCommerce Task Force (membership listed in Appendix E); and
- the conclusions put forward by several published articles examining aspects of eCommerce in the North American healthcare sector (Appendix F).

The combination of these robust sources was assembled to provide as comprehensive a reading on the state of eCommerce in Canada as possible at this early stage.

The Focus of Analysis

The goal of the research was, as stated, to understand the status of eCommerce in the healthcare environment, as evidenced by actual usage and benefits achieved. To draw out this information, respondents to the HSCN survey addressed four major questions. The other sources were then examined with a similar focus on readiness, adoption, utilization, and value. The specific questions the survey set out to answer were:

1. *What is the state of readiness of large (greater than \$400 M budget), medium (between \$50M and \$400 M budget) and small (less than \$50 M budget) hospitals to adopt leading eCommerce practices in Canada?*
2. *What is the degree of eCommerce penetration that currently exists in a sample of large, medium and small hospitals in Canada?*
3. *What is the degree of value that could be realized by large, medium and small hospitals should they adopt leading eCommerce practices?*
4. *What are the major barriers and challenges to successfully implementing leading eCommerce practices?*

³ CareNET Member Survey, CareNET Services Inc., October 2003

⁴ GHX - Global Health Exchange member data database, March 2004

Major Findings

Readiness

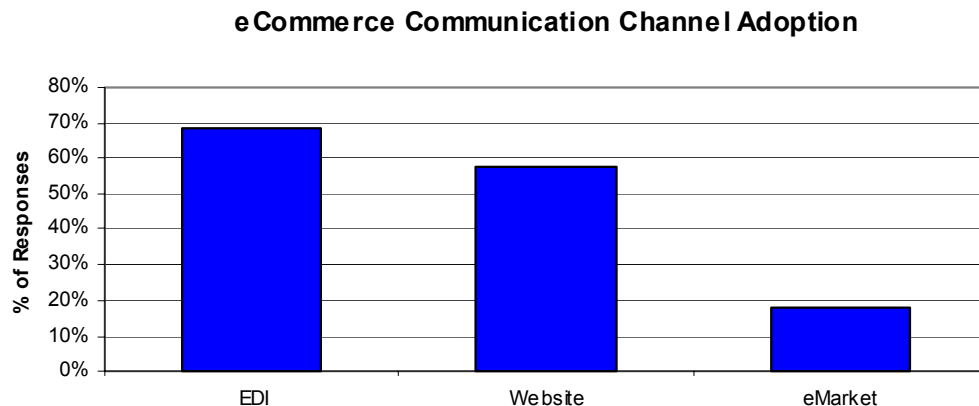
Hospitals are committed to the strategic importance of eCommerce, but it appears lack of information has made it difficult to justify an integrated eCommerce solution and gain active executive sponsorship.

Within the HSCN survey (questionnaire provided in Appendix G), 85% of medium hospitals saw eCommerce as either a high or moderate priority, and in the case of large-sized organizations, the high/moderate level was 80%. Purchasing executives are generally in agreement that their organization should be working towards some level of eCommerce adoption, however, a formal strategy to pursue such a solution was present in only 35% of the small and medium hospitals, as opposed to 90% in larger hospitals. One of the possible reasons behind this discrepancy is that larger hospitals viewed the implementation of eCommerce within a shorter timeframe as being more critical to a successful procurement strategy than medium and small hospitals. However, given that adoption lags commitment (see next graph), a subsequent analysis of barriers to eCommerce indicates that executive sponsorship may be more important than simply pursuing a strategy.

Adoption

There is positive evidence of eCommerce adoption, as well as strong support for complementary technology.

The results of the HSCN survey showed that over 80% of the respondents are using some form of eCommerce communication channels (i.e., EDI, websites, and/or eMarkets).



