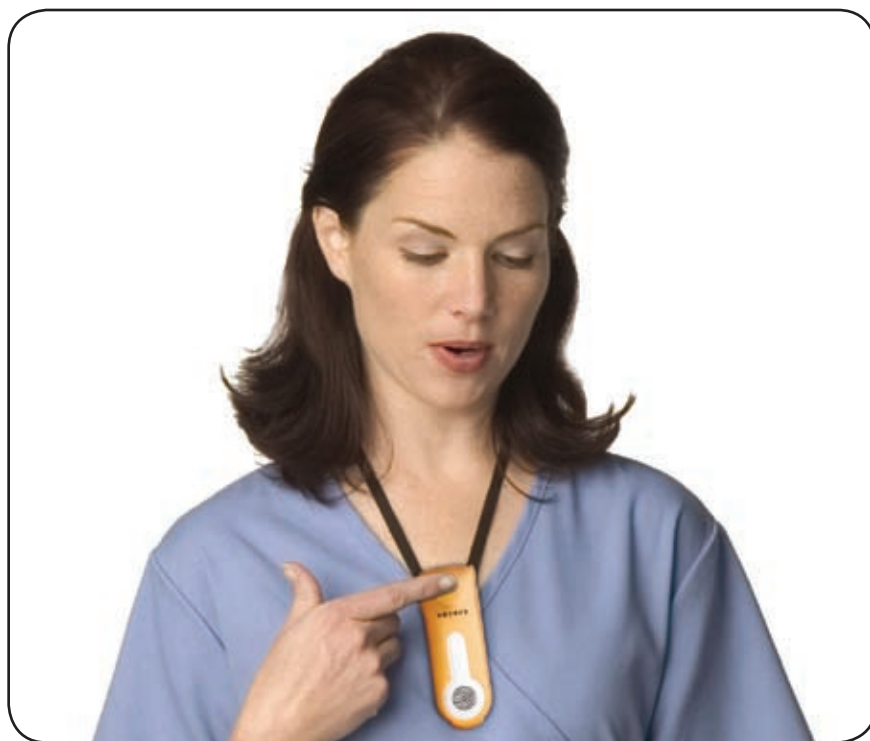


Instant voice communication in mission-critical environments with the Vocera wireless voice communication solution and IBM



Instant access to critical resources

Today, leading healthcare organizations are turning to a wireless voice communication system from Vocera® Communications and IBM to dramatically reduce clinical staff response times. Vocera's customers include 30 percent of *U.S. News & World Report's* "Top 100 Hospitals" and 36 percent of its "Most Wired Hospitals" from 2007, and 20 percent of hospitals designated with Magnet status by the American Nurses Credentialing Center.

The IBM solution

The Vocera Solution for Healthcare from IBM enables instant wireless voice communication that users can control with naturally spoken commands. Mobile staff are immediately connected to the people and resources they need up to five times faster than with other means of communication.¹ The solution reduces phone tag, overhead paging and the need to physically search for a person—leaving more time for patients.

Highlights

- ***Provides instant, hands-free communication between healthcare professionals at the point-of-care, facilitating decision making***
- ***Improves productivity and employee satisfaction by eliminating the need to memorize phone and extension numbers***
- ***Allows instant access to resources and people using simple voice commands***

To bring the solution together, IBM Global Technology Services works closely with Vocera Communications to integrate wireless voice systems with back-end hospital management systems. IBM uses proven methodologies to integrate a multi-vendor solution specific to your environment. IBM also has relationships with multiple healthcare technology companies, allowing us to successfully integrate Vocera solutions with existing clinical systems.

"In our database of over 3,000 sentinel events [deaths and major disability resulting from care] and their root cause analyses, the most frequent cited causative factor—over two-thirds of the cases—is ineffective communication."

*—Richard K. Croteau, M.D.,
executive director for strategic initiatives,
The Joint Commission*

Vocera's workflow advantage

Traditional hospital communication occurs in a hub-and-spoke manner, a time-consuming and hit or miss approach. With Vocera, hospitals use the solution's advanced database capabilities to create user and workflow profiles including name, job function and groups. These unique profiles allow staff members to call by function or group in a round-robin or sequential fashion, such as "call transport" or "find the charge nurse." If the end-user is unavailable or does not respond, the Vocera system automatically routes the call to the next person in the workflow.

VoIP saves lives

One of the largest hospitals in Michigan helped improve the safety of patients monitored by centralized telemetry by re-engineering its alarm communication process and incorporating the Vocera Communications solution. Moving away from one-way pager technology to Vocera's two-way solution, the hospital dramatically reduced the response time from more than nine minutes to less than one minute. It also closed the communication loop 100 percent of the time—up from 26 percent of the time.²

Emergency department challenge—noise creating chaos

The most common complaints among emergency department (ED) staff include leaving patients to find help, shouting out requests and not knowing if they are heard, waiting for responses to pages, and running around the department to find needed resources. By implementing the Vocera solution, one hospital saved 7,439 clinical hours per year in improved ED staff communication.³ Hospitals have also reduced the number of overhead pages by up to 94 percent.⁴ Vocera's unique smart calling features can broadcast requests to an entire team and can send voice and text messages. The result is improved communication performance, clinical workflow and patient care.

