Innovation: Generating, Restoring, & Redesigning Healthcare

Insights from the
Spring 2014
System Invitational
Center for Advanced Medical Learning & Simulation
Tampa, Florida

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The Governance Institute

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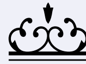

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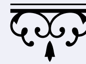

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Preface

The Governance Institute's Spring 2014 *System Invitational*, held April 6–8, 2014, at the Center for Advanced Medical Learning & Simulation (CAMLS) in Tampa, FL, brought together a distinguished group of faculty with 54 representatives from five health systems across the U.S. to discuss critical issues facing their organizations in today's rapidly changing environment. The meeting represented The Governance Institute's seventh invitational focused on governance and leadership within integrated care delivery systems. Such meetings are usually held twice a year, with sessions building upon the previous when applicable.

The inaugural *System Invitational* (held in the spring of 2011) focused on the unique and ever-changing business and governance needs of healthcare systems, featuring interactive plenary sessions and small-group discussions designed to prepare organizations for the future. After the meeting, The Governance Institute produced a white paper, entitled *System–Subsidiary Board Relations in an Era of Reform: Best Practices in Managing the Evolution to and Maintaining "Systemness."* This paper laid out concrete strategies for managing system–subsidiary board relationships, expanding on many of the themes and ideas covered in the meeting. The second *System Invitational* built on the first, focusing on promoting change and forging better relationships with key stakeholders, particularly physicians. The third gathering, held in the spring of 2012, continued this discussion, with an emphasis on the need to transition from volume- to value-based payments in partnership with physicians. The fourth meeting, held in the fall of 2012, focused on the need for constant or even accelerated innovation that simultaneously improves quality and reduces costs. The fifth meeting (spring 2013) addressed how to respond to the realities of the Affordable Care Act (ACA), including the evolving role of boards in an era of reform. The sixth (fall 2013) continued the reform theme, focusing on how to balance mission and margin in an era of accountable care. After each of these sessions, The Governance Institute published proceedings reports like this one that summarized key messages.

This most recent *System Invitational* returned to the theme of innovation. The need for innovation has never been greater in healthcare, as the status quo is not sustainable. Health systems must innovate or face the very real possibility of going out of business. Yet by its very nature, innovation involves change, risk, and stress, leaving many healthcare leaders to resist or ignore demands to innovate. This approach will not work. New entrants continue to enter the healthcare arena, bringing disruptive innovations that promise to change the industry in ways that cannot even be imagined. As Harvard Business School Professor and innovation expert Clayton Christensen, Ph.D., has noted, disruptive innovations turn complex and expensive services and products into simple, less expensive ones. These innovations do not simply change the rules of the game, but instead create an entirely new game with new requirements. Just as Southwest Airlines, Skype, Netflix, Pandora, and others have revolutionized their industries, new entrants are doing (and will continue to do) the same in healthcare; for example, the rapid rise in retail clinics and virtual visits promises to revolutionize the provision of primary care. Health system leaders need to respond to and embrace these innovations. And in doing so, they must avoid common traps that occur when large, entrenched organizations try to innovate, including the reluctance to shed or disrupt existing physical assets such as facilities and equipment (the physical trap), an excessive reliance on what has made the organization successful in the past and an associated tendency to ignore new competitive realities (the psychological trap), and an excessive focus on today's marketplace rather than future business models (the strategic trap).

This *System Invitational* brought together a tremendous faculty to assist health system executives, boards of directors, and clinical leaders in wrestling with the challenges associated with innovation. Held at CAMLS, the meeting also featured a tour of the center's state-of-the-art simulation and learning center. As with the previous sessions, this report summarizes the presentations and discussions from the meeting. Additional proceedings reports will be released after future meetings in our *System Invitational* series.

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Executive Summary

The Governance Institute's Spring 2014 *System Invitational*, held April 6–8, 2014, at the Center for Advanced Medical Learning & Simulation (CAMLS) in Tampa, FL, brought together a distinguished group of faculty with 54 representatives from five health systems across the U.S. to discuss critical issues facing their organizations in today's rapidly changing environment. This *System Invitational* returned to the important topic of innovation. The need for innovation has never been greater in healthcare, as the status quo is not sustainable. Health systems must innovate or face the very real possibility of going out of business. This section serves as a high-level summary of the presentations and discussion that took place at the meeting; additional details can be found in the main body of the report, which follows this summary.

Generating Innovation: Thinking Inside the Box

Larry Keeley, President and Cofounder of Doblin, Inc., a division of Deloitte Consulting, LLP, reviewed his company's findings on the "science" of innovation and how to effectively generate innovations inside an organization. While many leaders understand that the world is changing, relatively few know how to react to and take advantage of that change. Success requires the ability to innovate effectively. However, contrary to conventional wisdom, successful innovation is not about creativity. Too many leaders think that innovation comes from placing a group of people in a room and telling them to brainstorm new product ideas. This approach seldom works, and often these groups become dysfunctional. In fact, over 95 percent of innovation attempts fail. To succeed, innovation needs to be treated as a science rather than as art. In fact, an in-depth study of innovation by Doblin, Inc. yielded three critical findings that serve as a guide to those seeking to innovate:

- **Innovation comes in 10 types:** Research into more than 200 years worth of innovation suggests that there are 10 distinct types that fall into three categories (product configuration, product offerings, and customer experience). Most innovators focus primarily on product-based innovations, with little or no attention to the other types. However, successful innovators tend to integrate multiple types of innovations, typically employing five or more simultaneously, with representation from all three categories.
- **People want platforms, not products**: A platform is an integrated offering that creates a unique and holistic customer experience only loosely controlled by the platform owner. People want and need such platforms much more than they want or need new products. The best platforms make it easy to do hard things.
- **Leaders need to spot the moments that matter**: Good leaders notice when something is off balance. They also know when and how to evolve their business model and product and service offerings.

Mr. Keeley also shared seven steps to transforming innovation in healthcare delivery:

- Develop a consistent way to define, measure, and teach innovation.
- Periodically assess the innovation performance of every unit, department, function, and program.
- Identify and sponsor specific initiatives, ideally in partnership with those who benefit from them.
- Put incentives in place for senior executives to improve performance in the area of innovation.
- Use disciplined protocols to help teams succeed.
- Ensure that human resource leaders work with the heads of units and departments to identify those with high potential.
- Document, share, and deepen the initiatives to gain leverage across units and regions.

Innovation on the Human Experience of Care

M. Bridget Duffy, M.D., Chief Medical Officer of Vocera Communications, Inc., discussed the need for more humanized care and strategies for improving the human experience of care. Only about 20 percent of healing is linked to medical care and technologies, with the remaining 80 percent being driven by the quality of interactions and communications between the patient and physicians/nurses, the physical environment, and spirituality. Too many organizations lose sight of the 80 percent, and instead focus on technical competence, such as the quality of procedures. To improve the patient's human experience, health systems need to begin by improving the experience of those caring for patients (i.e., hospital staff and physicians). The goal should be to restore joy to the profession, so that clinicians and staff want to spend the rest of their professional careers at the same institution. To that end, Dr. Duffy offered the following "well-being checklist" to optimize the experience of physicians and staff:

- Reconnect people to their purpose (i.e., the original reason they went into the field of medicine).
- Address employees' spiritual and emotional needs.
- Improve the relationship between physicians and nurses.

- Create a healing environment, including taking steps to reduce stress and burnout among staff.
- Enable peak performance by staff.

Dr. Duffy also laid out five additional steps that healthcare leaders can take to foster innovation and transformation related to the patient experience:
- Align experience with quality and safety. Efforts to improve the patient experience must be front and center, not something dealt with "on the side."
- Build a relationship-based culture. The human resources department should take the lead on promoting improved relationships between and among physicians, nurses, staff, and patients.
- Infuse the voice of patients and families into the organization, and do so long before they come through the doors for service.
- Map the gaps between efficiency and empathy, and take concrete steps to close those gaps.
- Put science behind the human experience.

Most organizations have the resources available to focus on continuous improvement, but they need to be deployed in the right manner. The key to success is to focus on a few big things, not a hundred small ones. As a potential starting point for health systems, Dr. Duffy shared five low-cost innovations that various health systems have implemented that can make a significant difference in the patient experience. (Brief descriptions of these five low-cost innovations appear in the main body of the report.)

Following Dr. Duffy's presentation, *System Invitational* attendees broke into small groups in which representatives from each system discussed the major implications of the material she presented. Key points from this discussion include the need to do the following:
- Secure board and leadership support.
- Designate a chief experience officer.
- Create an internal transformation center.
- Engage the head of human resources.
- Improve physician–nurse and clinician–patient communication.
- Return to a sense of purpose.
- Encompass the whole family.
- Focus on staff experience first.
- Do not forget affiliated physicians.

Redesigning America's Healthcare System

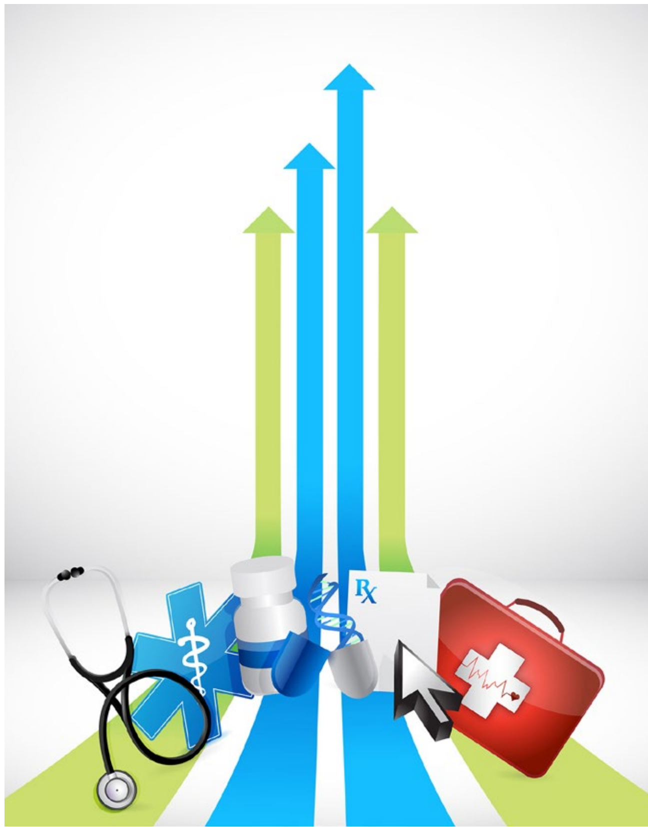
Elizabeth Teisberg, Ph.D., Professor at the Geisel School of Medicine at Dartmouth and Senior Associate at the Institute for Strategy and Competitiveness at Harvard Business School, discussed the need to transform the American healthcare system by resetting the compass from volume-based strategy to value-based strategy.

To succeed, the healthcare sector needs to organize around how value is created for customers (patients and families), as many businesses and services did a decade or two ago. In *Redefining Health Care,* Michael Porter and Dr. Teisberg analyzed eight principles for transforming healthcare to achieve a dramatic improvement in value. In practice, the authors have found that implementation starts with these five steps:
- Define services from patients' perspectives by condition or sector.
- Organize care delivery around solutions from the patient's perspective.
- Create multi-disciplinary teams.
- Measure results to accelerate learning.
- Align financial success with medical success through partnerships.

Engaging Multiple Partners to Transform Healthcare

Stephen K. Klasko, M.D., M.B.A., President of Thomas Jefferson University and President and CEO of Thomas Jefferson University Health System, discussed how his organization is engaging various stakeholders to transform healthcare over the next decade. Seeking to "do the impossible," Thomas Jefferson University Health System plans to look very different a decade from now than it does today. This transformation is already underway with efforts to create "doctors of the future" by changing how the medical school chooses and educates physicians. Traditionally, medical schools and residency programs choose applicants based on grade point average (particularly in science classes) and test scores, and then teach them in ways that do not emphasize teamwork or empathy. To address these issues, the University of South Florida (USF) School of Medicine and later Thomas Jefferson University School of Medicine began selecting students based in large part on their emotional intelligence and then changed the educational curriculum to focus on health system competencies and patient-centered care, taking the perspective of the whole patient and emphasizing patient autonomy, health literacy, teamwork, and cultural competency. (Dr. Klasko served as President of the USF School of Medicine before coming to Thomas Jefferson.)

Thomas Jefferson has also embraced entrepreneurship and entrepreneurial medicine, including a huge emphasis on delivering virtual care. These activities will yield a significant, positive return on investment (ROI) under at-risk payment systems (which will be the primary payment systems by this time) through reductions in length of stay and readmissions,



improved patient satisfaction, and increased engagement of referring physicians. The transformation of healthcare being led by USF and Thomas Jefferson also stems from a substantial investment in infrastructure to promote better care. For example, CAMLS works to assess physicians and nurses based on their competencies, including both technical and teamwork skills, and serves as a place where clinicians can learn and practice procedures and techniques in a simulated environment that closely resembles real-world clinical settings.

Getting from Here to There: A Journey Powered by Innovation-Driven Ecosystem

Praveen Chopra, Executive Vice President and Chief Information Officer at Thomas Jefferson University and Thomas Jefferson University Health System, built on Dr. Klasko's remarks about strategies for transforming healthcare. Mr. Chopra recently came to Thomas Jefferson from Children's Healthcare of Atlanta, an organization that is transforming the delivery of pediatric care through use of information technology (IT) to ensure that practitioners have access to the right information at the right time, regardless of where they practice. The organization routinely makes use of IT to register patients in advance of visits and collect information about their medical history to ensure that providers have all the relevant information they need before deciding on the appropriate treatment. The information is available to any provider who might treat the patient, even an out-of-town doctor treating a patient on vacation. The effort began with development of a clinical data repository covering the inpatient and ambulatory settings. Over time, it has expanded to include a health information exchange that spans all healthcare settings throughout the state. These strategies have already paid substantial dividends, as Children's Healthcare of Atlanta has seen significant declines in alert fatigue and medication errors (which both fell by 70 to 80 percent), which in turn has resulted in a roughly 12 percent decline in pediatric mortality rates.

Under the leadership of Dr. Klasko, Thomas Jefferson University Health System is pushing the idea of transformation even further. Under an initiative known as "Jefferson 3.0," system leaders are putting in place an organization where patients and families truly do come first. Through innovative partnerships and the use and creative deployment of new technology, Thomas Jefferson is developing a seamless clinical enterprise. Rather than emphasizing the provision of healthcare services, the system now focuses on promoting the health of individuals, relying on team-based care rather than autonomous physicians.

Case Study: Kodak and the Digital Revolution

Stephen W. Kett, Senior Program Director of The Governance Institute, led a discussion of Eastman Kodak Company, an iconic American company founded in 1884 by George Eastman. The company filed for bankruptcy on January 19, 2012. Yet at one point, it amassed huge profits due to its dominant market share in both film (90 percent) and cameras (85 percent). *System Invitational* attendees highlighted key factors in Kodak's decline:

- **Fear of disruptive innovation:** Even though Kodak had highly talented engineers and researchers who developed a variety of potentially revolutionary products, the company's leadership feared disruptive innovation and resisted marketing these products aggressively.
- **Underestimating the competition and not understanding the consumer:** For many years, Kodak faced no real competition. When potential competitors eventually did arrive, company leaders viewed their products as inferior and underestimated how consumers would respond.

The Kodak case study offers a number of lessons for the leaders of health systems:

- **Recognize and respond to the rapidly changing business model**: Unlike Kodak's leaders, health system leaders must recognize and embrace a changing business model where traditional sources of revenue and profits, including use of hospital services and face-to-face visits, are fading away and being replaced by new care settings, including virtual visits and retail clinics.
- **Accept short-term pain for long-term gain**: Just as Kodak should have been willing to cannibalize its main business line, health system leaders need to aggressively reengineer care delivery and manage population health, even if doing so results in some loss of revenues in the near term.
- **Do not assume customers will remain loyal**: Like Kodak's leaders, some health system leaders believe that consumers will not accept "inferior" care from nurse-led retail clinics. However,

the services offered by these clinics rival those provided in traditional health settings, and they tend to be more convenient and less expensive. Consumers are flocking to them.

- **Focus outward, not inward**: When Kodak finally decided to innovate, it did so with its own people, operating within the same entrenched culture. This approach was doomed to failure.
- **Engage middle managers**: Even if the board and administrative leaders understand the need for innovation, the rest of the organization may not. Health systems cannot transform themselves unless all key stakeholders, including physician leaders and middle managers, are on board.
- **Do not wait for the "perfect" moment**: There is never a perfect, pain-free time to innovate, and it is better to err on the side of being early than late.
- **Embrace big, bold change**: Kodak's leaders believed in slow, incremental change over time during a period when rapid, bold change clearly was in order.

Innovations in the Uses of Social Media in Healthcare

Lee Aase, Director of the Center for Social Media at Mayo Clinic, discussed the use of social media in healthcare. He reviewed the wide array of available social media platforms (e.g., blogs, podcasts, wikis, YouTube, Twitter), the vast majority of which can be used at little or no cost.

