

Revolutionized Health Care - Preparing for Future mHealth Models

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No other consumer electronics technology rivals the mobile phone, now in use by 4 billion people worldwide, in touching so many aspects of business and consumer life. Even in an industry as old as farming, the mobile industry provides the platform for a farmer to gain new visibility of the prices his crops might fetch on markets hundreds of miles away, thus eliminating an enormous information asymmetry and altering the business model of the middle-man who carries the goods to market.

In every sector where mobile communications have been introduced, major behavioral and structural change has been the result. The health care sector will be no exception.

‘m-,’ a new agent for change in health care

Contrast our newly empowered farmer with a patient sitting in a doctor’s office in the U.S. at the turn of the 21st century. She likely has little or no information about her physician’s track record, the effectiveness of the treatments he recommends, and even which treatments would be covered by her insurance. She may not even have complete information about her own health situation, since much of the data is held in various paper medical records kept by doctors she has seen in the past.

Essentially, the business model of health care in the U.S. relies on consumers who have little or no understanding of the product, its value, their own ability to pay, or even their own needs. Once prices have been set by the Centers for Medicare and Medicaid Services (CMS) or by private insurers, patients wander aimlessly amongst health care suppliers who drive their own demand. In fact, healthcare spending by region is highly correlated with the proportion of specialists relative to general practitioners.¹ Put simply, if you send one more specialist to a town, the town’s healthcare spending will go up.

Competitive service delivery and affordability models are two critical elements that have enabled the mobile communications industry to attain its massive reach and impressive economies of scale. At the same time, the Internet sector has spawned new business models that foster unprecedented information sharing and collaboration. The adoption of these services is not limited to the younger generations. Somewhat surprisingly, for example, the fastest-growing segment on Facebook is women over 55 years-old.²

The opportunities to apply these same achievements to empower consumers – and to alter the balance of power for entire swaths of the health care system in the process – are tremendous. Companies in both health care and telecommunications need to consider their own vulnerabilities as well as the paths of opportunity that are likely to open before them. This process is underway with leading companies in the global mobile communications industry³ already investigating new business and market entry strategies for embedded mobility in sectors such as energy, health care and utilities.

¹ Ginsburg, Paul B., Ph.D., “High and rising health care costs: Demystifying U.S. health care spending,” *The Synthesis Project*, Robert Wood Johnson Foundation, October 2008, p. 15.

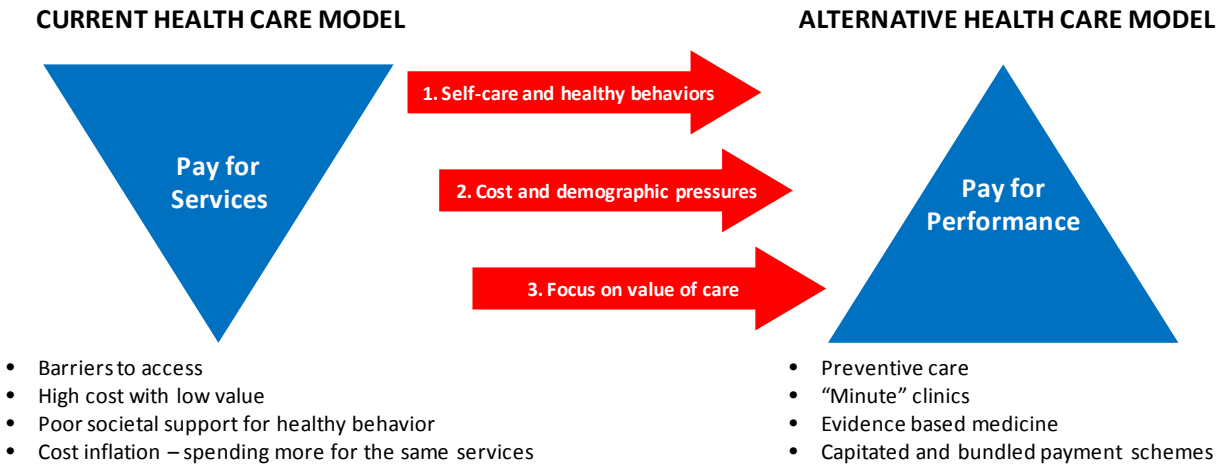
² Fastest-Growing Demographic on Facebook: Women over 55, *Inside Facebook*, February 2, 2009, (www.insidefacebook.com/2009/02/02/fastest-growing-demographic-on-facebook-women-over-55).

³ “Embedded Mobile – M2M solutions and beyond”, report prepared by Ventura Team LLP for the GSM Association, November 2008 (www.gsmworld.com/embeddedmobile)

From old business to new behaviors

By all objective accounts, today’s healthcare system is not viable in the long run. Change will be brought about by existing providers and new entrants in response to various pressures on the system. In particular, three market drivers - personal, political and economic – will bring about an alternative health care model, the structure of which remains to be defined, but is beginning to take shape.

Exhibit 1 Stabilizing the economics of healthcare provision



First, patients are increasingly using the Internet and other technologies to control their own health information and to make more health care decisions on their own. Websites such as PatientsLikeMe.com and dLife.com allow patients to trade stories and to exchange information about the various available treatments. New tools like Google Health and Microsoft Health Vault are simplifying the process of changing healthcare providers. It is likely that this trend will accelerate given the \$2 billion that the stimulus package made immediately available for the implementation of electronic medical records (EMRs).

