

CONTINUING CARE LEADERSHIP COALITION



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**HEALTH INFORMATION TECHNOLOGY IN LONG TERM CARE**

**SURVEY FINDINGS**

**2006**

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*The Continuing Care Leadership Coalition (CCLC), an affiliate of the Greater New York Hospital Association, is an association of more than 100 not-for-profit and public long term care providers in the metropolitan New York area and beyond. The purpose of CCLC is to shape, through advocacy, research, and education, an environment that supports the delivery of, and access to, continuing care services of the highest quality, and to provide state and national leadership in advancing effective long term care policy and practice through the collective experience, vision, and efforts of its members. CCLC members are leaders in the delivery of skilled nursing care, home health care, adult day health care, respite and hospice, rehabilitation and subacute care, senior housing and assisted living, and services to special populations in need of long term care.*

# CONTINUING CARE LEADERSHIP COALITION HEALTH INFORMATION TECHNOLOGY IN LONG TERM CARE

## EXECUTIVE SUMMARY

The Continuing Care Leadership Coalition (CCLC), an affiliate of the Greater New York Hospital Association, represents the interests of more than 100 not-for-profit and public long term care organizations in the New York metropolitan area and beyond.

### Key Findings

- The top priority of long term care organizations is to implement the use of electronic medical records, followed by replacing or upgrading clinical systems and promoting patient safety.
- The top barrier to advancing health information technology (HIT) for long term care organizations is the initial cost of investment.
- Long term care organizations' greatest challenge with regard to HIT networks and infrastructure is financial considerations.
- Both freestanding nursing facilities and multi-service organizations currently allocate approximately 1% of their overall budgets to HIT.
- A majority of long term care organizations outsource some component of their HIT functions. Of these organizations, over 70% outsource for network monitoring.
- Long term care organizations report that the HIT application with the highest level of full operation (87%) is the use of clinical data systems for billing functions.
- Long term care organizations rely heavily on facsimiles for transmission of data to and from hospitals and other health care entities.
- Long term care organizations are beginning to become involved with collaborative HIT projects such as clinical data exchange projects and regional health information organizations. Collaborative projects are driven by the availability of outside funding for such projects.

### Recommendations

- Continue the momentum of advancing HIT adoption in long term care
- Encourage national research on assessing HIT adoption in long term care
- Encourage additional research on how to implement electronic medical records and other HIT priorities identified in this survey
- Advocate for more funding to advance HIT in long term care, particularly areas in which HIT will best help improve the delivery of long term care services

# CONTINUING CARE LEADERSHIP COALITION HEALTH INFORMATION TECHNOLOGY IN LONG-TERM CARE

## SURVEY FINDINGS

### Background

The Continuing Care Leadership Coalition (CCLC) represents the interests of more than 100 not-for-profit and public long term care (LTC) organizations in the New York metropolitan area and beyond. CCLC is an affiliate of the Greater New York Hospital Association (GNYHA) and together they have followed information technology issues in the health care sector for several years. Following an April 2005 retreat on long term care reform, the CCLC Board of Directors declared information technology to be a top priority in its reform agenda for New York State. Shortly thereafter, CCLC established its Workgroup on Health Information Technology (HIT) to develop an agenda to advance HIT adoption throughout its membership. The first item on CCLC's HIT Workgroup's agenda was the development of a survey to better understand the priorities, challenges, and level of HIT adoption throughout CCLC's membership.

### Survey Objectives

The objectives of the survey were as follows:

- Understand the current state of HIT efforts in the long term care community, including both successes and challenges.
- Determine current and future HIT priorities of the long term care community.
- Support CCLC's advocacy efforts in increasing funding opportunities for HIT.
- Guide CCLC in activities to support its members' HIT agendas.

### Method

In 2005, CCLC's Workgroup on HIT initiated a project that was intended to help CCLC develop a survey tool to 1) assess the level of HIT activities in the membership, and 2) collect other baseline data on organizational priorities and challenges to help guide CCLC's HIT agenda. Prior to CCLC's survey, no benchmarking data existed for long term care organizations' adoption of HIT in New York.

In March 2006, CCLC developed a survey tool with the input of key member organizations and distributed the survey to its membership. The survey sought to explore the following areas:

- the level of investment in HIT, and current and future HIT priorities among long term care organizations;
- challenges and barriers to implementing HIT in the long term care sector;
- use patterns and satisfaction levels with respect to clinical information systems; and
- partnerships that are in place or under development with other health care entities.

### Report Design

This report provides each question on the survey, a discussion of the survey results, and tables summarizing the findings. The report is designed to assist long term care providers in benchmarking their HIT activities against the activities of other long term care organizations. For the purposes of tabulation, responses were analyzed, where applicable, by type of long term care organization - either a freestanding nursing facility (NF) or a multi-service long term care organization (MSO). Where respondents reported a dramatically wide variety of answers, maximums, minimums, and means were reported instead of averages.

## SECTION 1. RESPONDENT INFORMATION

Section 1 requested information about the respondents and their services. Similar to previous CCLC reports, these survey findings include aggregated data without providing organization-specific data.

