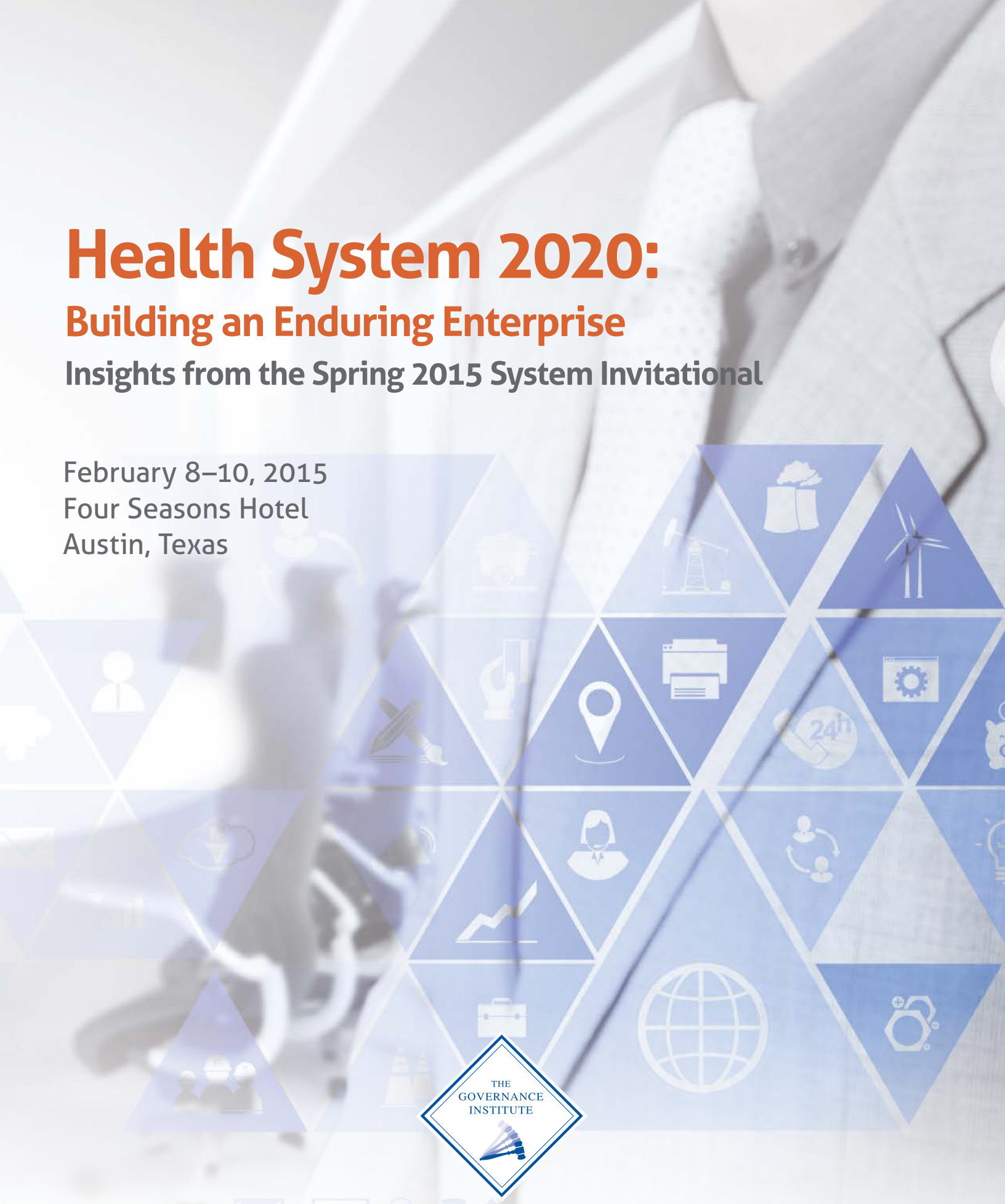
Health System 2020:

Building an Enduring Enterprise

Insights from the Spring 2015 System Invitational

February 8–10, 2015
Four Seasons Hotel
Austin, Texas



A service of NATIONAL RESEARCH Corporation

About the Author

Larry Stepnick is Vice President and Director of The Severyn Group, Inc., a Virginia-based firm that specializes in conducting qualitative and quantitative research, and writing and producing publications on a wide range of healthcare management issues. In addition to printed materials, The Severyn Group creates Web site content and electronic presentations for training and education purposes. Severyn's clients include a broad spectrum of organizations that represent virtually all aspects of healthcare, including financing, management, delivery, and performance measurement. The Severyn Group assists clients in resolving their most critical strategic concerns.

Prior to cofounding The Severyn Group in 1994, Mr. Stepnick served as Senior Vice President and an elected officer of The Advisory Board Company, a for-profit membership of more than 1,000 hospitals and health systems. Mr. Stepnick received his bachelor's degree from Duke University, where he graduated summa cum laude. He also holds an M.B.A. from the Wharton School of the University of Pennsylvania, where he graduated with honors.

Mr. Stepnick can be reached at (703) 723-0951 or via email at larry@severyngroup.com.

The Governance Institute

The Governance Institute provides trusted, independent information and resources to board members, healthcare executives, and physician leaders in support of their efforts to lead and govern their organizations.

The Governance Institute is a membership organization serving not-for-profit hospital and health system boards of directors, executives, and physician leadership. Membership services are provided through research and publications, conferences, and advisory services. In addition to its membership services, The Governance Institute conducts research studies, tracks healthcare industry trends, and showcases governance practices of leading healthcare boards across the country.