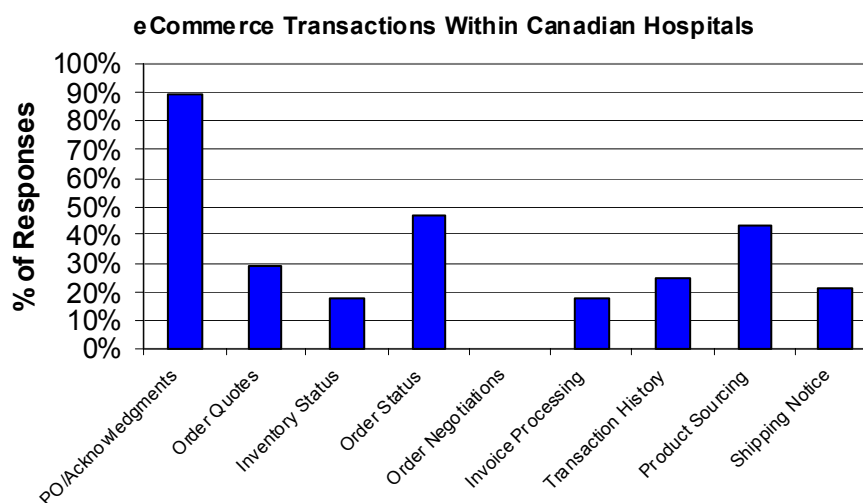
However, it is important to note that these results are not reflective of all hospitals in Canada and that there are significant differences from one province to another—the province of Quebec has lagged in the implementation of eCommerce solutions (with the exception of the use of supplier Web sites). The reality is that much of the interaction between a number of hospitals and their suppliers remains largely manual. Purchase orders generated from the materials management systems are faxed (or sometimes printed out and then faxed) to the supplier. The supplier in turn needs to key in this faxed order into their computer systems so that the order can be fulfilled. Similar gaps exist in the order management, receiving, invoicing and payment processes that are fundamental to supply chain operations. Often, data between the hospital and supplier systems are not synchronized.

In terms of future adoption, there are a number of encouraging signs. A demonstration of the growing comfort and commitment to eCommerce is suggested by the fact that two important and complementary best practices—remote requisitioning and bar coding—are currently in widespread usage among the survey respondents. In the HSCN survey, more than 80% of all respondents reported using remote requisitioning and 45% cited the use of some form of bar coding. Although these results are based on a small sample size, and not reflective of practices that are based on any national standards—they still reflect a desire to incorporate these types of applications within the supply chain. Additional commitment—and a level of urgency—is indicated by the fact that approximately 80% of all survey respondents felt eCommerce would be critical to a successful procurement strategy within the next three years.

Transaction Types

eCommerce is currently being used primarily for straightforward order administration, but hospitals recognize the potential of stronger supplier links.

The most common transaction being implemented is placing purchase orders and receiving acknowledgements, with almost 90% of the HSCN survey respondents using some form of eCommerce for this purpose. Checking on order status ranks as the second most common activity at almost 50%.



These results are not unusual since both of these transactions are relatively simple to implement and require the least integration; often only a simple 'bolt-on' function is required. Survey results also noted that participants are not using eCommerce to negotiate orders.

The EDI communication channel had a near 70% adoption among survey respondents—the corresponding transactions selected with this channel were (in the majority of cases) limited to purchase order transmission and acknowledgement. Survey respondents selecting supplier website and E-Markets channels tended to select a greater number of corresponding eCommerce transactions—this is not surprising given these respondents reflected the large hospital community.

Although a wide variety of transactions are being handled by eCommerce, indications are that few hospitals have yet linked the receiving, invoicing and payment processes with their suppliers. In the GHX surveys/interviews conducted with nine hospitals, none had yet implemented this capability, but some recognize linking these activities as the next major area to focus upon—not unusual given that accounts payable departments spend between 35% to 60% of their labour resources on manually entering invoices sent from the suppliers.

Perceived Future Value

The major benefits of eCommerce derive from process improvements rather than material price reductions.

Among the hospitals surveyed by HSCN, it is acknowledged that to achieve these process efficiencies, a more integrated eCommerce solution is required—often at a greater cost. This is perceived as acceptable given that improved process productivity would allow for staff to focus on more value added activities such as product sourcing. However (when considering the current level of penetration of eCommerce applications discussed above), although the recognition is there that greater integration is needed to realize process efficiencies, the demonstration of this belief has not yet taken place.

