

**Health Information Technology
in New York State's Skilled Nursing Facilities
Study Findings
October 2006**



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Study of Health Information Technology in New York State Skilled Nursing Facilities

ACKNOWLEDGMENTS

The Foundation for Quality Care (FQC) and its parent, the New York State Health Facilities Association (NYSHFA), would like to express our appreciation to the 93 skilled nursing facilities that participated in the survey. A list of participating organizations appears at the end of this report. FQC would also like to thank the members of NYSHFA's Information Analysis and Services Committee for their important role in reviewing the survey instrument, the survey results and providing valuable input on the report recommendations. The staff and Committee members that assisted in preparing this document are listed below.

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The Foundation for Quality Care, Inc. is a not-for-profit research and education foundation whose mission is to pioneer and promote activities designed to advance and improve the quality of care in nursing homes and related long term care settings. Through its educational programming, grant funded research, scholarship administration, and other leading edge initiatives the Foundation will provide opportunities that ensure a well trained work force and exceptional care for elderly and disabled populations.

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SURVEY FINDINGS

Background and Purpose

The Foundation for Quality Care (FQC) is a research and educational affiliate of the New York State Health Facilities Association (NYSHFA) which represents approximately 240 skilled nursing facilities (SNFs) throughout the state of New York. FQC/NYSHFA recognizes that health information technology (H.I.T.) is rapidly emerging as a key driver in increasing operational efficiency and improving quality of patient care in long term settings. NYSHFA has had a standing Information Analysis and Services Committee since 1986. Until recently, the focus of the committee has been on information technology and data collection as it relates to issues of finance and reimbursement. Key objectives in NYSHFA's 2005-2006 Strategic Plan are to establish a written plan to pursue more broad based technology enhancements for SNFs and provide educational programming to healthcare providers on emerging technology products and services.

Conventional wisdom is that the application of health information technology in long term care settings lags considerably behind what is readily available in the H.I.T. marketplace and what is typical in acute care settings. This assumption is based on anecdotal evidence gathered through site visits to SNFs, review of current H.I.T. literature, participation in national conferences on H.I.T., and dialogue with H.I.T. vendors, consultants and long term care managers.

The key purposes of the SNF Health Information Technology survey is to provide some empirical data on the current state of technology in SNFs throughout New York State and to use the results of the survey to develop recommendations for long term care providers, vendors and policy makers on how information technology can be more fully integrated into long term care settings.

Method

The survey tool was developed by key staff from FQC and NYSHFA. In developing the survey tool, staff reviewed other industry focused H.I.T. surveys and consulted with qualified representatives from other statewide long term care associations. Before distributing the survey tool, it was reviewed and approved by NYSHFA's Information Analysis and Services Committee.

Once completed, the survey was distributed via fax, conventional mail and digitally through a subscription based electronic survey tool to approximately 240 SNFs (this figure represents over 36% of all SNFs in the state) across New York State. Some of the surveys were also conducted by telephone. The facilities were given approximately 3 weeks to respond. A total of 93 SNFs responded to the survey, this figure represents slightly more than 14% of all SNFs in the state. The survey data was collected and compiled by Ellen Bagley, Director of Information Services for NYSHFA.

Report Design

This report of survey findings provides each question that was asked on the survey, a narrative and tabular summary of the responses to each question and analysis and explanation of the results. The key findings of the report, and recommendations, are summarized following the descriptions of each survey question and in the Executive Summary.

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I. Respondents

The survey was delivered to 239 Skilled Nursing Facilities within the State of New York. Ninety-three (93) facilities responded, representing 35 counties, and resulting in a response rate of 34%. In terms of statewide facilities, we heard from approximately 11%. Sponsorship of the respondents is represented in the table below. Twenty-seven (27) or 33%, of the respondents were affiliated with a multi-facility management company.

Sponsorship	Responses	
Proprietary	88	94%
Voluntary	4	5%
Public	1	1%

The average bed size of respondents was 149 beds. Responses represented all 15 of NYSHFA's geographic regions in New York, but the greater concentration (42%) came from Western New York, i.e., the Rochester and Buffalo area. These responses came from administrators, I.T. personnel, and various other facility staff members.

