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Six Steps to Developing a

Successful Clinical Mobile Communications Strategy

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Introduction

On any given day, nurses are caregivers, counselors and comforters. And recently, the demands on them have increased even more. Nurses are now faced with new patient care models and comprehensive metrics on patient safety and outcomes that require frequent communication and access to critical information. It's no wonder healthcare executives are turning to mobile devices such as clinical smartphones as a means of boosting nursing efficiency and productivity.

[Clinical smartphones allow nurses to communicate, collaborate and coordinate patient care across a wide array of team members]

These devices utilize enhanced Wi-Fi and management features to provide reliable, consistent and secure communication throughout a hospital – even in an operating room or radiology lab. And unlike consumer smartphones, clinical smartphones are designed for patient care environments with unique use cases and security requirements.

Are you considering deploying a clinical smartphone strategy as a means to support collaborative, team-based care? Here is Spectralink's prescription for establishing a successful clinical smartphone plan.

1 Define an overall vision for your mobile technology initiatives

A recent Spok report[1] found that 92% of healthcare professionals say that communication technology is very important for improving clinical outcomes. Despite this, 31% of respondents said that a complete communications platform was needed to improve communications across their hospital.

> Without a clearly defined vision, hospitals risk investing in a wireless communication solution that doesn't meet their current or future requirements

A vision statement clearly defines how a clinical smartphone strategy will help to improve patient outcomes and satisfaction in your hospital environment. It includes specific timelines and results (e.g., reduction in overhead paging, higher HCAHPS scores, improved response times to patients, etc.). The vision may come from the CNO, CMIO, or even the CEO, and it is critical that the organization is aligned around these goals and objectives.

55% of hospital personnel can access staff and contact information with mobile devices

30% can access critical test results with mobile devices

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2 Understand information flows and application requirements

A successful clinical smartphone deployment supports nurses at the point of care by helping to eliminate communication bottlenecks, streamline workflows and improve care quality. So it is essential to understand how information flows within your hospital. Conducting interviews with key stakeholders will help identify specific communication issues and the "workarounds" they've created to address them.

Key questions to ask include:

- How are your care teams communicating within each unit and across departments?

- Are caregivers using personal phones to send unsecured text messages within or outside the hospital or residential complex?

- Are nurses and care givers experiencing delays in getting the information they need from physicians and other care team members?

- How do nurses and care givers currently conduct shift handoffs?

- How do you measure effective communication among your care teams? How does this translate into better patient care?

- Are there communication gaps or inefficiencies contributing to patient and/or resident dissatisfaction or potential sentinel events?

Technology considerations

Understanding the types of communication flows is important in determining the applications and capabilities that need to be delivered by clinical smartphones. In addition, your IT team must evaluate and select a smartphone solution that aligns with your vision and supports collaborative, team-based care.

The solution architecture must be vendor neutral and scalable to meet current and future device and application needs. And the solution middleware must be flexible to easily integrate with the hospital's infrastructure including PBX, biomedical devices, clinical information systems and nurse call systems.

Telephone calls are the most frequent form of care team coordination. Therefore, it is critical that a clinical smartphone solution integrates with a hospital's telephone system and enables real-time voice communications throughout the facility over the hospital's Wi-Fi network.

Clinical smartphones must also support healthcare-specific applications including:

HIPAA-compliant messaging applications – enable secure text messages to be exchanged among care team members. Clinically relevant messages can be stored within a secure repository to meet regulatory requirements.

Alert/alarm management applications – allow hospitals to manage and prioritize text-based alerts and alarms generated from nurse call systems and clinical information systems. Alarms and ringtones can be assigned according to urgency or importance, helping to alleviate alarm fatigue.

Patient record system applications – provide mobile access to patient information such as vital signs, input/output (I/O) and pain scores to be collected, validated and electronically stored with the EHR.

Staff assignments and directory – provide presence management tools that determine a team member's availability.

Your mobile solution should enable real-time voice communication throughout the facility

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3 Evaluate enterprise-class smartphone solutions

While there are numerous smartphone solutions on the market, few can withstand the rigors of a hospital environment. Today's nurses and caregivers are "mobile knowledge workers" who perform their job functions while roaming through a hospital building or campus. They rely on clinical smartphones for the following:

Connectivity to an in-building Wi-Fi network – Reliable and ubiquitous communication is essential for nurses to perform their roles effectively. In many cases, cellular coverage within hospital may be spotty or nonexistent. It is critical that the devices support seamless roaming across the Wi-Fi network, particularly for real-time applications like voice communication.

Extensive battery life – Nurses often share duties with others across multiple shifts where devices may be used 24x7. Rather than wait for their devices to charge, they need to easily swap out batteries that can be charged outside the device.