### 1.1. Please describe your organization.

Thirty-four long term care organizations responded to CCLC's Health Information Technology (HIT) in Long Term Care survey, for a response rate of 55%. The respondents represented 60% of the nursing home beds (over 16,000) in the CCLC membership and over 90% of member home health care agency patients. In New York State, the survey captures 14% of all nursing home beds and approximately 30% of all home health care patients. Twelve of the respondents were freestanding nursing facilities (NFs). Twenty-two of the respondents were multi-service organizations (MSOs), each of which included at least two of the following types of entities: nursing facilities, certified home health care agencies, long term home health care programs, licensed home health care programs, medical model adult day health care programs, managed long term care programs, senior housing, and other community-based services such as diagnostic and treatment centers, hospices, and social model adult day health care programs. According to responses in Section 5 of the survey, the 34 respondents together comprised a total of 70 separate entities, including 38 nursing facilities and 32 home and community-based service (HCBS) programs.

Type of LTC Organization	Number	Percent
Freestanding nursing facility (NF)	12	35.3%
Multi-service organization (MSO)	22	64.7%
<i>Total</i>	34	100.0%

	Number	Percentage of MSOs	Percent of Respondents
Nursing facility	21	95.5%	61.8%
Certified home health agency	6	27.3%	17.6%
Long term home health care program	15	68.2%	44.1%
Licensed home health care program	10	45.5%	29.4%
Adult day health care program	18	81.8%	52.9%
Managed long term care program	9	40.9%	26.5%
Housing	9	40.9%	26.5%
Other	2	9.1%	5.9%

## SECTION 2. INVESTMENT IN HEALTH INFORMATION TECHNOLOGY

Section 2 focused on organizational investment in HIT, including the number of personnel dedicated to HIT, the level of outsourcing for HIT functions, HIT-related budgets, and capacity of HIT functions.

### 2.1. How many staff are dedicated to information technology responsibilities (excluding telecommunications)?

Respondent LTC organizations indicated that they have information technology (IT) departments that vary significantly in size and magnitude. The median number of full-time equivalents (FTEs) dedicated to IT functions, excluding telecommunications, was 4 FTEs. The size of IT departments ranged from zero to 35 individuals dedicated to IT functions. Of the four facilities that indicated they have zero FTEs dedicated to IT, two outsourced their IT functions and two were part of larger health care systems that could not estimate dedicated staff for the LTC organization.

<b>Number of FTEs</b>	<b>Total</b>	<b>NFs</b>	<b>MSOs</b>
Median	4	2	7
Maximum	35	5	35
Minimum	0	0	0
Total Answering Zero	4	3	1
Number of respondents (N)	34	12	22
No response	1	0	1

### 2.2. Does your organization currently outsource any portion of its IT function?

More than half of the organizations (56%) indicated that they outsource some portion of their IT function. Freestanding nursing facilities indicated a higher level of outsourcing (67%), while multi-service organizations indicated a lower level of outsourcing (50%). Nevertheless, a majority of organizations indicated that they outsource of some portion of their HIT functions.

<b>Outsource HIT</b>	<b>NFs (N=12)</b>		<b>MSOs (N=21)</b>	
	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>
<b>Yes</b>	8	66.7%	11	52.3%
<b>No</b>	4	33.3%	10	47.6%

If yes, please indicate below which of your institution's IT functions are currently outsourced.

Half of the organizations that outsource some IT function, do so for their help desk function and nearly three-quarters of the organizations outsource network monitoring, as seen in Table 5. For both the help desk and network monitoring functions, LTC organizations that outsource are relatively pleased with this arrangement, answering that they would recommend the vendor.

<b>Table 5 Outsourcing of HIT Functions</b>		
<b>Variable</b>	<b>Function Outsourced</b>	
	<b>HelpDesk</b>	<b>Network Monitoring</b>
	<b>N</b>	<b>N</b>
<i>Response</i>		
Yes	10	14
No	10	5
Total	20	19
<i>Vendors Identified</i>		
Atlantic Business Systems	2	1
CNS	0	1
Custom Computers	1	1
Eclipsys	1	1
EHIT	1	1
INET	1	1
Network	1	0
Pinnacle Group	1	1
Synergy	0	1
<i>Duration of Outsourcing (in years)</i>		
Median	4	4
Minimum	8	8
Maximum	1	0.25
<i>Level of Satisfaction (1=very satisfied; 5=not satisfied)</i>		
1	3	5
2	3	3
3	2	2
4	1	2
5	1	1
<i>Recommend outsourcing this function?</i>		
Yes	8	11
No	2	2
<i>Recommend the vendor you use?</i>		
Yes	7	10
No	1	1

**2.3. What percentage of your organization's overall budget is allocated for information technology (excluding telecommunications)?**

Both freestanding nursing facilities and multi-service organizations allocated approximately 1% of their overall budgets to HIT functions, as seen in Table 6.

