The Clinical Connectivity Gap: Leveraging Technology to Save Lives

Medical-related communication in the hospital, at least when done poorly, can be deadly.

The Institute of Medicine estimates that between 44,000 and 98,000 Americans die each year from preventable medical mistakes they experience during hospitalizations. A common cause frequently cited is communications systems that break down and don't support the highly qualified and dedicated hospital caregivers as effectively and efficiently as needed. However, the real tragedy is that most of these medical mistakes are preventable.

[1]**Connectivity and communications–right at the bedside.**

More than 1.5 million preventable medication-related adverse events occur each year. Technology can certainly be part of the solution. One such communications system revolves around the dispensing of prescriptions medication directly at the patient bedside. A pervasive and continuously available Wi-Fi network assisted Western Maryland [2] Health [3] System to implement a Bedside Medication Verification System that allows nurses and clinicians to deliver the right medication to the right patient in the right dosage at the right time.

"WMHS has been utilizing BMV for some time, but due to the nature of the coverage of our previous Wi-Fi deployment, it became counter-productive for our clinicians to use effectively," said Bill Byers, CIO, WMHS. "We thought we had great coverage, but then we realized that 99% was not good enough. Clinical confidence declined in our system as they looked for ways to work around the system. Once we implemented our Enterasys IdentiFi Wi-Fi solution, our coverage increased to 100% and our BMV system now functions flawlessly and is widely adopted by our clinical staff."

Enhancing care and the overall clinical experience

True mobility carries the potential to help medical providers diagnose patients more quickly and accurately, improves the patient-provider relationship, and reduces extra paperwork – and the medical errors that are sometimes caused by them. “When it comes to a healthcare environment, network downtime is simply not an option. With systems such as Bedside Medication Verification and telemetry devices connected via Wi-Fi, we understand that continuously available and secure connectivity is absolutely life-critical to our hospital customers,” said Chris Crowell, president and CEO, Enterasys [4]. “The combination of wired and wireless infrastructure with advanced analytics forms a complete solution that not only ensures connectivity and coverage, but network visibility to meet HIPAA and other compliance measures, enabling our healthcare customers to deliver the best care and the best experience for their patients.” But mobility done wrong can expose a hospital to data breaches and patient confidentiality concerns (running afoul of HIPAA compliance) and, worst case, cost a patient their life.

“mHealth is about enabling the direct connection between patients and caregivers in a more meaningful way,” said Vala Afshar, CMO and Chief Customer Officer, Enterasys [4]. “We recognize that a robust networking infrastructure is pivotal to our healthcare customers in the efforts to improve patient safety and the overall clinical experience.”

Connectivity isn’t glamorous, it’s essential

Information technology has been shown to decrease medication errors in many studies. The percentage of decrease of errors related to BMV and pharmaceutical bar coding ranges from 60 to 97% (Medical News Today, 2008, Patel 2009, Figge, 2009). ”Infrastructure [5] isn’t glamorous and the Wi-Fi doesn’t dispense medications, but if you don’t have robust connectivity, basic tasks to insure patient safety will be compromised,” said Byers regarding his Enterasys IdentiFi Wireless network. “100% coverage is required to insure your patients are safe and your clinicians are efficient.”

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January 08, 2013

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