*Case Study*

# North Shore-LIJ Health System develops far-reaching clinical collaboration and communications strategy

**North Shore-Long Island Jewish Health System**

A major, multi-faceted health system brought on board a technology executive with deep expertise in enterprise telecommunications to transform diverse workflows and enhance patient care. Retained for its clinical and technology experience, Burwood Group engaged clinicians, researchers, educators, and administrators in creating a long-term strategy for interoperable clinical collaboration and communications systems.

**Third-largest U.S. nonprofit, secular health system**

**16 hospitals and three skilled nursing facilities**

**6,000 hospital and long-term care beds**

**46,000 employees and 9,440 physicians**

Over the course of 20 years, North Shore-LIJ Health System had grown into the third-largest health system in the United States. Today, it comprises 16 hospitals, about 400 outpatient physician practices, a major research institute, and three rehabilitation and skilled nursing facilities, along with a home care network, a hospice network and other progressive services.

As its structure grew more complex, the organization faced a communications and clinical operations challenge common to many health systems in the current era of consolidation.

Applications and services had proliferated. New communications technologies had been adopted piecemeal without an overarching plan, and some were not necessarily enhancing workflow.

Alert fatigue was a growing problem in which caregivers received alerts—without prioritization or context—from multiple disparate systems and personal devices. Telemetry applications, for example, triggered alerts from smart pumps, cardiac monitors and other medical devices, competing with messages from pagers, smartphones, mobile workstations and various other new and legacy systems.

Each facility within North Shore-LIJ had its own workflow systems, making it difficult for clinicians and administrators to share information across the organization or even within a single facility. With hundreds of caregivers working in different hospitals and ambulatory service centers, the health system needed to make it easier for caregivers to locate and connect with each other and with other department contacts.

## Bringing it all together

A new vice president of enterprise network services, Kevin Friel, came on board to lead network and communications initiatives. He quickly saw a need for a unified communications strategy, integrating instant messaging, telephone services, video conferencing, interactive white boards, voicemail, and other communications services to streamline workflows and support clinical collaboration.

"At the root of virtually every problem we found in our hospitals was a breakdown in communication—or an opportunity to improve communication," said Friel. "We wanted to transform healthcare by applying unified communications to the clinical workflow."

Friel sought a unified communications strategy that would achieve five primary goals:

- Improve provider-to-provider access;
- Enable clinical collaboration;
- Reduce delays in patient care;
- Increase bedside contact; and
- Improve quality of outcomes in patient care.

Given the importance of technology in today's increasingly complex healthcare environment, Friel wanted to partner with a consulting firm with healthcare industry experience. Burwood Group was selected for its knowledge of delivering advanced healthcare technologies, its deep understanding of the healthcare environment, and its track record of working with more than 170 healthcare organizations.

"Our healthcare team understands the impact that communications and collaboration technologies can have throughout a hospital system," says Kathleen Harmon, Chief Nursing Executive, Burwood Group. "With a team that includes hospital clinicians from leading national healthcare institutions, we offer expertise in using technology to transform clinical practice and, equally important, engaging practitioners in adopting new technologies."

Friel envisioned a future state in which clinical staff could, for example, use presence technology to quickly locate another caregiver; instantly contact the other caregiver with a voice-activated device; and easily share an image or a video to collaborate on patient care. Click-to-contact technology would be integrated into clinical applications to expedite collaboration. Mobile devices would serve as extensions of the clinical infrastructure, and clinicians would have on-demand access to data.

Technology strategy is not developed in a vacuum, as hospital leadership and Burwood Group both understood all too well from previous experience. Engagement with stakeholders early in the process was considered essential for its success.

While North Shore LIJ's clinicians were eager to use new communications tools, the organization lacked mechanisms for the Office of the CIO, clinicians, and administrators to collaborate in creating the communications technology strategy. These groups existed largely in silos without natural channels for collaboration on goals.

Another consideration was that, as an integrated system, North Shore-LIJ was more than simply a group of hospitals. Its operations also included an emergency medical service and a large network of ambulatory service centers, as well as an education and training organization, and a major research institution—each with a different set of workflow, collaboration, and communications needs.