A service of NATIONAL RESEARCH *Corporation*

The Governance Institute®

The essential resource for governance knowledge and solutions®

9685 Via Excelencia • Suite 100 • San Diego, CA 92126
Toll Free (877) 712-8778 • **Fax** (858) 909-0813
GovernanceInstitute.com

Jona Raasch	Chief Executive Officer
Zachary Griffin	General Manager
Cynthia Ballow	Vice President, Operations
Kathryn C. Peisert	Managing Editor
Glenn Kramer	Creative Director
Kayla Wagner	Editor
Aliya Garza	Assistant Editor

The Governance Institute is a service of National Research Corporation. Leading in the field of healthcare governance since 1986, The Governance Institute provides education and information services to hospital and health system boards of directors across the country. For more information about our services, please call toll free at (877) 712-8778, or visit our Web site at GovernanceInstitute.com.

The Governance Institute endeavors to ensure the accuracy of the information it provides to its members. This publication contains data obtained from multiple sources, and The Governance Institute cannot guarantee the accuracy of the information or its analysis in all cases. The Governance Institute is not involved in representation of clinical, legal, accounting, or other professional services. Its publications should not be construed as professional advice based on any specific set of facts or circumstances. Ideas or opinions expressed remain the responsibility of the named author(s). In regards to matters that involve clinical practice and direct patient treatment, members are advised to consult with their medical staffs and senior management, or other appropriate professionals, prior to implementing any changes based on this publication. The Governance Institute is not responsible for any claims or losses that may arise from any errors or omissions in our publications, whether caused by The Governance Institute or its sources.

© 2015 The Governance Institute. All rights reserved. Reproduction of this publication in whole or part is expressly forbidden without prior written consent.

Table of Contents

Preface

Held February 8–10, 2015, at the Four Seasons Hotel in Austin, Texas, The Governance Institute's System Invitational brought together a distinguished group of faculty with just under 50 representatives from 10 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 eighth invitational focused on governance and leadership within integrated care delivery systems. After each of the previous sessions, The Governance Institute produced proceedings reports summarizing the key messages.

This most recent System Invitational focused on building a health system for the future. In business environments characterized by fundamental and rapid change, leaders understandably and inevitably become preoccupied with near-term mandates and priorities. Within such an environment, some leaders might be skeptical of the notion of focusing on a more distant future. However, the ultimate test of highly effective healthcare executives and board leaders is whether their organizational stewardship results in something that endures, providing a lasting benefit to the communities served. Success requires an ability to understand, prioritize, and navigate today's challenges while simultaneously building the foundation to take advantage of tomorrow's opportunities. To that end, The Governance Institute's 2015 System Invitational focused on how health systems can thrive in the year 2020 and beyond. Specifically, the program featured case examples from leaders of some of the most innovative provider organizations across the nation, along with other distinguished faculty who brought expertise and perspectives from both inside and outside the healthcare arena.

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.

Please direct any questions or comments about this document to:

Kathryn C. Peisert
Managing Editor
(877) 712-8778
kpeisert@GgovernanceInstitute.com

Faculty

The Governance Institute thanks the following faculty members of the 2015 System Invitational (listed in alphabetical order) for being so generous with their time and expertise:

Nancy Howell Agee
President and CEO, Carilion Clinic

Ryan D. Donohue
Corporate Director of Program Development, National Research Corporation

Atul Gawande, M.D.[1]
Professor, Harvard Medical School

Mark Grube
Managing Director, Kaufman, Hall & Associates, LLC

Marc Halley, M.B.A.
CEO, The Halley Consulting Group, Inc.

Stephen W. Kett[2]
Program Director, The Governance Institute

Walter Morrissey, M.D.
Senior Vice President, Kaufman, Hall & Associates, LLC

Robert M. Wachter, M.D.
Professor, Associate Chairman, and Chief of the Division of Hospital Medicine;
Marc and Lynne Benioff Endowed Chair in Hospital Medicine;
University of California, San Francisco

1 Dr. Gawande's presentation, "Being Mortal," was based on his book of the same name (*Being Mortal: Medicine and What Matters in the End,* Metropolitan Books, 2014). Due to copyright issues we are unable to publish his presentation summary in these proceedings. For more information, refer to his book.

2 Mr. Kett conducted a teaching session on the leadership transformation of Scripps Health, which is not included in this proceedings report. To download the related case study, *Building a Culture of Accountability from Within: The Transformation of Scripps Health,* visit www.governanceinstitute.com.

Executive Summary

Held February 8–10, 2015, at the Four Seasons Hotel in Austin, Texas, The Governance Institute's System Invitational brought together a distinguished group of faculty with just under 50 representatives from 10 health systems across the U.S. to discuss critical issues facing their organizations in today's rapidly changing environment. 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.

Key Takeaways

Among many key lessons discussed during the System Invitational, four key messages stand out:

- **The promise (and potential perils) of technology:** Digital medicine and related technologies offer tremendous potential to improve care, but the day-to-day consequences in many cases may be unintended. Overseeing the digital transformation remains "mission-critical" for health system leaders.
- **Commit to standardization:** Leaders need to fully commit to reducing variations in processes, outcomes, and costs.
- **Think big, act small:** The ideal size for a health system remains a matter of debate. While achieving significant scale within a local market seems wise, the merits of a multi-state presence (both at a regional and national level) remain unclear. Regardless of actual size, health systems should strive to "think big" but "act small," particularly when it comes to serving individual patients and consumers with unique preferences and needs.
- **Invest in leadership:** Developing effective, proactive leaders (especially physician leaders) has never been more important.

