

Connection-Driven Care

Mobile Performance Management in Healthcare Transformation

The entire healthcare system is changing in front of our eyes in response to governmental reform efforts, clinical developments, technological advances and business realities. Putting mobile technologies in the hands of providers at the point of care is one of the key enablers of the change. With caregivers increasingly reliant on these technologies, organizations will first need to solve the problem of making their mobile connections as robust and reliable as their wired networks. Only then will clinicians be able to apply the full benefit of healthcare transformation to improve patient care and outcomes.

Increasing Reliance on Mobile Devices

In recent years, wireless technologies have moved progressively closer to the point of care, bringing clinical and business systems to the bedside. This is largely a byproduct of federal regulations and meaningful-use incentive payments promoting electronic health record systems, which have seen a fivefold increase since 2008. Initially the devices of choice were wireless-equipped computers on wheeled carts, but smartphones and tablets are increasingly being used. A study of more than 1000 physicians, nurse practitioners and physician assistants found that 86% regularly use smartphones and 53% use tablets. Many clinical resources useful at the point of care are available on mobile devices such as mobile editions of standard medical references, interactive clinical tools to aid in diagnosis and treatment decisions, up-to-date treatment guidelines, and various medical calculators. Clinicians are coming to depend on these devices, and the beneficiaries are the patients. Studies have found that use of these devices for clinical decision support leads to more-appropriate diagnosis and treatment decisions and improves the quality of documentation.

Connectivity — Often the Weakest Link in Healthcare

With the majority of hospitals and physicians now using EHR systems and mobile devices, the challenge now is to realize ROI from those investments in the form of lower costs and better outcomes. Yet, many still struggle with day-to-day use, and even see them as a drain on efficiency.

As medical providers have often found, the inability for clinicians and their applications to continuously and reliably connect over wireless networks is often the weakest link in clinical-information access. This basic usability issue slows adoption, hampers the ability to enter and retrieve full medical information, and jeopardizes the ability to recoup the full value of the EHR investment.

Optimizing and Securing Connections at the Point-of-Care

Mobile Performance Management software handles the challenge of providing reliable access to vital data in clinical settings. It optimizes, accelerates and secures data traffic, making multiple Wi-Fi access points and cellular networks work as seamlessly as a wired network. Supporting any application that runs in a wired environment, Mobile Performance Management allows healthcare organizations to quickly extend their clinical systems for mobile access.

Traffic Optimization ensures applications and resources are optimized for weak and intermittent network coverage, and workers can roam freely between networks as conditions and availability change.

Adaptive Policies fine tune the mobile user experience, prioritizing applications and network access based on network, situation and location parameters specified by IT.

Performance Analytics and Diagnostics deliver constantly updated analytics on data use by devices, applications and networks, so IT can fine-tune the user experience. Root-cause detection quickly pinpoints problems for fastest troubleshooting to get workers productive again.

Security supports highly flexible and programmable secure access capabilities. IT can configure secure tunnels per-app or device-wide, securing access to enterprise applications and resources.

Hundreds of healthcare organizations and thousands of clinicians worldwide depend on Mobile Performance Management to allow them to reliably access and update patient data.

The Role of Mobile Performance Management. Whether on a medical center campus, home-care setting or emergency-response setting, Mobile Performance Management allows multiple Wi-Fi and cellular networks to work as seamlessly and reliably as a single, wired network. It addresses the following issues, particular to healthcare settings:

- Single-sign on for clinicians and seamless roaming thereafter, using both Wi-Fi and 2G/3G/4G connections
- Security compliance with HIPAA and other regulations
- Access control of users/devices/applications, enforced by flexible adaptive policies
- Optimizations that make video and voice-over-IP usable, even over marginal or bandwidth-constrained connections
- Stable connections for medical equipment in remote locations
- Reduction in trouble tickets due to connectivity issues
- Remote troubleshooting and root-cause analysis for prompt resolution to keep clinicians focused on patient care

Healthcare Transformation: An Explosion in Clinical Data at the Bedside

Complete and correct information in EHRs and the ability to access it is only the beginning. A new wave of medical innovation is poised to trigger the era of data-driven healthcare. Mobile devices will bring highly relevant data directly to the point of patient interaction, to support the real-time treatment decision that maximally benefits each patient. Four factors are driving this revolution.

Changing Reimbursement Models. Accountable Care Organizations (ACOs) are a key feature of the Affordable Care Act, and are compensated on a per-patient basis rather than on the amount of services the patient requires. This “value-based” payment model puts the incentive on providers to maximize efficiency, demonstrate that they are following best practices, and deliver optimal outcomes. The Department of Health and Human Services has set a target of at least 50 percent of its payments to be based on this value-based compensation model by 2016. On the private side, 80 percent of commercial payors say that value-based contracts are “very important” to their strategic objectives.

Wider Availability of Data at Scale. Reliable connections increase the amount of correct, relevant and highly structured data in EHRs including lab and test results, prescriptions, diagnoses and treatments. Government and private entities are already consolidating this data in health information exchanges; around 45 percent of U.S. hospitals either participate in local or regional exchanges now or plan to do so in the near future.

Competitive Pressures. The business opportunity in deriving insight and making use of healthcare data has been estimated at \$300 billion to \$450 billion annually. The opportunity is simply too big to ignore, and both startups and large established players have jumped into the arena in a big way.

Increasing Technical and Analytic Capabilities. Other industries have harnessed analytic capabilities to use “big data” to drive businesses, and these capabilities are now being applied to healthcare. The application of big data to medicine is still in its infancy. However, organizations that have large volumes of data at their disposal, such as insurance companies and care providers, are already using insights from data to drive better care practices.

Mobile technologies are essential to enabling and then reaping the benefits of healthcare transformation. Value-based reimbursement models require timely, immediate access to new insight and information with maximum efficiency.

Conclusion

With the entire healthcare system dependent on mobile data, healthcare providers must address their basic connectivity challenges. The most elegant and cost-effective solution is Mobile Performance Management software. It addresses the security requirements, while also adding a layer of intelligence that keeps connections alive through gaps in coverage, and allows multiple wireless networks to function with the simplicity and reliability of a single wired network. This will ensure that the massive investments being made pay off in the form of lower costs, healthier patients and better outcomes.

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