

Hospital Increases Efficiency of Mobile Clinicians and Staff

Evergreen Hospital adopted collaboration solutions to increase clinician productivity and provide excellent patient experience.

EXECUTIVE SUMMARY

Customer Name: Evergreen Hospital
Industry: Healthcare
Location: Kirkland, Washington
Number of Employees: 2,600 Employees

CHALLENGE

- Increase productivity for mobile clinicians and staff
- Improve experience for patients calling 24-hour nurseline
- Increase operational efficiency

SOLUTION

- Call management and wireless IP phones integrated with nurse-call and clinical-information systems
- Web conferencing for team meetings and training, including remote staff
- High-definition telepresence to avoid travel for executive meetings with partner hospital

RESULTS

- Increased time available to home nurses for patient care
- Optimized nurseline staffing to provide excellent patient experience
- Halved operational costs of voice system, saving US\$500,000 annually

Challenge

Evergreen Healthcare is a public hospital district and community-based healthcare organization, serving 400,000 residents in Washington State. More than 950 physicians provide care through a network of primary and urgent care practices and two medical centers. Healthgrades, an independent healthcare ratings company, has ranked Evergreen among the top five percent of U.S. hospitals for quality patient care and clinical performance every year from 2008 through 2011.

Information technology plays a significant role in the hospital's success. "Our guiding principles for every IT project are to contain costs and improve the patient experience," says Greg Dinehart, director of IT infrastructure for Evergreen. Recently the IT team turned its attention to improving organizational communications and patient satisfaction using advanced collaboration tools.

Previously, nurses needed two mobile devices: a pager integrated with the nurse-call system and a wireless phone that operated on a proprietary network. "When patients pressed the nurse-call button, nurses had to walk to the patient's room to find out the nature of the request, such as ice or pain medication, and then return to fulfil it," says Dinehart. "To save time, nurses were starting to give out their

personal mobile phone numbers." The IT team envisioned giving nurses a single mobile device that would provide the same functions as a desk phone while also integrating with the nurse-call system and the hospital's clinical information system.

Another goal was enabling home health nurses, who visit patients in their homes, to meet for training without taking time away from patient care to drive to the office.

Finally, the hospital wanted to improve the experience for patients calling the 24-hour nurse advice line. The ability to collect detailed contact-center metrics such as waiting time and queue length, for example, would help managers optimize staffing to answer calls promptly.

Solution

Evergreen Healthcare is increasing clinician productivity and improving an already good patient experience with Cisco® Unified Communications and Cisco collaboration tools.

Delivering Information Directly to Mobile Clinicians and Staff

Nurses now need only one device for all their communications needs. Using Cisco Unified IP Phone 7925G mobile handsets, they can place and receive calls from anywhere in the hospital, receive notifications from the Rauland Responder nurse call system, and access the Cerner clinical information system. Cisco partners Electrocom and Emergin integrated the clinical information systems and Emergin middleware with Cisco Unified Communications Manager.

“Until you understand the ebb and flow of call volume, you’re relying on instinct for contact center staffing. Now we can see plainly that the busiest time is Mondays from 8 to 11 a.m., for example, and make sure we have enough agents to answer patient calls promptly.”

— Greg Dinehart, Director of IT Infrastructure, Evergreen Hospital

When patients press the nurse-call button, nurses receive an alert on their wireless IP phone and can call patients to see what they need, saving the time to walk to the patient's room. “It’s a more efficient use of staff, and nurses are providing positive feedback,” says Tim Parsley, Evergreen’s manager of infrastructure.

Facilities staff use Cisco Unified Wireless IP Phones to monitor temperature-sensitive equipment throughout the hospital, such as the refrigerators and freezers used to store drugs and specimens. Although staff used to visit these areas throughout the day, temperatures could stray out of the acceptable range between visits. Once a refrigerator door was left open in between inspections, requiring the hospital to discard thousands of dollars of drugs. Now sensors constantly monitor temperatures and automatically send alerts to the appropriate staff members’ phones.

The hospital also uses the Cisco Unified Wireless Network to track mobile assets such as wheelchairs. Active RFID tags affixed to the wheelchairs beacon their location, which appears as a blinking light on a map of the facility. “Volunteers can find chairs right away instead of looking in every corridor,” says Dinehart.

Meeting from a Distance

Several hospital teams now conduct meetings using Cisco WebEx® Meeting Center for audio conferencing and web sharing. “Home-nursing teams meet regularly to discuss procedures, and with WebEx they can now meet from the field instead of taking time away from patient care to drive to the office,” says Parsley.

In the first 10 weeks of 2012, Evergreen Home Care Services conducted 120 Cisco WebEx meetings for its home nurses, with a total of 435 remote participants. If each nurse saved 30 minutes of driving time to spend with patients, Evergreen Home Care Services regained 217 hours, the equivalent of 5.5 additional home nurses with no additional staff costs.

Executives, too, are saving travel time, using a Cisco TelePresence® System to meet with peers at a partner hospital in another city. Ultra-high-quality video and audio provide the in-person experience not available from voice conferences or consumer videoconferencing services.

