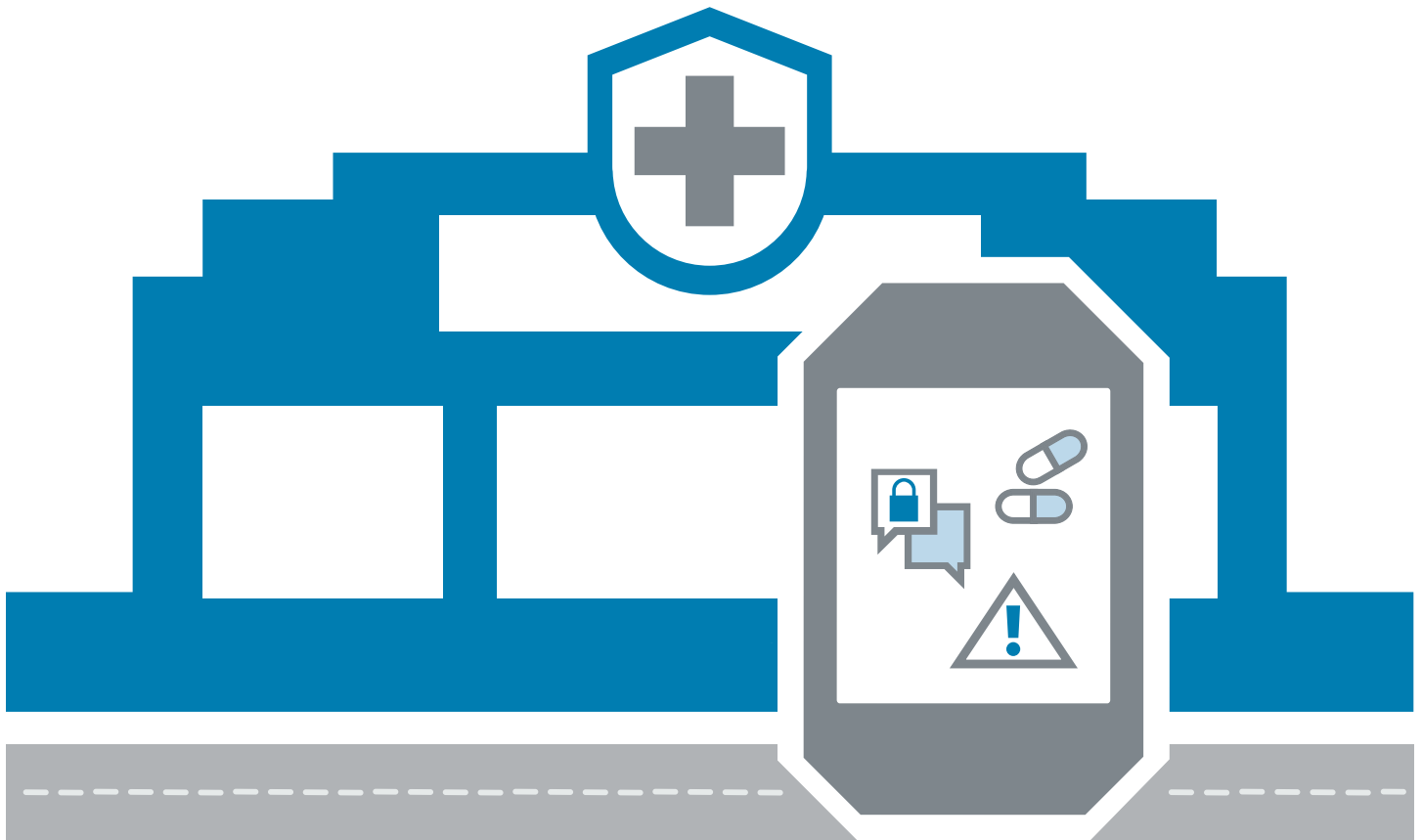




ZEBRA



A Five-Step Roadmap to Building Your Mobility Strategy

Hospitals and other healthcare organizations can empower clinicians, accelerate workflows and reduce operational costs by leveraging mobile technology—if design, deployment and implementation are done right. That’s why it is important to develop a carefully planned mobility strategy. To be successful, your strategy will need strong senior level leadership, commitment, funding and resources. An interdisciplinary team should be gathered – including nursing, physicians, pharmacy, IT, ancillary care, biomedical engineering and finance – to develop a vision for a common technology infrastructure that supports all staff across the organization. This white paper highlights a five-step roadmap for building an effective mobility strategy.

