

Going Digital with the Connected Consumer: Five Considerations for Governance Teams

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The digital revolution in healthcare is not coming, it's here. News about advances such as the following appear regularly:

- A community of users has solved a problem.¹ A do-it-yourself parent developed computer code that enables him to monitor his child's blood glucose readings through mobile technology in real time. A Web site with a telling name—Nightscout#WeAreNotWaiting—provides other parents of children with Type 1 diabetes with the code, written instructions, and videos to launch the system to monitor via smartphone, smartwatch, or a Web site. No assistance from healthcare professionals is needed.
- A two-minute virtual visit with an informed doctor has arrived.² More than seven million patients can access a platform that lets them upload information and images. When combined with their medical record, it uses an algorithm to suggest a likely diagnosis. A physician receives that information electronically and can select the appropriate diagnosis and treatment plan or enter a new one. The doctor then “meets” with the patient and sends a prescription to a pharmacy—within less time than it takes to fill a car's gas tank.
- A “lab on the skin” is coming.³ A new wearable bioelectronic device that looks and feels like a tattoo uses sweat analysis to allow consumers to monitor their health on the spot. It makes measurements that “quantitatively match those of gold-standard hospital instruments” and potentially will be used more broadly for disease diagnosis.



Information-savvy consumers with mobile-first expectations have emerged as the driving force in a world of constant innovation and change.⁴ They use a smartphone to review lab results on MyQuest,

refill a prescription through CVS Pharmacy Online, compare provider prices and quality through guroo, and “see” an Amwell telehealth doctor 24/7.

The Digital Proposition for Leadership Teams

Legacy hospitals and health systems are facing disruption that threatens core and ancillary services. (See sidebar on the following page for examples of non-traditional competitors.) New standards for healthcare access, experience, and price are imperative. This reality is pressing senior leadership teams to make significant investments in new technology or partner with a company to gain new mobile and digital tools to improve their organization's position. Requests for digital investments that may require significant capital are coming from the managers of many different departments and services. Expensive digital initiatives may be occurring as uncoordinated silos of activity with many one-off investments being made.

Boards of directors need to be asking the right questions about whether the organization has an overall digital/mobile strategy.

Consideration of the desired outcome of such a strategy will help board members step back from the buzz of requests, trends, and technology to evaluate how investments in mobile and digital health support the organization's long-term goals.

Key Board Takeaways

The digital revolution in healthcare is not coming, it's here. Information-savvy consumers are using smartphones to review lab results, refill a prescription, compare provider prices and quality, and “see” a doctor 24/7. Boards will need to take action now to ensure their organizations are reaching the connected customer. A few points to consider:

- New standards for healthcare access, experience, and price are imperative. Legacy hospitals face disruption that threatens core and ancillary services.
- Boards of directors need to be asking the right questions about whether the organization has an overall digital/mobile strategy.
- Growth should be the strategy behind digital investments. Directors must evaluate how investments support the organization's long-term growth through improved consumer access and experience, affordable care, extended geographic reach, and new products and channels.



1 Joyce Lee, Emily Hirschfeld, and James Wedding, “A Patient-Designed Do-It-Yourself Mobile Technology System for Diabetes,” *JAMA*, April 12, 2016.
 2 Shelby Livingston, “The Two-Minute Virtual Doctor Visit,” *Modern Healthcare*, March 4, 2017.
 3 Megan Fellman, “Researchers Develop Soft, Microfluidic ‘Lab on the Skin’ for Sweat Analysis,” *Northwestern*, November 23, 2016.

4 *State of the Connected Customer*, Salesforce Research.