Bed Size	Beds
Mean	155
Median	160
Maximum	400
Minimum	28

District / region	Count of respondents
01E (Suffolk E)	6
01W (Suffolk W)	5
02 (Nassau)	2
03 (Westchester)	3
04 (Lower Hudson)	7
05 (Capital + north)	8
07 (North Central)	7
08 (Syracuse South)	6
09 (Rochester)	16
10 (Buffalo)	21
11 (Bronx)	3*
12 (Queens)	6*
13 (Brooklyn)	1*
14 (Manhattan)	2*

*Another recent LTC H.I.T. survey was conducted for facilities in the New York City metropolitan area. This may explain the low response rate for that area in this study. Interested parties may wish to review the LTC H.I.T. survey conducted in 2006 by Continuing Care Leadership Coalition's (CCLC).

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Resources Allocated

The first five (5) questions centered on the staffing and other resources a facility allocates to its Information Technology needs. Nearly 50% of our facility respondents said that they employed a full time Technology Manager, either at the facility level or at a multi-facility management company.

Employ Technology Manager	Responses	
Full time	49	53%
Part time	2	2%
Consultant	12	13%
None	30	32%

Of those who employed technology staff, the average number of Full Time Equivalent (FTE) positions was 0.52. When bed size was considered, the average number was 298 beds for every one (1) I.T. full time equivalent.

Full Time Equivalents	#FTEs
Mean	0.52
Median	0.73
Maximum	6.00
Minimum	0.00

Planned annual I.T. spending varied widely among respondents. Several respondents (17) were unable to provide an answer to this question. Fifty-eight percent (53%) spend \$50,000 or less and 30% spend more than \$50,000, exclusive of salaries.

Average Annual Spending	Responses	
0 - \$20,000	22	24%
\$20,001 - \$50,000	26	28%
\$50,001 - \$100,000	18	19%
More than \$100,000	10	11%
No Response	17	18%

Average annual I.T. spending was allocated as follows:

Spending Category	Responses
Personnel	31%
Operations	58%
Capital	55%
Supplies / Other	43%

Thirty-one (31) facilities had no response.

Facilities reported an average of 25 computers/workstations in the organization. The range of responses was 2 to 80 computers.

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II. Utilization

The largest section of our study focused on current utilization of available resources. It was important to us to determine where along the technology curve our facilities would fall. Sixteen (16) respondents (17%) indicated that they had developed some level of proprietary software. To determine the prevalent methods of receiving and transmitting health information, we inquired what types of reporting was used. Response counts appear in the table below.

Health Information Transmittal	Responses	
Paper (FAX or postal mail)	87	91%
Electronic: via Internet	57	64%
Electronic: via eMail	45	48%
Electronic: via dedicated connection	17	18%

Internal Connectivity

Nearly 84% of our respondents reported that all facility computers were interconnected via Local Area Network (LAN). Only 2 respondents reported no internal connectivity.

Internal Connectivity	Responses	
No Connectivity	2	2%
Some computers connected via LAN	13	14%
All computers connected via LAN	78	84%

External Connectivity

External connectivity seemed a bit more elusive. Only 23% of our respondents reported a high level of connectivity with suppliers and providers. Sixteen (16) respondents (17%) reported no external connectivity. Thirty-five percent (35%) reported external connectivity to a management company office. The remainder of those who responded indicated they connected with at least one external system (supplier or insurer). Four (4) respondents did not answer this question.

External Connectivity	Responses	
No Connectivity	16	17%
Management connectivity	35	38%
External partner connectivity	17	18%
High level Connectivity	21	23%
No Response	4	4%

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Interoperability

It is highly desirable for various departmental systems (clinical, financial, therapies, pharmacy) to work together, or at least “talk” to one another. Less than 13% of respondents reported a high level of interoperability between systems within their facilities. The largest group (33% of those responding) reported at least two software systems integrated.