<b>Percentage of Overall Budget</b>	<b>NFs</b>	<b>MSOs</b>
Median	1.40%	1.10%
Maximum	25.00%	10.40%
Minimum	0.10%	0.004%
N	10	18
No response	2	4

**2.4. What is your organization's annual IT budget in the following categories?**

*Operating budgets include software and hardware maintenance, IT staff education and training, data processing and supplies, network fees, consulting and consultants, disaster recovery and planning, and data communication.*

Operating, personnel, and capital budgets varied significantly by respondent organizations and were primarily driven by the size of the organization with freestanding facilities spending approximately 27% more on HIT as a percentage of their overall operating budgets. The median operating budgets for both freestanding nursing facilities and multi-service organizations are just above \$200,000 per year. For personnel and capital budgets, the medians of freestanding facilities and multi-service organizations dramatically differed. The median budget for personnel in freestanding nursing facilities was \$130,404, and for capital budgets it was \$90,000. The median personnel budget for multi-service organizations was \$950,782 while the median capital budget was \$445,890.

<b>Variable</b>	<b>Operating</b>		<b>Personnel</b>		<b>Capital</b>	
	<b>NFs</b>	<b>MSOs</b>	<b>NFs</b>	<b>MSOs</b>	<b>NFs</b>	<b>MSOs</b>
Median	\$213,500	\$225,000	\$130,404	\$950,782	\$90,000	\$445,890
Maximum	\$593,000	\$1,900,000	\$261,262	\$3,074,000	\$999,000	\$4,273,000
Minimum	\$12,000	\$80,000	\$4,340	\$80,000	\$1,000	\$25,000
N	8	18	7	16	9	15
No Response	4	4	5	6	3	7

**2.5. What is your best guess for your organization’s expected capital IT budget in 2007?**

Estimated capital budgets for 2007 also differed by type and size of organization. The median for freestanding nursing facilities was \$175,000 and the median for multi-service organizations was \$687,500, as seen in Table 8.

<b>Table 8. Estimated Capital Budget, 2007</b>		
<b>Variable</b>	<b>NFs</b>	<b>MSOs</b>
Median	\$175,000	\$687,500
Maximum	\$1,500,000	\$3,000,000
Minimum	\$5,000	\$5,725
N	10	18
No Response	2	4

**2.6. We are interested in learning how many of the following features you support. Please indicate the number of physical locations supported, desktops supported, platforms supported, business units supported, and servers supported.**

All organizations reported support for a range of HIT infrastructure. One organization supported a significant infrastructure with no servers, because the organization had off-site HIT operations through its larger health care system.

<b>Table 9. Supported HIT Features</b>										
<b>Variable</b>	<b>Physical Locations Supported</b>		<b>Desktops Supported</b>		<b>Platforms Supported</b>		<b>Business Units Supported</b>		<b>Servers Supported</b>	
	<b>NFs</b>	<b>MSOs</b>	<b>NFs</b>	<b>MSOs</b>	<b>NFs</b>	<b>MSOs</b>	<b>NFs</b>	<b>MSOs</b>	<b>NFs</b>	<b>MSOs</b>
Median	1	6	75	302	2	5	3	10	4	20
Maximum	7	25	235	1,600	10	12	300	1,829	10	100
Minimum	1	1	20	1	1	1	1	3	1	0
N	11	21	11	21	11	20	10	20	11	21
No resp.	1	1	1	1	1	2	2	2	1	1

### SECTION 3. HEALTH INFORMATION TECHNOLOGY PRIORITIES

Overall, the top priority for 67.6% of respondent organizations is to implement an electronic medical record (EMR) system. The next two priorities include replacing or upgrading clinical systems (58.8%), which includes integrating these systems with an entity's financial system, and reducing medical errors and promoting patient safety (50.0%). For freestanding nursing facilities, the top two priorities were implementing an EMR system and (58.3%) and reducing medical errors or promoting patient safety (58.3%), followed by replacing or upgrading clinical data systems (50.0%). For multi-service organizations, the top priority was implementing EMR systems (72.7%) followed by replacing or upgrading clinical data systems (59.1%), developing a clinical data exchange with outside entities, including regional health information organizations (RHIOs) (50.0%), and reducing medical errors or promoting patient safety (45.5%).

3.1. Please select below the top three information technology priorities for your organization over the next two years (*please check only three*).

Priority	# of Times Selected	Percent of Respondents
Implement an electronic medical record system	23	67.6%
Replace or upgrade clinical systems	20	58.8%
Reduce medical errors/ promote patient safety	17	50.0%
Develop a clinical data exchange with outside entities (e.g., RHIOs)	16	47.1%
Upgrade network infrastructure	11	32.4%
Establish wireless capabilities	8	23.5%
Develop security initiatives	7	20.6%
Create data repositories	5	14.7%

3.2. Has your organization developed its own proprietary software to solve problems?

Overall, 44% of organizations indicated that they have developed their own proprietary software to solve problems. Multi-service organizations indicated that they developed 80% of the existing proprietary software.