Among healthcare organizations, Mayo Clinic has been a pioneer in the use of these platforms, and these efforts have contributed to the organization's strong brand image and reputation among consumers. Social networking has been a part of the organization's "DNA" since its foundation. In fact, social networking at Mayo began 150 years ago with a newspaper announcement placed by Dr. William Worrall Mayo about the opening of a new practice. Since that time, other initiatives have included launch of a syndicated news media resource that includes television, radio, and newspaper, and the development of thousands of podcasts and videos that are widely distributed via social media. Mr. Aase shared four specific examples where use of social media has generated a significant, positive ROI for the organization:

- A significant increase in referrals of patients with a rare blood cancer (myelofibrosis) after release and widespread distribution via social media of a short video about the disease
- A significant increase in referrals for a new type of surgery to repair a specific wrist ligament injury after release via social media of various news stories about the procedure, including how it helped save a prominent professional baseball player's career
- Use of internal social networking to eliminate the need for in-person team meetings
- Development and distribution via social media of patient education videos that have eliminated the need for some office visits

In 2009, Mayo's incoming CEO (John H. Noseworthy, M.D.) sent out an email suggesting that Mayo's leadership team consider whether an even bigger investment in social media was warranted. In July 2010, the Mayo Clinic Center for Social Media opened. Its purpose is to improve health globally by accelerating the effective application of social media tools throughout Mayo Clinic, and by spurring broader and deeper engagement in social media by hospitals, medical professionals, and patients. Key lessons from Mayo's experience in social media include the following:

- **Do not let perfect be the enemy of the "good enough":** The goal should be to make resources available to patients, even if the video quality is not professional grade.
- **Think big, start small, and move fast™:** The official motto of the Mayo Clinic Center for Innovation, this approach helps to ensure that social media and social networking are used to their maximum advantage.
- **Focus on platforms with at least 10 million users:** With hundreds if not thousands of potential social media platforms, it becomes impossible to have a presence on all of them. The best strategy is to concentrate on those that have at least 10 million users.

Generating Innovation: Thinking Inside the Box

Larry Keeley, President and Cofounder of Doblin, Inc., a division of Deloitte Consulting, LLP, reviewed his company's findings on the "science" of innovation and how to effectively generate innovations inside an organization.

A Period of Intense, Rapid Change

Sociologists believe that humans today are living in one of the most intense periods of change in the history of mankind. Infants born today will experience significantly more change during their lifetimes than their parents did. Much of this change has been and will continue to be driven by new innovations and technologies that make access to information much easier by connecting people and organizations around the globe. For example, consider the rapid rise of YouTube as a way to share videos. Every minute of every day, 100 hours of new videos are uploaded to YouTube. Even after filtering out those that have no relevance, the typical individual will find that 6.8 days of new, useful information becomes available free of charge on YouTube each day.

The availability of all this information stimulates rapid, substantial change. In fact, the pace of innovation continues to accelerate, with more change having occurred in the last three to four years than occurred in the past several decades. Companies like Google use huge amounts of information to conduct predictive analytics, and in doing so accomplish tasks that previously seemed impossible, often at very low cost. For example, Google provides real-time traffic information by inferring information from the movement of cell phones, movements that users of Android phones have given Google permission to track. Whereas in the past commuters would turn on the radio in hopes that the traffic report might magically report on congestion along their route at the precise moment they need it, now they access real-time information on their route through Google's system. Using similar analytic techniques, Google can now predict with 82 percent accuracy the box office take for a movie two weeks before it opens, a level of precision that experts in Hollywood have never been able to achieve, even after decades of trying. To do so, Google uses brute-force arithmetic, making projections based on how many people conduct Internet searches on the movie, watch the movie trailer, etc. Inspired by the work of an analyst employed by the Oakland Athletics baseball team (portrayed in the book *Moneyball* and the movie of the same name), similar advances have been made in sports management, with detailed statistics being used to analyze various players' value and to design effective plays and strategies.

The same kind of predictive analytics can be used in the healthcare arena to improve outcomes and manage costs. To that end, IBM provides Atul Gawande, M.D., with an annual research budget to apply predictive analytics to improving health and healthcare in communities. Using these funds, analysts investigating Camden, NJ, found specific neighborhoods responsible for the area's very high healthcare utilization and costs. Two buildings in particular stood out as home to many of the city's heaviest users of services. In one building, 332 residents were responsible for over 1,400 visits a year, at a cost of $65,000 per person. Because few residents had any type of coverage, collection rates for these services averaged only 16 percent. To address this issue, the city opened clinics in the two buildings that offer free preventive, primary, and chronic care services, with the goal of keeping residents healthy and avoiding unnecessary acute episodes.

Online and social networks often serve as the catalyst for rapid change. For example, at any given moment, between six and 11 million individuals (mostly adolescent males) play the game World of Warcraft. To survive in the game, players become part of self-organized, self-optimized "guilds." With more than 50 billion hours of collective play thus far, each day brings roughly 20,000 advances in the state of play. Few, if any, activities in human history have ever exhibited this rate of change. This same type of learning network can be applied in healthcare, leading to better care of chronic diseases such as diabetes and better management to control the spread of infectious disease. In fact, some of the world's best infectious disease specialists are studying human behaviors related to playing the World of Warcraft to better understand how and when humans learn to change behaviors in the face of health epidemics.

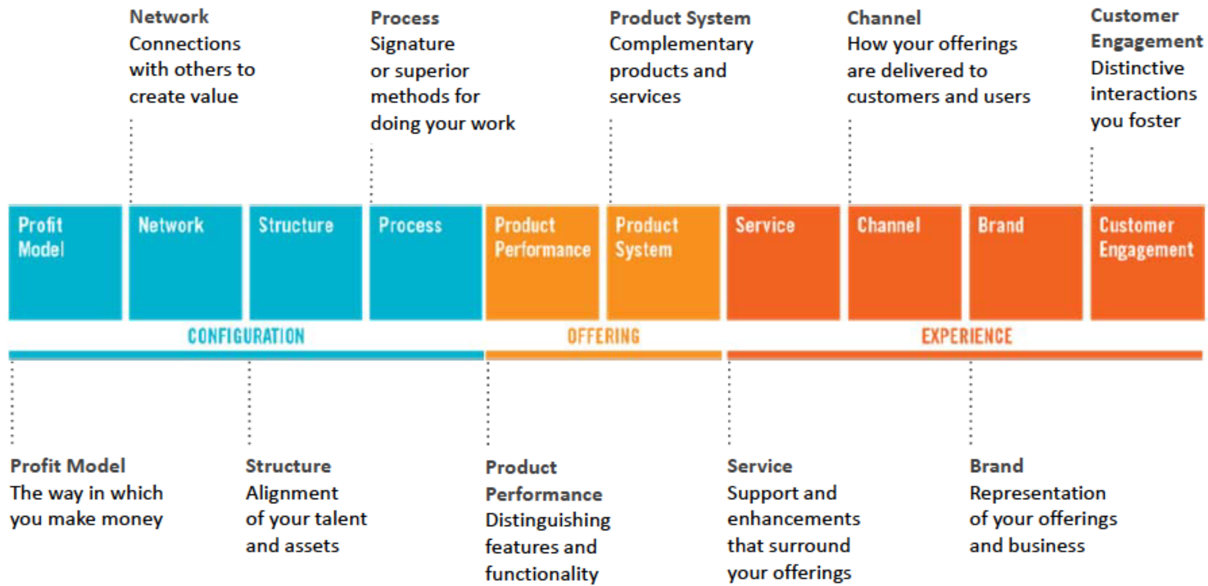
Preparing for and Capitalizing on Change

Sometime soon, the world of healthcare will likely be completely unrecognizable to those in the field today, just as the boats that raced in the most recent America's Cup were completely different than any boat that previously raced. Consequently, the leaders of healthcare organizations must be prepared for a world that can change so quickly. While many leaders understand that the world is changing, relatively few know how to react to and take advantage of that change. Success requires the ability to innovate effectively. However, contrary to conventional wisdom, successful innovation is not about creativity. Too many leaders think that innovation comes from placing a group of people in a room and telling them to brainstorm new product ideas. This approach seldom works, and often these groups become dysfunctional. Rather, innovation is more science than art, and understanding that science can make successful innovation much easier. In fact, as detailed below, the study of innovation has yielded three critical findings that can serve as a useful guide to those seeking to innovate.

Finding #1: Innovation Comes in 10 Types

Research into more than 200 years worth of innovation suggests that there are 10 distinct types, and understanding these different types makes it much easier for individuals and organizations to conceive of breakthrough innovations. Many

Exhibit 1. 10 Types of Innovation



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leaders try to solve problems through quick fixes, such as hiring someone, looking for a "hot" new product, using social media, implementing new processes such as Lean, declaring that the organization should become risk adverse, and/or deciding to "crowd source" new ideas. These strategies are unlikely to work. In healthcare parlance, innovation is the equivalent of major surgery. Success requires an unbelievably skilled team where everyone is very well trained and able to orchestrate brilliantly. Virtually every successful innovation in the world has come from these kinds of well-functioning teams.

> "There is a massive gap between people who know how to make innovation work and those who are fooling themselves by using out-of-date lore that needs to be replaced with science-based logic."
>
> —*Larry Keeley, President and Cofounder, Doblin, Inc.*

Innovation is now an emerging science that can be mastered. Doblin, Inc. has invested more than $6.8 million in research and development on innovation, the results of which have been published in a concise guidebook.[1] The book covers how to create successful innovations and develop competence in the field of innovation. It helps teams move beyond myths to specific methods and tactics that work. As depicted in **Exhibits 1** and **2**, the 10 types of innovations fall into three distinct categories (designated by different colors on the exhibits): product configuration, product offerings, and customer experience. Descriptions of the 10 types of innovations appear in **Exhibit 1**, and examples of companies that have been successful with each appear in **Exhibit 2**.

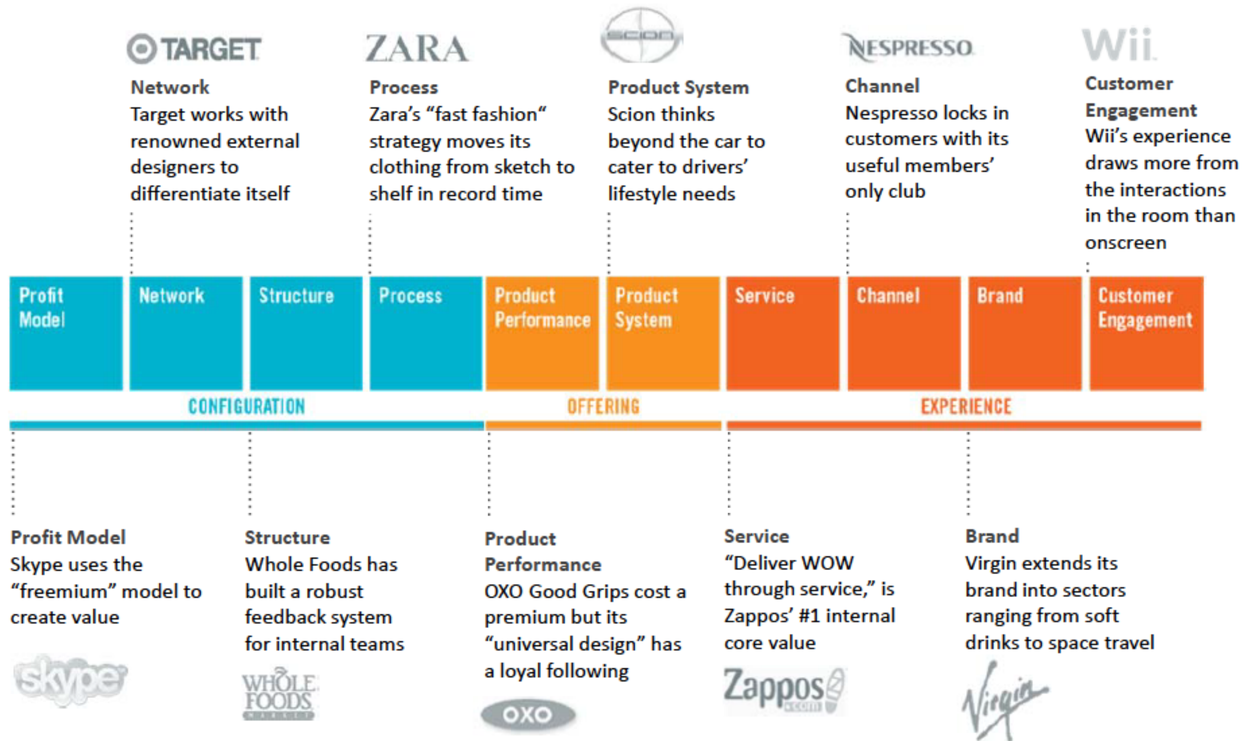
As depicted in **Exhibit 3**, most innovators focus primarily on product-based innovations, with little or no attention to the other types. However, successful innovators tend to integrate multiple types of innovations, typically employing five or more simultaneously, with representation from all three categories. These innovators work more evenly across their business system to create lasting advantage, typically using twice as many types of innovation and a much richer mix.

Over 95 percent of innovation attempts fail, often because leaders place a group of untrained people in a room and tell them to "go nuts" and "be creative." Organizations that are serious about innovation take a very different approach. As noted, they tend not to focus on product performance, but instead make use of a broader array of innovation types. As **Exhibit 4** depicts, successful innovators are four-and-a-half times more likely to employ business model innovations, three times more likely to use partnering/network and structure innovations, and nine times more likely to use structure-based innovations focused on how to attract, measure, reward, and inspire talent.

An analysis of the historic stock price performance of companies suggests that those that have been the most successful innovators have outperformed those that have not, even during the recent recession. In an analysis of 138 companies (depicted in **Exhibit 5**), the 45 that used five or more types of innovations performed the best in terms of stock price. The 59 companies that used three or four types of innovations

1 L. Keeley, et al., *Ten Types of Innovation: The Discipline of Building Breakthroughs,* John Wiley & Sons, Inc., 2013.

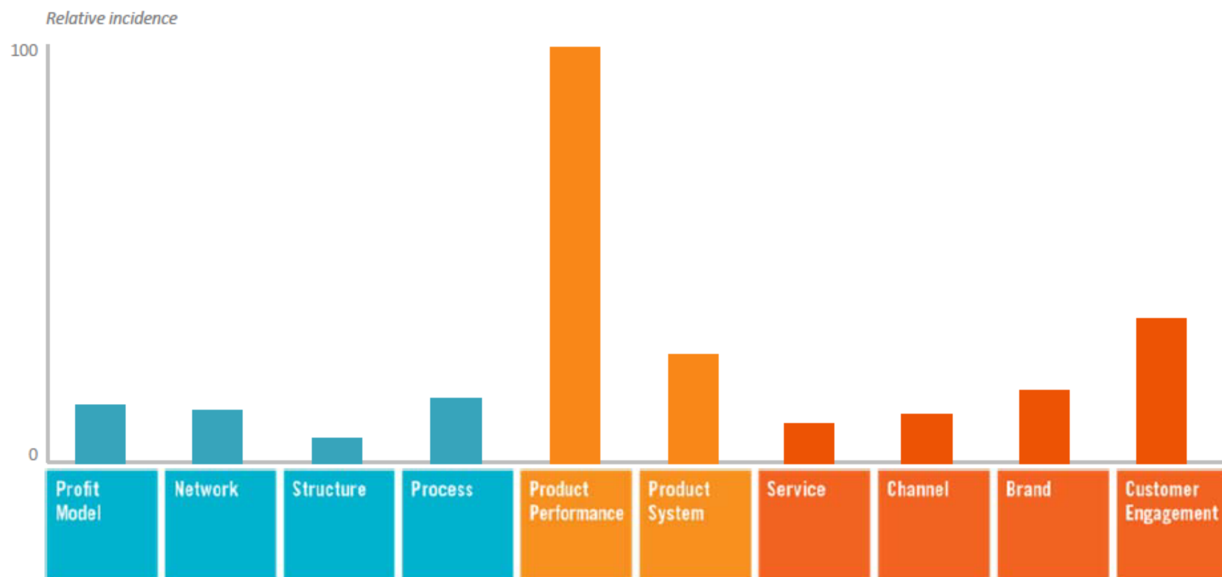
Exhibit 2. Examples of Successful Innovators



Source: ©Doblin, Inc.

Exhibit 3. Product-Based Innovation Isn't Enough

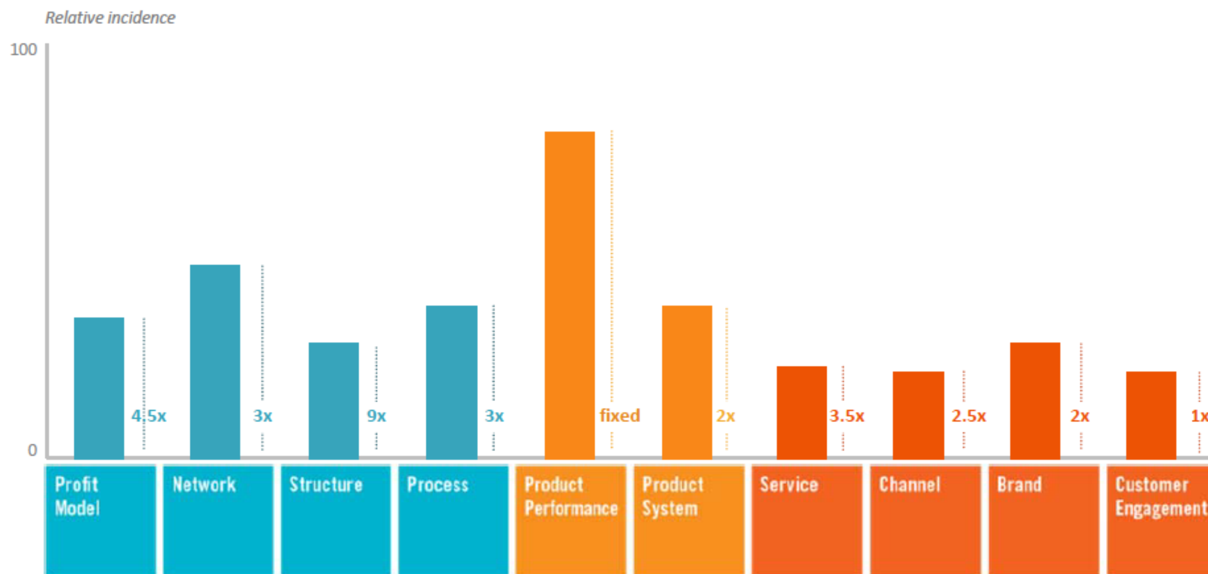
The average innovator pursues product-based innovation and seldom integrates other types.