Interoperability	Responses	
No integration	16	17%
Some integration	30	32%
Moderate integration	31	33%
High integration	11	12%
No Response	5	5%

Departmental Internet Access

In order to assess the pervasiveness of computers in various departmental areas in the facilities, we requested to know which staff had Internet access in their work areas. Responses appear in the table below.

Departmental Internet Access	Responses	
Clinical staff	57	61%
MDS Coordinator	81	87%
Administrator	91	98%
Clerical Staff	77	83%
Food service staff	63	68%
Environmental staff	62	67%
Business office staff	89	96%

Internet Access Type

All of our respondents, with the exception of one (1) indicated broadband Internet access.

RHIO / HIE Development Projects

Sixteen (16) facilities (17%) indicated they are involved in a collaborative project involving H.I.T. and exchanging health information among stakeholders. That indicates 83% of respondents are not involved in these important community efforts coordinate and share health data.

Types of Software in Use

Of the common long term care software types, accounting software was the most pervasive in our respondent facilities. The table below outlines this topic.

Software in Use	Responses	
Accounting	92	99%
Electronic Health/Med Records	34	37%
ePharmacy	21	23%
Telemedicine Apps.	22	24%
Bedside Documentation	5	5%
Patient sensor systems	38	41%
Other	28	30%

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III. Investing in H.I.T.

Just over half (51) of our respondents indicated they have a current plan to invest in H.I.T. upgrades. Timelines varied, with the greatest number estimating their timetable at 2-3 years (see table below). It is possible that some respondents did not have access to this information. Others may have no plans to invest in H.I.T.

Timetable	Responses	
Within 1 year	23	25%
2-3 years	24	26%
3-5 years	3	3%
More than 5 years	1	1%
No Response	42	45%

Expenditure Types

The majority of respondents indicated they would be investing in software and hardware. A number of them said wireless networking and systems integration were on their radar screens. A smaller group advised they are looking forward to implementing or upgrading bedside documentation systems and electronic health records. (See table below: 51 respondents indicating they would be investing in H.I.T.)

Expenditure Type	Responses	
Software	47	51%
Hardware	45	48%
Wireless networking	33	35%
Internal systems integration	24	26%
External systems integration	21	23%
EHR / EMR	26	28%
Telemedicine Apps.	2	2%
Bedside Documentation	28	30%
Patient sensor systems	22	24%
Other	47	51%
No Response	41	44%