70%

of medical errors can be traced to communication breakdowns

Source:
The Joint Commission

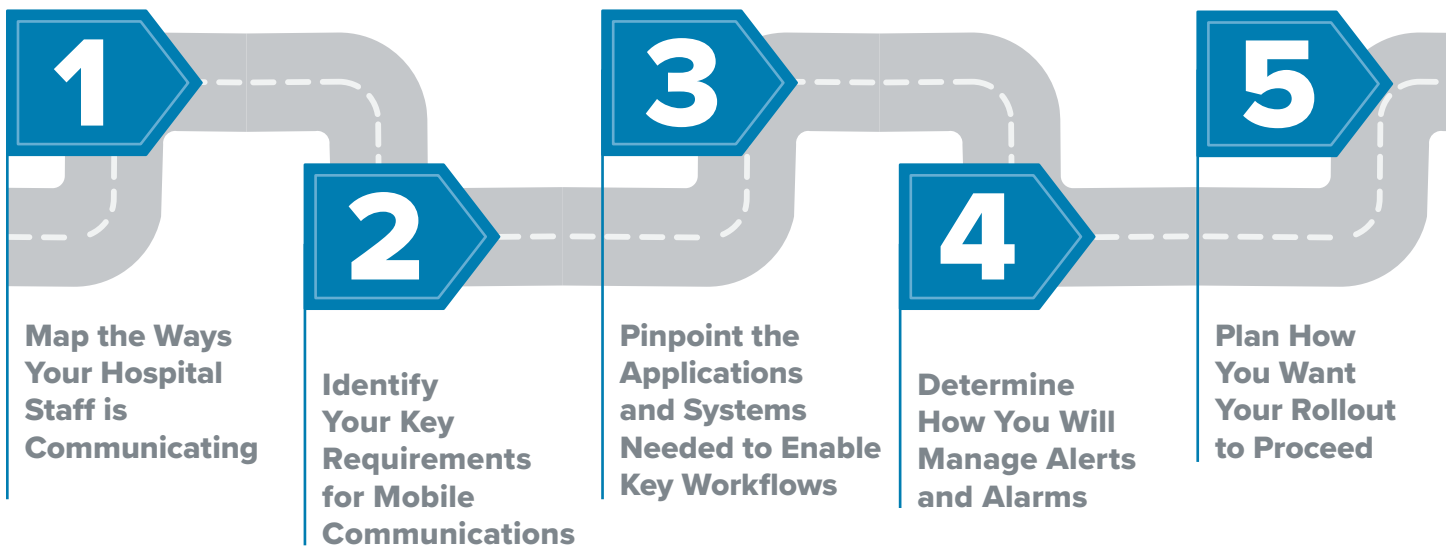
In today's clinical healthcare environment, electronic health record (EHR) systems have become the industry standard for many patient care applications and processes because of their ability to provide accurate, up-to-date and complete patient information. Yet caregivers at the patient's bedside don't always have immediate access to this critical information which is often only available on a workstation. As a result, caregivers run the risk of making compromised decisions that can directly affect a patient's well-being.

Fortunately, clinical mobility is changing the face of patient care. No longer will caregivers have to seek out a workstation to access a patient's EHR. Instead, this real-time patient data will be accessible on mobile computing devices. When implemented properly, these devices can serve as a secure voice and data communications tool, a valuable information portal and a critical life line for hospital staff in managing alarms and alerts. Clinical mobility is also helping to improve workflow efficiencies and collaboration between team members which translates into dramatic improvements in patient care.

When it's time to integrate mobile devices into your hospital's workflows, an enterprise-wide mobility strategy is essential to averting unchecked usage of mobile devices by staff and a host of headaches for your organization. By planning ahead, you'll be able to integrate mobile devices that are purpose-built for healthcare into a centralized system – and better support your staff with fewer and more effective resources.

Five-Step Roadmap

The path to developing a mobility strategy for your healthcare facility begins by following the five critical steps outlined in this report. They can help you create a more collaborative, more effective mobility strategy that keeps patient care at the forefront of all decision making.





Map the Ways Your Hospital Staff is Communicating



50%

of hospitals have
deployed VoIP
solutions within their
organizations

Source: Spyglass Consulting

Carefully assess your current capabilities by surveying clinical and support staff throughout your facility to learn about the devices and applications currently in use.

In many cases, hospital staff are still using pagers and overhead paging systems as well as consumer-grade smartphones to communicate with each other. Unfortunately, breakdowns in communication are all too common. Your mobility strategy should examine:

- Is there an enterprise-wide system?
- Does it work well?
- Does your system allow for both voice and data communications?

Map the constituencies and workflows that will benefit most from mobile computing. Generally, these employee groups include bedside and procedural nurses, physicians and support service areas, such as patient transport, facility engineering, environmental services, biomedical engineering, security and food delivery.

Implementing an integrated voice (VoIP) solution that provides the services users need to stay in touch when they're on the move – voice, secure text messaging and data interoperability with mobile computers – can significantly improve communications and collaboration among staff in a healthcare environment.

2

Identify Your Key Requirements for Mobile Communications



80%

of nurses use standard, unsecure, HIPAA-noncompliant, bundled short messaging service (SMS) applications on their smartphones

Source: Spyglass Consulting

Determine your must-haves for communication among staff at your hospital. Your requirements should include reliability and roaming, so there are no dropped calls as staff and devices move throughout the facility.