Source: ©Doblin, Inc.

Exhibit 4. Successful Innovators Employ More Types of Innovation

The most successful innovators work more evenly across their business system to create lasting advantage, typically using **twice as many types** with a **much richer mix**.



Source: ©Doblin, Inc.

performed slightly worse, and the 34 using one or two types underperformed. However, all three groups outperformed the larger group of companies that make up the S&P 500 index as a whole. It is important to note that using more types of innovations does not mean implementing more innovations. The most successful innovators implement a few big ideas rather than many small ones. Consequently, the focus should not be on the number of ideas, and leaders should not charge teams with coming up with huge lists of ideas, since the vast majority of them will never see the light of day.

> "Put simply, a great platform makes it easy to do hard things, typically free of charge. To develop one, companies need to do more than put a group of people together in a room to brainstorm for an afternoon."
>
> —*Larry Keeley, President and Cofounder, Doblin, Inc.*

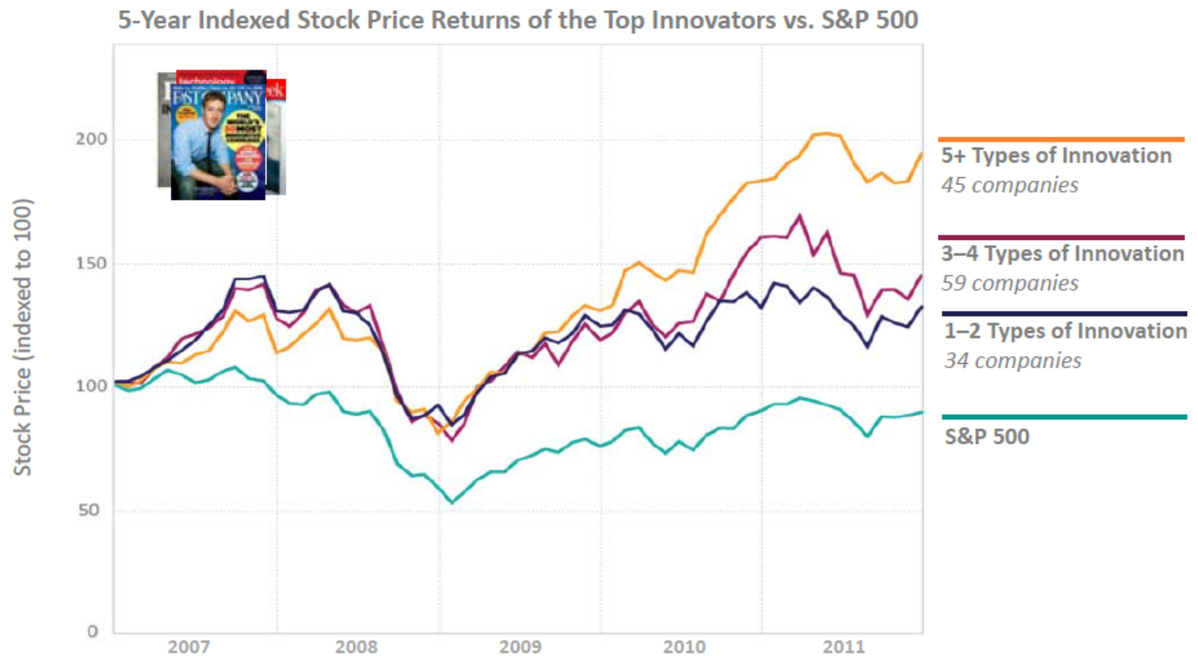
Finding #2: People Want and Need Platforms, Not Products

A platform is an integrated offering that creates a unique and holistic customer experience only loosely controlled by the platform owner. People want and need such platforms much more than they want or need new products. The best platforms make it easy to do hard things, and most customers want their lives to be made easier. Most platforms cut across companies and markets, leveraging the inter-connectedness of the world. Platforms tend to be anchored by proprietary technologies, and they leverage interdependent products and services provided through a network of business partners who share costs. The most innovative platforms carefully orchestrate use of five or more different types of innovations to create an entirely new ecosystem.

Google, Apple, Facebook, Yahoo, Amazon, Zagat, YouTube, Craigslist, and others have figured out how to develop such platforms for consumers, turning them into integrated, worldwide franchises. The least valuable of these franchises is worth $1 billion, with many being worth tens of billions. Other companies, including Microsoft, SAP, and Oracle, have developed business-to-business platforms worth at least $10 billion each (and often much more). Not content with being a computer-based search engine, Google has employed nine different types of innovations to allow for searching on mobile devices on its Android platform. Similarly, Starbucks has reinvented a product category, turning coffee drinking into a customer experience, thus enabling the company to charge prices three to four times the commodity price of coffee. Starbucks also created an innovative payment system where customers "prepay" for their coffee by purchasing a card, helping the company to generate billions of dollars in cash. Together, these platforms mean that millions of customers agree to pay a premium price for coffee, with many of them paying for it in advance. After initially resisting innovation, Nike has created integrated franchises that make it easier for consumers to achieve their goals. For example, the company put sensors in its shoes and apparel and developed related applications that allow consumers to track their progress versus pre-set physical activity goals. In so doing, Nike created brand-new classes of athletic shoes and apparel.

Exhibit 5. Results of Using More Types of Innovations

Integrating more types of innovation delivers superior financial returns



Source: ©Doblin, Inc.

Within healthcare, some of the most impressive platforms have been developed by veterinarians, including insurance products and integrated care plans. Overseas companies are also driving innovation in the healthcare arena. For example, the Aravind Eye Care System in India can profitably deliver LASIK eye surgery on a sliding-fee pay scale that ranges from $10 to $100 an eye, less than the cost of a pair of glasses. Product innovation is also occurring in the area of three-dimensional printing, which is being used to make customized vertebrae implants that offer improved performance at lower cost. Looking ahead, the industry will likely see a revolution in use of custom-built products for individuals based on their unique needs.

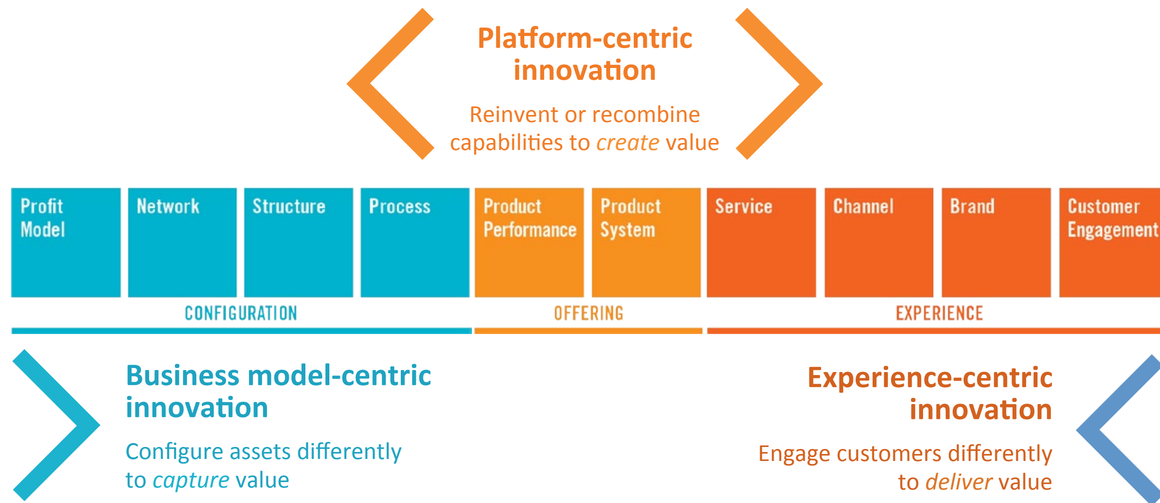
For health systems, however, the most important innovation in the industry is coming from Walgreens and other large companies that are becoming more aggressive in serving and competing with traditional healthcare organizations. These companies are rapidly expanding their networks of neighborhood health centers, aggressively using pharmacists to coach and educate patients, and developing top-notch technological applications to help coordinate care and support those with chronic illness.

Looking ahead, other competitors from outside the industry will also introduce disruptive technologies into healthcare. For example, IBM's Watson computer may someday supplement and/or replace physicians in figuring out how to diagnose and treat patients. In fact, Watson recently passed board exams, and is being adapted for use by several major organizations, including Memorial Sloan Kettering Cancer Center and WellPoint. In an experiment at Memorial Sloan Kettering, Watson caught things that the best oncologists in the world could not, including diagnosing a rare cancer in a Japanese patient based on information in a recently published article that none of the doctors had seen. As a result, the patient's cancer was caught much earlier than it otherwise would have been, giving the patient a better prognosis and avoiding the use of unnecessary, expensive, and potentially harmful tests and treatments. Ultimately, Watson's use of cognitive computing will be adapted to many aspects of medicine, initially to support physicians by telling them which cases merit special attention and what co-factors matter the most. Watson will also help doctors keep up with the ever-increasing amount of clinical knowledge available today. WellPoint has plans to partner with IBM to use Watson's analytical capabilities to help physicians diagnose patients and chart a course of treatment.

From its research into more than 14,000 innovations, Doblin, Inc. has identified 115 tactics or building blocks to innovate effectively. Collectively, these tactics span the 10 different types of innovations. (Mr. Keeley made the complete list of building blocks, including a brief description and an example of each, available to *System Invitational* attendees.) Literally all complex innovations can be deconstructed into these modular tactics. For example:

- Kaiser Permanente developed a set of national registries to allow its various locations to share data and experiences so as to improve the odds of achieving the best possible outcome

Exhibit 6. Using the 10 Types of Innovation Strategically



Source: ©Doblin, Inc.

for each patient. Registries have been developed for heart valve replacements, spinal surgery, cardiac implantable devices, anterior cruciate ligament reconstruction, and other procedures. Kaiser also developed a mobile health clinic that brings preventive and primary care to enrollees who would otherwise have difficulty accessing such services.

- Jefferson Health System developed a clinical skills and simulation center that makes use of five different types of innovations, and has partnered with a health plan to create a value-based incentive program for physicians.
- Geisinger Health System developed the ProvenCare model, which consists of six different types of innovations. Under this model, Geisinger offers a fixed price for bypass surgery that includes 90 days of post-procedure care, along with a "guarantee" that covers any problems that arise during that 90-day period, including the need for a readmission or second surgery. This program is very similar to one offered by GE Aviation for its airplane engines. Rather than selling $30 million engines to financially struggling airlines, GE bought back the engines and sells them to the airlines on a per-hour basis. The per-hour fee includes a guarantee that no engine will be out of service for more than an hour of unscheduled maintenance. Both Geisinger and GE use the same four tactics as part of these innovations—risk sharing, predictive analytics, product bundling, and a guarantee.

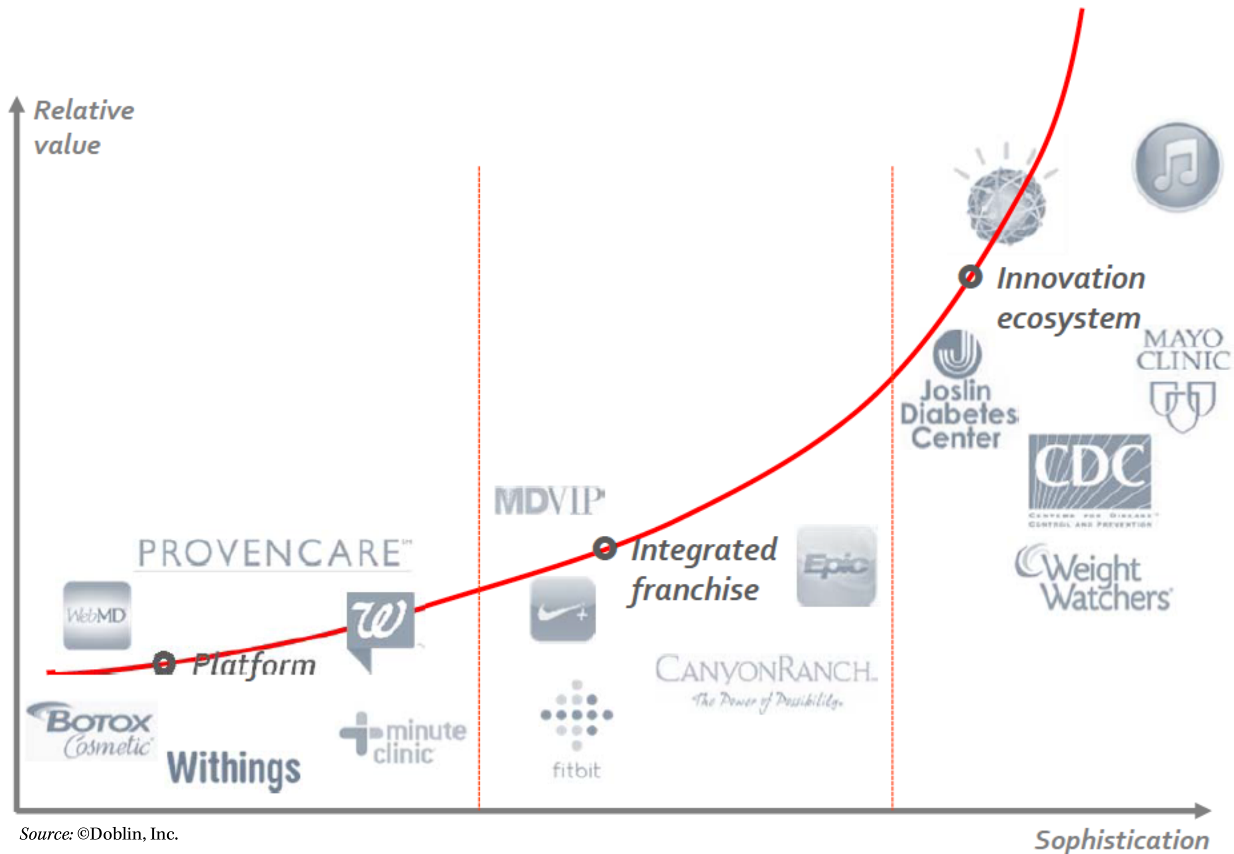
Finding #3: Leaders Need to Spot the Moments That Matter

Good leaders notice when something is off balance. As shown in **Exhibit 6**, the balance is shifting in healthcare and in other industries within each of the three major categories of innovation. Innovators are developing better business models and are focused on ways to improve platforms and build a better customer experience by engaging the consumer in a different way.

Good leaders know when and how to evolve their business model and their product and service offerings. For example, Amazon revolutionized the bookstore business. However, Amazon's leaders always wanted to sell more than just books. In fact, since Amazon's founding, an arrow has appeared in the company's logo that connects the letters A and Z, making it clear that the company always intended to sell everything to consumers and be the world's largest retailer. To that end, Amazon recently introduced its Amazon Prime service, where consumers pay $79 a year for unlimited free two-day shipping on all orders (even small ones), along with free instant streaming of movies and television shows and the ability to download any of 350,000 items to Amazon's electronic reader. At its surface, this strategy seems to lose money, as it costs Amazon more than $79 to provide these services. However, analysis suggests that those who sign up for Amazon Prime spend 2.4 times more each year from Amazon than they did before signing up. Having spent the $79, Amazon Prime customers feel a psychological need to get the most out of the service, so they tend to buy more goods from Amazon. Consequently, Amazon makes a $78 annual profit on each person who signs up for the service. Amazon leaders plan to raise the fee to $99 next year, and they strongly believe that the price increase will lead to further increases in Amazon purchases by those who pay the fee.

As the Amazon Prime example makes clear, business models really matter. AT&T has learned this lesson as well. The company's new "connected-car" program combines six distinct tactics and six types of innovations to serve customers who want to remain connected (safely) while in the car. Similarly, Google leaders have recognized the opportunity to connect home appliances to the Internet, thus leveraging the ecosystems of customers and collaborators to simplify people's homes and lives.

Exhibit 7. Understanding Ideal Options for Sophisticated Innovation



Source: ©Doblin, Inc.