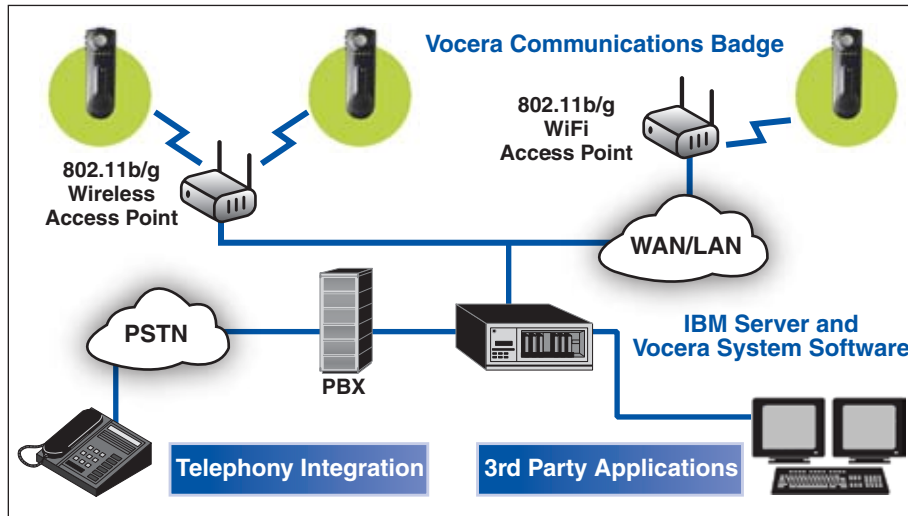
Patient flow and throughput

A more connected healthcare team can improve outcomes and service and provide a better patient experience. In one study, hospitals using the Vocera solution experienced a 40 percent reduction in the time to prep patients and a 60 percent reduction in patient wait times for transfer to testing areas, procedure rooms and operating rooms.⁵ Rapid response teams can be notified or communicated with in real time, reducing lost time associated with page-phone-page-and-wait cycles.

The wearable Badge

What makes the Vocera system so convenient to use is the Vocera Communications Badge, a small, lightweight, wireless device that provides a voice-controlled user interface to the Vocera System Software. Using the Badge, you can call one or more people at a time, get help from a predefined department or communicate with co-workers or outside resources at the touch of a button. A high-contrast screen displays caller ID, text messages and alerts. Designed for the healthcare environment, Vocera Communications Badges and accessories include BioCote®, an antimicrobial agent that inhibits growth of a broad spectrum of bacteria, mold and fungi. The Badge is activated by either a push of a button or a voice command to receive or generate calls. Vocera also offers headset options for high-noise environments.

The Vocera Solution for Healthcare from IBM



Save bandwidth and costs in converged network

The Vocera Solution for Healthcare from IBM operates over an 802.11 b/g wireless infrastructure. The system can leverage your existing wireless LAN investment, reducing your dependency on cell phones and pagers, which incur costly monthly service fees. IBM can advise you on any wireless infrastructure changes that may be required to support Vocera.

Upgradeable and scalable to fit your needs

The Vocera System Software, which runs on an IBM System x™ server, contains system intelligence that manages calls, call connections and user profiles, as well as speech recognition and voiceprint verification software. The system's telephony software allows

users to place and receive calls from traditional phone systems—from one central location. The server architecture is highly extensible and can adapt to a changing healthcare environment.

The IBM wireless advantage

IBM is leading the way in implementing mission-critical wireless solutions in healthcare. Complete with services, hardware and software components, the Vocera Solution for Healthcare from IBM is designed to help hospitals build an instant communication network that delivers a strong return on investment. From LAN servers to staff training, IBM can help your healthcare professionals become more responsive to patient care with a solid wireless foundation that can grow where and when needed.

Case study: Vassar Brothers Medical Center

Adapting to tomorrow's needs with mobile processes

Vassar Brothers Medical Center is a 365-bed facility on the banks of the Hudson River in Poughkeepsie, NY, and a key member of the Health Quest regional hospital network. Vassar Brothers was facing communication challenges common in hospitals around the world—a large disperse environment, mobile staff, overhead paging and complicated workflows. Vassar Brothers' leadership approach in formulating strategies for success included the implementation of the Vocera Solution for Healthcare from IBM.

This solution has delivered dramatic improvements in the quality and safety of the organization's operations. For example, if a nurse has a question regarding a patient's medication, the Vocera system enables the nurse to contact the doctor in real time directly from the patient's bedside, without having to return to the nursing station. This instant communication has enabled faster problem resolution and more accurate patient care, helping to ensure that each patient receives the right dose of the right drug at the right time.

Nurses also report that they are able to save an average of 90 minutes per shift as a result of being able to communicate with the resources they need, no matter where they are. It's one of the many reasons Vassar Brothers has garnered national attention for their use of innovative methods and technologies.



Solution components

- *IBM Systems hardware*
- *Vocera System Software*
- *Vocera Communications Badges and accessories*
- *Vocera Enterprise License Software*
- *Digital Telephony License Software*
- *Optional Vocera Messaging Interface*

Services

- *IBM Global Technology Services*
- *24x7x365 technical support*

For more information

To learn more about the Vocera Solution for Healthcare from IBM, please contact your IBM representative, or visit:

ibm.com/businesscenter/healthcare/wireless

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- 1 "Wireless Communication's Role in Patient Response Time: A Study of Vocera Integration with a Nurse Call System." Robert H. Smith School of Business: St. Agnes Hospital. Baltimore, MD, January 2006.
- 2 "VoIP Saves Lives." VON Magazine, November 2006.
- 3 "Vocera Communications Benefit Study: St. Agnes Hospital." First Consulting Group, February 2004.
- 4 "Vocera Communications Benefit Study: The Children's Hospital at Westmead." The NTF Group, March 2007.
- 5 "New Ways of Working: Improving Workflow on Patient Care Units." American Hospital Association and the Maryland Hospital Association, 2006/2007.