



Why Should I Care About Secure Wireless?

For today's mobile caregivers, the workspace can be anywhere: the point of care, hospital corridor, or home. And yet, nurses and doctors typically can only access information from the nurse's station or desk, using a stationary computer with network access. Constantly walking back and forth to the network connection erodes productivity and can delay care.

Hospitals around the world are securely extending the network to the point of care with Cisco® Secure Wireless as part of their Cisco Medical-Grade Network infrastructure. Cisco Secure Wireless enables healthcare organizations to confidently access medical applications and services, such as electronic health records, decision support, e-prescribing, and e-research. In addition, it offers the wireless foundation to deploy mobile care applications and location-aware services. Mobile caregivers can now access information and order services wherever they happen to be, using notebook computers, tablet PCs, wireless IP phones, and new dual-mode phones, which connect over the hospital's Wi-Fi network when in range and the cellular network otherwise.

What Problems Need to Be Solved?

The fast-paced, demanding environment of healthcare requires technology that promotes efficiency. Empowering hospital staff to provide better and faster care, while containing costs and improving security, is a necessity.

Because of the overwhelming concern of maintaining the security of patient information and preventing intrusions from exterior sources, healthcare organizations are turning to their IT organizations for greater assurances that underlying network and communications systems are secure. Securing the wireless network is a requirement for all healthcare organizations. While the latest wireless security standards provide robust, secure encryption and authentication, the importance of securing and controlling the entire corporate wireless environment is mandatory in today's healthcare environment. The four main factors that a healthcare organization must address prior to deploying a secure wireless network include providing pervasive

coverage and secure access, complying to global regulations, having a disaster recovery plan, and providing better hospitality to patients and guests.

Cisco Secure Wireless as Part of the Cisco Medical-Grade Network

The Cisco Secure Wireless Solution addresses these challenges and delivers secure, integrated mobility services to enable healthcare organizations to confidently deploy mobile applications. With this solution, healthcare organizations can increase employee productivity while keeping patient data private and secure, helping meet the rigorous demands of regulatory compliance. Healthcare organizations can also create a disaster recovery plan and provide better hospitality with secure Internet access for guests.

Coverage and Access

Hospitals tend to have challenging RF environments, so wireless service must adapt as different wireless devices move across the facilities. The Cisco Secure Wireless Solution provides reliable coverage for mobile caregivers and hospital staff, who require wireless access throughout the hospital. Doctors and nurses will have wireless access in their offices and more importantly at the point of care, when and where they need it. For example, if a doctor or nurse is diagnosing a patient, it is easier to read the patient charts electronically to review the background information. They can also enter new patient information quickly at the point of care to make sure they reduce the number of medical errors. The following features facilitate better coverage and access:

- Network optimization: The controllers in the Cisco Unified Wireless Network improve network availability and optimize coverage
- Spectrum intelligence: Improves network performance and coverage because RF interference is quickly detected and mitigated
- Voice-over-WLAN Readiness Tool: Validates adequate voice-over-WLAN RF coverage and provides predictive coverage based on calibration data

Regulatory Relief

Healthcare organizations must comply with stringent regulatory requirements such as the Health Insurance Portability and Accountability Act (HIPAA), the Personal Cardholder Information (PCI) Data Security Standard, and other global requirements. These standards require organizations to implement security standards that protect patient data, billing, and credit data.

The Cisco Secure Wireless Solution helps organizations comply with regulatory requirements by enabling the following:

- Information privacy and integrity: All information is encrypted as it travels over the wireless network. Cisco Secure Wireless solutions protect information such as prescription dosages from accidental or deliberate alteration as it travels over the wireless network.
- Network access control: Before providing access to services, the network validates that the right user is authorized to access the network and the right application and that the user's devices conform to the hospital's security policy for required security software and settings.
- Intrusion detection and prevention: Mitigate network misuse, hacking, and malware from WLAN clients
- Rogue detection and containment: Integrated 24-hour RF monitoring to identify, locate, and contain unauthorized wireless activity

Disaster Readiness

Hospitals need their network to be reliable and available 24 hours a day, so that operational processes are not interrupted. With the Cisco Secure Wireless Solution, hospitals can create a disaster recovery plan that will help prevent loss of patient information and loss of network connectivity. This plan will help enable secure access to critical applications and patient data with the following:

- Performance and reliability: The Cisco Secure Wireless Solution constantly and automatically



adapts to changes in usage patterns as people move around and use different applications over time. Optimized WLAN performance and availability provide a better end-user experience. In addition, if laptops are missing software or are not configured properly, remediation is performed automatically, without any action from the doctor or nurse.