The Digital Doctor: Hope, Hype, and Harm at the Dawn of Medicine's Computer Age

Robert M. Wachter, M.D., Professor, Associate Chairman, Chief of the Division of Hospital Medicine, and Marc and Lynne Benioff Endowed Chair in Hospital Medicine at the University of California, San Francisco (UCSF), discussed potential unintended consequences that can arise from the digitalization of healthcare, including the following:

- **Changing social and power relationships:** Health information technology (IT) can lead to unexpected changes in social and power relationships among providers. Nowhere is this example more telling than in the field of radiology, where the digitalization of one "thing" (the image) led to a withering of social relationships and communication patterns between radiologists and other clinicians, along with a renegotiating of accompanying power relationships. But in today's world, the "thing" being scaled is not just radiology images, but rather the entire medical record.
- **Physicians who interact with computers (not patients):** The advent of the electronic medical record (EMR) means that doctors generally review results from prior scans, blood tests, diagnoses, and other information before ever seeing the patient, so there is less need for interaction during the visit. In addition, EMRs often require the entry of information during the visit. As a result, many physicians spend little time engaging with patients during visits, and instead stare into a monitor.
- **New kinds of medical errors:** The advent of health IT creates the potential for new kinds of medical errors. As an illustration of that potential, Dr. Wachter shared the case of a 16-year-old boy being seen at UCSF Medical Center, who ended up taking a massive overdose that led to a grand mal seizure and near death. (Additional details can be found in the main body of the report.)
- **Reduction of skills:** An over-reliance on technology sometimes means that people do not have the skills needed to handle complex situations.

Key Takeaways and Implications for Health Systems

System Invitational attendees broke into small groups to discuss the major implications of the material presented by Dr. Wachter and Dr. Gawande. Key points include the need to do the following:

- **Focus on health and well-being of patients as humans:** Health systems risk alienating patients by failing to focus on their experience as humans. To that end, community-based systems should focus not only on maintaining health, but also on ensuring the well-being of those they serve.

- **Continually push toward greater "systemness":** Even after leaders make the commitment to reduce variation, manage population health, and otherwise act as a "system," constant work is required to ensure that the structures are in place to achieve these goals.
- **Invest in physician leadership development:** Physicians have to lead their peers through the changes required to reduce variation and act as a single system. Yet few physicians have such leadership skills today.
- **Focus on end-of-life care:** Major challenges remain in providing high-quality palliative care, including ensuring that appropriate conversations are taking place.
- **Embrace transparency:** Standardizing care and reducing variability requires the distribution of physician performance data.
- **Embrace at-risk payments:** Once at-risk payments hit a certain threshold, physicians become very interested in reducing variation and otherwise enhancing the value of care, as it becomes in their own economic self-interest to do so.

Does Size Matter? Scale as a Less Important Virtue

Nancy Howell Agee, President and CEO of Carilion Clinic, discussed her organization's journey from being a hospital-dominated system to a clinic model similar to Mayo Clinic. Over the last seven years, Carilion has developed a multi-specialty group practice (including hiring 350 physicians in the last three years); created leadership dyads, with physician leaders being paired with non-physician leaders; and implemented the Epic system across the entire enterprise. Carilion also built a large multi-specialty clinic building, a medical school, and a research institute. As part of its care redesign efforts, Carilion transformed its primary care sites into patient-centered medical homes focused on care coordination and the management of chronic illness. Carilion started its own accountable care organization and is working closely with its two major payer partners to improve quality and reduce costs.

The transformation has not always been an easy one. Five of the organization's administrators left, as they did not buy into the strategic direction. Early on, tremendous turmoil existed within the medical staff and public confidence in the organization eroded, particularly after it lost money for four consecutive years. Ultimately, however, Carilion's leaders brought the physicians along. They regularly communicated with them, highlighting the critical imperative to change and emphasizing collaboration and teamwork in executing those changes. They focused on the need to create a coordinated, integrated care model and emphasized the common, higher purpose that drew everyone into the healthcare arena in the first place. After spending four years in the red, Carilion's efforts to transform itself into a clinic model have finally begun to pay financial dividends. The organization had a 3.7 percent operating margin in fiscal year 2014, slightly above the 3.0 percent needed to sustain investments in new technologies and people.

Think Big, Act Small: The Essence of Patient-Centered Care

Marc Halley, M.B.A., CEO of The Halley Consulting Group, Inc., noted that large provider organizations often end up getting in their own way by setting up complex systems and processes that actually create barriers to performance. To succeed, these organizations need to "think big and act small" at the same time. They cannot allow their size to interfere with their relationships with individual patients and consumers. Large organizations have a tendency to centralize certain functions, but centralized departments too often put in place policies and procedures that support the department rather than their internal and external customers. Sometimes they "take on lives of their own" and make it harder for those on the front lines to do what they need to do.

Health systems do need to "think big" when it comes to certain activities, such as sharing risk, negotiating with payers, positioning competitively, fighting for market share, accessing capital, sharing technology, being accountable, integrating functionally, sharing best practices, building economies of scale, and rationalizing clinical services. At the same time, health system boards and management teams need to "act small" when it matters, including supporting physician efforts to do the following: ensure easy access to care, maintain strong relationships with patients, provide high-quality clinical care, support patients in maintaining their health, manage care for the chronically ill, provide a good service experience, promote individual accountability, be productive, manage transitions across silos, and self-report data on performance.

System "Small Ball": Doing Little Things to Win Big with the Customer

Ryan D. Donohue, Corporate Director of Program Development at National Research Corporation, built on Mr. Halley's remarks by discussing the "little things" that systems must do to "win big" with the customer. Since 2012, National Research has conducted a "blue-sky exercise" that uses quantitative and qualitative research to better understand customers' views on healthcare. This research has uncovered a very clear message from the consumer: "Treat me like the person I am and empower me to make the best healthcare decisions (for me) and guide me every step of the way." Whether fair or not, customers want health systems to empower and support them, and if health systems do not play that role, someone else (e.g., the insurer) will.

