How Mobility Drives and Shapes Digital Transformation in Healthcare

Mobility is revolutionizing every aspect of healthcare, enabling digital transformation in clinical, operational and business activities. But “going mobile” is a strategic decision for healthcare organizations, requiring thoughtful planning and precise implementation to achieve the full range of the technology’s benefits.
The healthcare industry is in the midst of a massive change that touches on, and is a key driver in, the debate over the future of value-based care and compensation. Digital technologies—from widespread use of new types of endpoint devices and computerized healthcare records to smart medical equipment and sophisticated analytics—are transforming how healthcare is delivered and how healthcare organizations run their businesses.

This digital transformation of healthcare is reaching critical mass, both as a result of increased regulatory demands and as a way to capture and use the mountain of unstructured healthcare data for improved patient outcomes. In fact, digital transformation is now a strategic imperative for healthcare executives—not an option. “It’s predicted that the digital revolution can save $300 billion in spending in the (healthcare) sector, especially in the area of chronic diseases,” according to Daniel Newman, principal analyst at Futurum. “Clearly there is value—human and financial—in bringing new technology to the healthcare market.”

And there is probably no technology more important, empowering and transformative than mobility. In healthcare, mobility is making digital transformation a reality by enabling practitioners, business stakeholders, patients and users throughout the healthcare spectrum to do exciting new things. For this reason, it’s vitally important to view mobility not just through an IT lens, but also by understanding that mobility is a key demand for all healthcare constituents.

**MOBILITY’S ALLURE IN HEALTHCARE**

Mobility and all forms of connected technology are expanding and deepening in their use throughout healthcare. A 2016 industry study pointed out that 81% of surveyed organizations were using at least one connected health technology and that 52% were using at least three different mobile technologies. And, perhaps even more important, 47% of respondents said they expect their organization to expand its use of connected health technologies over the next few years.

Mobility’s potential in healthcare may be limitless, given the rapid pace of the technology’s improvement in delivering greater performance for equivalent or even less cost. This is important in helping healthcare organizations to re-engineer their clinical workflows to improve productivity, reduce errors, speed time to diagnosis and treatment, cut costs, improve patient engagement, ensure compliance and improve compensation levels.

In particular, mobility has enormous potential to facilitate one of the healthcare industry’s most important initiatives—coordinated care. As healthcare providers commit to delivering the right care at the right time without duplication or errors, organizations and practitioners need mobile solutions to enhance productivity, allow doctors to spend more time with patients with real-time information.

As a result, many healthcare workflows have been re-imagined and reconstructed with mobility in mind. These workflow enhancements have sped the diagnosis and treatment of patients both at the facility and even long after a patient has been discharged, through the use of mobile-centric portals.

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HEALTHCARE IT'S DILEMMA WITH MOBILITY

It’s now a given that healthcare IT has embraced its role as a business facilitator, rather than simply as a technology approver. Most healthcare IT professionals are aggressively seeking out and leading the implementation of mobility solutions to support clinical requirements, facilitate data analytics, improve financial performance and create a more engaging patient experience—one that ultimately drives higher patient satisfaction scores.

But healthcare IT has had to make big decisions on mobility. Some of them have entailed providing justification for investing in upgraded wireless infrastructure and adopting mobile-centric applications such as telemedicine. Others have focused on how to support the Internet of Things in a wide range of mobile platforms, from smart medical devices to wearable technology.

Another key mobility issue for healthcare IT is security—both physical and digital. With doctors, patients and business users looking to utilize their own familiar personal devices in—and outside of—the healthcare facility, a lost device can have catastrophic impact on business continuity, practitioner productivity and, of course, compliance.

And then, there is the specter of cyber attacks, which has flourished in healthcare as more and more mobile devices represent attractive entry points for hackers. And with practitioners, patients and business users accessing services and data through often-unprotected or infrequently updated personal devices, healthcare organizations’ threat vectors have dramatically increased.

Finally, there is the all-important issue of endpoint management. More and more devices are coming into the facility—or accessing information remotely—through something other than a company-owned and –issued methodology. That means that without a strategic approach to device selection and support, IT departments will have to find a way to manage a palette of formats, including full-sized notebooks, ultra-notebooks, tablets, smartphones, hybrid "phablets," digital carts, scanners and others. This represents a management nightmare for IT organizations to ensure that all devices are secure, provide high performance at scale, support all essential applications and enhance user productivity—not inhibit it.

TAKING THE RIGHT STEPS TOWARD THE BEST MOBILITY OPTION

Technology decisions in healthcare are heavily influenced not only by business and clinical requirements, but also by regulatory mandates such as the HIPAA, Meaningful Use and MACRA. Selecting the right device(s) for use by your different constituencies is an essential part of ensuring compliance, as well as delivering mobility’s promises of improved efficiency and great patient engagement.

That means healthcare organizations need to conduct a formal analysis of potential mobile devices under consideration for clinical applications. This is important for a variety of reasons, including helping IT better manage all endpoints involved in clinical care and ensuring that the devices fit well into workflows, promote patient safety and provide the best economic return.
Your device assessment should:

- Provide an inventory of existing endpoint devices and applications.
- Account for current and anticipated device usage in clinical workflows.
- Evaluate and surface potential compatibility issues.
- Allow potential users to “trial run” devices to determine preferences.
- Capture user feedback and preferences to identify the best fit(s) for different workflows and user groups.

CONSIDERING MICROSOFT SURFACE

There are more device formats than ever to consider: notebooks, tablets, smartphones…and other still emerging form factors. Healthcare IT leaders have to do serious homework into the tradeoffs of each device class, in hopes of striking a balance between giving users the ability to use a device they prefer and not having too broad a mix of devices to implement, support and manage.