Other requirements may include establishing an enterprise employee user group directory to help facilitate seamless team member identification via text messaging or phone calls. And, of course, you will need to plan for technical and workflow-related security measures to ensure that employees are always following patient privacy guidelines.

As part of this process, it is strongly recommended that hospitals consider employing a third-party mobile device management (MDM) system/provider that can help ensure a HIPAA-compliant mobile environment. An effective MDM solution provides central control of all mobile devices in your network so that patient data is never at risk, with remote management capabilities, application control and reporting tools.

A recent survey found that there is a real need for healthcare organizations to meet employee communication needs (email, messaging and voice calls) and **provide a secure, internal messaging platform that enables HIPAA compliance** – and to replace outdated communications systems like pagers – to improve patient care.

Source: "Most physician secure messaging apps not HIPAA compliant," HealthITSecurity, Nov. 9, 2015

3

Pinpoint the Applications and Systems Needed to Enable Key Workflows



52%

of nurses will use an app instead of asking a colleague for information

Source: InCrowd

Determining the mobile technology needs of your key users also includes identifying the systems and applications they access:

- Will you need to interface with your voice network systems (PBX systems)?
- Will the new mobile device traffic need to access your hospital's nurse alert and alarm systems?
- Will your devices need to connect with an existing communications platform?

With mobile devices, your staff will now be able to access EHR data in real time. Your mobility strategy will need to provide ways to facilitate staff access to that EHR data and improve the use and sharing of that data. In developing your strategy, determine which EHR applications will need to be enabled on your staffs' mobile devices.

TECHNOLOGY IN ACTION

RENOWNED JAPANESE HOSPITAL ADVANCES PATIENT CARE WITH BEDSIDE ACCESS TO REAL-TIME DATA

Japan's Nagasaki University Hospital implemented Zebra handheld computers while upgrading its electronic health record (EHR) system.

By deploying the Zebra devices, which work as a mobile nursing information tool in seamless conjunction with the hospital's EHR, the hospital vastly improved efficiency and accuracy.

Now, nurses can check on drug prescriptions by the bedside before administering injections or blood transfusions – and electronically record the details of the procedure with a single click. There is no longer a need to transfer records from the nurse's memory to patient files, reducing the time required for the recording process and increasing accuracy. In addition, the handheld computers make it possible to securely manage personal patient information.



4

Determine How You Will Manage Alerts and Alarms



**85-
99%**

of alarms are just noise generated by medical devices and don't require any action at the patient's bedside

Hospitals are dealing with a proliferation of patient monitoring technologies. Clinicians are struggling with how to manage the constant barrage of alarms and alerts on top of their regular daily duties. While these alarms have been instrumental in saving lives, they have also resulted in one unexpected side effect: Alarm fatigue.

Your mobility strategy should include plans for an alarm management program that ensures alarms are transmitted to mobile devices in a way that ensures patient safety and prevents alarm fatigue. It should include ways to differentiate between critical and noncritical alarms.

- Do you have an application to integrate the nurse call system?
- Is that system interoperable?
- Which devices should interact with patient monitoring technologies?

You may want to consider employing a middleware company to manage the efficiency of the alarm management system.

Source: Association for the Advancement of Medical Instrumentation (AAMI)



Plan How You Want Your Rollout to Proceed

BIG BANG MOBILE IMPLEMENTATIONS PROS & CONS

PROS

- Implementation is faster
- Users must learn the new system faster, because the old system is no longer available
- Avoids potential issues that can arise from users working with different software and hardware
- May lower costs and provide a faster ROI

CONS

- A high-risk approach
- Requires extensive planning
- Can create major disruptions to operations, leading to lower productivity
- Difficult for users to learn the new system immediately
- Issues during implementation can be unpredictable and costly

After completing your own assessment, it's time to set some concrete short-, medium- and long-term goals and establish a timeframe for your mobile deployment.

You may decide to rollout your new mobile devices with a "big bang" deployment (an instantaneous changeover in which the new system goes live across the entire healthcare network). Or you may want to consider a phased, or pilot approach in which a specific group of users is deployed before the rest of the system. In a phased approach, you may equip your bedside nurses on the surgery floor with devices during the first phase, followed by all nursing staff, all hospital staff and finally the entire care continuum.

Best practices recommend a phased-in approach, beginning with voice and text capabilities to start, followed by EHR applications. You will also want to factor in testing for interoperability, and providing individual training for each capability and application.

The mobility strategy that results from this due diligence should be put in writing in a living, breathing document that can be shared with your team and revised as needs evolve.

The mobile revolution is underway at hospitals and healthcare systems. As more and more organizations make the move to mobility, they are realizing that participation by more than the IT department is critical and that clinical leadership and other critical stakeholders should be involved in the planning process. By ensuring a complete understanding of the communication needs of stakeholder groups, surveying the technologies and infrastructure that are currently in use, and exploring all viable options, the healthcare organization will be able to develop a clear vision for the mobile implementation and an effective plan for managing a successful transition.

For more details about planning for a successful mobile deployment, visit zebra.com/mobility.



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