Examples of Non-traditional Competitors in Digital Healthcare

- Smart Choice MRI, which offers 15 imaging centers in Illinois, Wisconsin, and Minnesota. MRI scans are guaranteed to cost \$600 or less with expert interpretation by a Cleveland Clinic Radiologist and the availability of early morning, evening, and weekend appointments. Scan results with a copy of the scan are available to patients within 24 hours of the scan.
- Walgreens is applying online games to improve diabetes care. Its platform includes contests, prizes, quizzes, surveys, and health tips. Aware of the importance of contemporary digital engagement with consumers, the retail giant is positioning itself to be the provider of choice for non-physician services for patients with chronic conditions.
- IBM Watson is partnering with many types of entities to bring consumers precision and personalized medicine. For example, IBM and Quest Diagnostics are offering a solution for physicians that helps them provide precision cancer treatments featuring genetic-sequencing services from Quest and cognitive analysis by Watson. Similarly working with Watson, Medtronic is creating an app for the more than 415 million people worldwide with diabetes. It will use data from sensors, insulin pumps, wearables, and scientific studies to help predict potential hypoglycemia hours in advance.

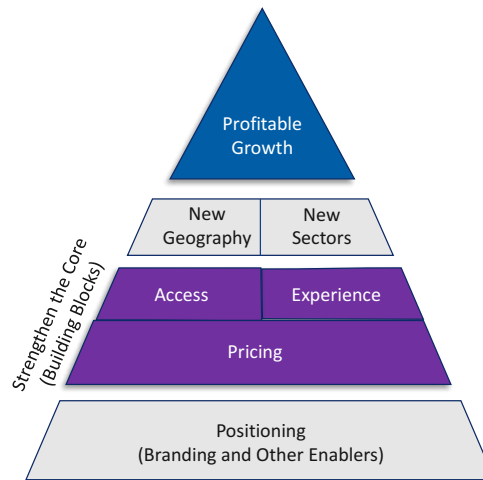
Sources: <https://smartchoicemri.com>; J. Duncan Moore, "Walgreens Wants You to Take Your Pills," *Crain's Chicago Business*, August 16, 2016; IBM Watson, "With Watson, the World Is Healthier," *Wall Street Journal*, March 16, 2017.

Growth as the Desired Outcome

The strategic vision and integrated strategic-financial plan for most hospitals and health systems involve achieving profitable growth to deliver on a core mission as a healthcare provider in the communities served.

Traditional healthcare provider growth has been *supply*-driven, based on profitably expanding the number of facilities, clinicians, and technology that organizations could offer in the community. In today's rapidly changing competitive environment, the growth model is becoming *demand*-driven, based on what consumers need and ask for. Responsible for a greater portion of healthcare costs and leading busy lives, consumers expect mobile-enabled access to health and healthcare services.

Exhibit 1:
Healthcare Provider Growth Pyramid™



Source: Kaufman, Hall & Associates, LLC. Used with permission.

The key to growth is understanding what consumers want in a specific region and delivering that in core competency areas. Growth objectives will vary by organization type and location, whether an independent hospital, a health system, an academic medical center, a critical access hospital, or a public hospital.

Kaufman Hall's Healthcare Provider Growth Pyramid™ (see **Exhibit 1**) offers a structure for the important components of achieving that outcome or goal for all organizations. Mobile devices and digital tools are foundational means or enablers to engage consumers, manage the cost of care, and achieve profitable growth. Moving up the pyramid, mobile and digital health investments support healthcare's new value proposition of improved **access**, **experience**, and **affordability** (pricing). Strengthening these core building blocks through use of digital technology enables organizations to expand their reach into **new geography** and enter **new sectors**, such as through new products and channels.

A close look at these five areas of the pyramid and answering key questions with each will help governance teams to ensure that mobile/digital initiatives align with the organization's strategic growth objectives.

1. Access

Enabling more consumers to gain access to care from your organization is a key driver of growth. Historically, improvement in this area has required major investments to build physical access points (i.e., buildings) and hire clinicians. While these

investments will still be required going forward, mobile devices and digital tools allow providers to enhance consumer access in three complementary ways.

Better use of existing provider capacity. During downtime at walk-in clinics, for example, clinicians can answer patient emails, conduct video visits, or advance asynchronous virtual visits, meaning the doctor and patient don't have to be together virtually or physically at the same time. For example, physicians in clinics associated with the Massachusetts General Hospital manage the care of patients with chronic conditions through asynchronous visits.⁵ The patient provides answers to specific questions on a secure Web site; the physician reviews and communicates next steps within a day.