Customers want a one-to-one relationship with their providers and provider organizations, and often admire big companies for doing the little things. Hence a commitment to "small ball" is essential as organizations increase in size and scale to ensure that system complexities and politics do not get in the way. To make that commitment a reality, health systems and hospitals should engage in the following:

- **Increase visibility:** Relatively low-cost changes can help consumers find the organization.

- **Treat people well:** Small changes can make a big difference, such as redesigning the imaging room in a children's hospital to be less scary to patients.
- **Encourage feedback:** People love to provide feedback and to have access to other people's perspectives.

Specific examples of small changes that can have a big impact include the following:

- Mobile applications to make appointments and track experiences
- Round-the-clock urgent care clinics to treat minor issues
- Payment plans that offer manageable payments
- Easy access to the pharmacy and ability to refill prescriptions over the phone
- Accessible online medical records
- Same-day and virtual appointments
- Short wait times in the emergency department
- Monitors and way-finding machines that provide useful information
- Satisfaction surveys offered during the care experience
- Use of physician assistants and/or nurse practitioners to see patients faster and more frequently
- Loyalty and reward programs for repeat purchases

Key Takeaways and Implications for Health Systems

System Invitational attendees broke into small groups to discuss the major implications of the material presented by Mr. Halley and Mr. Donohue. Key points include the need to do the following:

- **Focus on small things to create seamless experience:** The goal should be to make everything easy for consumers, with the experience being as seamless as possible.
- **Support physicians and nurses in communicating with patients:** Consumers trust physicians and nurses more than other healthcare stakeholders. Yet this trust depends on their ability to listen and clearly explain things to patients.
- **Strive for customer-focused service line integration:** Service lines should be integrated from the patient's (not the provider's) perspective.
- **Treat primary care physicians (PCPs) as customers:** Specialty groups have two sets of customers—PCPs and patients—and should elicit their feedback and consider their perspectives.
- **Consider written compacts for care transitions:** These compacts can lay out the rules with respect to moving patients through various service lines.
- **Promote price transparency:** Providers can either take the lead in promoting price transparency or be "dragged along" by government initiatives.
- **Focus on virtual experience, particularly with millennials:** Many customers want opportunities to interact virtually with hospitals and health systems, including accessing information online and having virtual or telephone-based visits and consultations. These options are particularly important to young adults.

Reconfiguring the Clinical Delivery Network

Mark Grube, Managing Director at Kaufman, Hall & Associates, LLC, and Walter Morrissey, M.D., Senior Vice President at the same firm, discussed delivery system reconfiguration and optimization. Success begins at the board level. Board members must believe in the change, develop a set of guiding principles for it, and enable the transformation by empowering a steering committee to lead the process, charging it with being both bold and accountable for results. The planning itself should be a bottom-up process, led by service line-specific and facility-level task forces made up of physician leaders, administrative champions, subject matter experts, and patient representatives. These task forces develop, quantify, and identify implementation issues related to the service reconfiguration plan. Throughout the process, senior administrators and the board must be prepared to respond to those who object to the changes being made. Many hurdles exist when attempting such a transformation, but they can be overcome. Key lessons include the following:

- **Start early:** There will never be a perfect time to lead a market transformation. If health systems do not act, however, someone else will transform the market, reaping significant first-mover advantages and forcing the rest of the market to scramble to catch up.
- **Ensure commitment from the top:** Commitment to and ownership of the transformation must come from the highest levels of the organization, including the board.
- **Communicate the "why":** A well-coordinated communication plan is needed to highlight the rationale for change to all key stakeholders, including the community at large.
- **Avoid incrementalism:** Many organizations choose to proceed incrementally due to a reluctance to drive transformational change. This approach will not result in the magnitude of operational savings or capital avoidance needed to succeed.
- **Proactively address barriers to execution:** These barriers include realigning incentives, setting up the right organizational and physician structures, building the required ambulatory infrastructure, and managing cultural change.
- **Engage physicians through bottom-up planning:** While it may take longer to get through the planning process, fully engaging physicians upfront positions the organization for accelerated execution farther down the line, once planning has been completed.
- **Focus on enhancing access to care:** The transformed system should make it as easy as possible for consumers to access care, both at physical sites and virtually.
- **Remain patient:** This type of effort requires multiple years of planning and implementation. By starting early and focusing on major (rather than incremental) change, proactive systems should have adequate time to plan and execute the needed steps.

The Digital Doctor: Hope, Hype, and Harm at the Dawn of Medicine's Computer Age

Robert M. Wachter, M.D., Professor, Associate Chairman, and Chief of the Division of Hospital Medicine; Marc and Lynne Benioff Endowed Chair in Hospital Medicine; University of California, San Francisco

The Computerization of Healthcare

In his 2004 State of the Union address, President George W. Bush stated: "By computerizing health records, we can avoid dangerous medical mistakes, reduce costs, and improve care." Yet as occurred in other industries, immediate benefits did not accrue to healthcare from the introduction of information technology (IT). The lack of benefits stems not from subpar technology, but rather from the failure to make changes around the technology. For the digitalization of healthcare to make a difference, the entire ecosystem around health IT needs to change, including how work is organized and how people interact with one another.

Several weeks after the address, President Bush created the Office of the National Coordinator for Health Information Technology (initially referred to as ONC-HIT, and later shortened to ONC) and appointed David J. Brailer, M.D., Ph.D., as the nation's first National Health Information Technology Coordinator (the "czar" of health IT), giving him the mandate of computerizing American healthcare. While natural forces led to computerization in most other industries, healthcare needed a push from the federal government, due in part to financial incentives that gave insurers (not providers) most of the benefits derived from any cost savings generated by investments in health IT. Initially provided with an annual budget of only $42 million, Dr. Brailer made modest progress in encouraging computerization, primarily through convening stakeholders to forge standards to ensure that various systems could communicate with each other.