The following table ranks the benefits associated with eCommerce, as reported by participating HSCN survey hospitals, on a scale from 0 to 5.

Potential Benefits Ranked by Average Score

Scale from 0 to 5 (Low to High)

Benefit	Avg. Score
Purchasing process productivity	3.8
Purchasing process savings	3.8
Invoice Processing	3.4
Order/Delivery times	3.0
Data tracking and reporting	3.0
Increased strategic purchasing	2.9
System Integration	2.8
Inventory reduction	2.6
Reduction in Material Costs	2.1
Access to better products	1.8

The results of the GHX surveys/interviews echo these findings—all hospitals interviewed agreed that continued expansion of eCommerce would accelerate productivity gains and improve process quality. They felt the benefits would accrue across an organization in the clinical, materials and finance departments. The table below provides a summary of the interview participants’ perceptions on how eCommerce could evolve over the next 5 years and what improvements could be achieved. Going forward, these targets could serve as medium-term business objectives.

Department	Future Benefits Resulting From the Evolution of eCommerce
Clinical	<ul style="list-style-type: none"> • 80% of all requisitions to be converted to electronic format (contract and non-contract) • 100% of all standard, routine requisitions converted to electronic format • >95% contract compliance rate
Materials	<ul style="list-style-type: none"> • 80% of purchase orders electronic • 75% of item reference data 100% correct and continuously synchronized • < 10% of staff time involved in clerical activities • 90% spent in contract management and process improvement with suppliers
Finance	<ul style="list-style-type: none"> • 75% of invoices electronic • 75% of payments electronic • < 10% of department involved in clerical invoice and payment activities

The business impact of these benefits will differ depending on the size of the hospital (i.e., large, medium or small). Two types of hospital profiles have been discussed in the table below—one representing large hospitals (single campus or multiple

campuses) and another for small hospitals. The savings associated with these profiles represent the opposite ends of a continuum—savings for medium hospitals would fall in between these ranges, based on their size and physical make up.

Hospital Size	Profile	Expected Source of Benefit	Annual Savings
Large Hospitals	\$600 Million Operating Budget \$100 Million Supplies Spending Multiple Campuses	Supplies Savings 5% Unit Cost Savings for 15% of Spending	750,000
		Administrative Productivity Gains	225,000
		Clinical Department Productivity Gains	1,750,000
		Total	\$2,725,000
Small Hospitals	\$100 Million Operating Budget \$10 Million Supplies Spending Single Facility	Supplies Savings 5% Unit Cost Savings for 30% of Spending	150,000
		Value of Productivity Gain, All Areas	50,000
		Total	\$200,000

The intention of this table is to discuss the potential eCommerce savings that could be achieved by hospitals in Canada. The results were calculated using the GHX Return on Investment (ROI) model. Due to the relatively small sample size of the hospitals (n=9) that contributed their data to populate the ROI model, these results have not been extrapolated to the rest of the hospitals in Canada at this time. However, this preliminary analysis suggests that the savings associated with adoption of eCommerce could be significant for organizations of all sizes. Hospital's supply budgets could expect a 5% unit cost reduction on a portion of their overall spend (i.e., 15% for large hospitals and 30% for small). This variation is due the fact that larger hospitals tend to have more contracts in place than smaller hospitals, therefore, the amount of spend (based on non-contracted business) available for a cost reduction is less in a large hospital setting compared to a smaller hospital. Applying these targets, supply savings for large and small hospitals could amount up to \$750,000 or \$150,000 respectively. In addition, large hospitals can expect gains of up to \$225,000 in administrative productivity through redeployment of resources. With the implementation of a full electronic clinical environment, large hospitals with multiple campuses could achieve further productivity gains of approximately \$1,750,000. In total, larger hospitals can see overall savings of up to \$2,725,000, while small hospitals could achieve savings of up to \$200,000.