Easier communication and scheduling. Consumers want to access their providers in ways and at times convenient to them. Through online medical appointment scheduling and secure online messaging, consumers can set up doctor, lab, or testing appointments from wherever they are, and communicate with their providers between visits. According to the American Hospital Association, although an important way to improve consumer access, less than half of hospitals nationwide have a system that allows their patients to schedule appointments online; secure patient-provider messaging with hospital-based providers is available in about 60 percent of hospitals.⁶

Bringing care to the patient. Mobile apps and on-demand video visits enhance consumer access and extend physician reach by providing care wherever the consumer wants it rather than requiring him or her to come to the provider. The use of telehealth and other digital health tools to manage chronic conditions will continue to increase as consumers exert control over their health and providers seek to reduce costs and improve outcomes by managing the care of patients with chronic conditions in non-acute or rural settings.⁷ For example, Dignity Health uses its telemedicine network to broaden the reach of its specialists to smaller community hospitals.⁸

5 Susan Hall, "Asynchronous Virtual Visits Adept for Routine Care," *Fierce Healthcare*, September 9, 2014.

6 "Individuals' Ability to Electronically Access their Hospital Medical Records, Perform Key Tasks Is Growing," American Hospital Association, *Trendwatch*, July 2016.

7 *Technology Advances Continue to Drive Growth in Digital Health*, Validic, January 2017.

8 Shelby Livingston, "Tapping Telehealth for Complex Cases," *Modern Healthcare*, March 20, 2017.

Key Questions:

- *What is the organization currently doing to better understand consumer needs and how they want to access services related to those needs, whether in-person or virtually?*
- *Does the organization offer online medical appointment scheduling and secure online messaging? If so, what proportion of patients use these tools and how effective are they? If not, why not, and is there a plan to offer these services?*

2. Experience

Once a consumer has chosen and accessed a hospital or health system, the organization must provide that consumer with the best possible experience during service delivery and post-use interactions. High patient satisfaction is the most reliable means of achieving loyalty and driving growth through a bigger share of the consumer's total healthcare spending on an ongoing basis. Mobile devices and digital tools are creating new patient experience standards. Some examples are listed below.

Wayfinding. The 322-acre National Institute of Health Clinical Center in Bethesda, Maryland, has a wayfinding app called "Take Me There" to guide patients and their families to all departments, clinics, and 40,000 staff members.⁹ This alleviates common concern and stress about navigating a large campus. Similarly, but with a one-facility focus, Kaleida Health, a large system in western New York, added experiential wayfinding to its app for the system's new children's outpatient center.¹⁰

Feedback. Community Hospital of the Monterey Peninsula in California encourages patients to download a barcode scanning app on their smart devices that allows them to provide real-time feedback about their experiences.¹¹ The patient's input becomes actionable information that staff responds to and addresses—often within minutes of when a patient raises a concern. This enables the organization to improve performance in all areas, from registration to discharge.

Distance and wait times. Inova Health, serving the Washington, D.C. metropolitan area, has a mobile app that allows users to estimate drive times to Inova's emergency

rooms and hospitals based on current location and traffic. The app also lets them see and compare wait times at emergency rooms and urgent care centers, and check into a convenient Inova urgent care facility.

Transportation. Through a collaborative arrangement, 10-hospital MedStar Health, also in the D.C. metro area, prominently displays on its Web site a "Ride with Uber" button.¹² Patients' use of the button enables them to quickly determine the wait time and approximate cost of a ride and then request one to or from a hospital or the hundreds of outpatient sites in MedStar's system. Patients also are able to set up a ride reminder to automatically notify them an hour before their appointment.