*Healthcare Technology Services:*
Strategy & Roadmapping
Healthcare-Technology Alignment
Clinical Engagement
Process Transformation
Technology Governance
Program/Project Leadership
Training and Adoption
Application Delivery
Secure Mobility

Burwood Group facilitated a visioning and strategy process with a focus on collaborative communication. One critical objective was to tie the technology strategy directly to the needs of the clinical staff, recognizing that each facility within the system would likely have unique preferences and operating practices. Another was to standardize wherever possible, recognizing that the strategy had to incorporate technologies appropriate and clinically relevant for each facility and component organization.

## Identifying the stakeholders

Burwood Group worked with North Shore-LIJ's technology leadership to identify the primary stakeholder groups for the strategy planning process. Given the complexity of the organization, stakeholder identification was a critical and challenging task.

As an objective third party, Burwood Group was able to assemble a multidisciplinary steering committee that included representatives from across the health system, including the technology team, caregivers, specialty departments, and hospital leadership. Throughout the visioning and strategy process, Burwood Group worked with the steering committee to ensure that the appropriate stakeholders were engaged.

The steering committee identified key individual stakeholders, including both champions and detractors of the process. In a series of workshops, Burwood Group engaged these stakeholders in individual interviews and workshops to uncover their perceptions of technology and their workflow challenges, and to envision ideal practices.

### Engaging the stakeholders

Rather than focusing on specific technologies on the spot, the workshops focused on future workflow scenarios and included examples from Burwood Group of how other hospitals and health systems had transformed their workflows. The workshops allowed Burwood Group to benchmark technologies currently in use and to gather feedback from stakeholders regarding their use.

"One purpose of the stakeholder engagement was to move beyond the constraints of technologies currently in place," says Kathleen Harmon, Chief Nursing Executive, Burwood Group. "We drew from our experience not only in healthcare, but also education and other sectors to help each organizational unit envision new ways of working. Ultimately, the stakeholders need to own the technology decisionmaking, or the strategy will not succeed."

***Healthcare Technologies:***
- Caregiver-to-Caregiver Communications
- Video Collaboration and Telemedicine
- Clinical Workflow
- Alarm and Message Management
- Realtime Location Services

### Creating short-term and long-term technology strategies

Following the stakeholder interviews and workshops, Burwood Group identified key issues and recommended possible solutions. Burwood Group worked with technology leadership and stakeholders to help the organization develop short-term and long-term plans and a roadmap for implementation.

Most important, stakeholders were involved in the process, rather than being passive recipients of potentially unwelcome technologies. Toward that goal, Burwood Group helped the organization pursue strategies to smooth the path to adoption of new systems.

"Working with a consultant brought an objective perspective to this critically important project, along with

access to best practices used by other health systems," said Friel. "Also important, we found it helpful to have a knowledgeable, neutral third party engage stakeholders in open discussion about their challenges and possible solutions."

The overall unified communications strategy includes a taxonomy of the different categories of technologies to be used: network services; collaboration applications and services such as messaging and calendaring; integration middleware; clinical applications; communications devices; and more. Following approximately 120 stakeholder interviews, Burwood Group worked with North Shore-LIJ to create a unified communications architecture and infrastructure plan to integrate the various communications technologies.

### Short-term successes

One short-term initiative was to adopt collaboration tools. Given the size of North Shore-LIJ, it is not unusual for physicians to seek consultations from their network peers when caring for patients with complex health issues. One group of enterprising clinicians in the system had devised innovative ways to visually share patient information, diagnostic test data and image scans during and after consultations. Burwood Group helped North Shore-LIJ adopt a technology platform to support use of these innovations throughout the organization.

Another initiative concerns the emergency medical service, which is considering adopting a leading-edge collaborative communications system designed specifically for in-ambulance use. Such a system could allow ambulance personnel to quickly share patient data and images with emergency room caregivers, and potentially improve patient outcomes.

Today, the project team is implementing a focused deployment of secure instant messaging, conferencing and video collaboration technology. As this roll-out progresses, the health system can determine whether these tools are most appropriate.

The strategy's initial focus is on high-impact technologies, particularly those that will quickly improve patient care. However, this is only the initial phase of what is intended to be an ongoing process. Rather than providing a fixed endpoint, the strategy is a living document to guide the development of the organization's communications systems over time. Its ultimate objective is to ensure that communications technologies evolve in alignment with the needs of the organization and the requirements of all stakeholders.