- Cisco next-generation technology: Healthcare organizations can offer robust and predictable coverage with 802.11a/b/g or deliver greater performance and throughput with the unprecedented reliability of 802.11n.
- Backup network access: Hospitals can be prepared for an emergency by using their wireless network for backup network access

Hospitality Services and Payment

With the number of medical centers increasing, hospitals are striving to provide the best experience for patients and visitors in order to improve customer satisfaction and develop customer loyalty. Many hospitals are starting to provide interactive Web services such as allowing patients to view training videos online or providing family and friends with access to online pictures of a newborn.

The Cisco Secure Wireless Solution improves hospitality with the following services:

- Guest Internet access: Hospitals can use the same network to provide secure guest access for patients and visitors who want to learn about hospital services or browse the Web. Guest traffic is kept completely separate from all other hospital traffic to preserve the hospital network integrity.
- Secure payment: Hospitals can help ensure the security of patient credit information.

What Are the Business Benefits of the Cisco Secure Wireless Solution?

The Cisco Secure Wireless Solution delivers the following benefits:

Increase Staff Productivity

A secure and reliable wireless network enables health-care organizations to adopt advanced applications such as electronic medical record (EMR) and computerized physician order entry (CPOE) systems. This improves the productivity of hospital staff and allows them to make better-informed decisions on the spot. For example, having access to a patient's medical history or information at the point of care and being able to access the latest research can accelerate diagnostics and enable better-quality care.

Better Manage Cash Flow

A secure wireless solution allows hospitals to improve the reimbursement process. This in turn improves patient satisfaction and loyalty by reducing the number of administrative errors. Caregivers can also reduce administrative errors by avoiding handwritten documents, which tend to create costly medical mistakes. In addition, hospitals can reduce expenses by avoiding the penalties of non-compliance with regulatory requirements. Further, an integrated wired and wireless network helps reduce IT operating expenses.

Enhance the Patient Experience

A patient's priority is to receive timely treatment and spend minimal time in the hospital or doctor's office. A wireless network accelerates diagnostics by giving doctors and nurses faster access to test results and research information online. With the security of the Cisco solution, patients can be confident that their personal and credit information remains confidential. Hospitals can also improve the patient's experience by providing secure Internet access to patients and their guests.

Case Studies for Cisco Secure Wireless Solutions in Healthcare

Cisco Secure Wireless Solutions have been deployed in healthcare organizations worldwide. For example:

The Greenwich Hospital in Connecticut implemented a secure wireless solution that supports high-bandwidth applications such as video feeds and the transmission of detailed X-rays and MRI scans. The hospital also offers wireless Internet access for patients and visitors without compromising the privacy of patient records and other confidential data. Providing public WLAN access to guests and patients has garnered a great deal of positive publicity for the hospital, and improved the experience for patients and visitors. The hospital now includes the WLAN in its emergency response plans.

Similarly, Overlake Hospital Medical Center in Bellevue, Washington uses its secure wireless network to streamline patient registration. Patients no longer need to wait in the Emergency Room or lobby to be registered; instead, a roaming registration person brings a wireless tablet to the patient's bedside after the patient has received critical care.

Why Cisco?

Cisco leads the industry in providing secure healthcare connectivity and is a catalyst in transforming healthcare based on its industry innovation, participation, and collaboration.

A new culture of mobility is reshaping the ways hospitals do business. Since early 2005, more laptop and notebook computers have sold than desktops, and 95 percent of notebooks are Wi-Fi-enabled. This is underscored by the plethora of mobile devices used by caregivers today. But the most powerful notebook will live up to its full potential only when connected back to a state-of-the-art communications system, as provided by Cisco. To learn more, visit: <http://www.cisco.com/go/wireless> and www.cisco.com/go/healthcare.