Response	Total (N=34)		NFs (N=12)		MSOs (N=22)	
	N	%	N	%	N	%
Yes	15	44.1%	3	25.0%	12	54.5%
No	19	55.9%	9	75.0%	10	45.5%

Members developed proprietary software in the following categories:

- Comprehensive financial and clinical systems
- Departmental data tracking
- Wandering risk tracking

- Accident and incident reporting
- Staff directory system
- Events or educational session management
- Contract management
- Executive information reporting
- Resident activities and appointment scheduling
- E-prescription capabilities
- Case management and care planning
- Palliative care tracking
- Community statistics
- Patient review instrument (PRI) analysis

**3.3. If yes to above, will the proprietary software have a broad applicability across the membership?**

Four organizations stated that their software would have a broad applicability for other long term care organizations. The categories of software included a comprehensive financial and clinical system, e-prescription management, accident and incident reporting, and case management and care planning.

## SECTION 4. HEALTH INFORMATION TECHNOLOGY CHALLENGES AND BARRIERS

4.1. Please indicate what you consider to be the barriers to long term care health information technology adoption.

Nearly half of the organizations (48.5%) identified the initial cost of investment in HIT as the most significant barrier and 42.4% of the organizations identified the same factor as somewhat of a barrier. Almost half (46.9%) of the organizations reported that the availability of well-trained HIT staff was not a barrier.

Variable	Not a barrier		Somewhat of a barrier		Significant barrier	
	Number	Percent	Number	Percent	Number	Percent
Initial cost of IT investment (N=33)	3	9.1%	14	42.4%	16	48.5%
Ability to support ongoing costs of hardware and software (N=34)	8	23.5%	18	52.9%	8	23.5%
Inability of technology to meet needs (N=33)	9	27.3%	16	48.5%	8	24.2%
Interoperability of hardware and software with current systems (N=33)	11	33.3%	14	42.4%	8	24.2%
Availability of well-trained IT staff (N=32)	15	46.9%	11	34.4%	6	18.8%

4.2. Please indicate below your organization's greatest technical challenges with regard to IT networks and infrastructure (*please check all that apply*).

Sixty-two percent of the organizations responded that the greatest challenge with regard to IT networks and infrastructure was financial considerations, followed by integration of services, data center redundancy, network security, and authentication or single sign-on. Additional technical challenges that organizations faced included simultaneously supporting and improving clinical and operational workflow of internal systems, interoperability standards for security and data, portal technology, staff training, and locating application vendors to cater to all business units.

Challenge	Number of Times Selected
Financial considerations	21
Integration of services	15
Data center redundancy	13
Network security	10
Authentication/single sign-on	7
Other	5

## Section 5. CLINICAL DATA SYSTEMS

In Section 5 respondents identified clinical data systems used for each entity in their organization. Organizations were asked to complete the table in Question 5.1. for all entities they represented. Seventy entities were identified in Question 5.1., 38 nursing facilities, both freestanding and part of multi-service organizations, and 32 home and community-based service (HCBS) programs, which are all part of multi-service organizations. Responses to Question 5.1. are reported in Tables 15 and 16: the first identifying clinical information systems for nursing facilities and the second identifying clinical information systems for HCBS programs. Questions 5.2. and 5.3. of this section also attempted to develop a baseline of information to help explain the current status of information technology use during the transfer to and from LTC organizations. Finally, Question 5.4. of this section explored the use of electronic medical records in LTC organizations.

Type of LTC Entity	Number	Percent
Nursing Facility	38	54.3%
Home and Community-based Service (HCBS) Program	32	45.7%
<i>Total</i>	70	100.0%

Table 15. Clinical Information Systems, Nursing Facilities

Department/ Functional Area	N	%	Operational status		Vendor		Application		Years Used		Satisfaction with System (1= very satisfied, 5= not satisfied)								
			Status	N	%	Name	N	Name	N	Years	N	1	2	3	4	5	N/R		
Billing	38	100%	Fully operational	33	87%	ADL	8	Charts	3	<1	0	2	10	8	6	9	3		
			Partially operational	2	5%	Reliable	6	6N Systems	2	ADL for Wind	2	1-3	7						
			Plan to implement within 2 yrs	1	3%	Siemens	3	HCIS	1	SOS	1	4-6	6						
			No plans to implement	0	0%	6N Systems	2	SOS Data	2	Sunrise	1								
			No Response	2	5%	SOS Data	2	Misys	2	HDS	1								
						RHS	1	Amer HC	1	Helpcare Plus	1	7-9	9						
						HCS	1	HCS	1	Interactant	1								
						Eclipsys	1	Accumedic	1	Accumedic	1	10+	13						
						Infosys	1	Infosys	1	Homecare	1	N/R	3						
						Accumedic	1	Accumedic	1	Healthcare Bill	1								
						N/A	9	N/A	9	Optimum Finan	1								
										RHS	1								
										N/A	20								
			Clinical Data System	38	100%	Fully operational	19	50%	ADL	7	ADL Windows	2	<1	0	4	8	9	4	3
						Reliable	4	One Touch	2										
	9	24%				SOS Data	2	6N Financials	1	6N Financials	1								
	16	42%				Misys	2	SOS	1	SOS	1	1-3	5						
	17	45%				Lintech	2	HDS	1	HDS	1								
	4	11%				6N Systems	1	Helpcare Plus	1	Helpcare Plus	1								
	6	16%				HCS	1	Interactant	1	Interactant	1	4-6	12						
	4	11%				Infosys	1	Homecare	1	Homecare	1								
	6	16%				Cerner	1	Optimum Fin	1	Optimum Fin	1								
	8	21%				Frameworks	1	RHS	1	RHS	1	7-9	5						
	27	71%				One Touch	1	Charts	1	Charts	1								
						N/A	14	PerSe MCO	1	PerSe MCO	1								
								EMR	1	EMR	1								
								Home Grown	1	Home Grown	1	10+	5						
					N/A	22	N/A	22	N/R	1									

