

Sponsored by:

Key to Successful Service  
Oriented Architecture  
Implementation

Application Grid:  
Ideal Platform for IT  
Consolidation

Performance Under Pressure: The  
State of Enterprise Web Application  
Quality and Availability

Automating IT Configuration Controls  
with Oracle Enterprise Manager  
Configuration Change Console

## NETWORKWORLD

This story appeared on Network World at  
<http://www.networkworld.com/news/2010/020510-healthcare-wireless-voip.html>

# Wireless VoIP benefits being frustrated in healthcare: study

Big picture view needed for infrastructure and nurses' workflow

By [John Cox](#), Network World

February 05, 2010 01:37 PM ET

Wireless VoIP and unified communications promise better patient care at homes and hospitals, yet the deployment of these technologies is being hamstrung by a piecemeal approach that often ignores or even interferes with that care, according to a new study by [Spyglass Consulting Group](#), a consulting group focused on healthcare IT.

### [How emerging wireless techs are transforming healthcare](#)

To realize the benefits, healthcare organizations need to take an enterprise-wide approach to wireless infrastructure and mobile devices, and to involve nurses early in the planning stages, the study concludes.

The report, "[Point of Care Communications for Nursing](#)," is based on 100 in-depth interviews with nurses in home health and acute care facilities. The interviews covered existing workflow bottlenecks and inefficiencies in communications with patients and other staff, how mobile devices and systems are actually being used, and barriers to wider adoption of these technologies, according to Gregg Malkary, managing director for Spyglass.

The results are not encouraging. Sixty-six percent of the hospital-based nurses say their organizations have deployed VoIP communications. But 71% say the wireless networks are poorly designed: there are coverage gaps, interference and overloaded access points. Data and voice connections often get dropped.

Concerns over the cost of such deployments often results in limiting them to one or a few specific hospital departments, and VoIP handsets are in short supply.

UC is an attempt bridge the many communication gaps that exist in healthcare, Malkary says. Many nurses carry anywhere from two to five different communication devices including cell phones, VoIP phones and pagers. And, while they want improved communication and smoother, saner workflows, the term "unified

Sponsored by:

TECH DISPENSER

Disturbingly  
personal  
newsletters

Put yours  
together today!

communications" is one they can't or don't define. "They say 'it's a meaningless marketing term that has no bearing on what I'm doing,'" Malkary says.

For example, one constant refrain from nurses who were interviewed was that VoIP communications often can be disruptive of patient care. With a VoIP mobile device, nurses have to field calls in the midst of medical procedures and treatments.

"Today, you typically have a department secretary that triages incoming calls," Malkary says. "But with wireless VoIP, this is shifted to the nurse at the patient's bedside. If you push more onto the nurse, it disrupts her thinking process and her treatment, especially if she's doing things like administering medications."

Often, the call can't simply be ignored. For example, if a patient has a heart attack or other medical emergency, the nurse may be forced to respond. But it requires nurses to be multi-tasking, while still providing quality patient care, a potentially dangerous combination, according to Malkary.

The wireless VoIP systems also often create an unexpected gotcha: nurses and hospitals suddenly discover that a nurse is forbidden by the Health Insurance Portability and Accountability Act (HIPAA) to talk over a wireless voice connection about one patient's condition while in the presence of another. "This is actually a big issue in healthcare," Malkary says.

The solution is for hospitals to take a big picture approach to the details of wireless VoIP deployments. Wireless voice networks have different design requirements than wireless data: networks have to be pervasive, with enough bandwidth to support shifting user populations, with signal quality to ensure voice calls are clear and strong.

In the same way, nurses and doctors need to be included in the design of the workflow processes that will be changed or introduced with wireless communications. Those processes may require new policies, procedures, guidelines and protocols to protect patient care, while enabling staff to deal with questions from colleagues and with emergencies.

In a user case study commissioned by InnerWireless, a vendor of in-building distributed antenna systems, Malkary examined a comprehensive wireless deployment at a new critical care hospital at Virginia Commonwealth University Medical Center, Richmond, Va. The new unit incorporated InnerWireless' antenna system to support data, voice, and eventually telemetry over Wi-Fi and cellular connections. There was, Malkary says, extensive consultation with nursing staff at the very outset, so that both infrastructure and workflow would meet their real-world requirements.

(The case study is available on the [InnerWireless Web site](#), "titled "Nursing staff redefines workflow and embraces all things wireless at Virginia Commonwealth University Medical Center." Registration is required to download the document.)

Follow Jon Cox on Twitter: <http://twitter.com/johnwcoxnw>; blog RSS feed: <http://www.networkworld.com/community/blog/2989/feed>

[Read more about wireless & mobile](#) in Network World's Wireless & Mobile section.

All contents copyright 1995-2010 Network World, Inc. <http://www.networkworld.com>