Ideally, healthcare IT and business leaders should look for a class of device that affords the broadest possible flexibility in use cases and utility. Rather than standardize in a single format—notebook, tablet or smartphone—many healthcare organizations have turned to Microsoft’s Surface platform, which offers a wide range of features that span the capabilities of traditional notebooks and tablets.

For instance, the Microsoft Surface Pro enhances return on investment by allowing healthcare organizations to replace legacy notebooks and tablets with a single, multi-function device. Because it runs the ubiquitous, familiar and widely supported Windows operating system, onboarding is easy and support is consistent. It also is easy to integrate the Surface Pro into existing IT and security protocols because it supports the full array of Windows functionality, including Windows 10 and other widely used Microsoft applications.

No longer do practitioners have to log into multiple devices throughout the day; whether they are working in an office, in a lab, in a patient room or anywhere outside the healthcare facility.

For home healthcare workers, Surface offers the versatility to convert from a traditional tablet configuration to a laptop using the integrated kickstand and keyboard covers. Its long battery life gives workers the ability to stay online for extended periods without having to look for a power outlet or log off a network connection.

Additionally, the enhanced security features of Windows 10 will make life easier for IT and security professionals looking to adopt a state-of-the-art platform without also bolting on a lot of third-party security programs to adequately protect confidential patient information.
Most healthcare organizations—even some very large systems—supplement their internal IT staffs with outside experts with deep knowledge in deploying different technologies.

The Surface pen is an important accessory for note-taking applications for practitioners and other users who prefer handwriting to typing. Instead of updating charts manually at the end of a 12-hour round, patient data is entered into EMRs in real time throughout the day—improving real-time access to the latest patient data and allowing doctors and nurses to trim valuable time off their long days. The Surface line comprises three unique form factors, each for different use cases and requirements. The Surface Pro 4 is designed for the mobile users that crave an ultrathin system; the Surface Pro is aimed at use cases requiring larger screens and more processing power, and the Surface Book most closely resembles a modernized notebook with the highest power.

Healthcare IT and business users also will take advantage of accessories for the Surface line, including an Ergotron cart, a Trident case and an Ergotron multi-device charging cabinet.

PARTNERING WITH CONNECTION FOR MOBILITY IN HEALTHCARE

Healthcare IT, perhaps more than many other industries, typically runs a modest organization. Most healthcare organizations—even some very large systems—supplement their internal IT staffs with outside experts with deep knowledge in deploying different technologies for healthcare applications and workflows.

One organization with extensive experience deploying mobility solutions for healthcare is Connection, a global IT services and integration leader. Connection provides a number of mobility-centric services for healthcare, including:

• **Clinical Device Assessment**: This Connection service is ideal for healthcare organizations looking to wade through all the many options for mobility devices. In tight collaboration with the healthcare organization, Connection helps healthcare organizations assess their full set of options when it comes to mobile devices. Connection also helps to determine the best platforms for each unique workflow, requirements and current and future resources, while identifying a short list of devices from which to select. The Clinical Device Assessment not only meets all the device analysis tasks identified earlier in this paper, but it includes an important element: A hands-on, turnkey clinical device demonstration “fair,” at which different healthcare constituencies try their hands at different devices and rate them for a wide range of needs. The fair includes product demonstrations from product experts to allow the evaluator an opportunity to touch and use the device. At the start of the device fair, each evaluator is provided a handheld table to rate the short list of devices, providing the organization with valuable feedback from the clinicians who use the technology every day. Data from the user surveys is compiled, analyzed and electronically reported for the organization, with helpful recommendations based upon how different user constituencies rated different devices. In the end, the fair helps establish the right set of data from the organization to make an informed decision, eliminates a daunting task from the to-do list of an over-stressed IT department, offers a tailored approach to the organization’s technology investment process and meets the demands for strategic use of mobile technology.
The technology utilization has gone far beyond the earliest applications of rolling carts with clunky laptops used at the bedside or WiFi access for visitors.

- **Workflow Analysis:** Connection provides a workflow analysis service to help organizations identify potential efficiency improvements in their workflows when moving to a mobile-centric model. It is based on each organization’s current and future business objectives, including the transition to the value-based care model, where providers need to know the cost of care at the point of care. The move to the value-based model is likely to require a re-engineering of clinical workflows to capture the data for the new reporting requirements. It also helps organizations identify their vision for mobility solutions, educate them on the pros and cons of mobility solutions versus traditional desktop/stationery solutions, review the impact of mobility in support needs and recommend appropriate manpower requirements and organizational structure for mobility adoption.

**CONCLUSION**

Mobility is no longer a nicety for healthcare organizations. The technology utilization has gone far beyond the earliest applications of rolling carts with clunky laptops used at the bedside or WiFi access for visitors. Mobility is now embedded into clinical workflows, healthcare analytics, population health, compliance, data governance, telemedicine and long-term patient health after discharge.

Making the right decision on which of the many possible device formats and functionality should be supported is a conundrum for IT and business leaders alike, because it has financial, operational and clinical implications. Healthcare IT professionals increasingly are turning to the Microsoft Surface platform to enable providers, patients and other stakeholders instant access to information and resources in a flexible, scalable and affordable package. As a leading integrator of Microsoft Surface in a wide range of healthcare applications, Connection provides both careful planning and precise implementation of mobility solutions that drive digital transformation in healthcare.

For more information on how to evaluate and select the right mobility platform for your healthcare organization’s needs—and why the Microsoft Surface is the most productive device for business—please visit [www.connection.com/health](http://www.connection.com/health).

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