NF Clinical IS Department/ Functional Area	N	%	Operational status			Vendor		Application		Years Used		Satisfaction with System (1= very satisfied, 5= not satisfied)							
			Status	N	%	Name	N	Name	N	Years	N	1	2	3	4	5			
Computerized Provider Order Entry (CPOE)	38	100%	Fully operational	3	8%	Misys	2	6N Financials	1	<1	1	1	0	1	0	35			
			Partially operational	3	8%	6N Systems	1	Interactant	1	1-3	2	1	1	0	1	0	35		
			Plan to implement within 2 yrs	16	42%	PerSe	1	Homecare	1	1	2	1	1	0	1	0	35		
			No plans to implement	10	26%	HCS	1	CPR	1	1	2	1	1	0	1	0	35		
			No Response	6	16%	Cerner	1	EMR	1	1	2	1	1	0	1	0	35		
						Next Gen	1	PerSe MCO	1	1	0	0	1	1	0	1	0	35	
						One Touch	1	N/A	32	7-9	0	0	1	1	0	1	0	35	
						Medscend	1					10+	0	1	1	0	1	0	35
						N/A	29					N/R	33	4	8	4	5	3	14
						ADL	7	66%	ADL Windows	3	<1	0	4	8	4	5	3	14	
Admission, Discharge, Transfer (ADT) System	38	100%	Fully operational	0	0%	6N Systems	2	Comet	2	1-3	5	5	5	5	5	5			
			Partially operational	8	21%	Siemens	2	6N Financials	1	1	5	5	5	5	5	5	5		
			Plan to implement within 2 yrs	1	3%	SOS Data	2	McKess Horiz	1	1	4-6	5	5	5	5	5	5	5	
			No plans to implement	4	11%	Reliable	2	SOS	1	1	6	6	6	6	6	6	6	6	
			No Response	1	3%	Lintech	2	Sunrise	1	1	7-9	6	6	6	6	6	6	6	
						American HC	1	HDS	1	1	8	8	8	8	8	8	8	8	8
						HCS	1	Helpcare Plus	1	1	10+	8	8	8	8	8	8	8	8
						Eclipsys	1	Interactant	1	1	N/R	14	14	14	14	14	14	14	14
						Infosys	1	Optimum Fin	1	1									
						Misys	1	Charts	1	1									
Electronic Prescribing	38	100%	Fully operational	3	8%	Cerner	1	Home Grown	1		2	2	2	2	2	33			
			Partially operational	2	5%	lastword	1	Invision	1		2	2	2	2	2	2	33		
			Plan to implement within 2 years	11	29%	N/A	14	N/A	22		0	0	0	0	0	0	33		
			No plans to implement	16	42%	Medscend	2	Interactant	1		1	1	1	1	1	1	1	33	
			No Response	6	16%	HCS	1	CPR	1		1	1	1	1	1	1	1	33	
						Misys	1	EMR	1		1	1	1	1	1	1	1	1	33
						ADL	1	Primecare	1		1	1	1	1	1	1	1	1	33
						Cerner	1	N/A	34		1	1	1	1	1	1	1	1	33
						Next Gen	1				7-9	1	1	1	1	1	1	1	33
						One Touch	1				10+	0	0	0	0	0	0	0	33

Table 15. Clinical Information Systems, Home and Community-based Services

Department/ Functional Area	N	%	Operational status		Vendor		Application			Years Used					Satisfaction with System (1= very satisfied, 5= not satisfied)				
			Status	N	%	Name	N	Name	N	Years	N	1	2	3	4	5	N/R		
Billing	32	100%	Fully operational	24	75%	McKesson	6	Mckess Horiz	5	<1	3	9	11	7	0	0	5		
																		6N Systems	3
																		3M	3
																		AHC	3
																		Misys	3
																		ADL	2
																		Medical Mngr	2
																		PerSe	1
																		Siemens	1
																		Accumedic	1
Delta	1																		
Strafford	1																		
Reliable	1																		
N/A	4																		
Clinical Data System	32	100%	Fully operational	10	31%	McKesson	5	Mckess Horiz	4	<1	4	6	8	0	1	2	15		
																		Reliable	3
																		6N Systems	2
																		3M	1
																		Delta	1
																		ADL	1
																		Next Gen	1
																		Frameworks	1
																		Lintech	1
																		A4	1
N/A	15																		
E-documentation	11	34%	Partially operational	3	9%	6N Systems	2	6N Financials	2	1-3	9								
																		3M	2
Care planning	15	47%	Plan to implement within 2 yrs	7	22%	Delta	1	HDS	1										
																		ADL	1
Assessments	16	50%	No plans to implement	4	13%	Next Gen	1	HCMS	1	4-6	3								
																		Frameworks	1
Physician support	9	28%	No plans to implement	4	13%	Lintech	1	CDO/CDF	1	7-9	0								
																		A4	1
Workflow	14	44%	No Response	8	25%	N/A	15												
Medication administration	11	34%	No Response	8	25%														
MDS/OASIS	13	41%	No Response	8	25%														