After the economy imploded in 2008, President Obama and Congress passed a $700 billion stimulus package in 2009, designating the funds for "shovel-ready," productive projects that could create jobs and otherwise stimulate economic activity. Recognizing a once-in-a-lifetime opportunity, newly appointed czar David Blumenthal, M.D., managed to secure $30 billion for ONC. The approach clearly worked, as adoption of electronic medical records (EMRs) and computerized physician order entry (CPOE) systems skyrocketed, from roughly 10 percent of hospitals and physicians in 2008 to over 70 percent today. Other factors besides financial incentives likely played a role as well, such as the advent of accountable care organizations (ACOs) and pressure from the federal government and other payers to reduce readmissions.

If the goal of the effort was simply to transition healthcare from an analog to a digital industry, then clearly the $30 billion worked. However, a deeper investigation reveals some unintended consequences and "bumps in the road." Many providers did not know how to organize themselves and their work so that IT systems and related data could be used to improve relationships between provider and patient. As Richard Baron, a pioneering primary care physician (PCP) in Philadelphia noted after digitizing his office in mid-2005, "the staff came to work one day and no one knew how to do his or her job." In fact, problems with newly installed EMRs have led some providers to tout their lack of health IT as a benefit when recruiting physicians.

Unintended Consequences Stemming from Health IT

The patient safety field has long looked to health IT as a way to improve the quality and cost-effectiveness of care. However, as discussed below, a number of unintended consequences must be addressed before this hope will be realized. The existence of these unintended consequences does not mean that the transition to health IT should stop or that a return to paper-based systems would be better. Rather, such consequences inevitably arise whenever a major change occurs, and health systems must be aware of and takes steps to manage them proactively.

Changing Social and Power Relationships: The Digital Radiology Example

Health IT can lead to unexpected changes in social and power relationships among providers. Nowhere is this example more telling than in the field of radiology, which went digital roughly 15 years ago with the creation of PACS (picture archiving and communication system), thus allowing for the storing of digital images of computed tomography (CT) and magnetic resonance imaging (MRI) exams. Economics drove the creation of PACS. Because CT and MRI scans produce hundreds of images for each patient (unlike X-rays, where typically only one or a few images are created), it became cost-prohibitive to print each image. What most people did not anticipate, however, was that

the transition from printing images to viewing them on a computer screen changed social relationships and communication patterns among physicians. In the past, frontline clinicians had to visit the radiology department to view the films. As a result, radiologists controlled access to the images, and frontline clinicians and radiologists typically gathered around the printed images to discuss specific cases.

With PACS, however, the ordering physician views the image and the radiologist's report at his or her leisure, with no need to talk to the radiologist. As a result, for many health systems, the demand for radiologists has declined significantly. In addition, a radiologist need not be physically located at the health system to review a scan and create a report, since images can be read from anywhere in the world. Because of PACS, the potential exists for U.S.-based radiologists earning $400,000 a year to be replaced with radiologists in India who make only one-tenth of that amount.

The digitalization experience in radiology should serve as an "early warning system" for the rest of medicine. The lesson is clear: the digitalization of any one "thing" creates the potential for nearly infinite scalability and distribution of that thing, as there are now infinite copies rather than just one. Within radiology, this process led to a withering of social relationships and communication patterns between radiologists and other clinicians, along with a renegotiating of accompanying power relationships. But in today's world, the "thing" being scaled is not just radiology images, but rather the entire medical record. The most obvious sign of this change can be seen by looking at the typical hospital ward in a teaching hospital. These wards used to be teeming with residents most of the time, but today residents spend little time there. Once they see their patients, they quickly flee the ward, preferring instead to work in the residents' room, where they have complete access to all medical records and can be with their peers. No one set out to change work in this manner; it just happened as a result of the introduction of EMR systems. Unfortunately, however, all the work that had been done prior to digitalization to promote teamwork between residents and other clinicians has largely been lost.

The "iPatient": Physicians Interacting with Computers (Not Patients)

The advent of the EMR means that physicians often "meet" their patients long before actually seeing them. These doctors generally review results from all prior scans, blood tests, diagnoses, and other information before ever seeing the patient, so there is less need for interaction during the visit. In addition, EMRs often require the entry of information during the visit itself. As a result, many physicians spend little time engaging with patients during visits, and instead stare into a monitor. To avoid this problem, some health systems have begun to hire "scribes" whose job it is to enter information during the visit, thus freeing the physician to interact with the patient.

> "Every other industry lays off people when automating. Only in healthcare do we hire more people to 'feed' the computers."
>
> *—Robert Wachter, M.D.*

New Kinds of Medical Errors

The advent of health IT creates the potential for new kinds of medical errors. As an illustration of that potential, consider the case of a 16-year-old male being seen at UCSF Medical Center, which has state-of-the-art EMR and CPOE systems.

Weighing 38.6 kilograms (about 85 pounds), the boy had a chronic immunodeficiency and was admitted to the hospital for a colonoscopy as part of a workup for gastrointestinal bleeding. At 1:09 P.M., the resident wrote the patient's admission orders. She meant to order one double-strength tablet of Septra (a common antibiotic the patient had been taking for years). Instead, the order ended up being for 38.5 tablets. Despite having multiple safeguards in place, the patient ended up taking this full dose, and 14 hours later had a grand mal seizure and nearly died. Fortunately, he left the intensive care unit (ICU) a week later and is doing well today. But the obvious question is, how could such an error occur, particularly given the medical center's new EMR and CPOE systems?

The unfortunate chain of events leading to the error began as a result of a reasonable rule implemented by the hospital that requires weight-based dosing for any child weighing less than 40 kg. This rule meant that the admitting physician could not simply prescribe the same dose the patient took at home—one double-strength pill. Rather, the CPOE system required the doctor to enter a weight-based dosage. The physician did that, entering a dose of 5 milligrams (mg) per kg of body weight, which translated into 160 mg dose. The physician signed the order for a 160 mg dose of Septra (a double-strength single pill).