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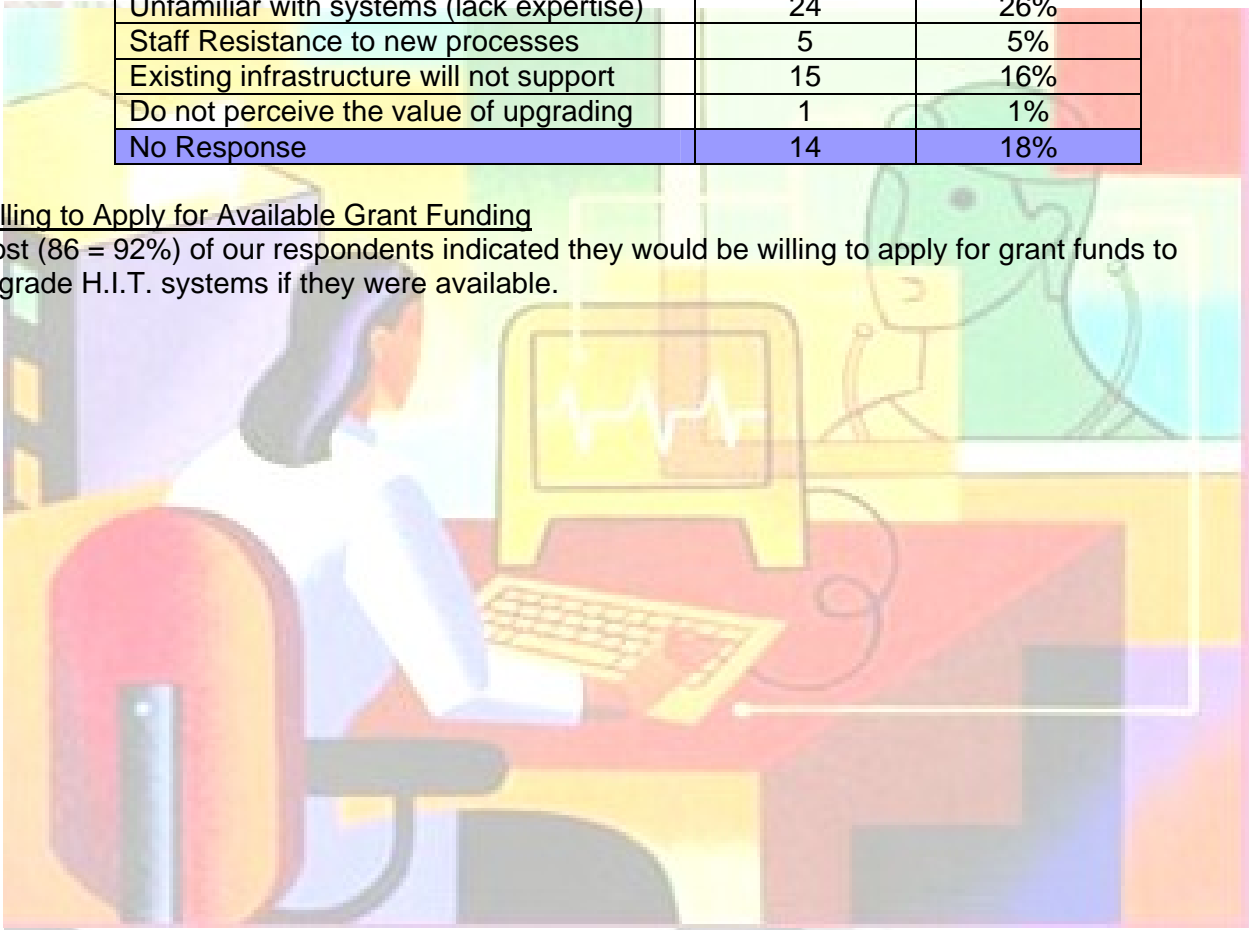
Barriers to Implementing New H.I.T.

We inquired as to what barriers stood in the way of advancing H.I.T. initiatives in organizations. The responses varied, but “financial investment” at 78%, stands out over other explanations why H.I.T. has not been more widely adopted. The next largest barrier was that facilities did not know what technologies are available.

Barrier	Responses	
No Immediate Need	12	13%
Financial investment	54	58%
Maintenance costs	14	15%
Unfamiliar with systems (lack expertise)	24	26%
Staff Resistance to new processes	5	5%
Existing infrastructure will not support	15	16%
Do not perceive the value of upgrading	1	1%
No Response	14	18%

Willing to Apply for Available Grant Funding

Most (86 = 92%) of our respondents indicated they would be willing to apply for grant funds to upgrade H.I.T. systems if they were available.



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IV. Summary of Findings

As we developed this study, the Foundation for Quality Care (FQC) reviewed the 2006 Continuing Care Leadership Coalition's (CCLC) Health Information Technology in Long Term Care survey findings. This survey focused on facilities in the New York City area. Many of our questions paralleled CCLC's study. However, our target audience was NYSHFA members, predominantly proprietary, free standing nursing facilities, throughout New York State.

We were intrigued to learn that all of the respondents use broadband Internet access. This will become increasingly important as vendors develop more robust versions of online programs and services.

Very few independent owner facilities had designated information technology personnel on staff. Those affiliated with a multi-facility owner were much more likely to have access to I.T. staff. This phenomenon will be interesting to track, as H.I.T. becomes more a part of facilities' daily routines.