HCBS Clinical IS Department/ Functional Area	N	%	Operational status			Vendor		Application		Years Used		Satisfaction with System (1= very satisfied, 5= not satisfied)							
			Status	N	%	Name	N	Name	N	Years	N	1	2	3	4	5			
Computerized Provider Order Entry (CPOE)	32	100%	Fully operational	4	13%	McKesson	3	McKess Horiz	2	<1	2	1	2	0	1	2			
			Partially operational	3	9%	Misys	2	Misys	2	1-3	2	1	2	0	1	2	26		
			Plan to implement within 2 yrs	2	6%	PerSe	1	CDO/CDF	2	EMR	1	4-6	1						
			No plans to implement	9	28%	Next Gen	1	EMR	1	PerSe MCO	1	7-9	0						
			No Response	14	44%	Medscend	1	N/A	24	N/A	24	10+	1						
												N/R	26						
												<1	5	10	10	2	1	2	7
												1-3	11						
												4-6	5						
												7-9	0						
Admission, Discharge, Transfer (ADT) System	32	100%	Fully operational	24	75%	McKesson	7	McKess Horiz	4	<1	5	10	10	2	1	2	7		
			Partially operational	2	6%	Misys	3	6N Financials	3	6N Financials	3	1-3	11						
			Plan to implement within 2 yrs	1	3%	6N Systems	1	Misys	3	Misys	3	4-6	5						
			No plans to implement	0	0%	PerSe	1	HCMS	3	HCMS	3	7-9	0						
			No Response	5	16%	Siemens	1	Medical Mngr	1	Medical Mngr	1	10+	4						
												N/R	7						
												Home Grown	1						
												Comet	1						
												Canopy	1						
												PerSe MCO	1						
Electronic Prescribing	32	100%	Fully operational	1	3%	McKesson	1	EMR	1	<1	0	2	0	0	0	0	30		
			Partially operational	1	3%	Next Gen	1	Sandata	1	Sandata	1	1-3	2						
			Plan to implement within 2 years	3	9%	Medscend	1	N/A	30	N/A	30	4-6	0						
			No plans to implement	13	41%	VNSNY	1					7-9	0						
			No Response	14	44%	Sandata	1					10+	0						
												N/R	30						

### 5.2. How does your organization receive hospital discharge data?

The overwhelming majority of organizations receive hospital discharge data via facsimile. Overall, only 40% of organizations receive the data electronically. The data show a dramatic disparity between freestanding nursing facilities and multi-service organizations, with one nursing facility (8.3%) receiving electronic data and 12 multi-service organizations (54.4%) receiving data electronically. Organizations are also commonly receiving data from hospitals verbally, via the telephone.

Method for Receiving Data	Total (N=34)		NFs (N=12)		MSOs (N=22)	
	N	%	N	%	N	%
Fax	30	88.2%	10	83.3%	20	90.9%
Telephone	19	55.9%	4	33.3%	15	68.2%
Electronically	13	38.2%	1	8.3%	12	54.5%

Organizations indicated the following responses for electronic vendors. Six organizations indicated use of more than one electronic vendor.

Name	N
ECIN	9
E-Discharge	8
IDX	1

### 5.3. How does your organization provide clinical information to hospitals or other health care entities?

Method of Providing Data	Total (N=34)		NFs (N=12)		MSOs (N=22)	
	N	%	N	%	N	%
Fax	28	82.4%	9	75.0%	19	86.4%
Send chart with patient	21	61.8%	6	50.0%	15	68.2%
Electronically	8	23.5%	2	16.7%	6	27.3%
Telephone	19	55.9%	7	58.3%	12	54.5%

5.4. Please indicate below the status of electronic medical record implementation in your organization. *(For this purpose, the electronic medical record is defined as electronically originated and maintained clinical health information, derived from multiple sources, that replaces the paper record as the primary source of patient information.)*

Only two organizations indicated that they had a fully operational electronic medical record, as defined above, and these were multi-service organizations. More than 40% of the organizations indicated that they are developing plans to implement an electronic medical record.