Had that order gone through and the dose been administered to the patient, all would have been well.

At this point, however, a second hospital policy kicked in, one that requires any dose rounded by more than 5 percent to be confirmed and signed by the ordering physician. Because the patient's actual weight was 38.6 kg, a weight-based dose of 5 mg per kg translated into 193 mg. Since a single pill contains 160 mg, the system automatically rounded the 193 mg to the nearest single-pill dose. This rounding exceeded 5 percent, thus preventing the pharmacist from approving the order without first going back to the physician to confirm the acceptability of the rounding. As a result, the ordering physician received a notice asking her to approve the rounded dose. Unfortunately, this is where the problem began. When the ordering physician entered the CPOE system to review the notice, the system automatically returned to the dosing mode (in mg per kg) and automatically inserted *160 mg per kg into the dosing box (not 5 mg per kg)*. As shown in **Exhibit 1**, the 160 mg per kg translated into a total dose of 6,160 mg for the patient, or 38.5 tablets. Because the physician was busy, she did not notice the change and approved the order.

Not surprisingly, the CPOE system has additional safeguards in place, and the physician received an alert indicating that the ordered amount (6,160 mg) was an overdose. But as depicted in **Exhibit 2**, the alert did not have any visual warnings, such as a picture of a skull and crossbones. In addition, the system generated alerts all the time; a study of a 70-bed ICU at UCSF found that the system generated 2,558,760 alerts each month,

Exhibit 1. Resident Returns to CPOE Screen

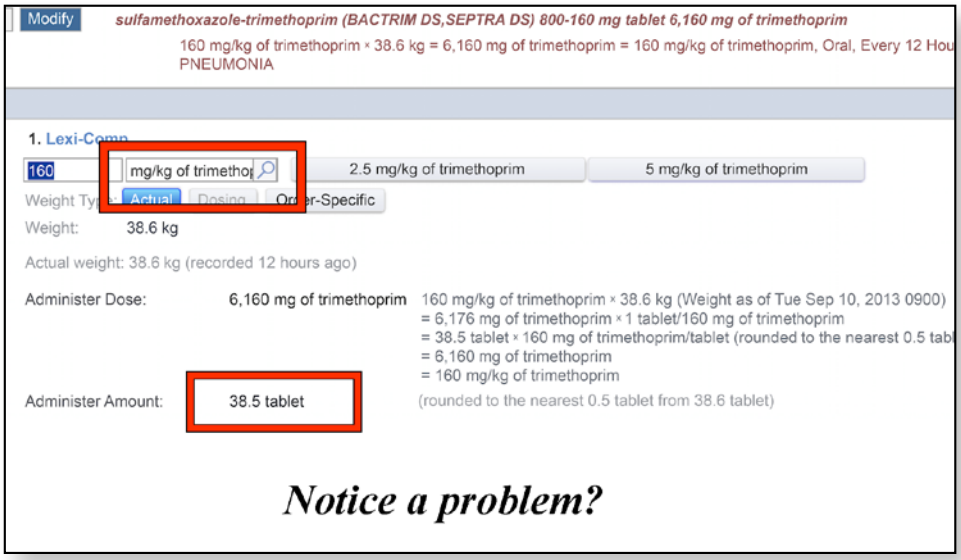
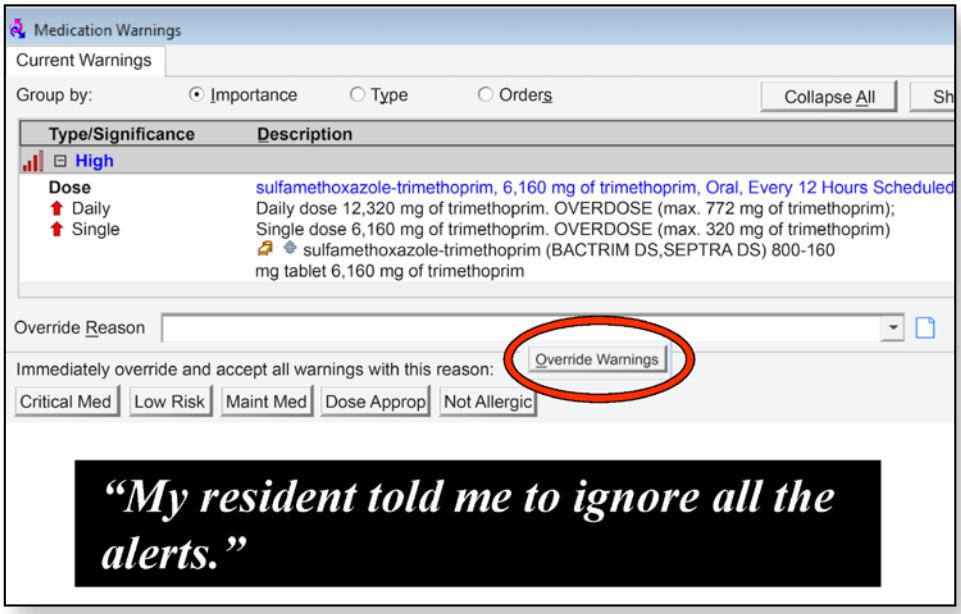


Exhibit 2. Alert Triggered



the equivalent of one every seven minutes. These alerts were almost always meaningless, so much so that the resident's attending physician had instructed her to ignore them. Consequently, the busy resident overrode the alert and proceeded with the order.