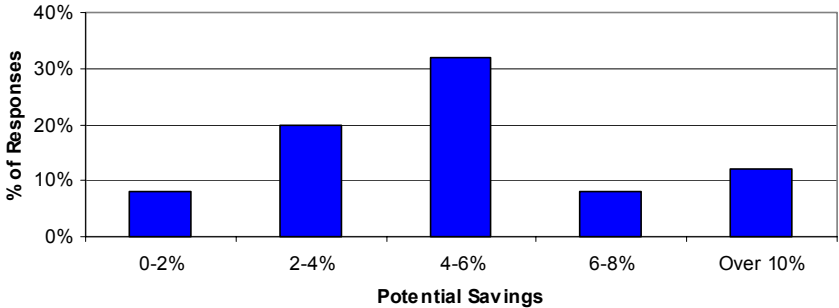
Current and Anticipated Savings

Although realized savings are in line with or below industry estimates, most hospitals expect to extract significantly greater amounts.

By inputting the data collected from the nine hospitals into the GHX ROI model, calculations showed that these organizations could expect between 2 to 3% savings in their overall supply chain budget as a result of implementing a truly integrated solution and adopting the wide functionality associated with eCommerce.

The table below shows that in the HSCN survey, most large hospitals reported realizing less than 2% savings since implementing eCommerce practices; however, about half of them are confident they can extract additional savings of 4 to 6% in the future.

Potential Savings Using eCommerce Not Yet Extracted From The Supply Chain



A major theme within the comments provided by respondents to the HSCN survey supported these results stating that greater savings would be derived from improved integration, plus, greater usage would yield greater savings. Additional comments referred to the current level of eCommerce transaction adoption and electronic transaction volumes—a number of respondents recognized that opportunities for greater savings could be realized by increasing the number of suppliers they electronically transact with along with integrating additional transactions into their eCommerce solution. Although, these results may at first seem to be rather conservative, the Expert eCommerce Task Force feels strongly that the anticipated savings will be much higher. These perceptions are supported by the literature—significant quantitative benefits have been realized in other industries in which eCommerce has been fully embraced (e.g. manufacturing, food, electronics).

Barriers to adoption

Barriers to eCommerce are perceived as surmountable with more information, time and support.

Many organizations report that they have not had the time or resources to fully integrate eCommerce practices into their business, or simply feel they have not maximized the benefits from these applications and tools. They believe that advances will occur as they implement complementary practices, purchase from an increased number of suppliers who support eCommerce, or increase the quantity of products to be sourced electronically. The table below summarizes the barriers that the HSCN survey respondents selected when asked to identify the 3 most significant barriers/concerns to implementing eCommerce practices.

Barriers/Concerns Ranked by Consensus

Ranked by response selection %

Barrier/Concern	% Selected
Integration with current ERP	71%
Capital investment	54%
Product Standardization	32%
Staff's technical ability	32%
No/Little perceived benefit	18%
Information security	4%
Group Purchasing Organization	4%

Encouragingly, respondents indicated that they expect barriers to eCommerce adoption to be less of an issue with time, experience, and expertise. There is acknowledgement that the technology is available to support effective eCommerce transactions, getting sufficient sponsorship and financial commitment to acquiring it is the challenge.

The barriers identified in the literature, and by the eCommerce Expert Task Force, include the following:

- Lack of information/difficult to quantify savings opportunity and investment.
- Lack of sponsorship/support.
- Lack of information technology (IT) resources to support implementations.
- The degree of process change required.
- Relationship with existing suppliers.

Conclusions / Indicated Actions

Overall, this study provides encouraging qualitative support for the value of eCommerce in the Canadian healthcare sector. However, the moderate level of satisfaction regarding eCommerce savings—a common theme observed across a variety of industry reports—indicates the importance of “ramping up” commitment and executive sponsorship for eCommerce.