Status	Total (N=34)		NFs (N=12)		MSOs (N=22)	
	N	%	N	%	N	%
Fully operational	2	5.9%	0	0.0%	2	9.1%
Partially operational	8	23.5%	1	8.3%	7	31.8%
Developing plans to implement	14	41.2%	4	33.3%	10	45.5%
No current plans to implement	10	29.4%	7	58.3%	3	13.6%

## SECTION 6. HEALTH INFORMATION TECHNOLOGY PARTNERSHIPS

### 6.1. Is your organization involved in a Regional Health Information Organization (RHIO)?

Several organizations that indicated they are involved in RHIOs or collaborative projects identified their efforts as part of the Health Care Efficiency and Affordability Law for New Yorkers Capital Grant Program (HEAL NY), for which the New York State Department of Health (DOH) was in the process of awarding \$53 million for multi-stakeholder HIT projects at the time of the survey. When the grants were awarded on May 24, 2006, 10 of the respondents to this survey were identified as part of a HEAL NY HIT project. The HEAL NY program was initially put forward by the GNYHA and 1199 SEIU Healthcare Education Project in January 2004 as part of a comprehensive health care reform proposal; the program authorizes \$1 billion in capital grants over four years to strengthen the health care system through both capital restructuring projects and HIT projects. DOH expects to release the remainder of the \$1 billion in HEAL NY funds, the bulk of which will be for capital restructuring initiatives; however, another phase of funding for HIT projects is also expected.

Involved in a RHIO?	Total (N=34)		NFs (N=12)		MSOs (N=22)	
	N	%	N	%	N	%
Yes	5	15.2%	2	16.7%	3	60.0%
No	28	84.8%	10	83.3%	18	40.0%
No response	1		0		1	

### 6.2. Is your organization undertaking any collaborative information technology projects with other health care providers or health care entities?

Collaborative HIT projects included chronic disease collaboratives, interoperability systems with hospitals, grant-funded projects, clinical data exchanges with hospitals and independent physician groups, and community electronic medical record projects.

Involved in a collaborative project?	Total (N=34)		NFs (N=12)		MSOs (N=22)	
	N	%	N	%	N	%
Yes	12	38.7%	0	0.0%	12	14.3%
No	19	61.3%	11	100.0%	8	85.7%
No response	3		1		2	

## SUMMARY OF FINDINGS AND RECOMMENDATIONS

During the development of this survey, CCLC found no other broad assessments of HIT adoption in long term care organizations. By conducting this survey, CCLC demonstrated that long term care organizations are eager to advance their HIT efforts.

Overall, multi-service long term care organizations are further along in the adoption of HIT than are freestanding nursing facilities. Currently, the most established HIT activities for long term care organizations are in the area of billing applications. The top HIT priority is for long term care organizations to implement the use of electronic medical records.

Financial challenges are a significant barrier to the adoption of HIT by long term care organizations. This survey demonstrated that the initial investment cost is the top barrier to the adoption of HIT and financial considerations represent the greatest challenge to organizations considering the implementation of HIT.

A majority of organizations outsource some HIT function to outside entities and many rely on non-electronic methods of data exchange, such as facsimile, for transmitting patient data to and from hospitals and other health care entities.

Some long term care organizations are beginning to get involved with collaborative HIT initiatives such as clinical data exchange projects and regional health information organizations. Collaborative projects identified in this survey are driven by availability of outside funding for such projects.

This report will provide the baseline data for further efforts to advance HIT in long term care and will provide an important benchmarking tool for CCLC members. To continue the momentum of advancing HIT, CCLC intends to meet regularly with its Workgroup on HIT comprised of HIT professionals in New York. With the guidance of this group, CCLC plans to develop next steps in assisting its members in advancing their priorities, which may include outreach to the research community and information technology entities interested in working with a large group of long term care providers.

Although this report was intended as a benchmarking tool for CCLC members, CCLC members were interested in comparing this data with the nation and other regions. CCLC was not able to find national or other regional data that would allow such comparisons. Therefore, CCLC encourages other entities to conduct assessments of HIT adoption in long term care organizations to further develop a more complete picture of HIT in the long term care field. CCLC also encourages researchers to explore how to implement electronic medical records and other HIT priorities identified in this survey.

CCLC believes strongly in the value of additional research as a means to help build the case for more funding for the advancement of HIT in long term care. Additional research will also help target the areas in which HIT can best help improve the delivery of long term care services.

## PARTICIPANT ORGANIZATIONS

CCLC would like to take this opportunity to thank the following member organizations for their participation in CCLC's 2006 HIT in LTC Survey. The following list includes the organizations that responded and the entities identified in Section 1 and Section 5, Questions 5.1. of the survey.