Key Questions:

- *What consumer research techniques does the organization use to learn about aspects of the patient experience that could be improved through digital tools?*
- *Has the organization evaluated and prioritized consumer pain points in order to inform high-impact investment in digital solutions?*

3. Affordability

As healthcare costs rise and shift to individuals and families through high-deductible health plans, mobile devices and digital tools offer consumers assistance, both by providing price information and making the care itself less costly.

The consumer's cost. Price-estimator and transparency tools are now offered by hospitals and health systems, employers and payers, and public sources. For example, ProMedica, Priority Health, and Mercy Health are among many other providers that have an online cost-estimating tool for treatments or procedures at their hospitals. Price transparency tools are available to insured individuals through employers and insurance companies. Publicly available cost estimators, often coupled with quality data, are available through *guroo*, which was created by the Health Care Cost Institute; *Amino*, which provides "detail stats" about every doctor in America; *Healthcare Bluebook*, which serves employers and consumers; and many other companies.

Less costly care. Mobile handheld tools offer consumers a convenient way to complete

the examination and diagnostic requirements of a clinic visit, without ever leaving the home or office. For example, a *MedWand™* telemedicine device, used with patients in a nursing home or by individuals in their own homes, allows a doctor to hear hearts and lungs, and look at ears, eyes, nose, and throat in a private video consultation. The \$250 device can automatically notify the doctor if any clinical data exceeds boundaries, allowing timely medical intervention. Or, for a \$99 one-time charge, *Kardia Mobile* from *AliveCor* enables consumers to take a medical grade EKG in 30 seconds, to know immediately if their heart rhythm is normal or if atrial fibrillation is present.

Mobile devices are proliferating for care teams as well, increasing efficiencies and other benefits. For example, *TigerText* has a comprehensive communications device that enables healthcare professionals to send and receive real-time alerts and messages, among other functions. These functions improve collaboration with coworkers and enable clinicians to get more done in less time.

Key Questions:

- *What price information is made available to consumers via the Web or a mobile app, in advance of and following their in-person or virtual visits? How does that price compare competitively?*
- *How is the organization using mobile and digital tools to reduce the cost of delivering care?*

4. Geographic Reach

Historically, most providers have considered their geographic service area to be their "market." Under traditional thinking, expanding geographic reach would require acquiring a hospital or building a new one in a new area.

Mobile devices and digital communications change the concept of reach entirely, allowing health systems to offer site-to-site and provider-to-provider telehealth solutions, without investment in bricks and mortar at each location, both within their network and beyond. For example, St. Louis, MO-based *Mercy Health* has a virtual care center that offers on-demand video visits that extend the legacy of this nearly 200-year old health system to clinicians and patients across the *Mercy* system and in outside health systems.¹³ The suite of telehealth services includes ICU monitoring 24/7, telestroke with on-call neurologists, and teleperinatal for high-risk expectant parents.

9 Heather Mack, "NIH Taps Connexient for Hospital Wayfinding App," *Mobihealthnews*, July 6, 2016.

10 "Kaleida Health Adds Experiential Wayfinding to App Using Jibestream's Indoor Intelligence Platform," *Yahoo Finance*, March 17, 2017.

11 Dan Clarin, et al., "Elevating Your Organization's Consumerism IQ," *hfm*, August 2016.

12 "MedStar Collaborates with Uber to Provide a New Option for Accessing Care," *MedStar Health*, January 7, 2016.

13 Livingston, 2017.

Mobile devices and digital communications create opportunities for engaging new customers without limitations related to distance. Thus, contemporary thinking about the expansion of geographic reach involves entering a new market, perhaps first with a virtual offering such as a telehealth visit that provides free consultation and information, then followed by primary care offices, urgent care, or other ambulatory offerings, or not.

Many providers are making “white-label” arrangements with a telemedicine company for video visits that privatize the telemedicine platform on the provider’s own Web site. This allows the providers’ branding to be maintained and the site can be easily configured. For example, through TreatMD, physicians or hospitals can set themselves up for phone, video, or in-person visits and can market these offerings in adjacent geographies where they may not have physical assets.