One of the fundamental barriers to adoption of eCommerce practices is knowledge. Survey respondents cited “lack of information” and “difficulty in quantifying the savings opportunity / justifying the investment” as being key challenges while they work towards increasing their organization’s electronic transaction capabilities. In fact, most professionals surveyed described their knowledge on the subject as low. Unfortunately, many of the success stories in which organizations have implemented eCommerce transactions with relatively minimal inconvenience have yet to be published. Combining a lack of robust information with other pressing healthcare priorities, it is not surprising that purchasing and materials managers are often unable to muster sponsorship and the information technology resources required to support eCommerce implementations. Without this commitment, organizations will not be able to go beyond the “*introductory*” eCommerce implementation stage and proceed to “*full scale*” implementation—the stage at which they could achieve full realization of the potential cost savings and service quality improvements.

The findings outlined in this document go beyond intuitive confidence in the benefits of eCommerce in the health sector by providing encouraging empirical support for its value. But these findings, which emphasize the desire for better and faster results, also underscore the need for more detailed research. With knowledge comes power, therefore, the importance of additional, ongoing proof of the value of eCommerce to Canadian hospitals cannot be overemphasized.

In conclusion, the following key recommendations are being made as a result of the findings from this research study:

- The results of this study should be widely published and discussed to inform hospital executives that there are potential savings from adopting eCommerce best practices.
- Additional research should be conducted with a much larger sample of representative hospitals from across Canada. Specific data should be collected to populate a model that could more accurately forecast what the eCommerce savings could be for various types of Canadian hospitals.

Appendix A: eCommerce Transactions & Communication Channels

In the healthcare environment, eCommerce can automate procurement, fulfillment and payment cycles, and substantially reduce the level of manual, paper-based activity. It can create additional value by using newfound resources more strategically and ultimately improving patient care.

The major eCommerce transactions and communication channels are:

- **E-Sourcing:** Refers to strategic sourcing activities through collaborative, web-based technologies combined with leading process practices. Examples of E-Sourcing include product specification, RFX creation, E-auctions, response analytics, historic spend analysis, and Contract management.
- **E-Procurement:** Purchasing of products or services from approved suppliers using electronic product catalogues and the automation of the key transactional processes.
- **EDI (Electronic Data Interchange):** A data protocol that supports the electronic transmission, receipt and acknowledgment of various business documents such as: purchase orders, invoices, payments, price & sales catalogues, advance shipping notices, etc.
- **E-Collaboration:** Optimizing business processes (e.g. collaborative planning, forecasting and inventory replenishment) between companies with the use of Internet technologies.
- **E-Markets:** Independent and neutral third party web-based exchanges that bring together multiple buyers and sellers to facilitate trade through a number of protocols, including EDI, XML, etc. E-Markets are an enabler and provider of services, ranging from integration, transaction reporting, eCatalogues, etc.

Appendix B: Healthcare Supply Chain Network (HSCN) Overview

Vision

The HSCN vision is:

“To promote safe and quality health care through the implementation of optimal supply chain management practices & systems that are characterized by having the right product, at the right place, at the right time in the most cost effective manner.”

Mission

The mission of our organization is:

“To establish and promote Canadian healthcare supply chain standards and best practices, and to provide executional support for all healthcare stakeholders that result in improved effectiveness and efficiency, improved patient outcomes and greater alignment between supply chain partners.”

The mission encompasses both short and long term goals. Initially, HSCN will focus on the priorities outlined below. Once established, HSCN will develop the infrastructure to provide executional support.