- Aging in America
  - Morningside House Nursing Home
  - Certified Home Health Care Agency
  - Adult Day Health Care Program
  - Licensed Home Health Care Agency
  - Long Term Home Health Care Program
- Beth Abraham Family of Health Services
  - CNR Health Care Network, Inc.
  - Margaret Tietz Center for Nursing Care
  - Schnurmacher Nursing Home
  - Adult Day Health Care Program
  - Certified Home Health Agency
  - Licensed Home Health Care Agencies
  - Long Term Home Health Care Agency
  - Managed Long-Term Care Plan
- Bronx-Lebanon Special Care Center
- Buena Vida Care and Rehabilitation Center
- Casa Promesa
  - Nursing Home
  - Casa Promesa Adult Health Care
- Catholic Health Care System
  - Carmel Richmond Healthcare and Rehabilitation Center
  - Ferncliff Nursing Home
  - Kateri Residence
  - Mary Manning Walsh Nursing Home
  - St. Teresa's Nursing Home
  - St. Vincent de Paul Residence
  - Terence Cardinal Cooke Health Care Center
  - Adult Day Health Care Programs
  - Managed Long-Term Care Plans
- Cobble Hill Health Center
  - Licensed Home Health Care Agency
  - Long Term Home Health Care Program
  - Adult Day Health Care Program
- Coler-Goldwater Specialty Hospital & Nursing Facility (NYC Health and Hospitals Corp)
  - Long Term Home Health Care Program
- Dr. Susan Smith McKinney Nursing and Rehabilitation Survey (NYC Health and Hospitals Corp)
  - Adult Day Health Care Program
- Elant, Inc.
  - Nursing Homes in Brandywine, Glen Arden, Goshen, and Newburgh
  - Adult Day Health Care Programs
  - Licensed Home Health Care Agencies
  - Long Term Home Health Care Programs

- Managed Long Term Care Plans
- Elizabeth Seton Pediatric Center
- Good Samaritan Lutheran Health Care Center
- Greater Harlem Nursing Home
- Gurwin Jewish Geriatric Center
  - Licensed Home Health Care Agency
  - Long Term Home Health Care Program
- The Hebrew Home for the Aged at Riverdale
  - Palisade and Hebrew Home Corporations (nursing homes)
  - Adult Day Health Care Program
  - Licensed Home Care Agency (home care)
  - Long Term Home Health Care Program (home care)
  - Managed Long Term Care Plan
- Incarnation Children's Center
- Isabella Geriatric Center
  - Adult Day Health Care Program
  - Long Term Home Health Care Program
- Island Nursing and Rehab Center
- The Jewish Guild for the Blind
  - Guild Home for Aged Blind
  - GuildNet (MLTCP)
  - Adult Day Health Care Program
- Jewish Home & Hospital Lifecare System
  - Jewish Home and Hospital - Bronx Division
  - Jewish Home and Hospital - Manhattan Division
  - Jewish Home and Hospital - SRN Division
  - Adult Day Care - Bronx
  - Adult Day Care - Manhattan
  - Adult Day Care - SRN
  - HAPI (licensed home care services)
  - Home Care - Bronx
  - Home Care - Manhattan
  - Senior Housing, KITTAY
  - LifeCare Plus (community-based chronic care management)
  - Senior Health Partners (MLTCP)
- Menorah Home and Hospital - Manhattan Beach Division
- Metropolitan Jewish Health System
  - MJG and Shorefront Nursing Homes
  - Adult Day Health Care Agency
  - Home Care, Certified Home Health Agencies
  - Long Term Home Health Care Programs
  - Hospice
  - Managed Long Term Care Plan
- North Shore-Long Island Jewish Health System
  - Adult Day Health Care Program
  - Franklin Hospital Orzac Family Center for Extended Care and Rehabilitation
  - North Shore University Hospital Stern Family Center for Extended Care and Rehabilitation
- Parker Jewish Institute for Health Care and Rehabilitation
  - Nursing Home
  - Medical Model Adult Day Health Center

- Social Model Day Care
  - Long Term Home Health Care Program
  - Hospice Program
  - Diagnostic and Treatment Center
- Project Samaritan A.I.D.S. Services
  - Adult Day Health Care Program
- Saint Joseph's Nursing Home
  - Long Term Home Health Program
  - Geriatric Day Care
- The Schulman and Schachne Institute for Nursing and Rehabilitation
  - Adult Day Health Care Program
- Sephardic Home Skilled Nursing & Rehabilitation Center
  - Adult Day Health Care Program
- St. Mary's Healthcare System for Children
  - St. Mary's Hospital for Children
  - St. Mary's Rehabilitation Hospital for Children
  - St. Mary's Case Management Program
  - St. Mary's Community Care Professionals
  - St. Mary's Homecare for Children
  - St. Mary's Medical Day Care Program
  - Certified Home Health Agency Care
  - Licensed Home Health Care Agencies
  - Long Term Home Health Programs
  - Managed Long Term Care Plan
- The Taylor Care Center at Westchester Medical Center
- Victory Memorial Hospital Skilled Nursing Center
- Village Care of New York
  - Village and Rivington House Nursing Homes
  - Adult Day Health Care Program
  - CHHA
  - Cobra Case Mgmt
  - Licensed Homecare
  - Senior Housing
- Visiting Nurse Service of New York
  - Certified Home Health Agency
  - Licensed Home Health Care Agency
  - Long Term Home Health Care Program
  - Managed Long Term Care Program
- Wartburg Lutheran Services
  - Lutheran Care Center at Poughkeepsie
  - Wartburg Lutheran Home
  - Wartburg Lutheran Home for the Aging
  - Long Term Home Health Care Program