Those seeking to take advantage of the world's interconnectedness and the move to mobile technologies in healthcare should look to these models, as there is much to be learned from them. In fact, the single biggest change stems from the nature of the interconnected world. Innovators need to produce platforms, not products, as a good platform makes it easier for a patient to do what he or she wants with little friction and at low cost. Platforms, in turn, will drive the growth of integrated franchises rather than isolated offerings. These franchises build on platforms to better fit into modern, connected, digital lifestyles, offering complete solutions. Ultimately, these franchises foster development of "innovation ecosystems" (rather than markets) that align the actions of many firms around something important, creating a fundamentally new way of doing business. As illustrated in **Exhibit 7**, these ecosystems deliver much more value to consumers.

Lessons Learned

Innovations are much easier to achieve and sustain when one uses tools and protocols specifically designed to foster success. Doblin, Inc. and Deloitte have developed these protocols, including a set of questions that teams can answer as they embark on their work. Essentially the opposite of traditional brainstorming, this structured approach (see sidebar) allows the team to go deep into one or a few big ideas, rather than blindly developing a lengthy list of small ideas.

Seven Steps to Transforming Innovation in Healthcare Delivery

1. Define, measure, and teach innovation consistently, so that both the topic and the associated performance goals are unambiguous.
2. Periodically assess every unit, department, function, and program with respect to its performance in the area of innovation.
3. Identify and sponsor specific innovation initiatives, ideally in partnership with those who will benefit from them.
4. Put incentives in place for senior executives to improve their performance in the area of innovation. Incentives should be a combination of bonuses, awards, and other mechanisms designed to foster a deep commitment to sustained innovation.
5. Use disciplined protocols to help teams succeed. Tools must be available to track performance over time, including successes and failures, thus keeping benefactors engaged.
6. Ensure that human resource leaders work with the heads of units and departments to identify those with high potential, as these individuals drive innovation.
7. Document, share, and deepen the initiatives to gain leverage across units and regions. Celebrate and reward the success of teams and those that sponsor them.

Innovation on the Human Experience of Care

M. Bridget Duffy, M.D., Chief Medical Officer of Vocera Communications, Inc. discussed the need for more humanized care and strategies for improving the human experience of care.

The Need for More Humanized Care

During her last week of residency training 20 years ago, Dr. Duffy sat at the foot of a patient's bed after having been up all night. She watched as a whole cadre of clinicians and other staff came into the room, checked on something, and then left, all without talking to the patient or family. Each focused on some specific body part or other aspect of the patient's care, showing no concern for the patient as a living, breathing human being with unique concerns, fears, dreams, and ambitions.

This experience served as a wake-up call for Dr. Duffy, after which she approached hospital leaders about the idea of creating an "inpatient navigator" position. These conversations ultimately led to the development of a hospitalist model designed to humanize the patient experience. Since that time, hospitalists have become the standard of care in most hospitals, but over time the model has broken down and now hospitalists can be a source of dissatisfaction from the patient's perspective.

Earl Bakken, the founder of Medtronic and the inventor of the pacemaker, has called on Dr. Duffy and other thought leaders to accelerate innovations that improve humanity. Mr. Bakken has been a long-time mentor to Dr. Duffy ever since she called him during that pivotal last week of her residency training seeking guidance and hope after reading an article he wrote about building the most healing hospital in America.

During that call, Mr. Bakken told Dr. Duffy that only 20 percent of healing is linked to medical care and technologies, with the remaining 80 percent being driven by interactions and communications between the patient and physicians/nurses, the physical environment (e.g., the quality of the food, the cleanliness of the room), and spirituality, including the ability of people to tap into what they need to heal. Too many organizations lose sight of the 80 percent, and instead focus only on technical competence, such as the quality of procedures.

Dr. Duffy cofounded ExperiaHealth, acquired by Vocera Communications, and the Experience Innovation Network, which has partnered with the Clinical Excellence Research Center at Stanford, headed by Arnold Milstein, M.D., to accelerate the design and adoption of innovations that improve the patient, family, and staff experience. Recognizing the strong link between physician/staff well-being and patient satisfaction and outcomes, the group focuses on helping organizations identify a checklist of Always Events® to improve the experience of hospital staff and physicians. The goal is to achieve the "quadruple aim," which adds "joy" to the traditional Triple Aim of delivering high-quality, low-cost, person-centered care. By restoring joy back to the profession, clinicians and staff will want to spend the rest of their professional careers at the institution. Below is a "well-being checklist" designed to optimize the experience of physicians and staff:

- Reconnect people to their purpose (i.e., the original reason they went into the field of medicine).
- Address employees' spiritual and emotional needs, so that they do not have to "check their souls" at the door each day.
- Improve the relationship between physicians and nurses, including ending the excessive reliance on communicating through notes in the electronic medical record (EMR). In many hospitals, EMRs undermine the quality of communications, with nurses no longer having the opportunity to tell the patient's "story" to the doctor. At some hospitals, new technologies are destroying the quality of nurse–physician interactions, and patients are taking note.
- Create a healing environment, including taking steps to reduce stress and burnout among staff. For example, hospitals can create a "respite room" for staff to take a break and recover after a patient dies. (Loved ones are not the only ones who need to grieve.)
- Enable peak staff performance. Healthcare organizations need to focus on improving the employee experience before focusing on improving the patient experience to create real and lasting change.

Five Steps to Healthcare Innovation and Transformation

Dr. Duffy outlined five steps for healthcare leaders to foster innovation and transformation related to the patient experience:

- **Align experience with quality and safety**. Efforts to improve the patient experience must be front and center, not something dealt with "on the side." To that end, the board should set up a subcommittee focused squarely on innovation designed to improve the human experience, including that of employees, physicians (both employed and affiliated), and patients.
- **Build a relationship-based culture**. The human resources department should take the lead on promoting improved relationships between and among physicians, nurses, staff, and patients.
- **Infuse the voice of patients and families into the organization**, and do so long before they come through the doors for service. Patients and families should be given personalized approaches based on their unique needs. Rather than spending all one's time fixing what is broken ("service recovery"), put time and effort into creating the right systems in the first place.
- **Map the gaps between efficiency and empathy**, and take concrete steps to close those gaps.
- **Put science behind the human experience**.

Most organizations have the resources available to focus on continuous improvement, but they need to be deployed in the right

Exhibit 8. Levels of Experience Transformation

Source: ©Vocera Communications, Inc.

manner. The key to success is to focus on a few big things, not a hundred small ones. As outlined in **Exhibit 8**, the goal should be to, over time, deepen the organization's commitment to improving the human experience and enhance its ability to execute on that commitment. By achieving success on both fronts, the organization can differentiate itself in the minds of current and prospective staff, clinicians, and patients.

The human experience of care connects five pillars: quality, service, finance, people (patients, family members, employees, physicians), and growth. Today, employees often feel exhausted and note that their jobs resemble working on an assembly line. As noted, technologies designed to make things better, like the EMR and other forms of IT, often end up damaging the quality of physician–nurse and clinician–patient communications. Feeling overwhelmed, those on the front lines of care often display little or no empathy. For example, those staffing the front desk typically seem to care only about collecting insurance information and making sure that patient has a living will in case he or she dies. It should be no surprise that anxious and nervous patients who are about to undergo a major procedure often find such questions and attitudes to be inappropriate and off-putting.

To address this problem, organizations can revamp the focus of these staff members, charging them with being the "directors of first impressions" who treat the patient as a human being by displaying genuine empathy and concern and doing whatever they can to reduce their level of anxiety. It is important to remember, however, that the employees may not be responsible for today's poor performance; rather, the current system can make it difficult or even impossible for them to play the role they should be playing. Consequently, achieving this transition requires a change in the way the organization hires, trains, evaluates, and rewards frontline staff.

To succeed, organizations need to combine efficiency and empathy to create a great human experience, which in turn fosters customer loyalty and organizational growth. Through use of Lean and other processes, organizations can enhance efficiency by improving workflows and quality- and safety-related processes and by stripping out waste. At the same time, they need to improve empathy by emphasizing high-quality communications and relationships. Success requires making a good first impression during registration, ensuring patient- and family-friendly communication throughout the care process, and making a good lasting impression by connecting to patients and family members in ways that create lifelong loyalty.

Accomplishing these goals requires more than a traditional patient advisory council. Rather, health system leaders need to listen on a regular basis to the voice of the patient and family, including through social media. The goal should be to figure out what is broken and why (i.e., the root cause).

In many cases, there will be "mavericks" within the organization who can lead needed transformation. These mavericks should be unleashed to tackle the problem areas; they should be honored and protected rather than "shot down" by naysayers wedded to the status quo. Some thought leaders and progressive organizations assist these individuals in jumpstarting their ideas.

Five Low-Cost Innovations That Meet These Criteria

As a potential starting point for health systems, Dr. Duffy shared five low-cost innovations that various health systems have implemented that can make a significant difference in the patient experience, described below.

1. Informed Hope

As part of the informed consent process, most patients hear about everything that can possibly go wrong during a procedure. But they seldom hear about all the good things that might occur. To address this issue, some enlightened health systems have implemented "informed hope," in which patients are asked about their fears, hopes, and goals and are told about all the things that can go right as a result of the procedure. Providing informed hope takes little time or effort, yet has a significant impact on a patient's peace of mind, and in turn, their safety, satisfaction, and outcomes. One patient undergoing aortic valve surgery noted that her goal was to return to participating in water aerobics four days a week and to celebrate her 94th birthday with her children (something she did a few weeks after the procedure).

2. Code Lavender™

Where Code Blue is called to initiate a rapid response team to resuscitate a patient's heart, lungs, and brain, a Code Lavender™ is called to send healing thoughts and prayers to patients and staff who need emotional, spiritual, and physical support. Originally conceived for patients or family members who were going through a particularly difficult decision or transition, Code Lavender was extended at the request of an insightful nurse who recognized the need of her fellow staff members to receive healing support when they removed several long-term patients from life support. At its simplest, Code Lavender is a call to acknowledge the profound emotional needs of those who work or seek care in the hospital.

3. Sacred Moment

A Missouri hospital found that patient satisfaction with the admission and registration process at its hospital was quite low. To address the problem, the hospital created the "sacred moment on admission," which hardwired five questions into the EMR and instructed a charge nurse to ask these questions as a standard part of the admissions process. The questions focused on the five things that mattered most to the patient, including their biggest fears and concerns, who should serve as the family navigator, how to communicate with that person, food- and nutrition-related requests, and what other help or support the health system could provide to promote the healing process. Within six months of implementing this program, patient satisfaction scores rose by 117 percent, climbing from the 30th to the 80th percentile. Physician satisfaction also improved (to the 95th percentile), as did employee satisfaction and the quality of physician–nurse relations.

4. Pizza Tracker

Domino's pizza can provide customers with a precise update at any time on the status of their pizza order, such as how far it is in the cooking process and how long it will be until it is ready for pickup or will be delivered. Health systems should consider adopting a similar approach when it comes to informing patients about the status of outstanding test results. Rather than keeping patients in the dark, health systems should give them information on where their test currently resides in the process and when the results will be ready. They could also give patients a way to determine when, where, and how the results will be delivered to them, so that they can plan for the moment accordingly, rather than receiving a phone call out of the blue. Recent advances in the ability to deliver secure, HIPAA-compliant communications via text message and other mechanisms has expanded the opportunity to deliver medical information in accordance with patients' wishes and needs.

5. Post-Care Connectivity

Most hospitals and clinics use antiquated discharge processes, with nurses being given the significant burden of educating patients and family members right before they leave the hospital. As a result, these nurses often deliver a tremendous amount of complex information at rapid speed in a short period of time. To address this issue, some health systems have begun to audio and/or videotape these sessions so that the patient or a family member can hear it again after they return home. In some cases, the same information is sent to the designated family navigator so that he/she can use it to support the patient. One hospital using this HIPAA-compliant communication solution reduced readmission rates by 15 percent and increased HCAHPS scores related to discharge communication by 63 percent.

Always Events® Innovation Checklist

1. Address patients' emotional and spiritual needs.
2. Put doctors and nurses back at the bedside, looking at, touching, and examining patients rather than staring into computer screens.
3. Improve physician and nurse communication, thus restoring the patient narrative into the conversation.
4. Engage patients and families in the care plan.
5. Create consistent, seamless journeys that extend beyond the hospital's walls, following the patient wherever he or she needs care and providing services that meet the patient's entire set of medical, behavioral, and social needs.

Key Takeaways and Implications for Health Systems

System Invitational attendees broke into small groups in which representatives from each system discussed the major implications of the material presented by Dr. Duffy. Key points from this discussion include the need to do the following:

- **Secure board and leadership support**: Senior executives and the board play a critical role in making the patient/family experience a high priority within the organization. At one health system, the board recently endorsed a new mission statement that added the goal of becoming "world class" in terms of providing patient- and family-centered care. This simple addition helped to rally the organization around efforts to improve the patient experience, including instilling compassion and empathy into interactions with patients. At one psychiatric hospital within the system, patient engagement scores increased dramatically in the year after a senior executive and physician leader made patient engagement a high priority, including by tying financial incentives to these scores.
- **Designate a chief experience officer**: Some systems have created a "chief experience officer" position while others have not. Overall, most attendees felt that it was worth considering the creation of such a position. Most organizations have designated individuals to take charge of quality and safety, and the patient experience should be considered no less important a priority. Often a chief experience officer can help to tie together the many disparate activities that may be going on within an organization that are focused on improving the patient experience. The person taking on this role needs not have a clinical background, but he or she must have a strong vision, passion, and credibility in the eyes of other stakeholders. Those taking on this role without a clinical background should identify a few physician and nurse leaders who can provide support by championing initiatives with their peers.
- **Create an internal transformation center**: One health system created a transformation center that leads the organization's efforts to improve the patient and family experience and to implement Lean processes and other best practices. As a result, efforts to improve the patient and family experience are now part of a horizontal transformation function that cuts across the organization.
- **Engage the head of human resources**: The chief human resources officer should serve as a champion for activities to improve employee engagement, working in collaboration with operational leaders from throughout the organization. In some cases, partnerships with internal and external consultants may help.
- **Improve physician–nurse and clinician–patient communication**: Attendees universally emphasized the need to improve communication between nurses and physicians and between clinicians and patients, and highlighted EMRs and other IT systems as frequent causes of poor communication. Patients quickly notice when physicians and nurses are not in sync, and care often suffers as a result. The traditional model of staff repeatedly entering a patient's room but not talking to that patient has become more (not less) prevalent over the past few years.
- **Return to a sense of purpose**: Physicians and staff need to remember why they went into medicine in the first place—to facilitate a healing presence for the patient. At one health system, employees share personal stories about why they entered the field at weekly meetings. Often the room gets very quiet during these stories, as most people have very inspiring stories. Often some pivotal moment drew them to medicine, and in many cases they entered the profession feeling it would provide meaning and purpose in their life. Simple technologies are available that can help build this type of storytelling culture, which is critical to restoring relationships and improving communications.
- **Encompass the whole family**: Health systems need to engage and provide a wonderful experience not only to patients, but also to family members, friends, and caregivers.
- **Focus on staff experience first**: Attendees concurred with the idea of tackling staff morale and engagement as the first step in trying to improve the patient experience. Almost by definition, patients will not have a good experience unless the staff and clinicians who serve them are engaged and motivated.
- **Do not forget affiliated physicians**: Affiliated physicians, including hospitalists, regularly interact with staff, patients, and family members, and these interactions can have a profound impact on staff engagement and the patient experience. Consequently, efforts must be made to teach these physicians about patient-centered care and the need to treat nurses, other hospital staff, patients, and family members with respect and dignity. These efforts become particularly important for organizations that outsource their hospitalist and/or emergency services to outside physician groups.

Redesigning America's Healthcare System

Elizabeth Teisberg, Ph.D., Professor at the Geisel School of Medicine at Dartmouth and Senior Associate at the Institute for Strategy and Competitiveness at Harvard Business School, discussed the need to transform the American healthcare system by resetting the compass from volume-based strategy to value-based strategy.

Providers and employers can accelerate transformation to much higher-value care and build an understanding of why and how organizations can redefine healthcare to create dramatically more value for the patients, and profit in so doing. Healthcare leaders' responsibility to the communities they serve is to provide high-value healthcare, not just create access to *more* healthcare of undetermined or highly variable effectiveness.

A System in Need of Transformation

The healthcare sector is full of smart, hard-working, dedicated people working in a system that makes it difficult to achieve great outcomes at reasonable costs. Unlike other major sectors of the economy, healthcare has faced rising costs, poor access, ongoing safety and quality problems, and limited attention to value from the perspective of customers. With quality of life and dignity of death at stake, a new dynamic is badly needed.

Past efforts to transform healthcare have focused primarily on changing economic incentives and reducing waste and costs. However, problems have persisted in spending, access, safety, quality, and patient experience. Dramatic improvement in the value of healthcare delivery is the only way to provide better care for more people without skyrocketing expenditures.

People do not necessarily want more healthcare services; rather, they want more health. But healthcare has nonetheless been stuck in volume-based strategies. As organizations transition to value-based strategies, care will be redesigned to improve health, with the goal of improving value for patients and families by achieving better health outcomes at lower costs. This goal aligns interests throughout the healthcare sector, enabling new partnerships. By contrast, cost-reduction goals and volume-based strategies pit stakeholders against each other in a zero-sum dynamic. Rather than focusing on winning the contests to divide value, the goal should be to expand the value created for patients, families, and communities.

