E-Guide

FIVE STEPS TO EFFECTIVE WIRELESS NETWORKING IN HEALTH CARE
AKING THE RIGHT steps on the path to wireless networking in health care will help to ensure a robust, reliable network that can change with the times. This expert E-Guide discusses 5 steps to ensure effective wireless networking in health care. Uncover how you can tackle potential challenges, best practices for wireless network management and more.
FIVE STEPS TO EFFECTIVE WIRELESS NETWORKING IN HEALTH CARE

Wireless technology is being used extensively in health care, in a wide variety of settings. Wi-Fi coverage must be available from the emergency room to the pediatric ward to the intensive care unit, with each area having different needs and considerations. This tutorial shows IT pros how to plan, implement and manage health care wireless networks.

KNOW THE BENEFITS, CHALLENGES OF WIRELESS NETWORKING IN HEALTH CARE

Perhaps the biggest benefit to having a wireless network is that it allows providers to deploy technology at the bedside, as part of normal health care workflows. Providers can use smartphones to access clinical data and biomedical devices can record and manage patient information. Some researchers have predicted that by 2014, 5.7 million patients will be monitored with a wireless medical device.

Wireless networking is key when using medical radio frequency
identification (RFID) technology to keep track of medical equipment throughout a hospital. It can also give a boost to patient satisfaction, enabling visitors and patients to use Wi-Fi during hospital visits.

There are some big challenges to going wireless in health care as well, such as the need for a high-availability network to support life-saving devices. Another difficulty is the need to support electronic health record (EHR) systems that must move large amounts of data.

Infrastructure issues such as old buildings and rooms with lead-lined walls are also a challenge, along with having to serve a highly mobile, varied user base that includes clinicians, patients and guests. Lastly, any health care organization supporting a wireless network must consider security and privacy regulations related to sensitive patient data.

DEVELOP A PLAN FOR YOUR HEALTH CARE WIRELESS NETWORK
Proper planning – for both present and future needs – is key to a solid hospital wireless network implementation. Organizations should have a good understanding of current users’ habits and the physical environment where they will be accessing Wi-Fi. Hire a consultant to help with this planning if possible.

Many experts agree that proper planning for a hospital wireless network
requires thinking ahead to the future, when extra bandwidth may be needed to support new technologies. New paradigms of care delivery -- decentralized nurses, highly mobile patients and health care data flowing to many devices in many locations -- should be considered when developing a hospital’s wireless infrastructure.

**UPGRADE OR BUILD A HEALTH CARE WIRELESS NETWORK**

Building a wireless network in health care involves more than just hanging a few access points on a wall. Health care wireless network implementations require the right mix of technology and policy to enable reliable Wi-Fi coverage -- along with a user base that understands its limitations.

Some health care institutions are implementing wireless broadband wide-area networks (WANs) to augment their existing fiber optic networks. Others are considering wireless unified communications (UC) systems.

Regardless of the technologies used, it’s important that a hospital wireless network be able to accommodate the type of traffic it will be handling, such as images from a picture archiving and communications system (PACS), data from an EHR system, or even videos.
SECURING THE HEALTH CARE WIRELESS NETWORK

Tighter rules for HIPAA privacy compliance means health care wireless networks must be secured with encryption and access controls, which can be tricky to manage given the wide user base being served by the network. Conduct a wireless network security risk assessment to help uncover vulnerabilities that need to be addressed, then continue to monitor and re-assess for security issues.

With so many different mobile devices at play in a health care setting, establishing a solid network security policy can be challenging, but there are some best practices to follow. As long as the “security infrastructure of our IT division has weighed in, has appropriate oversight, understands what’s going out to the devices, understands what our enterprise control is -- we’ll be good to go,” said Dr. Ben Kanter, chief medical information officer at Palomar Pomerado Health in an interview with Health IT Exchange.

MANAGING THE HEALTH CARE WIRELESS NETWORK

Once the wireless infrastructure has been established or upgraded, it will need careful monitoring for any drops in coverage. Wireless network management is an ongoing process, which may sometimes require intervention with users
who are installing rogue access points to suit their personal needs. Hiring a third-party managed services provider is also an option that could be very cost-effective for some health care organizations.
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