



Integrate. Automate. Communicate.

Six Things Hospitals Need to Know About Replacing Pagers With Smartphones

Paging: The End of an Era

Pagers have been an essential part of healthcare communications for a long time due to their ability to provide reliable communications at a low cost. When pagers emerged on the healthcare scene, they fundamentally changed the way doctors, nurses, and administrators could be notified that a critical message or anxious patient awaited them. Carrying a pager or “beeper” became a status symbol. Then slowly, the technology began to offer new capabilities, such as two-way information exchange. Throughout, pagers ensured message delivery in accordance with industry requirements. In most cases, they promised a cost-effective solution and featured onsite and wide-area options so the right people could be reached at all times. Life was good.

But then the ugly truth began to emerge. IT teams saw escalating costs due to the need for backup equipment. They wasted hours configuring devices and trying to verify whether messages were sent and received when doctors reported they did not see a particular communication. The lack of an audit trail for messages led to accountability issues. Pagers were assigned to individuals but never used (or lost), eating away at thin hospital IT budgets for unnecessary equipment and services.

And then there was the aging infrastructure: paging terminals and transmitters on life support themselves that began to have questionable reliability and failures. Repairs led to extended downtime as IT teams struggled to repair old equipment. Additionally, coverage for wide-area pagers started to go downhill as paging companies retired towers in concert with shrinking revenues. A lot of people started crossing their fingers and living with reduced performance.

Going forward, pagers will still have a place in hospital communications. But there is now a better solution that allows a large percentage of the user population of doctors, nurses, and administrators to consolidate to a single device. In fact, chances are good that these devices are already commonplace at your hospital.



Enter the Smartphone Dragon

Seemingly out of nowhere, smartphones such as the iPhone™, BlackBerry®, Android®, and others have burst onto the communications scene with a vengeance. Physicians, nurses, and administrators love them. Medical students receive them upon entry to school. Even 10-year-olds carry them around. They're superphones, merging the power of a cell phone with the capabilities of computers.

Unlike pagers before them, these devices transcend social and job-related boundaries. They're the communications device for the masses—and seemingly every physician. More importantly, they're everywhere. Hospitals are no exception. According to Manhattan Research, an estimated 63 percent of physicians currently use smartphones, with that number expected to reach 81 percent by 2012¹.

With the unmatched capabilities of smartphones—not just in person-to-person communications, but also in data retrieval for anything from drug interactions to receiving EKG results—their popularity is understandable. Users in hospitals are passionate about these devices and now request all communications, including code calls, to be sent to their smartphones. They wish to shed their tool belt of onsite and wide-area pagers and cell phones, preferring to simplify their lives and communications with a single, all-encompassing smartphone.

Although the clinical and administrative communities at many hospitals seem to be leading a grassroots campaign to ubiquitously adopt smartphones, IT teams have legitimate concerns. With so many brands of phones and service providers, how can protocols and devices be managed? What about reliability of message delivery?

¹Manhattan Research study, "Physicians in 2012: The Outlook for On Demand, Mobile, and Social Digital Media." Quoted in American Medical News online article "Smartphone use published by hospitals": <http://www.ama-assn.org/amednews/2009/10/26/bica1026.htm>

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Making the decision to replace pagers with smartphones is certainly a weighty consideration. Lives are at stake. The technology has to ensure speedy delivery of the message. Every time. No exceptions. Following are important items to evaluate as you determine the right path for your organization.

1. SMARTPHONE USE IS EXPLODING EXPONENTIALLY IN HOSPITALS AND THIS TREND IS NOT GOING AWAY

The fact is, smartphones are here to stay, and their users are highly loyal. Many physicians and other hospital staff members carry smartphones in addition to their onsite or wide-area pagers. However, they're eager to consolidate to a single device and no longer wish to deal with pagers. It is important for IT teams to evaluate their options for incorporating smartphones into their communications strategy for all messages, including non-urgent updates and critical codes. Ultimately, a staff that is satisfied with their communications technology is one that will stick around. Attempts to ignore the growing smartphone trend will likely be futile.

2. SMS (TEXT) VIA A SMARTPHONE SERVICE PROVIDER'S WEB SITE IS NOT SUITABLE FOR MISSION-CRITICAL COMMUNICATIONS

If you're using a smartphone service provider's Web site to send time-sensitive communications, your patient care may be suffering. For one, you likely have to visit multiple Web sites when a critical message needs to be deployed to cover the various plans spanning your user group. This wastes a lot of time and can be prone to error because people are often switching from one provider to another. Messages sent from service providers' sites are also 'fire and forget,' meaning you have no centralized audit trail of communications to track message delivery, receipt, and response. Likewise, the built-in logic you have in place for escalating a message to the next most appropriate person cannot be carried out in the event the primary contact is unavailable. Overall, having backend communications systems that do not integrate means your process is rife with inefficiency and cause for serious concern.

