Mobile Heartbeat™
The Next Generation in Healthcare Communication

Key Considerations
for Implementing Mobile Technology
in the Healthcare Environment
and Improving HCAHPS Scores



## Introduction:

The "patient experience" is a term that is becoming the center of attention in the healthcare industry and "improving the patient experience" is the new mantra. The patient experience is gaining the attention of hospital executives because it will soon be tied to hospital reimbursements. Starting in October 2012, the U.S. government's value-based purchasing program (VBP) will monetarily reward those hospitals that provide patients with the highest quality of care and eventually penalize those whose care is not considered up to standards. While a number of factors will be used to determine "highest quality of care", one of the key metrics is the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores. According to the Centers for Medicare & Medicaid Services (CMS), HCAHP scores will account for 30% of the total score for VBP.[1]

Mobile technology designed for hospitals has been proven to both directly and indirectly affect many areas evaluated in HCAHPS. Noise levels, for example, are the lowest ranking score among hospitals nationwide. Consolidating many hospital data and communication systems onto a single mobile device reduces the reliance on desk phones, legacy VoIP phones, and overhead paging. As use of these traditional devices decreases, noise levels are reduced, making it easier for patients to rest. The smartphone devices also connect directly to hospital data and nurse call systems, which reduces lags in communication. Clinicians can respond to nurse calls faster because they are sent directly to them as opposed to a central workstation. Both of these areas are important factors in HCAHPS and can significantly affect performance-based reimbursements.

Indirect benefits are realized when mobile technology improves communication between doctors, nurses, and other unit staff. Clinicians have all relevant patient data at their fingertips, allowing for ease of care and reduced risk by keeping clinicians informed in real time. Mobile technology also can serve to improve staff efficiency and job satisfaction.

While smartphones are increasingly becoming an essential component of clinical decision making and hospital operations, there are several factors that should be considered before implementing a mobile technology solution in the hospital. This white paper will review some of those considerations.

## Growing Application of
## Mobile Technology in the Hospital

Information technology has become a critical factor in the delivery of healthcare services. Health information technology is also an important component in meeting current policy objectives by providing healthcare providers with tools and information to help decrease costs, reduce medical errors, and improve the quality and coordination of care.[2]

Mobile devices are revolutionizing the way healthcare professionals communicate. In the recent past, a specialist would evaluate a patient and make a consult note in the patient's chart. In many cases, the attending physician wouldn't see the note for several hours or even until the next day. Now digital communication technologies enable critical patient information to be communicated almost instantly. Physicians can use the voice and text messaging functionality of their smartphones. Nurses can send brief messages to physicians instead of relying on alphanumeric pagers. In most cases, using smartphones can improve workflow and communication among the members of a healthcare team.[3]

A report by Jackson and Coker, titled *Apps, Doctors and Digital Devices*, presented the results of several recent studies that investigated the use of smartphones, mobile computing devices and a wide variety of software apps by physicians in different specialties.[4] The report concluded that four out of five practicing physicians currently use smartphones, computer tablets, various mobile devices, and numerous mobile apps in the their medical practices.

Healthcare market research and advisory firm, Manhattan Research, predicts that in the near future, there will be very few professional activities that healthcare professionals won't be doing on their handhelds.[5] They note that 81% of U.S. physicians currently own smartphones and there is strong interest in iPads and other emerging technologies. According to their new *Taking the Pulse® U.S. 2012* study, physicians' device and digital media adoption are evolving much faster than anticipated, especially when it comes to tablets. The study surveyed 3,015 U.S. practicing physicians online in Q1 2012 across more than 25 specialties.

Consulting firm, Arthur D. Little, noted in a white paper entitled, *Mobile Vertical Applications: driving enterprise mobility*, that "Healthcare providers are using mobile applications to make prescription management more accurate, increase information flow between paramedic teams and hospital staff, and allow easier performance tracking by management against targets." Ultimately, they said, these result in improved patient services. The report went on to present an example of how mobile technology could optimize clinical workflows. They noted that with a smartphone, a nursing staff member can record patient data at the point of care and send it electronically to doctors on duty. This would not only improve the efficiency of the nursing staff through a reduction in paperwork, but also speed up response times in a crisis and improve the accuracy of data.[6]

A report by Motorola in 2009 concluded that healthcare mobile applications attributed to a 31% reduction in manual errors.[7] According to the report, medication mistakes are among the most common medical errors in the U.S., harming at least 1.5 million people every year. Additionally, the extra medical costs of treating drug-related injuries occurring in hospitals alone conservatively amount to $3.5 billion each year. The report went on to note that other commonly cited mobility benefits include increased employee productivity, increased compliance accuracy for quality reporting and increased order fulfillment accuracy.

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## HCAHPS –
## An Important Measure of Patient Satisfaction

Beginning fiscal year 2013 (October 2012), the Centers for Medicare and Medicaid Services (CMS) will withhold a percentage of hospital reimbursement funds and distribute it based on national HCAHPS performance. This change in distribution makes patient satisfaction more important than ever, and puts increased pressure on clinicians to improve the patient experience.