Efficient, Effective Customer Care

Finally, Evergreen is strengthening patient satisfaction with hospital contact centers, including the 24-hour nurse line as well as patient financial services, appointment scheduling, and IT helpdesk teams. “Cisco Unified Contact Center Express makes it easy to customize menus so that callers can reach the right resource, and provides detailed metrics needed to optimize staffing,” says Dinehart.

The advice nurses and agents who staff the contact centers can even work from home, using Cisco IP Communicator software on a PC or laptop. IT helpdesk personnel on call during weekends appreciate being able to work from home, and the hospital was able to retain one of the nurseline’s best agents when she moved out of state.

Results

Increased Clinician Productivity

Ward nurses now find out the nature of patient requests sooner, thanks to the integration between Cisco Unified Communications and the nurse call system. “Before, nurses would receive a page that said ‘Hurry to room 3,’” says Simms. “Now they can be reached on their Cisco Unified Wireless IP Phone, and can find out the nature of the problem to bring the appropriate equipment or find a doctor.”

“Home-nursing teams meet regularly to discuss procedures, and with WebEx they can now meet from the field instead of taking time away from patient care to drive to the office.”

— Tim Parsley, Manager of Infrastructure Group, Evergreen Hospital

Similarly, home nurses have more time for patient care, because they can attend meetings from the field, using Cisco WebEx, instead of driving to the hospital.

Improved Patient Experience

The experience is also better for patients who call the 24-hour nurseline. “Until you understand the ebb and flow of call volume, you’re relying on instinct for contact center staffing,” says Dinehart. “Now we can see plainly that the busiest time is Mondays from 8 to 11 a.m., for example, and make sure we have enough agents to answer patient calls promptly.”

When the Evergreen Primary Care Center adopted Cisco Unified Contact Center Express, caller wait times decreased by half and call length by a quarter, allowing each agent to handle more calls per day. “Agents say the new work flow is vastly improved and less frustrating for both them and the callers,” Simms says. “They also report that they enjoy their workday more, because they get fewer complaints from callers and can provide better service to their customers.” Collecting performance metrics for individual agents has also increased productivity. “Agents know their performance is visible, and it’s turned into a healthy competition to provide an excellent caller experience,” Simms adds.

Improved Organizational Communications

Internal communications have also become more efficient since the hospital introduced Cisco collaboration tools. For instance, doctors previously did not always check voicemail regularly because of the inconvenience and forgotten passwords. Now, with Cisco Unity® unified messaging, voicemail messages appear as email attachments. “Visual voicemail means one less thing that busy clinicians have to do, because they can check voicemail at the same time as email,” says Simms. “People are much more familiar with forwarding emails than voicemail messages.”

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— Shannon Simms, VoIP Administrator, Evergreen Hospital

Rapid ROI

Costs have decreased even as efficiency has increased. Cisco Unified Communications reduced Evergreen's voice system operational costs from US\$1 million annually to less than \$500,000 by converging the previously separate voice and data networks. “And instead of paying our service provider to make changes, we’ve developed the skills in house,” says Dinehart. “Not only are we saving money, but we can respond more quickly to requests for telephone extension moves, adds, and changes.” In addition, connecting remote clinics to Cisco Unified Communications Manager requires little time and expense, because the only equipment clinics need is a Cisco Integrated Services Router (ISR) and handsets.

PRODUCT LIST

Unified Communications

- [Cisco Unified Communications Manager](#)
- [Cisco Unified IP Phones 7900 Series](#)
- [Cisco Unified IP Phones 9900 Series](#)
- [Cisco Unity Unified Messaging](#)
- [Cisco Emergency Responder](#)

Collaboration Applications

- [Cisco WebEx Meeting Center](#)
- [Cisco Unity Connection](#)

Customer Collaboration

- [Cisco Unified Contact Center Express](#)

TelePresence

- [Cisco TelePresence System Integrator C-Series Codecs C40](#)

Next Steps

Evergreen Healthcare continues finding new use cases for Cisco Unified Communications and collaboration solutions to improve the patient experience and organizational communications. Plans include:

- Introducing Cisco TelePresence to other hospital teams interested in offering remote consultations for patients visiting clinics and weekly meetings for the health system's clinic managers.
- Providing enterprise presence and instant messaging capabilities to meet growing demand from employees. The Cisco Jabber™ UC Client provides these capabilities on all devices used within the hospital, including PCs, Macs, tablets, and even employees' personal smartphones.
- Using the Cisco Digital Signs solution for patient communications: A new Cancer Center will be the first to use the solution initially to help patients find their way around the facility. The hospital is also considering using digital signage for emergency security notifications and advertisements.

For More Information

To find out more about Cisco Collaboration, visit <http://www.cisco.com/go/collaboration>.

To find out more about Cisco TelePresence, visit: <http://www.cisco.com/go/telepresence>.

To join conversations and share best practices about collaboration, visit:
<http://www.cisco.com/go/joinconversation>.



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