Most facilities reported that they had not become part of regional health information exchange (RHIO / HIE) coordination efforts. These will be key links to the success of any community record sharing endeavors. It remains to be determined whether the facilities are not involved because they are not aware of a regional undertaking of this type, or whether they declined to participate. The responses seem to indicate that long term care facilities may be under-represented among these groups.

Health care information technology investment in long term care facilities has not risen to the level of that in other types of organizations, or in other health care settings. Initial capital investments may be a significant barrier. Reimbursement is available for such investments, but the initial outlay may be a problem for debt-conscious managers.

As FQC goes forward with developing materials and education events centered on health care information technology, this report will help to guide our efforts to the best advantage of our member facilities. In addition, it will serve as a benchmark for future studies to measure changes in technology use and priority of H.I.T. among other facility concerns.

FQC would be interested in comparing these results with any nationwide or other statewide studies along the same lines. In addition, we will use this study to help develop programs and funding opportunities for our members to implement systems that will support their goals of providing quality health care.

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V. Participating Facilities

We would like to extend our sincere thanks to the facilities that participated in this study.

- 
- 👉 Achieve Rehabilitation & Nursing Facility
 - 👉 Auburn Nursing Home
 - 👉 Baird Nursing Home
 - 👉 Barnwell Nursing & Rehabilitation Center
 - 👉 Beach Terrace Care Center Inc.
 - 👉 Berkshire Nursing & Rehabilitation Center
 - 👉 Bethany Gardens Skilled Living Center
 - 👉 Bridgewater Center
 - 👉 Brightonian
 - 👉 Briody Health Care Facility
 - 👉 Bronx Center for Rehab. and Healthcare
 - 👉 Brookhaven Health Care Facility
 - 👉 Cliffside Rehab & Residential HC Ctr
 - 👉 Community Memorial Hospital Inc.
 - 👉 Conesus Lake Nursing Home
 - 👉 Cortland Care Center
 - 👉 Delaware Nursing & Rehab. Center
 - 👉 East Haven Nursing & Rehabilitation Center
 - 👉 Elcor Health Services
 - 👉 ElderWood Health Care At Crestwood
 - 👉 ElderWood Health Care At Heathwood
 - 👉 ElderWood Health Care At Lakewood
 - 👉 ElderWood Health Care At Linwood
 - 👉 ElderWood Health Care At Maplewood
 - 👉 ElderWood Health Care At Oakwood
 - 👉 ElderWood Health Care At Riverwood
 - 👉 ElderWood Health Care At Wedgewood
 - 👉 Elm Manor Nursing Home
 - 👉 Evergreen Valley Nursing Home
 - 👉 Firemen's Home of the State of New York
 - 👉 Fishkill Health Center
 - 👉 Forest View Center for Rehab & Nursing
 - 👉 Garden Gate Health Care Facility
 - 👉 Haven Manor Health Care Center
 - 👉 Highland Healthcare Center
 - 👉 Highland Nursing Home Inc.
 - 👉 Hilaire Farm Skilled Living & Rehab. Center
 - 👉 Hillside Manor Rehabilitation & Extended CC
 - 👉 Hollis Park Manor Nursing Home Inc.
 - 👉 Horizon Care Center
 - 👉 Hornell Gardens
 - 👉 Hudson Haven Care Center Inc.
 - 👉 Huntington Hills Center for Health & Rehab
 - 👉 Hurlbut
 - 👉 Indian River Rehab. & Health Care Center
 - 👉 John J. Foley Skilled Nursing Facility
 - 👉 Julie Blair Nursing and Rehab. Center
 - 👉 Kingsway Arms Nursing Center Inc.
 - 👉 Maplewood Nursing Home Inc.
 - 👉 Mercy of Northern New York
 - 👉 Nesconset Nursing Center
 - 👉 Newark Manor Nursing Home
 - 👉 Niagara Rehabilitation & Nursing Center
 - 👉 North Gate Healthcare Facility
 - 👉 Northeast Center for Special Care
 - 👉 Nyack Manor Nursing Home
 - 👉 Oneonta Nursing & Rehabilitation Center
 - 👉 Orchard Manor Inc.
 - 👉 Palatine Nursing Home
 - 👉 Park Manor Rehab & Health Care Center
 - 👉 Patchogue Nursing Center
 - 👉 Penfield Place
 - 👉 Pine Valley Center for Rehab & Nursing
 - 👉 Queens Boulevard Extended Care Facility
 - 👉 Rome Nursing Home
 - 👉 Seneca Nursing and Rehabilitation Center
 - 👉 Shore Winds The
 - 👉 Silver Lake Specialized Care
 - 👉 Springs Nursing and Rehabilitation Centre
 - 👉 St. James Healthcare Center
 - 👉 St. James Plaza Nursing Facility LLC
 - 👉 St. Johnsville Rehabilitation & Nursing Ctr
 - 👉 St. Regis Nursing Home Inc.
 - 👉 Sunnyside Care Center
 - 👉 Sunrise Manor Center for Nursing & Rehab
 - 👉 Ten Broeck Commons
 - 👉 Terrace Healthcare Center Inc.
 - 👉 Union Plaza Nursing Home Inc.
 - 👉 Vestal Nursing Center
 - 👉 Waters of Allegany
 - 👉 Waters of Aurora Park
 - 👉 Waters of Dunkirk
 - 👉 Waters of Eden
 - 👉 Waters of Endicott
 - 👉 Waters of Houghton
 - 👉 Waters of Orchard Park
 - 👉 Waters of Salamanca
 - 👉 Wedgewood Nursing Home
 - 👉 West Ledge Health Care Facility
 - 👉 Westhampton Care Center
 - 👉 White Oaks Nursing Home
 - 👉 Wingate at Ulster
 - 👉 Woodside Manor Inc.