The challenge is to drive dramatic and ongoing improvements in the value of healthcare services. This includes but goes far beyond eliminating waste. Improving outcomes and reducing costs are often not conflicting goals. This is easy to see when one recognizes that living in good health is inherently less expensive than living in poor health, especially for those with chronic conditions. For example, managing diabetes well is less expensive than suffering the consequences of poorly managed diabetes, including going blind or losing one's foot or leg. Better outcomes tend to drive down costs in many other areas as well, including preventing and managing strokes and properly diagnosing patients. For example, conservative estimates suggest that roughly one in six patients initially get a wrong diagnosis; the resulting care is then waste, or worse, harm. More accurate and timely diagnosis could make an enormous difference in both the outcomes and costs of healthcare, but few institutions really track whether diagnoses led to effective care.

Transformation needs to change how care delivery is organized and structured. Current efforts to reduce waste and streamline a fractured system are important, but have inherent limits. For example, rather than managing different activities of diabetes care more efficiently, there is a need to restructure and reorganize the care journey so patients and clinicians can improve outcomes. Looking only at departments, procedures, or service lines as they are currently defined misses the greater opportunities to transform. Continuing the example, in the current structure, efforts might focus on performing diabetes-related amputations as efficiently as possible, but the bigger win would be to redefine the full care cycle in ways that prevent the need for the amputation in the first place.

Reorganizing Around How Value Is Created for Patients

To succeed, the healthcare sector needs to reorganize around how value is created for customers (patients and families), as many businesses and services did a decade or two ago. In *Redefining Health Care,*[2] Michael Porter and Dr. Teisberg analyzed eight principles for transforming healthcare to achieve a dramatic improvement in value. In practice, the authors have found that implementation starts with these five steps:

- Define services from patients' perspectives by condition or sector.
- Organize care delivery around solutions from the patient's perspective.
- Create multi-disciplinary teams.
- Measure results to accelerate learning.
- Align financial success with medical success through partnerships.

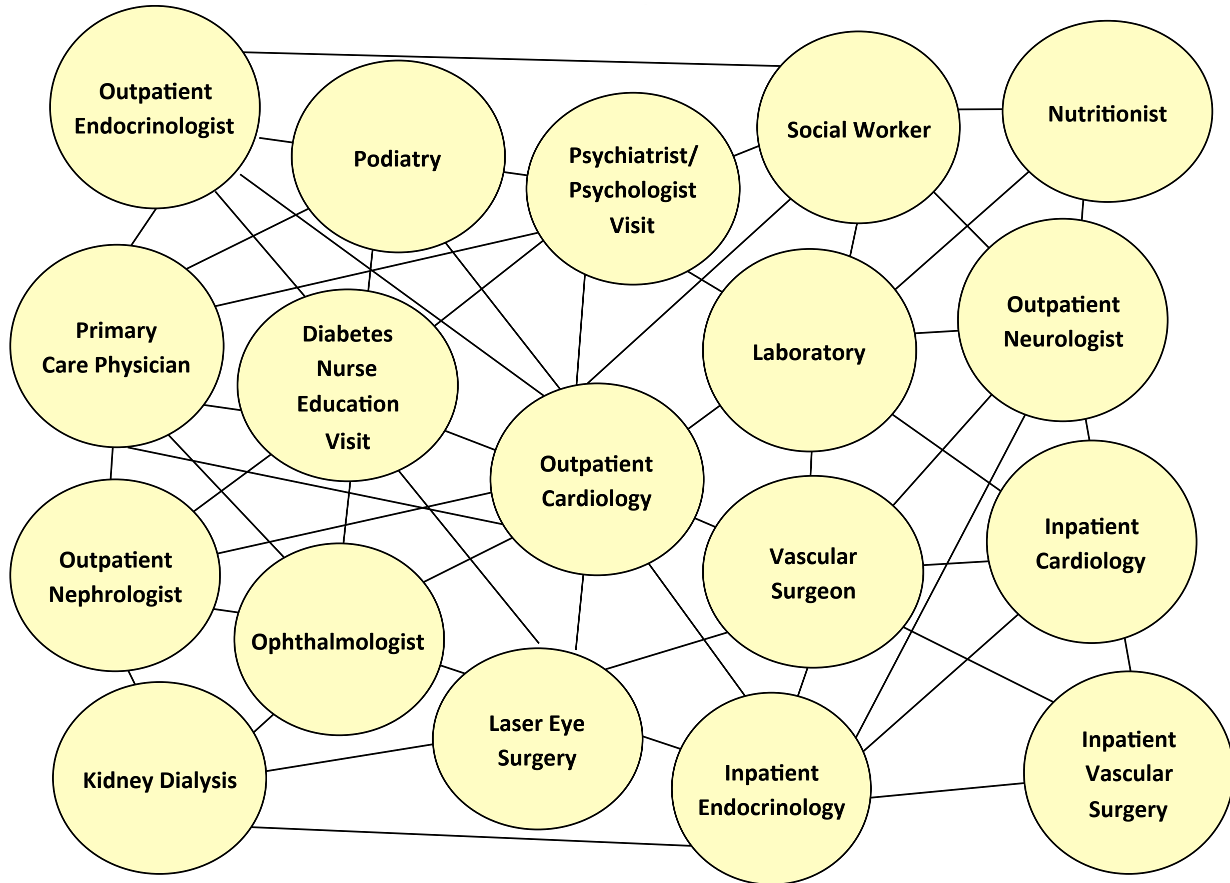
The sections below discuss each of these five factors in more detail.

Define Services from the Patient Perspective

Most healthcare organizations describe their services as patient centric, but the structure is rarely aligned with how value is created for patients. Care tends to be organized by department, medical specialty, facility, and procedure. The logic is to have resources available at every hospital to care for every possible case, even those that rarely occur. Essentially, this is organization for exceptions rather than for frequently

2 Michael Porter and Elizabeth Teisberg, *Redefining Health Care: Creating Value-Based Competition on Results,* Harvard Business Review Press, 2006.

Exhibit 9. Patient Perspective: Diabetes



Source: ©2012 Elizabeth Teisberg, Michael E. Porter, and Scott Wallace.

shared needs. When a patient arrives, those pieces of the system that he or she needs are mobilized. So a team to serve each patient is created on an *ad hoc* basis, even for fairly common situations. However, the ability to offer personalized care increases dramatically if the basic structure of what the patient needs is already in place and functioning as a standing team, rather than being pieced together with rotating clinicians. In other words, clinical teams and systems need to be organized around common, shared patient circumstances or conditions, rather than around procedures or specialties. These conditions or shared health circumstances should incorporate common co-occurring conditions. For example, a patient with breast cancer is not just a surgical patient, but rather needs integrated care throughout the entire cycle (from diagnosis to recovery). Similarly, patients with diabetes commonly face issues related to kidney disease and heart disease, so care should be structured in a way to focus on preventing and/or managing these common co-occurring conditions.

Today, patients with common conditions often find it difficult, if not impossible, to navigate the system. For example, as depicted in **Exhibit 9**, a patient with diabetes typically interacts with many providers. Coordinating this care and remaining adherent to the various treatment regimens they recommend becomes nearly impossible, even for the most educated, sophisticated patients.

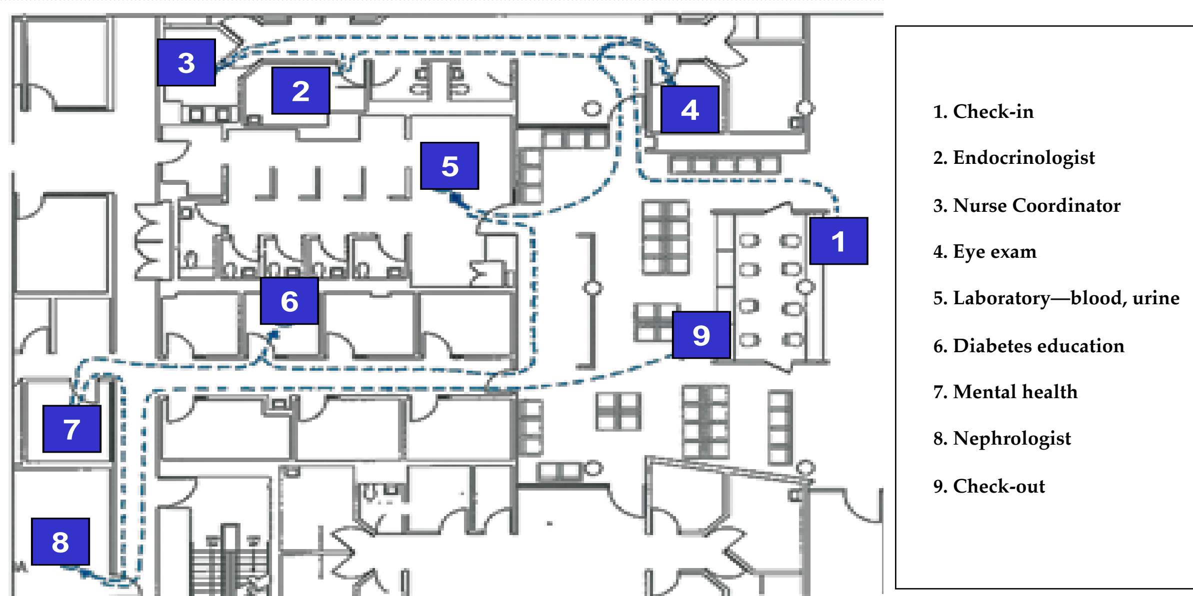
The healthcare sector needs to redesign itself in a way that makes this journey much less burdensome. As shown in **Exhibit 10**, the Joslin Diabetes Center coordinates a half-day appointment, during which time patients see multiple clinicians. Patients and their employers like coordinated appointments, since far less time is needed to receive care, as compared to the traditional fragmented approach where the patient would schedule a separate visit for each clinician.

Organize Care around Solutions

Patients with shared circumstances need solutions that conveniently, effectively, and efficiently enable better health. Professor Scott Wallace and Dr. Teisberg developed the Experience Group™ methodology for eliciting articulation of unmet needs from groups of patients facing shared circumstances. Unlike focus groups that ask patients to consider how services can be improved, this approach starts from the design perspective of understanding the patients' lives and perspectives. This view enables insight for designing transformational services with a value-based perspective.

An example of solutions is the transformation of migraine care in Essen, Germany. Under the old model, care was

Exhibit 10. The Joslin Diabetes Center



©2012 Elizabeth Teisberg, Michael E. Porter, and Scott Wallace. *Source:* Joslin company documents.

fragmented, with most patients not receiving effective, timely treatment for migraines. The West German Headache Center (WGHC), a collaboration between a hospital and a health plan, designed a new, integrated practice unit that puts many of the needed services in one facility. On the first visit, the patient gets the benefit of a multi-disciplinary team of clinicians figuring out the root cause of the headaches and a plan for effective care. Many patients then undertake a week-long experience at WGHC's day-hospital that enables lifestyle change, education, physical therapy, and medication adjustment. This approach has been shown to improve prevention, reduce pain, increase days at work, and lower the overall costs of these patients' healthcare. While the spending directly on migraine care has increased, the improved health of patients has reduced their need for and their use of other, more expensive, services.

Similar kinds of transformations are needed in the care of all chronic conditions. Instead, many patients today shuttle from appointment to appointment, struggling to be adherent to instructions that don't fit their current lifestyle. It is no wonder that success in managing chronic conditions is so elusive.

Create Multi-Disciplinary Teams

Dramatic improvement in value is achieved with multi-disciplinary teams working in clinically integrated practice units. These teams measure outcomes and costs and together accelerate learning.

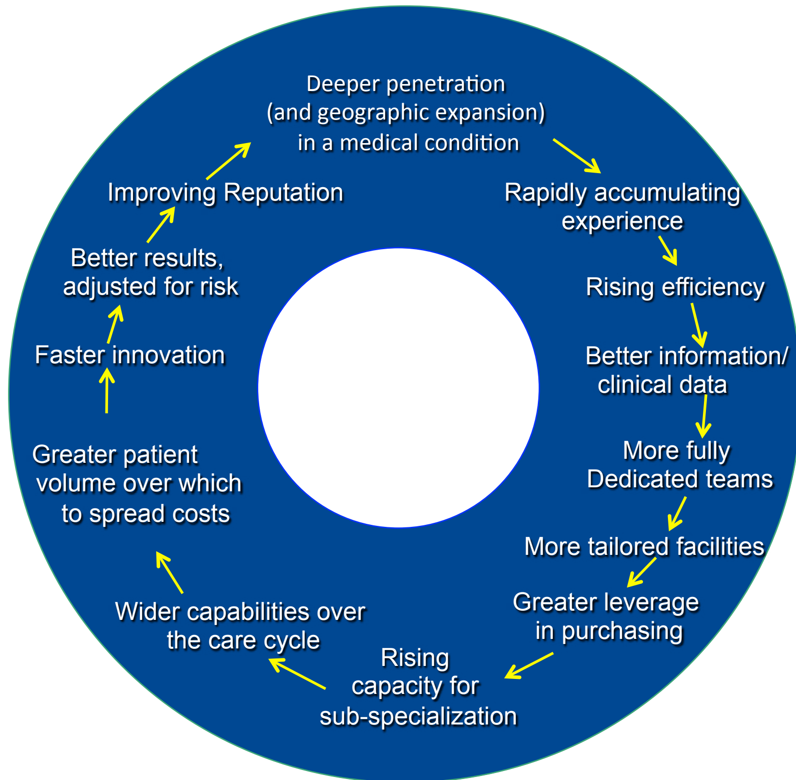
Most clinicians think of themselves as working in teams. But team-based care is fundamentally different than today's group dynamics. Interdisciplinary teams rapidly learn together. They develop and evolve collective clinical judgments based on repeated shared experiences and consistent processes. They become more efficient over time and they create an integrated experience for patients. In contrast, most hospitals are employing more and more coordinators and navigators to help smooth the patient experience. While this does help, the need for coordinators is a measure of how many patients are facing a patchwork of care by a well-intended group rather than the expert dynamic of an integrated team.

Team-based care often makes use of group or shared appointments, where people with similar circumstances come together. Contrary to conventional wisdom that patients view group visits as being impersonal, research suggests that they are highly satisfied with them. Not only do patients facing similar challenges learn from each other during the visits, but they also derive value from seeing clinicians interact with other patients, and these interactions often enhance their perceptions of and increase their satisfaction with the doctor. Overall, the provision of team-based care tends to increase both patient and clinician/team satisfaction.

Team-based care also stimulates continuous learning, as broad expertise develops over the care cycle for a segment of patients with similar circumstances (see **Exhibit 11**). Over time, moreover, care teams expand their expertise as the ability of the team to produce better outcomes increases. For example, as life expectancy has increased due to improvements in care for cystic fibrosis, patients now live long enough to have and raise children. Rather than ever-narrowing expertise, this success creates the need to expand and offer obstetrical care in a manner that meets these patients' unique needs.

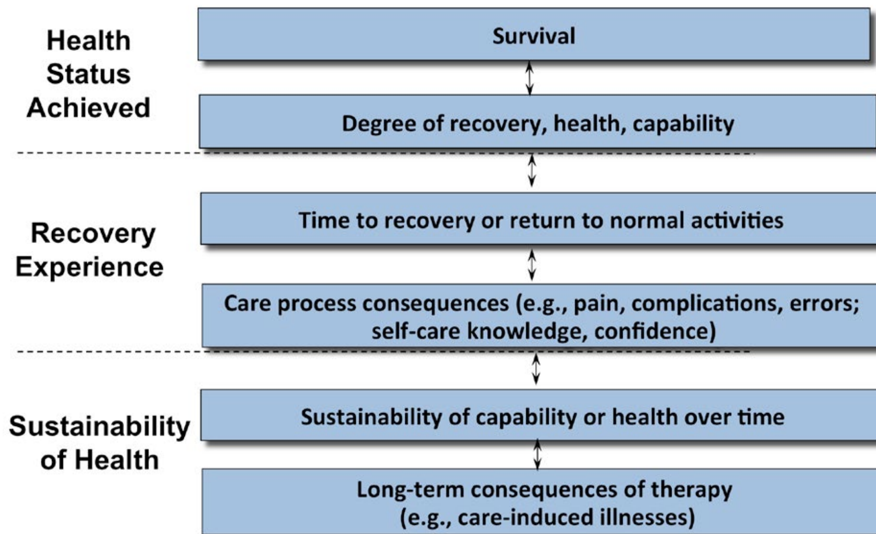
Exhibit 11. Driving Learning

Broad expertise develops over the care cycle for the patient.



Source: Adapted from Porter and Teisberg, *Redefining Health Care*, Harvard Business Review Press, 2006, p. 151.

Exhibit 12. Outcomes Have Multiple Dimensions



Source: ©2012 Elizabeth Teisberg, Michael E. Porter, and Scott Wallace.

Measure Results to Accelerate Learning

The traditional motto "what you measure will improve" holds true in healthcare. So it is critically important to have meaningful measures of the outcomes that matter most to patients and families and their clinical teams. While measures of processes and resource inputs are important, true quality means better health outcomes. As illustrated in **Exhibit 12**, outcomes have multiple dimensions.