“I want to be in control of my health.”

“The Baby Boomers are going to break the bank!”

Second, the costs associated with the aging of the Baby Boomers, within the context of the existing healthcare delivery system, have forced Government to acknowledge that it cannot afford the projected spending of the current model. This recognition may drive both contentious political debate and innovation in the delivery of health care, as in the “aging-in-place” sector.

Third, debate will intensify about the level of value we actually get from the health care we receive. While we pay a higher percentage of GDP for health care than any other country, we trail other developed nations on many key health indicators.⁴ One cause of this may be that around one-third of all medical care in the U.S. is either medically unnecessary or unbeneficial.⁵

“Why do we spend so much on health care and get so little value?”

⁴ In 2006, the U.S. spent 15.3% of GDP on health care, compared to an average of 8.9% for all OECD countries. Source: Ginsburg, Paul B., Ph.D., “High and rising health care costs: Demystifying U.S. health care spending,” *The Synthesis Project*, Robert Wood Johnson Foundation, October 2008, p. 9-10.

The biggest theme in health care over the next half-century will be the creation of a healthcare system that supports behavioral change on the individual, collective, and systemic levels. Individual behavior will change through improved management of information, greater attention to prevention and self-care, and the proliferation of company incentive programs that encourage healthy behaviors on the part of employees. Changes in collective behavior will result in greater public discussion of health and its effect on other issues – not least the federal budget. Systemic behavior will change as patients and governments restructure health care incentives in a way that holds providers accountable for practicing good medicine.

The resulting healthcare system could look quite different from what we have today. We may see shifts from high-cost medical interventions to preventive care, from specialty practice to primary care and “minute clinics,” and from “solution shop” physicians’ practices⁶ to evidence-based medicine that mines actual therapeutic outcome data to identify and promulgate best practices. Pay-for-service reimbursement models may be replaced by pay-per-performance models using capitated payments (per person, per month) or bundled payments for episodic care.

Inevitable, but uncertain new scenarios

While many believe that change of some sort is on its way, few companies in the health care, Internet and telecoms sectors have started thinking proactively about what it might look like. Many are too constrained by their standing assumptions of how their industry has operated in the past, or they have seemingly more important things to think about. Yet the structural changes on the horizon will be of far greater consequence than the corporate directives, lobbying positions, and sales targets that preoccupy them today.

To understand its future, a company must ask questions that challenge its own deeply held assumptions. A company must scan the entire environment for trends that could become significant, then postulate the alternative scenarios and probe their implications for the industry and value chain. **Exhibit 2** lists just a few of the trends and issues that must be considered.

⁵Baker, Neil, Triple Aim Informational Conference Call, Institute for Healthcare Improvement, April 23, 2009. http://www.ihl.org/ihl/files/TripleAim/IHI_20090423.wma

⁶ Christensen, Clayton et al, *The Innovator's Prescription: A Disruptive Solution for Health Care*, McGraw-Hill, December 4, 2008.

Exhibit 2 – A Futures Approach to mHealth

1. ENVIRONMENTAL SCAN	2. DEVELOP POSSIBLE SCENARIOS	3. EVALUATE IMPLICATIONS
<p>An environmental scan identifies patterns and trends that will be significant to an industry in the future.</p> <p>For example:</p> <ul style="list-style-type: none"> • New telecoms entrants via spectrum allocation. • Low-cost innovations in healthcare delivery. • Integrated bio-monitoring devices. • Shifts in social values regarding equitable access to health care. • Unexpected “wildcards” or “black swans.” 	<p>A set of scenarios bounds the uncertainty of potential realities that may emerge in the future.</p> <p>For example:</p> <ul style="list-style-type: none"> • What are the possible scenarios for the health of the economy? • What are the likely and possible tracks of healthcare reform? • How will internet and telecoms technology support shifts toward self-care and telemedicine? • What trade-offs will society make between heroic care and equal access to care? 	<p>Considering the implications of the various scenarios leads to the discovery of new strategic options.</p> <p>For example:</p> <ul style="list-style-type: none"> • What opportunities might an increase in self-care create for telecoms and Internet-based service providers? • What non-health platforms (e.g. telecos, Plaxo, Facebook, Google etc.) may enter the health arena? • How will industry relationships be reshaped under a capitated or bundled payment system?
<p>Value to your organization</p> <ul style="list-style-type: none"> • Identify trends emerging outside your industry. • Place your industry in a larger and longer-term context. 	<p>Value to your organization</p> <ul style="list-style-type: none"> • Develop more resilient strategies that can be adjusted to future events. • Build relationships across organizations. • Identify “signposts” that may give an early indication of where the future is headed. 	<p>Value to your organization</p> <ul style="list-style-type: none"> • Identify new threats and opportunities that have not yet been considered. • Develop a clear vision and mission for where the organization wants to go. • Identify potential non-sector business partners.

The uncertainty of these drivers and developments does not preclude the ability – or the necessity – to explore them in a strategically meaningful way. Thinking proactively about the future of mHealth will inform the decisions being made today and lay the groundwork for a competitive advantage tomorrow.

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