Durability and sterility – Nurses use strong solutions to clean and disinfect their phones throughout their shifts. Consumer smartphones can't withstand frequent cleaning with these solutions. Devices must also be durable enough to withstand frequent drops and bumps expected in a busy patient care environment.

4   Assess your IT infrastructure

Assessing your hospital's current infrastructure and technology assets provides clarity into the opportunities and limitations that are inherent in your environment.

Key questions to ask include:

* *Is your existing Wi-Fi network designed to handle voice and data traffic?*
  Many Wi-Fi networks in existing hospitals aren't designed with voice in mind. Therefore wireless infrastructure must be design-engineered to provide adequate bandwidth and coverage to support call volume, seamless roaming and mixed wireless client usage.

* *Can your network accommodate wireless communication throughout your facility?*
  Keep in mind your clinical smartphones must work in all areas of your hospital including restrooms, cafeterias, elevators, stairwells, etc.

Site assessment

A site assessment analyzes a healthcare facility's current infrastructure, technology assets and workflows. This data is then used to develop a comprehensive clinical smartphone strategy. It often begins with a comprehensive review of the hospital floor plan and layout to identify where "communication hubs" that may need additional bandwidth are located, or physical locations such as operating rooms or radiology labs where wireless signal strength may be weak.

Your infrastructure assessment should also include interference detection where the IT team and potential provider evaluate and identify rogue devices that can create issues on the network.

Mobile device management

Most hospital IT departments still don't have the appropriate tools to monitor, manage and support hospital-owned or personally-owned mobile devices on their hospital network. Your IT team will likely need to upgrade network management tools to monitor and manage smartphones and other mobile devices.

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Understand the opportunities and limitations that are inherent in your current IT environment

Mobile device management features include:

- Reporting tools that can track and report mobile device usage and potential threats to patient information, ensuring regulatory compliance.

- Solutions such as over-the-air application distribution, sandboxing to separate personal and hospital data, remote wipe to delete data from lost or stolen devices and security policy enforcement.

Key questions to ask include:

- Who is responsible for purchasing, servicing and maintaining the clinical smartphones and applications?

- How will clinical smartphones be assigned to caregivers and/or teams?

- How will these devices be stored when not in use?

- Who can authorize the purchase of replacement devices?

- Who is responsible for uploading applications to the smartphones?

Finally, hospitals must have guidelines in place for checking out smartphones and charging and/or swapping out batteries. A protocol should be established for accessing or sharing PHI on these devices in order to avoid potential information leaks that could violate HIPAA regulations.
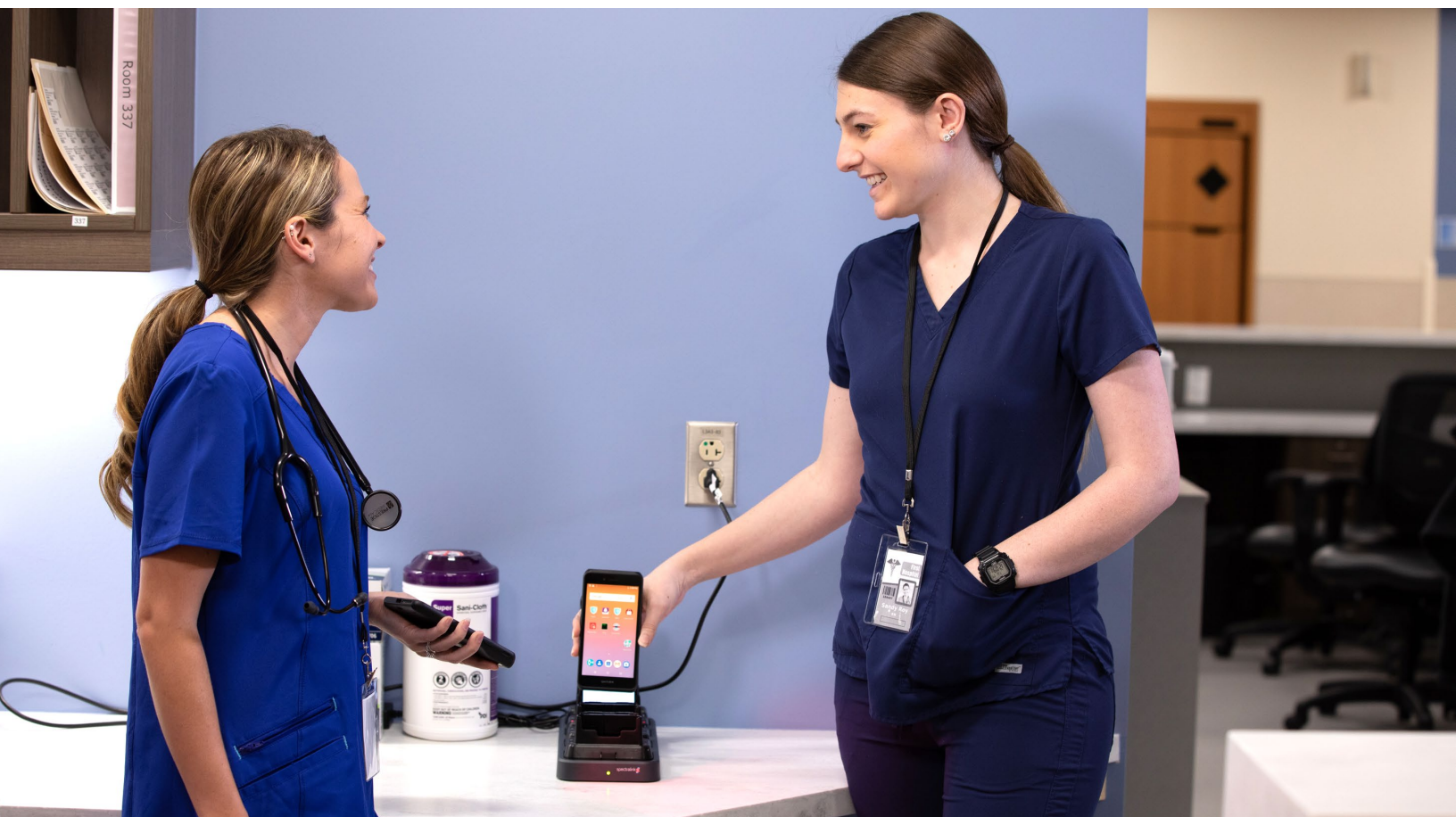
5 Implement a proof of concept and pilot program