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VI. Executive Summary

The Foundation for Quality Care (FQC) is an affiliate of the New York State Health Facilities Association (NYSHFA). We represent over 240 skilled nursing facilities across the state.

Key Findings

- Several long term care organizations have recognized the importance of adopting H.I.T. systems that will assist them in their overall efforts to efficiently provide quality care. Those who have begun to use H.I.T. are destined to become a resource for facilities that have yet to employ these technologies.
- Most facilities do not have dedicated staff to advise them and to coordinate the I.T. effort and assist with budgeting, instead relying on the advice of vendors and/or consultants.
- In addition to their relative unfamiliarity with systems, the initial investment cost is the chief barrier to advancement of H.I.T. in these facilities.
- As expected, accounting functions have been the primary focus of I.T. efforts in long term care facilities. However, an interest in electronic medical records has arisen and products like patient sensor systems seem to have become more prevalent.
- Transmission of data electronically is fairly limited. It is possible that limitations are base in part on privacy and security concerns. This item merits further consideration.
- Very few facilities have been involved in community health information exchange development efforts. It would be helpful to find out where these groups are working within the state and to encourage SNFs in those areas to become active in helping to develop these networks that will likely become the foundation for regional health data interchange.

Recommendations

- ◆ Keep long term care providers informed of emerging H.I.T. developments.
- ◆ Conduct advocacy efforts to request targeted funding for LTC H.I.T. projects.
- ◆ Take part in more widespread efforts to assess the adoption of H.I.T. in long term care settings.
- ◆ Conduct education that will assist facilities to learn about new technologies and to help them discover how to best implement useful systems in their organizations.
- ◆ Work with providers to identify and seek funding through the Foundation for Quality Care to provide resources so that facilities can take the steps needed to upgrade infrastructure, educate staff and to adopt systems that will increase efficiency and improve the quality of care.
- ◆ Identify and develop tools to assist in assessing the efficacy of emerging H.I.T. products and services.
- ◆ Disseminate these findings and recommendations to key policymakers and LTC providers.
- ◆ Identify key partners to help facilitate development of RHIO/HIE and other cross organizational H.I.T. projects such as e-prescribing and telemedicine.
- ◆ Follow up with facilities that have successfully implemented H.I.T. (i.e., EHR, telemedicine, etc.) to establish business cases.