From the patient's perspective, measurement should track, over time, the changes in functional outcomes (e.g., can the patient walk, drive, go to work, read, engage in favorite hobbies and activities) and the positive side of the care experience (e.g., level of independence, reductions in pain and stress levels, satisfaction with outcomes). Neither clinicians nor patients want healthcare to be judged only on the avoidance of bad outcomes (e.g., death, complications, errors, waste). Patient-reported outcomes should be collected regularly. The best surveys ask a few simple questions that project empathy and address issues patients care about deeply, such as whether they are feeling better, in less pain, and able to do the activities their medical circumstance had put at risk.

By measuring things that matter most to the patient, health systems can improve performance over time. For example, the multi-disciplinary team at MD Anderson Cancer Center that treats head and neck cancer patients realized that focusing solely on mortality rates did not reveal enough about patient experience or outcomes. For these patients, the key functional outcomes are the ability to swallow and talk. Tracking these specific outcomes drove and documented significant improvement in results for patients.

The primary reason for asking every team in the organization to track outcomes is to drive improvement in health results: better outcomes and lower costs. Dr. Teisberg instructed attendees to set aside report cards and pay-for-performance and insist that their teams measure outcomes and report on what they learn and improve. For example, at Cincinnati Children's Medical Center, a team wanting to improve care for pediatric patients with obsessive-compulsive disorder (OCD) found itself stuck with a long verified, validated form for measuring outcomes that made tracking every patient too time consuming and burdensome. They developed a simple, four question, child-friendly chart that every patient could quickly complete. The point was not national comparisons or grading of clinicians; it was learning and improvement. Analysis of the children's answers to the simple form revealed patterns in what clinical care was working better and for which subsets of patients. The clinical team discussed and applied their insights, achieving impressive results. In the next four visits 65 percent of their patients exhibited significant reductions in the severity of symptoms. In addition, they reduced the average number of visits needed to achieve subclinical status (i.e., no longer considered to have OCD) from 18 to 24 visits before measurement began to approximately 12 visits afterward. The dropout rate fell from 15 percent before the improvement project to 7 percent afterward. Overall, 97 percent of patients completing treatment reached the point where they no longer were

Exhibit 13. Change of Mindset

Source: ©2012 Elizabeth Teisberg, Michael E. Porter, and Scott Wallace.

classified as having OCD based on the long, verified, validated measures. The work clearly illustrates that meaningful functional measurement need not be complex to drive significant learning and improvement.

Leaders need to insist that the clinical teams start measuring some meaningful outcomes right away. Physicians' first response to outcome measurement is usually suspicion or resistance, but this usually fades quickly as patients and physicians experience improvement. No measurement system will be perfect, and risk adjustment is, of course, important. Over time both the measures and the risk-adjustment methodologies improve. The learning from the efforts becomes invaluable. For those who delay measurement of results not only improvement, but they invite costly process micromanagement by outsiders.

Align Financial Success with Medical Success through Partnerships

New partnerships are critical, particularly in the management of chronic disease. Chronic diseases are leading causes of death and drive three-quarters of all healthcare spending. Employers are natural partners for hospital/health system efforts, particularly those employers who are in the community or have leaders on the hospital board. Beyond the direct costs of healthcare, employers spend two to seven times more on lost productivity, resulting disability, and early retirement. Some employers are now partnering with provider organizations to design and offer integrated care for employees with chronic disease. As health outcomes improve and costs are contained, there are gains to be shared.

Success in the transforming healthcare system requires a new mindset to support the new business models (see **Exhibit 13** on the previous page). Services need to be designed and structured around how value is actually created for patients and families. Changing culture and mindset is challenging, but well worth it. Both professional satisfaction and patient satisfaction rise as teams create solutions that work with patients to improve health results. The steps are not rocket science. They require leadership, vision, and resolve.

Engaging Multiple Partners to Transform Healthcare

Stephen K. Klasko, M.D., M.B.A., President of Thomas Jefferson University and President and CEO of Thomas Jefferson University Health System, discussed how his organization is engaging various stakeholders to transform healthcare over the next decade.

Relatively little has changed in the healthcare arena over the last four decades. In 1977, Dr. Klasko served as President of the American Medical Student Association. Asked to talk about the future of healthcare, he highlighted three critical issues that needed to be addressed: spiraling costs, the fee-for-service (FFS) payment system, and outcomes measurement. Challenged to do something about these issues, the physician community resisted, and consequently not much happened. Even after the managed care revolution (which did little to manage care), the Balanced Budget Act (which did not balance the budget), and the initial implementation of the Affordable Care Act, not a whole lot has changed. When Dr. Klasko came to Thomas Jefferson University in 2014, the key question he highlighted remained essentially the same: can anything be done about spiraling costs, the FFS payment system, and outcomes measurement? Unlike the medical community back in 1977, however, payers, the government, physicians, and other stakeholders are now saying "yes," as are administrators, physician leaders, and others at Thomas Jefferson University Health System.

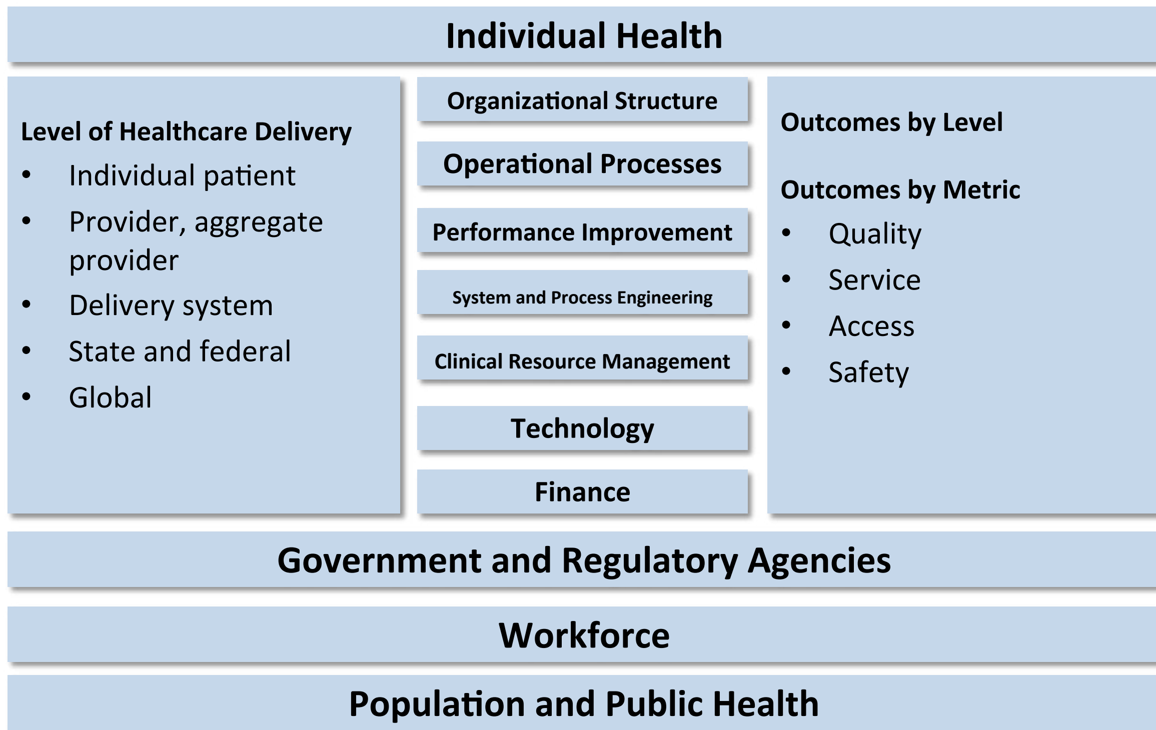
Seeking to "do the impossible," Thomas Jefferson University Health System plans to look very different a decade from now than it does today. If that vision comes true, the health system will be considered a "destination site" for the provision of innovative, entrepreneurial healthcare when it celebrates its 200th anniversary in April 2024.

So what will this transformation look like? It is already underway with efforts to create "doctors of the future" by changing how medical schools choose and educate physicians. Traditionally medical schools and residency programs choose applicants based on grade point average (particularly in science classes) and test scores, and then teach them in ways that do not emphasize teamwork or empathy. Physicians generally enter the field of medicine with a lot of "baggage" and biases, including a "winner-takes-all" competitive bias, a desire to work independently and autonomously due to a fundamental mistrust of others, a tendency to value hierarchy, and a general lack of creativity due to risk aversion and an inability or unwillingness to think differently. In fact, a study comparing Wharton Business School students to medical school students found that business school students tend to be much more comfortable working in teams (since they are required to join teams at the very beginning of their training), have more—and more varied—outside interests and hobbies that provide valuable perspectives and new ways of thinking, and are much more comfortable using creative thinking to solve problems.

To overcome these biases, the University of South Florida (USF) School of Medicine and later Thomas Jefferson University School of Medicine began changing the way medical students are selected and taught. (Dr. Klasko served as President of the USF School of Medicine before coming to Thomas Jefferson.) Both schools have partnered with others to learn how to better choose and educate students. Since 2012, Southwest Airlines has hired new pilots based in large part on their emotional intelligence. Rather than choosing new pilots based on very small differences in technical skills and knowledge, Southwest places prospective hires in a simulator and explicitly tests their response to different scenarios. USF and Thomas Jefferson have made similar changes in their selection process, with specific tests and assessments of applicants' emotional intelligence, including self-awareness (e.g., self-management/adaptation skills), social awareness (e.g., compassion, empathy), and relationship management (e.g., teamwork, collaboration, change-management skills). Grades and test scores no longer serve as the deciding factors; rather, the schools set minimum thresholds in these areas and then choose based on other factors from the pool of applicants that meets these thresholds. The schools have worked with Teleos Leadership Institute to identify new ways to interview applicants to gauge emotional intelligence, and with the art and music community to incorporate the arts into the school's curriculum. The overall curriculum at the schools has changed rather dramatically, with teaching centered around health system competencies (as shown in **Exhibit 14** on the following page) and focused on the whole patient, with an emphasis on patient autonomy, health literacy, teamwork, and cultural competency. The curriculum also focuses on developing leadership competencies. To that end, every student gets a mentor and coach, and the curriculum emphasizes various skills that affect a person's ability to embrace change and be a good team member. The curriculum also incorporates art through a partnership with the contemporary art museum at Thomas Jefferson University. Students use art to learn to observe things at a different level, since many doctors are good at "seeing" things but not really "observing" them.

In addition to being a pioneer in medical school education, Thomas Jefferson University Health System has also embraced entrepreneurship and entrepreneurial medicine, including a huge emphasis on delivering virtual care. System leaders expect to provide virtual visits to patients in 48 states by 2015, with physicians able to access all relevant health information during these visits and patients receiving a diagnosis and prescribed treatment, including instructions, within a few minutes. By 2016, leaders expect that 65 percent of patient visits will occur in this manner. The program began in 2014 with the 14,000 covered employees of Thomas Jefferson University Health System. It will expand to USF in 2015 and to other states quickly thereafter. Also by 2016, Thomas Jefferson plans to have a virtual ED in place to provide unscheduled acute

Exhibit 14. Health System Competencies



care to patients with moderate acuity and/or time-sensitive conditions that do not require an in-person visit. Studies suggest that roughly 85 percent of ED visits can safely take place somewhere else, and in many instances an initial virtual visit can resolve the problem or determine when and where the patient should be seen. By 2017, Thomas Jefferson expects to use telehealth for all care transitions, including during the discharge process to improve communications between the patient, care team, family members, and primary care physician. The system will also use bedside telehealth to include family members in the conversation during physician rounds and to convene multi-party meetings as necessary, and will use point-of-care telehealth to provide scheduled and urgent follow-up care after discharge.

These activities will yield a significant, positive return on investment (ROI) under at-risk payment systems (which will be the primary payment systems by 2024) through reductions in length of stay and readmissions, improved patient satisfaction, and increased engagement of referring physicians at the time of discharge. In fact, the approach is already paying dividends, as a pilot program conducted in partnership with Georgia Tech and Edj Analytics that features telehealth and "extensivists" (hospitalists who follow patients in a patient-centered medical home for 90 days after discharge) has virtually eliminated readmissions among high-risk patients.

The transformation of healthcare being led by USF and Thomas Jefferson also stems from a substantial investment in infrastructure to promote better care. For example, the Center for Healthcare Entrepreneurship and Scientific Solutions (CHESS) is employing predictive analytics and mathematical modeling to reduce future uncertainty in medicine. Similarly, CAMLS works to assess physicians and nurses based on their competencies, including both technical and teamwork skills, and serves as a place where clinicians can learn and practice procedures and techniques in a simulated environment that closely resembles real-world clinical settings. Built without state, federal, or city funds, CAMLS opened in February 2012 at a time when state funding to USF had fallen by 43 percent and reimbursement for clinical services was also on the decline.

CAMLS seeks to help hospitals and health systems deal with physicians who experience frequent complications and/or other problems, and determine if someone is competent with a new technology. CAMLS also allows physicians to practice procedures before performing them on patients, thus ending the "see one, do one, teach one" approach used commonly today. More than a simulation center, CAMLS functions as an assessment laboratory that allows for procedure-based credentialing, teamwork training and assessment, assessment of surgical and technical competence (not confidence), and the ability to practice procedures under real-world conditions in rehearsal studios.

Finally, as part of its "Jefferson 200" initiative, Thomas Jefferson University Health System has created a change management program that seeks to stimulate breakthrough thinking through a new set of metrics and strategies (see **Exhibit 15**).

Leaders expect this program to produce significant results within one-and-a-half to three years, after participants go through four predictable phases, as outlined by Quint Studer:

- **The honeymoon**: This phase brings a sense of excitement, with participants generating the right "to-do" list and

Exhibit 15. How Do We Get Breakthrough Thinking?

Three Boards of Play			
	Board 1	**Board 2**	**Board 3**
Name of Board	"Same Game"	"New Rules"	"New Game"
How You Play	By the Rules	Set the Rules	Create What Could Be
The Goal	To Optimize Performance	To Create Advantage	To Create Fundamental Change
How to Gain Advantage	Increase Skill or Competence	Increase Power (Any Base)	Seize New or Different Opportunity
Nature of Planning	**Operational**	**Strategic**	**Visionary**

Source: Adapted from M. Jennings Consulting from McWhinney, Novokowsky, Smith, and Webber.

adopting a hopeful mindset that things will get better. Several easy "quick fixes" will be adopted during this phase, and skeptics will remain in the minority.

- **Reality**: After about six months, some "we/they" divisions will likely emerge, along with some inconsistencies in effort and the realization that change is harder than anticipated. In addition, the reality will set in for some participants that change will have a personal impact. In general, participants will divide into two camps—those who "get" the need for change and those who do not.
- **The uncomfortable gap**: During this phase, gaps in performance and consistency will become obvious, leading to the need for tough decisions to be made as process improvement continues.
- **Consistency**: During this phase, strong results will be achieved thanks to proactive leadership and disciplined people and processes. Everyone will begin to understand the keys to success going forward.

Communication will be critical to successfully navigating through these phases. Leaders must decide who will communicate, and when and where they will do so. Communication must start with the "why" by laying out the imperative for change. The process must recognize employee psychology and

be completely transparent so as to reduce stress levels for employees. Key steps in the change-management process include:

- **Realign resources**: Without leadership skills, change will not occur. Consequently, leaders must realign their skill sets and leadership evaluations should similarly change to reflect the new high-priority skills.
- **Achieve competitive advantage under ACA**: Health system leaders need to increase volume, improve clinical outcomes, engage employees, and mentor middle managers.
- **Move from volume to value**: Health system leaders need to recognize when they enter the "twilight zone"—an era characterized by a payer mix that combines significant amounts of FFS and at-risk contracts, which means that improvements in value will have a mixed impact on finances. At Thomas Jefferson in 2014, revenues remain roughly evenly divided between FFS and at-risk contracts. By 2017, however, virtually all payments will be through at-risk, accountable care contracts. The leaders of health systems operating in the twilight zone cannot afford to wait to embark on transformation, as the ability to do so will only get harder. Consequently, leaders may have to accept the fact that transformation successes may initially hurt (or at least not help) the bottom line.
- **Recognize role of technology**: Health system leaders today underestimate the potential impact of new technologies as vehicles for transforming care delivery. EMRs represent a base, not the entire solution. Technology can also be used to create greater loyalty by patients, as many under the age of 40 see virtual visits and other technology-based innovations as new, preferred ways to see the doctor.

Getting from Here to There: A Journey Powered by Innovation-Driven Ecosystem

Praveen Chopra, Executive Vice President and Chief Information Officer at Thomas Jefferson University and Thomas Jefferson University Health System, built on Dr. Klasko's remarks about strategies for transforming healthcare.

The healthcare industry continues to undergo a fundamental transformation. Over the next decade, the amount of change will be tremendous. To compete effectively and ensure survival, healthcare organizations must innovate and change at a rapid pace.

Transformation at Children's Healthcare of Atlanta

Some organizations are already well on their way. As shown in **Exhibit 16**, Children's Healthcare of Atlanta is transforming the delivery of pediatric care, using IT to ensure that practitioners have access to the right information at the right time, regardless of where they practice. The organization routinely makes use of IT to register patients in advance of visits and collect information about their medical history (e.g., allergies, medications) to ensure that providers have all the relevant information they need before deciding on the appropriate treatment. The information is available to any provider who might treat the patient, even the ED doctor who treats an acute asthmatic episode experienced by a child while on vacation with his or her family.