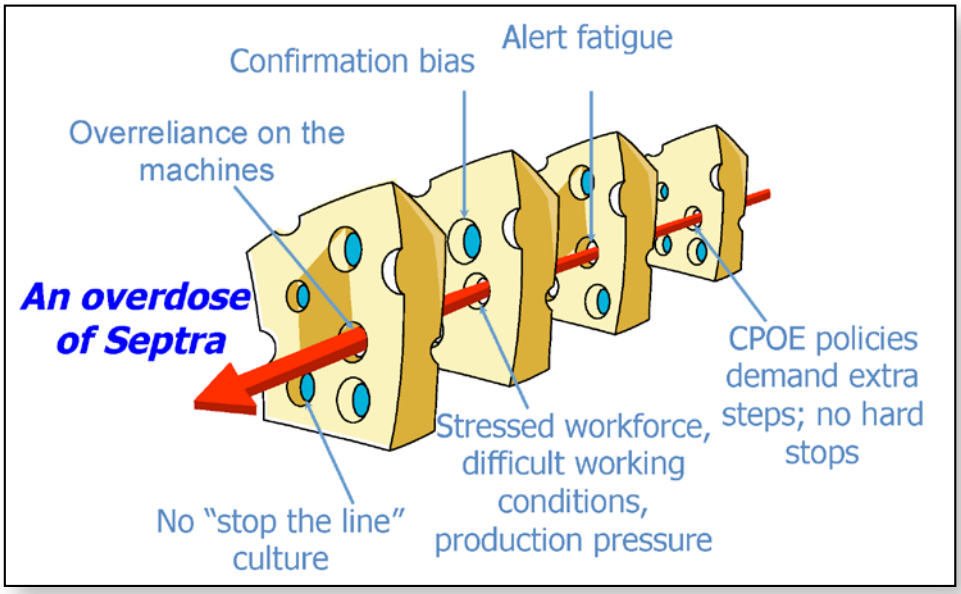
The overridden order went back to the pharmacy for approval, where overburdened pharmacists work in cramped quarters simultaneously answering phones, receiving visits, and manning computers that constantly generate alerts. As an additional safeguard built into the system, the pharmacist received a similar type of alert from the system about a potential overdose. Not surprisingly, however, the busy pharmacist also approved the order, not noticing the high dosage, in part because the actual dose ordered, 6,160 mg, was very similar numerically to the original dose of 160 mg.

In some hospitals, the order would have then gone to a pharmacy technician to be filled. But because the order was not time-sensitive, a robot rather than a person filled it. Unlike a person, the robot did not question the order, but rather pulled 38.5 pills off the shelf and applied shrink wrap and a bar code to each of them. The pills then came to a first-year nurse who did not normally work on this ward or with this type of patient. While the nurse thought the dose was unusually large, she had been instructed not to bother her boss (the charge nurse) unless absolutely necessary, particularly when her boss was busy with a complex task. At the time, the charge nurse happened to be administering chemotherapy to another patient, and hence was quite busy. With her boss unavailable, the floor nurse considered asking someone else, but did not want to "look stupid" by asking a question. So she began to think of reasons why such a large dose would be appropriate, and concluded that the dose was probably part of a research protocol (since the patient was on a research floor of the hospital).

The nurse also felt pressure to administer the dose quickly, since the hospital had a rule that medications should be administered within 30 minutes of their being ready and on the floor. So she brought the pills to the patient's room, where she planned to ask the patient's mother what she thought of the dose. However, the mother happened to be with her other child (also a patient) on a different floor of the hospital. Feeling pressure to give the medicine, the nurse checked the bar-code administration system to confirm that the pills matched the dose ordered and approved by both the doctor and pharmacist. When the system provided a positive confirmation, the nurse decided to trust the technology and gave the pills to the patient. The boy also thought the dosage seemed large, and even texted a friend that he was being given "a lot of pills" to take. But he took them, and later suffered the grand mal seizure and spent a week in the ICU.

In hindsight, of course, the floor nurse realized how ridiculous the dose was. However, at the moment it mattered, a whole host of factors told her that the dose was correct and she proceeded accordingly. As shown in **Exhibit 3**, this incident illustrates that the "Swiss cheese" model of major errors and accidents does not always work as planned. This model recognizes that individuals make mistakes, but these mistakes generally do not result in harm to the patient because of various layers of protection within the system. Unfortunately, in rare instances all the "holes" in the cheese line up, resulting in a major error.

Exhibit 3. The Swiss Cheese Model of Major Accidents and Errors



Source: James Reason, *Human Error* (Cambridge University Press, 1990).

Reduction of Skills

An over-reliance on technology sometimes means that people do not have the skills needed to handle complex situations. For example, three experienced pilots used to fly every commercial airliner. Because today's planes are so technologically sophisticated (they almost fly themselves), only two pilots fly commercial airliners today. In addition, most of these pilots have been trained in an era where sophisticated technology is assumed to be available. This over-reliance on technology can lead to disastrous results, as occurred when an Air France plane crashed off the coast of Brazil after its computer systems froze up. The relatively young pilot tried to fly the plane without its computer systems, but did not know how and consequently made a deadly mistake as the plane lost altitude and plunged toward the ocean.