3. AN INTEGRATED MESSAGING SYSTEM IS ESSENTIAL, ESPECIALLY WHEN IT COMES TO SMS

One positive of most paging systems today is that they are integrated with contact center solutions such as operator consoles to facilitate code calls and other staff communications. When evaluating a move to smartphones and SMS, a system that ties in seamlessly to your existing or planned communications infrastructure is essential. Any messaging system that operates on a stand-alone basis and does not "talk" with related applications means that the process will become lengthened and more prone to errors that jeopardize patient safety. For today's messaging systems to truly work in an environment where clinicians and other staff members are highly mobile, you need to bring your contact center's operator consoles, Web-based (or speech-based) employee directory, and on-call scheduling systems into harmony. A messaging system sitting in isolation is excess baggage for your IT team and hampers smooth information flow when it comes to effective staff communications using SMS.

4. THE WORLD OF SMARTPHONES IS HETEROGENEOUS — IT'S IMPOSSIBLE TO JUST SUPPORT ONE BRAND

Everyone has an opinion about which smartphone works best. Likewise, new smartphones are becoming available all the time, meaning the most popular one today may not be in vogue two years from now. Assuming your staff carries several brands of smartphones, the technology you put in place on the backend needs to be capable of supporting the diverse needs and devices of your user community. It also has to be able to accomplish this without causing extra strain on your IT staff. Another consideration is that wireless solutions at a minimum need to have security features and functionality that respect your organization's need to meet the technical safeguard specifications described in the HIPAA (Health Insurance Portability and Accountability Act) Security Rule. Additional IT considerations include the ability of smartphones to leverage wireless local-area networks (WLANs) down the road.

5. SMARTPHONE APPLICATIONS SHOULD OFFER AN IMPROVED AUDIT TRAIL

Intelligent smartphone applications are capable of providing an audit trail that includes a log of messages sent, received, and read. This is crucial to comply with Joint Commission requirements. These logs are a safety net to prove what happened and when—especially whom was contacted. Unlike most pagers, smartphones also allow users to respond with their availability. Messages can be sent back that confirm a smartphone has received the message, the message has been read, and the message has been acknowledged by the recipient. All of this is captured in an audit trail to ensure accountability.

6. REDUNDANCY AND ESCALATION ARE CRITICAL

There is no getting around the fact that messages sent in hospitals absolutely must reach their intended recipients instantaneously. A code STEMI message has to reach the right team members to minimize the door-to-balloon time for the patient. This means IT teams have to establish multiple paths to get messages through to recipients in the event that high communications traffic is straining bandwidth or coverage dead spots occur. Establishing redundant communication paths through overlapping access points helps ensure smartphone communications reach the right person. In addition to an attention to infrastructure, the 'if, then' business rules of your hospital should be incorporated so that messages are automatically escalated to the appropriate person if the initial contact cannot be reached on either a primary or secondary device.

CONCLUSION

Today's smartphones are truly changing the way everyone communicates. They have made inroads into hospitals worldwide as the device of choice for many physicians, nurses, and administrators. Effective use of smartphones should simplify messaging not only for staff members, but also for the IT teams who support them.

Smartphones also offer benefits over pagers in the ways they can be extended in medical situations beyond person-to-person critical messaging. They can be used for workflow activities such as receiving lab results, initiating notifications, managing schedules, managing alarms from clinical and security systems, performing client-to-client messaging, and providing information look-ups. In the end, patient care and safety will be heightened by more efficient staff communications, and the staffs themselves will be more satisfied with their jobs. As you consider making the switch from pagers to smartphones, make sure you evaluate how your strategy encompasses each of these six items. This will help you create a rock-solid messaging foundation for your organization.

About Amcom Software

Amcom Software connects people to each other and to the data they need. This helps organizations that depend on speed, accuracy, and productivity save lives, improve efficiency, and enhance effectiveness. Amcom Software's unified communications technologies include solutions for contact centers, emergency management, mobile event notification, and messaging. The company's products are used by leading organizations in healthcare, hospitality, education, business, and government. By continually developing its industry-leading technologies, Amcom Software has rapidly grown and solidified its market leadership.

About BlackBerry Solutions for Healthcare

Response times are critical for healthcare professionals. Delayed reactions caused by slow, inefficient processes, and divergent communications systems can compromise patient care. The BlackBerry Smartphone® provides a highly secure platform for critical alerts, collaboration tools, and clinical applications. The result? Secure and timely access to colleagues and information, which helps improve the safety and quality of care delivery.



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