Children's Healthcare of Atlanta and other organizations like it are in the midst of a paradigm shift. Rather than playing their traditional role as a manager of distinct incidents, these organizations are becoming "business enablers" that use technology on an ongoing basis to activate new capabilities. Rather than managing acute events, these organizations embark on change management, putting function before form (rather than vice versa) and enhancing services rather than managing costs. The effort began with development of a clinical data repository covering the inpatient and ambulatory settings (see **Exhibit 17**). Over time, the effort has expanded to include a health information exchange that spans all healthcare settings throughout the state. The goal is to provide a seamless experience across the care continuum.

To date, the transformation effort has already paid substantial dividends. Children's Healthcare of Atlanta has seen significant declines in alert fatigue and medication errors (which both fell by 70 to 80 percent), which in turn has resulted in a roughly 12 percent decline in pediatric mortality rates.

Exhibit 16. Make Kids Better Today, Healthier Tomorrow

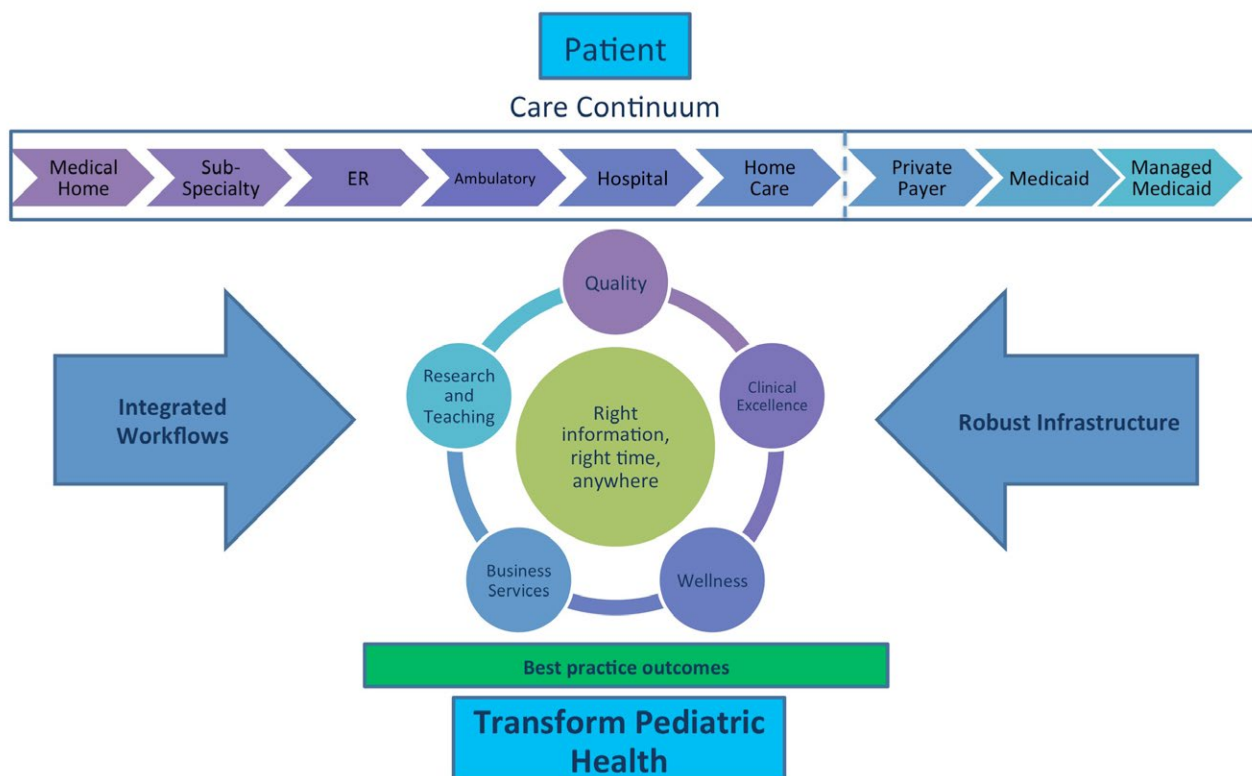


Exhibit 17. Think Big, Start Small, Scale Fast

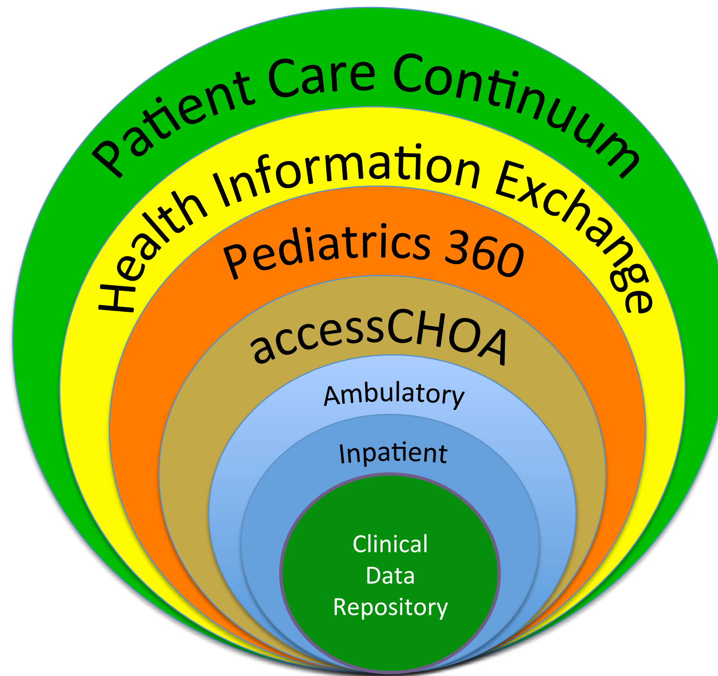
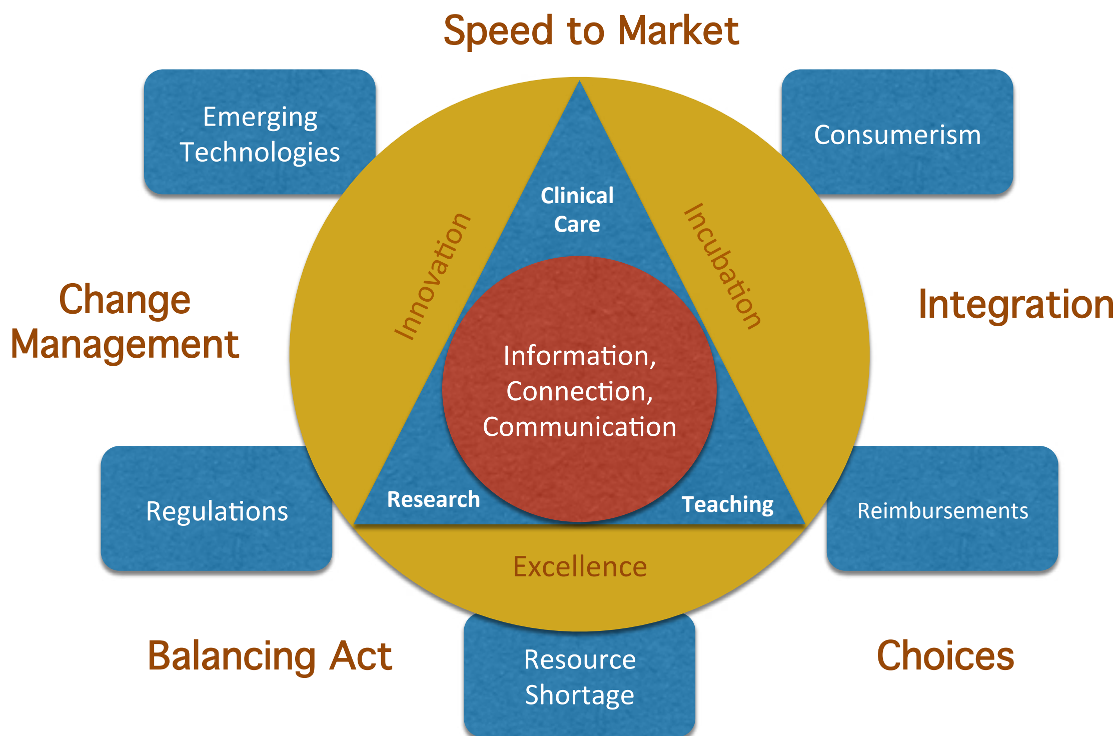


Exhibit 18. Innovation-Driven Ecosystem



Transformation at Thomas Jefferson University Health System

As described earlier, Thomas Jefferson University Health System is pushing the idea of transformation even further under Dr. Klasko's leadership. As part of an initiative known as "Jefferson 3.0," system leaders are putting in place an organization where patients and families truly do come first. Through innovative partnerships and the use and creative deployment of new technology, Thomas Jefferson is developing a seamless clinical enterprise. Rather than emphasizing the provision of healthcare services, the system now focuses on promoting the health of individuals, relying on team-based care rather than autonomous physicians who work as "craftsman." The system is organized around the patient's (not the provider's) needs. It no longer concerns itself with where services are provided and focuses instead on ensuring that providers use the right processes and have the right information. To succeed, Thomas Jefferson has put in place an "innovation-driven ecosystem" (see **Exhibit 18**).

Success requires the balancing of two key goals—management of the health of individual patients and management of the health of an entire patient population. With demand for services exploding and resources being limited, organizational leaders are turning to the strategic use of information and "big-data analytics," with a focus on having actionable information available to those who need it when they need it. They are also relying heavily on experimentation and simulation in the laboratory, where innovators can take risks without harming patients. Once these innovators figure out what does and does not work, they can then disseminate promising new approaches, using IT to ensure rapid deployment at the lowest possible cost.

Like all organizations, Thomas Jefferson is not enjoying a seamless transition. Change is never easy. As depicted in **Exhibit 19**, the process often begins with a "honeymoon" period in which all seems to be working well, only to be followed by a "valley experience" when people realize what the change really entails, including the need to make difficult trade-offs and decisions. However, with continued faith and ongoing perseverance and operational will, both staff and leadership usually "figure it out" and enter the "euphoria" stage characterized by even greater success than achieved in the honeymoon period.

Exhibit 19. Who Says Change Is Easy?

Case Study: Kodak and the Digital Revolution

Stephen W. Kett, Senior Program Director of The Governance Institute, led a discussion about lessons learned from the decline of Eastman Kodak Company.

Background

An iconic American company founded in 1884 by George Eastman, Eastman Kodak Company (more commonly known as Kodak) filed for bankruptcy on January 19, 2012. At one point, the company had a dominant market share in both film (90 percent) and cameras (85 percent). A highly profitable enterprise, Kodak pioneered what is now often referred to as the "Gillette model," in which hardware (the camera for Kodak and the razor for Gillette) is sold at a very low price, while consumables that go with the hardware (the film and razor blade) are sold at a high margin. Contrary to conventional wisdom, moreover, Kodak has been a great innovator throughout its history. In fact, it was the Apple Computer of the 1950s and 1960s, with many talented researchers developing a broad array of innovative products and services. Kodak invented the first disposable camera and the first digital imaging sensor (a chip that goes into every digital camera). In fact, Kodak invented more products to capture electronic images than any other company in the world. Yet most of these products remained in Kodak's "closet" and never successfully made it to market on a broad scale, in large part due to leadership fears about cannibalizing the company's dominant film business. In the meantime, more aggressive competitors entered the marketplace and released innovative products that captured share from Kodak. By 1993, Kodak's share of the film business had been cut in half, to 43 percent. By 2009, the company began selling off its intellectual property (i.e., patents) in a last-ditch, ultimately unsuccessful effort to stave off bankruptcy.

Kodak represents a highly relevant case study for those in the healthcare industry. While many differences exist between the camera/film business and healthcare, the value of examining Kodak as a case study lies in thinking about the similarities between what Kodak leaders faced and what health system leaders face today.

What Went Wrong?

System Invitational attendees highlighted key factors in Kodak's decline:

- **Fear of disruptive innovation:** Even though Kodak had highly talented engineers and researchers who developed a variety of potentially revolutionary products, the company's leadership feared disruptive innovation. They kept the research division isolated from the rest of the company and refused to aggressively market any product that threatened the main business lines—cameras and film.
- **Underestimating the competition and not understanding the consumer:** For many years, Kodak faced no real competition in the U.S. When potential competitors eventually did arrive, company leaders viewed their products as inferior and underestimated how consumers would respond to them. For example, Kodak leaders did not believe the American public would abandon its brand-name film for similar, lower-priced products offered by an obscure Japanese company (Fuji), which in their mind were of lower quality. This mindset persisted even as Fuji slowly but steadily gained market share, and even after the company introduced products that were arguably of equal or higher quality than those offered by Kodak, including faster-speed film. When competitors introduced digital cameras, Kodak leaders did not believe that consumers would accept them, believing they produced lower-quality pictures than available through film. This mindset continued even as consumers migrated to these cameras.

> "Perhaps the engineers and scientists at Kodak believed in the technologies they were developing, but the leaders did not, seeing them instead as a distraction from the main business. As a result, these products often did not see the light of day."
>
> *—Stephen W. Kett, Senior Program Director, The Governance Institute*

Ultimately, the "not-good-enough" stuff being sold by competitors proved to in fact be good enough for the mass market. In essence, these competitors had embarked on disruptive innovation—the process of taking something that has historically been complex and expensive and making it simple and inexpensive. In the meantime, Kodak leaders (including its board of directors) remained blind to the potential not only of competitors' products, but also to Kodak's own inventions. This lack of imagination and risk aversion ultimately led to the company's downfall. During Kodak's many decades of success, company leaders learned lessons and adopted habits that, over time, opened the doors for others to come in and take over the market. For example, company leaders became "tone deaf" when it came to listening to the voice of the customer. Given the company's long period of dominance, Kodak leaders came to believe that the world moved quite slowly and hence felt there was always time for innovation later. Unfortunately, however, later never came, as new technologies such as digital cameras always remained a distraction to the core business. As a result, the only innovations that Kodak ever introduced tended to be incremental and safe in nature, fitting comfortably within the current product line. Innovation essentially became a "hobby" at Kodak, even as competitors made it the main driver of their business.

Rather than investing the ample amounts of cash that the core business generated into new, innovative products, Kodak leaders exacerbated their problems. Beginning in 1983 and for roughly a decade thereafter, Kodak sought to diversity its business through acquisitions of companies offering somewhat related products and services. (Many other large companies pursued similar strategies at this time.) During this decade, Kodak bought a copier services business from IBM and also made acquisitions in the areas of clinical diagnostic imaging, mass memory to store data, and retail pharmacy (through the purchase of Sterling Drug). Leaders viewed these businesses as somewhat related to Kodak's core business; for example, diagnostic imaging involved photos/images and the pharmacy business involved the mixing of chemicals. Unfortunately, however, these businesses ended up being very different than Kodak's traditional products and services. In addition, they tended to require significant expenditures on research and development, and hence competed with the core business for capital.

> "A 100-year monopoly creates habits that get in the way of innovating…but it's much better to cannibalize your own business than to let someone else do it for you."
>
> *—Stephen W. Kett, Senior Program Director, The Governance Institute*

If Kodak's core business had remained stable (as leaders believed it would), these acquisitions might have worked out. However, as noted, Fuji had entered the U.S. in 1964, 30 years after Kodak's founding. The company began by selling lower-priced, private-label film and then in 1972 introduced its own brand. Kodak leaders dismissed Fuji's products as inferior from a technical perspective and continued to believe that higher quality combined with the Kodak brand name would keep consumers loyal. Yet many consumers could not see any difference between the products and chose to buy the lower-priced Fuji film. It also did not take Fuji long to innovate, as the company introduced the first 400-speed color film. By the mid-1990s, Fuji enjoyed 20 percent market share in film worldwide.

In 1993, George Fisher took over as the new CEO of Kodak. Mr. Fisher recognized the seriousness of the competitive threats facing the company, and tried to respond accordingly. He began by defining the company's core business as imaging, not film or paper. Mr. Fisher was largely successful in changing the culture at the very top of the organization (i.e., among members of the board and executive suite), but he failed to sway the huge mass of middle managers at the company who did not understand the digital movement and continued to view film as "superior" and hence the only product to offer. As part of his effort to change the company, Mr. Fisher launched a new digital division that operated out of the company's headquarters in Rochester, NY. Overseen by Kodak insiders who remained wedded to the firm's entrenched culture, this venture ended up innovating the "Kodak way"—very slowly and incrementally, developing and introducing products that would not inflict any major pain on Kodak's core business. For example, in the 1990s Kodak introduced a "photo CD" that the company described as "film-based digital imaging." The CD allowed consumers to store pictures that had been developed via film on a CD. Not surprisingly, this product, along with other similar innovations, was doomed to failure, as it paled in comparison to the digital cameras and other digital product offerings being introduced by competitors.

By 1993, Mr. Fisher realized that the company's three lines of business (chemical, photography, pharmaceutical) all needed capital. Yet the only cash being generated by the company came from the film business, and the declining amount being generated could not adequately fund all three businesses. Due to the acquisitions and other missteps, Kodak had approximately $12 billion in debt on its balance sheet, and its ability to defend its core business had diminished considerably.