Strategic Directions

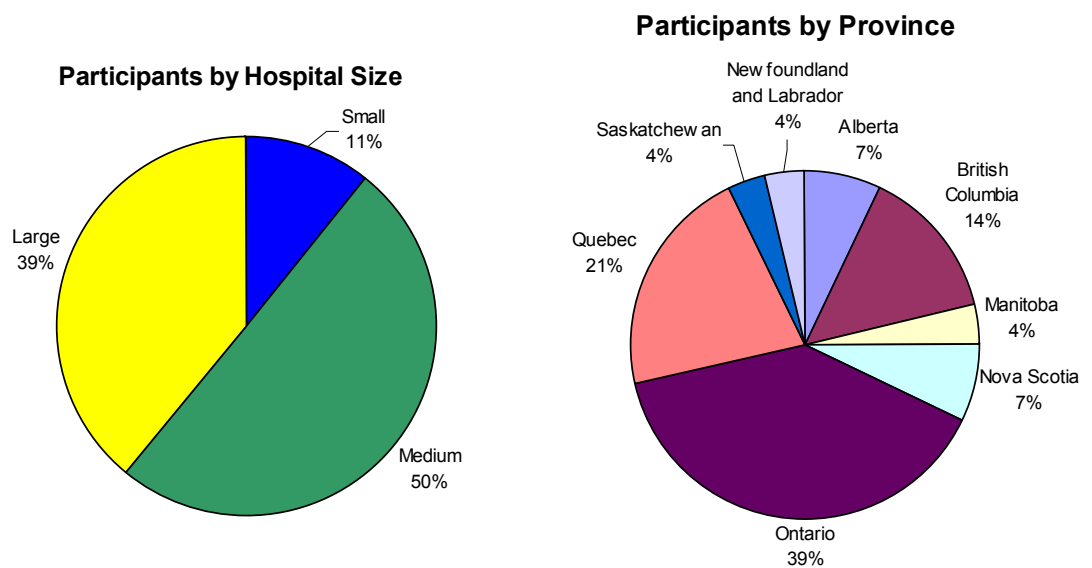
HSCN has identified five strategic directions to successfully achieve the vision and mission.

1. To establish an effective **operations** infrastructure for HSCN that will provide leadership and support growth and sustainability.
2. To identify, develop and implement a repository of healthcare supply chain **best practices** that can be leveraged by all health stakeholders to deliver value.
3. To develop and deliver **educational** resources that support best in class competencies in supply chain professionals.
4. To facilitate **executive sponsorship** and promote the level of focus needed to create an environment for positive change.
5. To identify and promote the advantages of universal **standards** in the supply chain.

Appendix C: HSCN Survey Respondents Demographics

The demographics of the HSCN survey respondents are as follows:

- Total of 28 responses (i.e., 28 hospitals responded to the survey)
- Respondent job titles included the following:
 - Purchasing Managers
 - Materials Managers and Directors



Appendix D: GHX ROI Study Participating Hospitals

The hospitals that participated in the GHX Return on Investment (ROI) study included the following:

- Capital District Health Authority, Nova Scotia
- Kingston General Hospital, Ontario
- McGill University Health Centre, Quebec
- Hôpital Laval, Québec
- Sunnybrook & Women's, Ontario
- Interior Health Region, British Columbia
- St. Joseph's Hospital, British Columbia
- Jewish General, Québec
- Centre hospitalier affilié universitaire de Québec, Québec

Appendix E: eCommerce Study Task Force Members

The members of the eCommerce Study Task Force included the following:

- Nils Clausen – Global Healthcare Exchange
- Sarah Friesen – Shared Healthcare Supply Services (Toronto, ON)
- David Loukras – Interior Health (Kelowna, BC)
- Herb Martin – BCE Emergis
- Richard Philippe – TRIAX Consulting
- Irene Podolak – Deloitte Inc.
- Marty Townsend – Capital Health (Halifax, NS)
- Bob Wall – MEDEC

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Appendix F: HSCN Survey Tool



Industry eCommerce Survey - HSCN

Please fill out this electronic survey in the appropriate spaces.

Section A: Demographics

What is the name of your Hospital?	
Province	City
Your Full Name	Position or Title
What is your hospital's current Operating Budget? (Place an "X" in the appropriate space)	
	Less than \$50M _____
	Greater than \$50M, Less than \$400M _____
	Greater than \$400M _____
Approximately how many Suppliers do you conduct business with on a regular basis?	
Approximately how many Suppliers represent 80% of your annual spend?	
How many Full-Time Equivalents (FTEs) of procurement staff do you have?	
How many FTEs staff do you have dedicated to eCommerce related activities? (EDI transactions, EDI maintenance, EFT, order automation, internet SCM etc.)	
Do you currently use a Just-In-Time inventory system? (Yes/No)	
Does your inventory control currently use bar code scanners? (Yes/No)	
Does your current material management system support remote requisitioning? (Yes/No)	
What is your current Financial Software Package? (Place an "X" in the appropriate space)	
	Oracle _____
	Geac _____
	Peoplesoft _____
	Other: _____ (Please state other)

