A conversation with Kendall White, Senior Director IT, Carilion Clinic

Wireless: Strategic or just another cost?

Deploying Epic's EHR for Stage 6 HIMSS Analytics Hospitals called for nothing short of ubiquitous wireless.

When you made the decision to implement Epic's EHR throughout your acute care hospitals and ambulatory physician practices, why did wireless coverage factor so heavily into your plans?

A number of years ago, we determined "wireless" was going to be a key enabling technology for efficient and quality patient care. Like most hospitals, we initially installed traditional wireless systems, meaning a separate infrastructure for each wireless service. We weren't happy with the results. We were unable to provide the consistent wireless coverage our customers required without significant IT support.

This led us to research new solutions that would provide ubiquitous wireless coverage throughout our facility and if possible, deliver all of the wireless services we used (802.11, 3G/4G, 2-way radios, etc.). Our research led us to the decision to implement distributed antenna system (DAS) and WLAN solutions from Black Box Network Services (BBNS).

How has wireless enabled physician adoption of Epic?

Since we were implementing an enterprise wide health record application, we wanted to ensure various technologies were leveraged so that all clinicians and physicians could utilize Epic as efficiently and effectively as possible. We analyzed the cost to install PCs in all patient rooms in comparison to implementing wireless carts. Our analysis suggested "going wireless" made the most sense for us. Not only was this the most cost effective option, it also

About Carilion:
- 8 Acute Care Hospitals (Including Two Stage 6 HIMSS Analytics Hospitals)
- 300+ Square Mile Geographic Footprint
- 110+ Ambulatory Physician Practices
- 13,000+ Peripheral Devices
- 1,500+ Servers
- Supporting 12,000+ Employees
- Ensuring 24x7x365 Availability of 120+ Financial & Clinical Applications

Biggest advantage:

100% coverage and high availability of all wireless serivces. This has enabled our IT staff to focus on end user needs instead of troubleshooting wireless issues.

supported our patient centered clinical workflow.

Having ubiquitous wireless coverage has given us a great deal of flexibility in supporting physician and clinician workflows. For example, our physicians are able to utilize their wireless laptops while seeing patients in the hospitals, maximizing the availability of mobile computers for the rest of the staff. Also our reliance on wireless connectivity eliminates the multiple log-in dilemma. In addition, I believe it has accelerated user confidence and adoption of EHR applications.

Where do you see your wireless solution going from here?

We continuously test new peripheral devices to determine if they fit a "business need" or can address a particular concern. As an example, we currently utilize over 400 mobile carts within our hospitals. While we are satisfied with their ability to support clinical workflow, we have some component and cost concerns. For instance, we have yet to find a battery that will support a full eight-hour shift. We are currently evaluating new devices that could be cart substitutes in the future. One particular device, which is showing some promise, is the tablet PC. Our initial testing reveals these devices to be highly portable, with a battery life over 12 hours and a substantially lower acquisition cost.

As we anticipated 4 years ago, the need for wireless connectivity is now A fundametnal expectation within our hospitals. Our ubiquitous wireless solution is not only meeting our current needs, but should continue to do so well into the future.

Carilion has won many IT related awards, including being named in the Top 100 Annual Most Wired and Wireless Hospital Systems 8 times and winning a National Mobility Award for their integration of mobile devices with their Field Service Support system.

Black Box (NASDAQ: BBOX) is leading communications systems integrator dedicated to designing, sourcing, implementing and maintaining today's complex communications solutions. Black Box services more than 175,000 clients in approximately 150 countries with approximately 200 offices throughout the world.