> "When building a new business within an existing one, success comes from forgetting, borrowing, and learning. But Kodak forgot to forget. They could not let go of their high-margin business even as it was being taken away."
>
> *—Stephen W. Kett, Senior Program Director, The Governance Institute*

Lessons for the Healthcare Industry

The Kodak case study offers a number of lessons for the leaders of health systems:

- **Recognize and respond to the rapidly changing business model**: Unlike Kodak's leaders, health system leaders must recognize and embrace a changing business model where traditional sources of revenue and profits, including use of hospital services and face-to-face visits, are fading away and being replaced by new care settings, such as virtual visits and retail clinics.
- **Accept short-term pain for long-term gain**: Just as Kodak should have been willing to cannibalize its main business line, health system leaders need to aggressively reengineer care delivery and manage population health, even if doing so results in some loss of FFS revenues.
- **Do not assume customers will remain loyal**: Like Kodak's leaders, some health system leaders believe that consumers will not accept "inferior" care from nurse-led retail clinics

run by CVS, Walgreens, Wal-Mart, and others. Just as Fuji film proved to be equal to or even better than Kodak film, the services offered by these clinics rival those provided in traditional health settings. In addition, these clinics tend to be much more convenient and less expensive, and consumers are flocking to them. Health system leaders cannot afford to ignore this trend, as it is dangerous to disregard what the market is saying about new products.

- **Focus outward, not inward**: When Kodak finally decided to innovate, it looked to do so with its own people, operating within the same entrenched culture. This approach was doomed to failure. The better strategy is to bring in those with relevant experience from other industries, such as retail.
- **Engage middle managers**: Even if the board and administrative leaders understand the need for innovation, the rest of the organization may not. Health systems cannot transform themselves unless all key stakeholders, including physician leaders and middle managers, are on board.
- **Do not wait for the "perfect" moment**: There is never a perfect, pain-free time to innovate, and it is better to be early than late. Culture change takes a long time to execute, so the earlier the organization gets started, the better.
- **Embrace big, bold change**: Kodak's leaders believed in slow, incremental change during a period when rapid, bold change clearly was in order. Big companies in other industries often responded in the same way, such as when a major airline responded to cost-cutting pressures by reducing the number of olives used in the salad served on its flights.

Questions to Consider Based on the Kodak Case Study

1. Do we have any "olives" (i.e., small and inconsequential changes) that we are focused on today?
2. Do we have anything like the photo CD in our pipeline (i.e., small, incremental changes being touted as true innovation)?
3. As we innovate, what do we need to forget, borrow, and learn?
4. As board chairs, executives, and leaders, do we have our eye on the ball? Do those throughout the rest of the organization have their eye on the ball?

Innovations in the Uses of Social Media in Healthcare

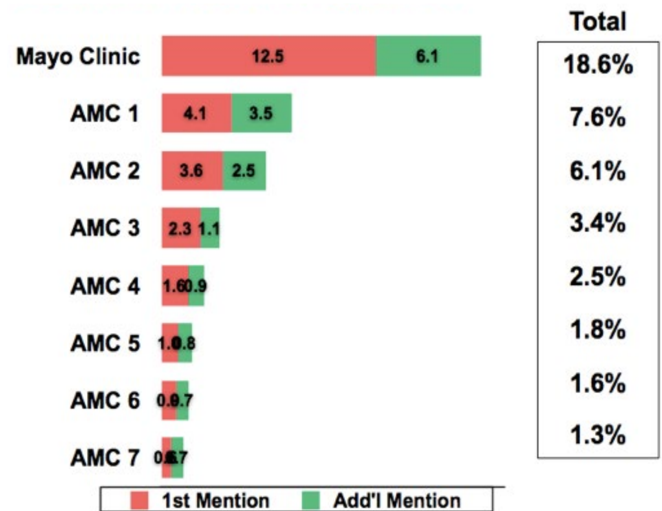
Lee Aase, Director of the Center for Social Media at Mayo Clinic, discussed the use of social media in healthcare.

Background on Social Media Categories and Platforms

Most people cannot imagine life without email. In the not too distant future, the same will be said about social media. There are a wide variety of social media platforms, the vast majority of which can be used at little or no cost. Examples include:

- **Blogs** are easy-to-publish Web sites that serve as a place to share news and comments. Most people read blogs all the time without even realizing it. They can be created in little time by going to wordpress.com or blogger.com. In addition, there are videos available through YouTube (another social media platform) on how to create a blog.
- **Really simple syndication (RSS)** lets a person easily track dozens of blogs and/or Web sites without surfing the Internet, with information of interest automatically being collected and made available in one place. RSS can be "baked in" to existing browsers.
- **Podcasts** are RSS feeds that allow the transmission of audio and video recordings. Users can subscribe to podcasts that interest them through RSS and/or iTunes.
- **Wikis** are collaborative editing tools that allow multiple people to create a document efficiently. ("Wiki" means "quick" in Hawaiian.) Wikipedia is the most famous "wiki"—it contains 4.5 million articles. Typically the Wikipedia entry is on the first page of results whenever someone searches on a proper noun. Written by volunteers, these articles are often viewed as definitive sources of information on various topics, including major events such as the shootings at Sandy Hook Elementary School and the Boston Marathon bombing in 2013.
- **YouTube** serves as a platform for videos and is the world's second largest search engine behind Google. Google purchased it for $1.65 billion a few years ago.
- **Twitter** is an online social networking and micro-blogging service that enables users to send and read 140-character text messages, called "tweets."
- **SlideShare** essentially functions like YouTube for presentations, and it has the potential to dramatically increase the audience for such presentations. In 2009, Mr. Aase spoke about social media at a conference attended by 200 people. During his presentation, an audience member sent out a tweet that included a link to the presentation on SlideShare. This single tweet got shared with others and ultimately led to more than 14,000 people viewing the presentation.
- **Ustream.tv** is a platform that allows individuals to create their own global high-definition television stations. Two different versions are available—one that is free (supported by advertising) and one fee-based service that allows the creator to customize and brand the station.

Exhibit 20. 2010 Brand Preference Summary
Healthcare Decision Makers Aged 25+



Source: 2010 U.S. Consumer Brand Monitor, n=5,279.

Mayo Clinic's History in Social Networking and Social Media

As **Exhibit 20** indicates, Mayo Clinic enjoys, by far, the strongest brand image of hospitals in the U.S. This strong brand image is no accident. Rather, it has been generated as the result of a conscious effort by Mayo leaders to engage in and leverage social networking, which has been a part of the organization's "DNA" since its foundation. In fact, social networking at Mayo began 150 years ago with a newspaper announcement placed by Dr. William Worrall Mayo about the opening of a new practice. His sons (both surgeons) invented the group practice of medicine, and subsequently spent a lot of time on "social networking" by traveling to explain the concept to others. Since that time, Mayo's leaders have consciously sought to leverage social networking to build brand image through word-of-mouth. For example, in 2004 Mayo leaders launched *Mayo Clinic Medical Edge*, a syndicated news media resource that includes television, radio, and newspaper. In 2005, they added podcasts of existing radio broadcasts to the mix, getting them listed in Apple's iTunes directory. This change led to a dramatic increase in the number of monthly downloads of these broadcasts, from 900 to 74,000.

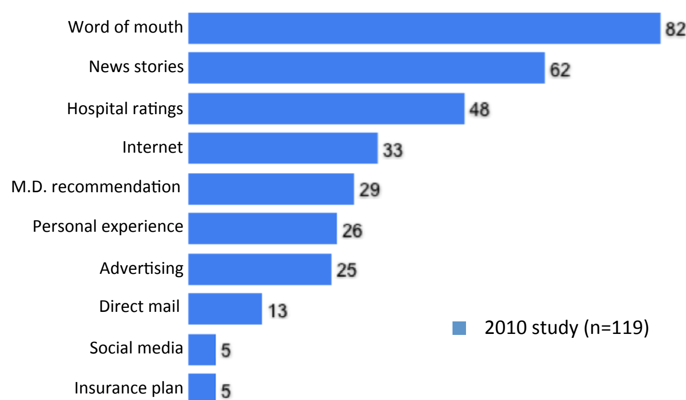
Beginning in October 2005, a new media task force met for a nine-month period to review the social media landscape and make recommendations on the right strategies for Mayo. The group called for the creation of more in-depth products, including podcasts, and suggested that Mayo hold off on blogging until later. Based on this recommendation, Mayo ended up producing several in-depth podcasts on different conditions. These podcasts come up prominently on Web searches and have enjoyed great popularity. Mayo leaders also gave approval very early on for the organization to set

up a Facebook page, and to repurpose existing video content by placing it on YouTube. Mayo has also taken advantage of advances in camera equipment to create low-cost videos on rare conditions. Using hand-held cameras that offer "good-enough" video quality, Mayo has created low-cost videos on POTS (postural orthostatic tachycardia syndrome), Niemann-Pick Disease Type C, and other rare conditions. Mayo now has over 4,000 such videos available. Under the old model (where professional-grade videos involve cameras that cost $25,000 each and typically require another staff person), the organization likely could not have afforded to produce more than a few hundred such videos. Mayo has also launched *Sharing Mayo Clinic*, the organization's version of *People* magazine, and in 2008–2009 Mayo began using Yammer as an internal social network for employees.

The effort to leverage social networking and social media has clearly paid off for Mayo. A 2010 survey found that 91 percent of Mayo patients say good things about the organization after their visits, and 86 percent would recommend Mayo Clinic to someone else. As shown in **Exhibit 21**, word-of-mouth is the single biggest source of influence for those choosing to come to Mayo, with news stories being second. These results are no accident, as social media and social networking are specifically designed to generate word-of-mouth and to maximize the reach and impact of media stories.

To maintain professionalism, Mayo Clinic has created a set of guidelines related to social media, including the sharing of patient stories. These policies reflect the belief that professionals have a moral obligation to use available tools effectively on behalf of those they serve, and to treat these individuals with respect, including honoring their right to privacy. Examples of these policies include not "friending" or "following" patients on social media sites, and always remembering the "front-page" rule (i.e., that anything shared could end up on the front page of a newspaper or magazine).

Exhibit 21. Sources Influencing Preference for Mayo Clinic (2010)



Source: Consumer Brand Monitor, Base: Respondents Who Prefer Mayo Clinic; *differs significantly from Q2-2010.

Case Studies Demonstrating Positive ROI

Social media and social networking often generate a positive ROI, as the following case studies illustrate.

Myelofibrosis Video

Ruben Mesa, M.D., developed a 10.5-minute video on this disease (a type of blood cancer) that has been viewed by over 14,000 individuals and used in various patient support groups. The video has led to at least 50 direct consults coming to Mayo, and to a substantial increase in the number of patients with myelofibrosis coming to Mayo's Scottsdale clinic for treatment. (Dr. Mesa practices at this clinic.)

News Stories Promoting Diagnosis/ Treatment of Torn Wrist Ligament

Richard Berger, M.D., Ph.D., an orthopedic surgeon, was the first to report a new type of injury to the ulnotriquetral (UT) ligament in the wrist. This particularly injury, called a UT split tear, can be quite difficult to diagnose, and can only be seen if the doctor knows specifically what to look for in the magnetic resonance imaging test. Dr. Berger knows how to diagnose it, and also developed the method to repair the damage surgically. Patients with this injury who do not have this operation will typically not improve, thus keeping them from being active.

One of Dr. Berger's patients was Jayson Werth, a professional baseball player who injured his wrist after being hit by a pitch. After undergoing a different type of surgery that made his condition worse, Werth came to see Dr. Berger based on the recommendation of a friend. Dr. Berger operated on his wrist the day after this visit, and after six weeks in a cast followed by rehabilitation, Werth was able to return to the baseball field. He subsequently signed an $850,000 a year contract with the Philadelphia Phillies, and several years later signed a contract worth tens of millions of dollars with the Washington Nationals (the 13th richest contract in the history of Major League Baseball at the time). He credits Dr. Berger and the Mayo Clinic with saving his career, and has been kind enough to say so during interviews and in newspaper stories. These stories have been featured prominently on Mayo's various social media outlets.

Dr. Berger has also conducted chats on Twitter where he talks about the injury and the surgery. Fueled by social media and social networking, Werth's story has become well known and has led to a significant increase in the number of UT split repair procedures performed at Mayo and to the adoption of Dr. Berger's technique by surgeons throughout the country. In medicine, it often takes 17 years for new treatments and techniques to make their way into practice. Thanks to social media, Dr. Berger's technique spread throughout the country in roughly two years.

Internal Social Networking through Yammer

A 10-person team at Mayo decided to use a Yammer thread instead of an in-person meeting each morning. This small change saves roughly 500 hours of staff time a year just within this team, equivalent to 0.25 full-time equivalent staff, or $20,000 a year in compensation. The potential savings would

increase exponentially if this approach were adopted throughout the 60,000-person organization.

Patient Education Videos

Rather than spend $30,000 for a traditional video with professional actors and scripts, Mayo decided to create short, procedurally-focused patient education videos at very low cost. For example, Mayo spent less than $200 to shoot and edit a video showing patients how to remove a nasal tube. As a result, patients with nasal tubes who view the video can often remove the tubes on their own, eliminating the need for an in-person visit and hence saving both time and money. Given that these videos cost very little to produce, it stands to reason that they will generate a significant, positive ROI, even if they eliminate the need for only a few patient visits.

Mayo leaders believe that there is a cost to *not participating* in social media. For example, after the introduction of the DTP vaccine, the number of pertussis cases in the U.S. declined by 90 percent over a 15-year period, from 120,000 cases in 1950 to 6,800 in 1965. However, cases are now on the rise again due to the growing number of people who are concerned that vaccines cause autism. This belief is based on what has been shown to be a fraudulent research publication, and it would be wise for the 60,000 members of the American Academy of Pediatrics to take to the social media "airwaves" to make the case for vaccination.

Some physicians, however, have taken the opposite approach by trying to prevent the spread of social media, including seeking gag orders against patients who publish negative reviews online. Such gag orders are not the answer. Rather than limiting use of social media, the better strategy is to respond to a negative review with lots of positive ones, since there are generally many more satisfied than unsatisfied customers.

"We trust physicians with sharp instruments and controlled substances. With proper training, we can trust them with Facebook and Twitter, too."

—Lee Aase, Director, Center for Social Media, Mayo Clinic

Taking Social Media to the Next Level

In 2009, Mayo's incoming CEO, John H. Noseworthy, M.D., sent out an email suggesting that Mayo's leadership team consider whether an even bigger investment in social media was warranted. In January 2010, Dr. Noseworthy endorsed the idea of creating a center for social media, which in turn led to formation of a planning team. In July 2010, the Mayo Clinic Center for Social Media opened. Its purpose is to improve health globally by accelerating the effective application of social media tools throughout Mayo Clinic, and by spurring

broader and deeper engagement in social media by hospitals, medical professionals, and patients. The center's mission is not primarily about creating a business advantage for Mayo, but rather about leading the social media revolution in healthcare, thereby contributing to the health and well-being of people everywhere by helping patients and their families and allowing other practitioners to learn from Mayo.

To help the center in accomplishing its mission, Mayo also formed the Social Media Health Network, an affiliated membership organization made up of institutions interested in using social media to promote health, fight disease, and improve care. Organizational members pay dues based on their revenues, and individuals can buy paid memberships as well. Much of the social media content is available free of charge through a guest account.

Lessons Learned

Key lessons from Mayo's experience in social media include the following:[3]

- **Do not let perfect be the enemy of the "good enough":** The goal should be to make resources available to patients,

3 More information on the use of social media in healthcare is available in *Bringing the Social Media #Revolution to Health Care,* a collection of 30 essays written by thought leaders in the field with a focus on the "why" (reasons to embrace social media in healthcare). Published by the Center for Social Media at Mayo Clinic, the book is available at Amazon.com. Discount bulk orders can be purchased through CreateSpace.com (offer code Z4L7DBSN). Net proceeds fund patient scholarships at Mayo. Other recommended reading: Clay Shirky, *Here Comes Everybody: The Power of Organizing without Organizations* (Penguin Books, 2009) and *Cognitive Surplus: How Technology Makes Consumers into Collaborators* (Penguin Books, 2011); and Clayton M. Christensen, *The Innovator's Dilemma: The Revolutionary Book That Will Change the Way You Do Business* (Harper Business, 2011), *The Innovator's Solution: Creating and Sustaining Successful Growth* (Harvard Business Review Press, 2013), and *The Innovator's Prescription: A Disruptive Solution for Health Care* (McGraw-Hill, 2008).

even if the video quality is not professional grade. Often a flip recorder used in a quiet room will produce a video of adequate quality.

- **Think big, start small, and move fast™:** The official motto of the Mayo Clinic Center for Innovation, this approach helps to ensure that social media and social networking are used to their maximum advantage. For organizations that have done nothing else, the first step should likely be to create a Facebook page, which is free and offers the opportunity to include video and photos. For greater impact, organizations should consider adding a presence on YouTube, which requires a slightly bigger (but still quite modest) investment of time and money. Most phones have cameras with adequate video capabilities, and much can be done with relatively inexpensive, consumer-grade equipment. Another early step worthy of consideration is the creation of an internal social networking platform for employees through Yammer (which offers both free and paid versions) or Chatter (a product of Salesforce.com).
- **Focus on platforms with at least 10 million users:** With hundreds if not thousands of potential social media platforms, it becomes impossible to have a presence on all of them. The best strategy is to concentrate on those that have at least 10 million users.