The HCAHPS survey is intended to achieve three goals:

1. Produce comparable data on patient satisfaction that would allow objective and meaningful comparisons between hospitals on issues important to healthcare consumers.

2. Create incentives for hospitals to improve the quality of their care.

3. Enhance accountability by increasing the transparency of the quality of hospital care.[8]

The HCAHPS survey is composed of two global questions that relate to patients' overall rating of the hospital and whether they would recommend the hospital to family and friends, plus questions that relate to seven key topics:

- Communication with physicians
- Communication with nurses
- Responsiveness of the hospital staff
- Cleanliness and noise level of the physical environment
- Pain control
- Communication about medicines
- Discharge information.

It also asks for demographic information (race, education level, health status and language) which is used in the overall analysis.



CMS proposes that a portion of inpatient reimbursement rates be based on a total performance score derived from three core indicators of quality:

- Clinical Process of Care Measures (Quality Data)
- Patient Perceptions of Care (HCAHPS) – Potential to represent 30% of score
- Outcomes of Care (Efficiency)

Also beginning in 2013, CMS will impose financial penalties on what it deems "excess admissions" compared to expected levels for 30-day readmissions for heart attack, heart failure, and pneumonia patients.

Healthcare consulting firm Studer Group notes that "While there is currently no penalty for negative HCAHPS results, the writing is on the wall. There is a clear movement to tie reimbursement to performance on quality metrics, including patient perception of quality."[9]

## Key Considerations for Selecting a Mobile Communications App

Many healthcare organizations are implementing mobile communications programs with the goal of improving patient care while reducing costs and streamlining operations. Every healthcare mobile communications solution should be implemented with quality, usability, security and compliance goals at the forefront.[10] Here are some specific areas to look for when selecting the right mobile app for any organization:

Interoperability – the optimum mobile solution provides much more than two-way communication between caregivers. A smartphone-enabled solution provides the ability to integrate with the hospital's healthcare information system (HIS), PBX phone system, and other 3rd party healthcare applications to provide instant access to vital patient data from anywhere in the hospital. Be sure that the solution is compatible with your existing infrastructure and can be integrated with your electronic healthcare applications.

Ease of Implementation – The October 2012 date for the new CMS reimbursement program is rapidly approaching. You want a solution that can be implemented now and deliver results quickly. Choose a device with demonstrated compatibility with existing systems to minimize implementation time.

Noise Levels – select a solution that will minimize or even eliminate the need for noisy overhead paging systems. Devices should have the ability to mute the ringer and employ a silent, vibration alert. This will go a long way towards improving HCAHPS scores.

Nurse Call Response Time – the solution should enable nurses to receive call bell, lab results, and other patient alerts directly on the smartphone. There should be no delays in communicating the alerts, enabling the nurse to respond to the patient immediately. The solution should also provide the ability to implement a call bell escalation scheme to ensure patients' needs are quickly addressed at all times.

Seamless Communication – the solution should provide seamless communication between caregivers – staff/staff, nurse/staff and nurse/nurse.

Security – The need to protect personal health information (PHI) is of critical importance to your mobile deployment. The solution requires secure voice and text messaging both inside and outside the hospital.

Compliance – a successful mobility solution must address all hospital compliance requirements, including HIPAA. The solution should enable compliance monitoring with built-in, personalized audit trail and reporting.

Usability – the mobile device software should provide an intuitive user interface. All staff should be able to learn to use the system easily and without constant support from your IT department. If you plan to implement a system across departments with different needs, be sure the features and functionality will meet all of those needs. One system that can be employed across multiple units will save costs and training time.

All in One Device – today, clinicians have to carry multiple devices with them on a typical shift. Don't invest in a solution that creates an additional device for staff to carry around the hospital. This will negatively impact efficiency and adoption rate. The solution should replace existing systems with an easy-to-use, all inclusive device.

**Knowledgeable Vendor** – the solution should be designed, implemented, and supported by a vendor knowledgeable in healthcare applications vs. a generic mobile technology vendor. The solution will more easily integrate into your hospital workflows and will be easier to learn and to maintain.

## Summary

Mobile devices are dramatically changing the way healthcare professionals communicate in a hospital environment. Several recent studies predict that smartphones and other digital devices are becoming the primary mechanism for communication between care givers. Through its value-based purchasing program (VBP), The Centers for Medicare and Medicaid Services (CMS) will monetarily reward those hospitals that provide patients with the highest quality of care and penalize those whose care is not considered up to standards. One of the key metrics in determining quality of care is the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores, which will account for 30% of the total score for VBP. As a result, care givers are increasingly pressured to improve the patient experience. Mobile technology designed specifically for hospitals has proven to positively impact many areas evaluated in HCAHPS, such as noise levels and call bell response. While use of mobile devices within hospitals is rapidly increasing, there are many factors that need to be considered before implementing a mobile technology solution in a hospital. Some of those factors include ease of implementation, seamless communication, security, compliance and usability.

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