Section B: Current State of eCommerce

Approximately how many Suppliers do you conduct business with using the following:		
	EDI (e.g. Direct or CareNET)	_____
	Supplier Websites	_____
	eMarkets (e.g. GHX)	_____
	Other: _____	_____
<i>If you answered "0" for all 3 eCommerce applications, please skip to Section D.</i>		
Please indicate all eCommerce transactions being performed at your hospital:		
- EDI -	- Supplier Website -	- eMarkets -
Purchase Order _____	Purchase Order _____	Purchase Order _____
Order Quotes _____	Order Quotes _____	Order Quotes _____
Inventory Status _____	Inventory Status _____	Inventory Status _____
Order Status _____	Order Status _____	Order Status _____
Order Negotiations _____	Order Negotiations _____	Order Negotiations _____
Invoice Processing _____	Invoice Processing _____	Invoice Processing _____
Transaction History _____	Transaction History _____	Transaction History _____
Product Sourcing _____	Product Sourcing _____	Product Sourcing _____
Shipping Notice _____	Shipping Notice _____	Shipping Notice _____
Other: _____	Other: _____	Other: _____
Please estimate the approximate % of spend transacting through eCommerce by each supply chain function:		
	Purchasing	_____ %
	Order fulfillment	_____ %
	Payment	_____ %
	Demand Planning	_____ %

SECTION C: Value of eCommerce

If tracked, approximately what has been the average annual realized savings on the applicable spend from implementing eCommerce practices?			
0 - 2%	_____	6 - 8%	_____
2 - 4%	_____	8 - 10%	_____
4 - 6%	_____	over 10%	_____
Relative to your eCommerce expectations, how did you perceive the realized annual savings?			
Did not meet expectations (Not worth it)			_____
Savings were satisfactory (Indifferent)			_____
Exceeded expectations (Very successful)			_____
Do you feel there are additional savings to be extracted from the applicable spend throughout the supply chain with respect to eCommerce? If yes, please specify.			
0 - 2%	_____	6 - 8%	_____
2 - 4%	_____	8 - 10%	_____
4 - 6%	_____	over 10%	_____
Please include a brief description regarding potential methods of attaining these further savings (if any).			
<i>Please type here....</i>			

SECTION D: eCommerce direction

Is your hospital currently pursuing a formal eCommerce strategy? (Yes/No)		_____	
<i>Please place an "X" in the appropriate space(s)</i>			
How does your Hospital rank eCommerce as part a current strategic business priority?			
Not very important		_____	
Moderately important		_____	
Very important		_____	
Please estimate your planned level of investment in eCommerce development over the next 3 years. (\$'000)			
\$0 - \$25	_____	\$100 - \$200	_____
\$25 - \$50	_____	\$200 - \$300	_____
\$50 - \$100	_____	Over \$300	_____
When do you feel eCommerce will become crucial to a successful procurement strategy?			
Within the next Year		_____	
Within the next 3 Years		_____	
Within the next 5 Years		_____	
Beyond next 5 Years		_____	
Please score the following potential benefits attributed to eCommerce: (Low Value) 0 - 5 (High Value)			
Reduction in Material Costs	_____	Order/Delivery times	_____
Purchasing process savings	_____	Inventory reduction	_____
Purchasing process productivity	_____	Access to better products	_____
Increased strategic purchasing	_____	Data tracking and reporting	_____
Invoice Processing	_____	System Integration	_____
Other: _____	_____	Other: _____	_____
What have you see as the 3 most significant barriers/concerns to implementing eCommerce practices?			
Integration with current ERP	_____	Staff's technical ability	_____
Capital investment	_____	Group Purchasing Organization	_____
Product Standardization	_____	No/Little perceived benefit	_____
Information security	_____	Other: _____	_____
Please include any comments that would better explain you thoughts towards eCommerce in Hospitals			
<i>Please type here.....</i>			

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