A proof of concept and pilot program enables you to "test and tinker" with the proposed technology to ensure it addresses current and future workflows. It can also be used by hospital executives to capture a baseline of performance metrics from which to track outcomes.

A "proof of concept" outlines factors that determine the viability of the proposed solution. These factors may include business considerations such as future needs, role of the solution in emerging health IT trends, technical issues and investments, and budget considerations.

A "pilot" is an initial rollout of a proposed solution within a limited scope. It may consist of deploying a specific number of clinical smartphones within a particular hospital unit or department over a preset timeframe. The purpose of the rollout is to test whether the proposed system will work as designed without impacting a large number of patients or staff.

The pilot includes the following activities:
- Assessment of IT infrastructure to support mobile devices (e.g. Wi-Fi, telephone system, application middleware, etc.).

- Identification of users and use cases for the clinical smartphones, and establishing processes for gathering feedback and suggestions.

- Understanding the logistical implications of mobile devices, such as battery management, loss and theft prevention, and usage etiquette.

> A proof of concept and pilot program enables you to "test and tinker" with the proposed technology to ensure it addresses current and future workflows

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6 Address operational issues, including training and support requirements

Deploying a clinical smartphone strategy will impact and/or create new clinical workflows. Therefore, staff education should cover not only the technical and functional aspects of using clinical smartphones, but also the new or modified clinical workflows that can result.

[
Staff education should address your employees' various levels of "tech savvy"
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While smartphones are increasingly popular, not all caregivers have adopted them in their personal lives. Therefore, it's important to tailor the orientation to a variety of experience levels in order for the team to gain the comfort and confidence needed to use them.

Finally, you need to determine the level of support your in-house IT team will provide for mobile issues related to the device, applications, provisioning, configuration and connectivity. In some cases, you may need to augment the existing IT team with outside technical resources in order to provide 24 x 7 support.

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Tailor device training and orientation to a variety of skill levels to build team confidence

A successful clinical mobile communications strategy focuses on improving patient care and outcomes

Conclusion

Healthcare executives have long realized the benefits
of deploying clinical smartphones in terms of durability, call quality,
and the safeguarding of sensitive patient data. And now the adoption of these devices to streamline workflows, enhance nurse productivity and support collaborative team-based care continues to expand across hospitals and other healthcare facilities.

Creating a successful clinical smartphone strategy requires taking a measured, forward-thinking approach that focuses on improving patient care and outcomes while accounting for future technology advancements. A clinical smartphone strategy that factors in people, processes and technology will ensure that your organization reaps the maximum benefits.

Sources

[1] Spok, *'The State of Healthcare Communications,'* 2020.

About Spectralink

Spectralink delivers secure, cost-effective mobile communication solutions that empower enterprises to streamline operations, increase their revenues and deliver a positive customer experience – each and every time. Since 1990, Spectralink has deployed millions of devices worldwide across the healthcare, retail, hospitality and manufacturing sectors – providing workers with the industry's most efficient, in-building communications solutions.

Visit www.spectralink.com for more information.