Mayo Clinic has extended its brand worldwide through affiliation arrangements with more than 100 hospitals that contract for the clinical services they use from Mayo Clinic. These include eConsults that connect providers electronically with Mayo Clinic specialists and AskMayoExpert, a point-of-care tool that gives providers 24/7 access to Mayo-vetted information via desktop computers or mobile devices. For consumers worldwide, MayoClinic.org is the number-two most-visited Medicine Web site, making the organization’s reach an international one.¹⁴

Key Question:

- *What is our provider-to-provider and direct-to-consumer strategy and what role do digital and mobile devices play in that strategy?*

5. New Sectors

Mobile healthcare offers the opportunity to enter new sectors through new products and channels. Leadership teams need to understand the magnitude and nature of healthcare spending via mobile and digital devices and determine whether the organization can benefit from serving potential customers through such means. While health systems may have strong local inpatient market share, they may be

capturing a relatively smaller portion of the overall healthcare spend, which includes virtual care.

As described earlier, many organizations are developing or partnering with technology providers to offer apps, virtual visits, and other digital health and healthcare tools that meet consumer needs and build loyalty. Also prevalent are partnerships with or for retail clinics that offer low-acuity care as an alternative to higher-cost ED care or a primary care office visit.

For example, in a partnership with Walgreens to improve patient access, Advocate Health Care now owns and operates 56 retail clinics inside Walgreens’ stores across the Chicago area. These Advocate Clinics are part of Advocate Medical Group, using the same electronic health record and advanced practice nurses. “In the first four months, more than 70 percent of patients had no prior relationship with Advocate, so that is a ‘win’ for us,” says Lee Sacks, M.D., Executive Vice President and Chief Medical Officer.¹⁵ Dr. Sacks describes the aim as providing online connectivity with instant access, and a seamless experience for consumers: “The health system is learning through the retail clinics how to use digital messaging to help individuals manage chronic disease.”

Key Question:

- *Which mobile or digitally based services have been developed based on consumer input (or not) and how are they performing?*

Evaluating the Organization’s Digital/Mobile Strategy

Growth should be the strategy behind investment in digital and mobile tools. The answers to the eight questions above will help boards of directors evaluate how investments in mobile and digital health technology support the organization’s long-term growth goals through:

- Improved consumer access
- Enhancing consumer experience
- Making care more affordable
- Extending geographic reach, and new sectors

“For many organizations, moving into the mainstream of digital healthcare will have all the challenges of a standing broad

jump,” note Kenneth Kaufman, Chair of Kaufman, Hall & Associates, LLC, and Chris Young, Vice President of New Virtual Market Development and Incubations at Ascension. “They will need to access significant market intelligence, capital, and talent in short order.”¹⁶

Relatively few small organizations have the financial and human resources to introduce digital technology to accomplish simultaneously or in combination all of the desired objectives—improved access, lowered care costs, enhanced consumer experience, and extended geographic access and products delivered. In many cases, a partnership approach will be the best way to provide customers with desired digital services. Doing nothing is not an option.

In all cases, a business plan should define partnership objectives, identify best-fit partners, quantify the required strategic human and capital resources, project ongoing requirements, calculate key risks, and identify potential exit strategies and related performance measures.

This leads to the final important question: How are our digital/mobile strategies and investments currently being organized and led? The allocation of capital to digital and mobile health initiatives should be based on organizational business direction, a digital/mobile plan that complements that direction or growth strategy, and buy-in from the board and leadership from the C-suite to communicate the plan to key stakeholders. Measurement of the plan is critical to making needed changes in a timely way. Strong leadership and high-quality decisions about what digital efforts to fund and the sequencing of those efforts will position the organization for successful growth going forward. ●

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14 “The Top 50 Sites on the Web (available at www.alexa.com/topsites/category/Top/Health/Medicine).

15 *Leading Transformational Changes*, Society for Healthcare Strategy & Market Development, 2016.

16 Kenneth Kaufman and Chris Young, “Health Care’s Digital Revolution Is Here,” *H&HN*, November 28, 2016.