

# Wireless designed for nurses could streamline healthcare IT

BY EMILY MOTSAJ

Wireless solutions designed specifically for nurses, the largest healthcare group in the U.S. and the biggest users of IT systems in hospitals, could streamline the otherwise inefficient healthcare field. But to be successful with nurse end-users, technology companies have to gear solutions toward their needs and hospitals have to be willing to invest in them.

Mobile nursing solutions are slowly gaining momentum, according to Greg Malkary, managing director of the Spyglass Consulting Group. However, there are still significant challenges for widespread deployment, and with an estimated 90 percent of hospitals still relying on paper-based record keeping, the transition to advanced IT solutions will likely be long, hard and expensive.

"Hospitals are reluctant to invest in nurses," said Malkary, noting that they usually already make up the biggest line-item on the hospital's

balance sheet because of their sheer numbers alone.

In addition to purchasing necessary hardware, hospitals have to spend time and money teaching nurses, who average 47-years-old, to use new solutions. Also, installing access points in older hospitals can be very expensive because of their concrete and steel construction.

Administrators are often unaware of nurses' technology needs and IT vendors have developed solutions that are not in line with what nurses are willing to adopt, added Malkary. A whopping 90 percent of nursing professionals, for example, are reluctant to use the TabletPC for bedside nursing, according to a recent study from Spyglass. Nurses cited the device's form factor as too large, too heavy, too fragile, and with too little battery life to be an appropriate solution for their job.

Despite the many roadblocks, hospitals are recognizing that mobile computing can improve productivity and efficiency, increase patient safety and reduce the risk of

errors, and several solutions have been tried and deployed in the marketplace.

Mobile computer carts, for example, are gaining popularity inside the hospital, according to Malkary, with Spyglass' survey showing 56 percent of healthcare organizations have implemented them.

From mobile carts, nurses can document their work, automate safety checks and procedures using bar codes, access information, automate vital sign data collection, facilitate real-time communications among the care team and practice evidence-based nursing.

Another solution reaches out to the home healthcare field: Polymap Wireless' Polytel System, a Bluetooth product that transmits from a wireless device to the Internet, is being used to transmit medical data securely and accurately from a patient at home to a healthcare practitioner.

Earlier this month, A&D Medical received Federal Drug Administration pre-market notifi-

cation clearance for a wireless blood pressure monitor powered by Polytel. The product allow patients to collect and transmit data to the Internet, providing healthcare practitioners with data that can help them make accurate treatment decisions sooner.

Meanwhile, Vocera Communications Inc. has developed a wearable, hands-free speech-recognition solution based on wireless LAN and voice-over-IP technologies, that is being used by industries that frequently rely on paging or intercom systems to do their jobs, including the healthcare industry.

"They love it," Malkary said of nurses using the solution, which, according to Debashis Pramanik, senior product manager at Vocera, features the mobility of a cell phone, full duplex capability of a speaker phone, direct connect capabilities of a walkie-talkie, the wearability of a pager and the coverage of in-building wireless.

The one-inch-by-three-inch

Vocera Communication Badge, includes a speaker and a microphone, a call button, a do not disturb and hold button, a wireless radio, a headset jack and an LCD screen.

From the tiny badge, end users can call one person, call a group, broadcast to a group, use push-to-talk conferencing, transfer calls, forward calls, block calls, put "urgent" status on a call, call by location, send voice, text and e-mail messages, dial and receive calls from outside lines and search address books.

The badges can be shared, as users are required to log in to access their individual profiles. Systems administrators take charge of updating Vocera System Software, which stores end-user profiles, groups, permissions and the like.

Vocera has more than 80 customers, according to Pramanik, with more than 60 percent in the healthcare field. Pramanik said the solution is used by several thousand end users and more than 1,000 badges have been deployed. **RCR**