Key Takeaways and Implications for Health Systems

System Invitational attendees broke into small groups to discuss the major implications of the material presented by Dr. Wachter and Dr. Gawande. Key points include the need to do the following:

- **Focus on health and well-being of patients as humans:** Health systems risk alienating patients by failing to focus on their experience as humans. To that end, community-based systems should focus not only on maintaining health, but also on ensuring the well-being of those they serve. The goal should be to know and respect the priorities of individual patients. Metrics used to gauge success also need to change accordingly. Beyond quantitative measures such as survival and fall rates, qualitative measures must also be used to evaluate success in providing humane care consistent with a patient's priorities and desires.
- **Continually push toward greater "systemness":** Even after leaders make the commitment to reduce variation, manage population health, and otherwise act as a "system," constant work is required to ensure that the structures are in place to achieve these goals, including clinical governance committees and dashboards at the system level. Many systems are the result of bringing together organizations with very different cultures and structures. It takes constant work to merge these cultures and address seemingly simple issues such as unwarranted variations in care. In fact, some systems that formed decades ago still have not fully committed to reducing variations across the organization, let alone to managing population health across the full continuum of care.
- **Invest in physician leadership development:** Physicians have to lead their peers through the changes required to reduce variation and act as a single system. Yet few physicians have such leadership skills today. To address this issue, several innovative health systems have invested in leadership development programs targeted at physicians.
- **Focus on end-of-life care:** Major challenges remain in providing high-quality palliative care, including ensuring that appropriate conversations are taking place. At Dana-Farber Cancer Institute, palliative care physicians teach a two-hour course on how to improve skills around end-of-life conversations and how to recognize patients for whom such conversations are appropriate. In addition, a palliative care team prompts physicians when such conversations do not take place. This effort has resulted in a doubling in the number of conversations, which are also occurring earlier than before. Many organizations do not have the skills or resources to revamp end-of-life care on their own, but instead need to partner with others in the community to do so. In particular, debate still exists over the respective roles of inpatient and outpatient hospice care teams, including teams in nursing homes and those going into patients' homes.
- **Embrace transparency:** Standardizing care and reducing variability requires the distribution of physician performance data, including sharing data on individual performance freely. Once physicians see how they are faring (and know that others can see as well), they will sit down to agree on a standardized process.
- **Embrace at-risk payments:** Once at-risk payments hit a certain threshold, physicians become very interested in reducing variation and otherwise enhancing the value of care, as it becomes in their own economic self-interest to do so.

Does Size Matter? Scale as a Less Important Virtue

Nancy Howell Agee, President and CEO, Carilion Clinic

Carilion in Brief

Carilion Clinic is a multi-specialty physician group made up of more than 750 physicians from approximately 70 specialties. The largest Virginia employer west of Richmond, Carilion has seven hospitals, including Carilion Roanoke Memorial Hospital (the third-largest hospital in Virginia, with 703 beds). Carilion has a very busy emergency department (ED), along with two trauma centers (Level 1 and Level 2), home health services, a retail pharmacy, hospice services, various graduate medical education programs, a residency program, and a college for health sciences with 1,100 students. The system handled over a million primary care visits, 175,000 ED visits, 55,000 urgent care visits, and 50,000 inpatient admissions in 2013. Compared to other systems, Carilion is relatively small, generating roughly $1.5 billion in net revenues each year. But it serves as an economic engine for its local region and operates in an area with more competition than elsewhere in Virginia, including HCA (which owns four hospitals in the region) and LifePoint (with five).

Carilion's Journey

Eight years ago, Carilion's senior leaders concluded that the system was in danger and needed to become bigger by joining forces with another organization. The group spent a year exploring various options for doing so, and ultimately took two such options to the board of directors: merge with another system or sell to a for-profit system. The board rejected both, directing the leaders to keep Carilion as a not-for-profit system headquartered in Roanoke, and charging them with figuring out how to make that work.

So the leadership team went back to work, focusing on what really mattered to them as leaders. Issues that surfaced during this discussion included taking care of patients and educating the workforce of the future, much the way university-based teaching hospitals do today. These discussions led to their investigating organizations that structure themselves as multi-specialty clinics, including Mayo Clinic, Geisinger Clinic, and The Cleveland Clinic. These systems stood out as leaders in taking on the thorniest issues facing the industry today, including physician leadership, the efficient use of resources, cost reduction, care coordination, improving clinical outcomes, and educating the workforce of the future

The leadership team decided that the best approach was to transition to a clinic model, and the board approved that strategy. Today Carilion is seven years into that journey. To endure, Carilion is working to be less risk adverse and more flexible, transparent, and customer-friendly. The goal is to stop acting like a hospital system, waiting for patients to knock on its doors, and instead focus on improving the health of the community, something fundamentally different than providing care to the sick.

> "Much work remains, and our success will ultimately be determined more by our willingness to change than by the specific changes being made."
>
> *—Nancy Howell Agee*

More specifically, over the last seven years Carilion has developed a multi-specialty group practice (including hiring 350 physicians in the last three years); created leadership dyads, with physician leaders being paired with non-physician leaders; and implemented the Epic system across the entire enterprise, including with patients (who now have access to their medical records so they can be partners in their care). Carilion also built a large, multi-specialty clinic building, a medical school, and a research institute. As part of its care redesign efforts, Carilion transformed its primary care sites into patient-centered medical homes (PCMHs) focused on care coordination and the management of chronic illness. Carilion started its own ACO and is working closely with its two major payer partners (Anthem and Aetna) to improve quality and reduce costs.

In essence, Carilion has worked to become a strong regional system that is becoming even stronger. But the road to getting there has not always been easy. Five of the organization's administrators left, including the chief medical officer (CMO) and later the CEO, as they did not buy into the strategic direction chosen. Early on, tremendous turmoil existed within

the medical staff and public confidence in the organization eroded, particularly after it lost money for four consecutive years. In 2008, a physician leader publicly declared that the medical staff had to organize to start a "fight" against Carilion, particularly its plans to change the care model and hire new physicians. These comments made their way into the local press, thus further undermining public confidence in the organization.

Ultimately, however, Carilion's leaders brought the physicians along. They regularly communicated with physicians, highlighting the critical imperative to change and emphasizing collaboration and teamwork in executing those changes. They focused on the need to create a coordinated, integrated care model and emphasized the common, higher purpose that drew everyone into the healthcare arena in the first place. They also highlighted the importance of those on the front lines of care in making change stick.

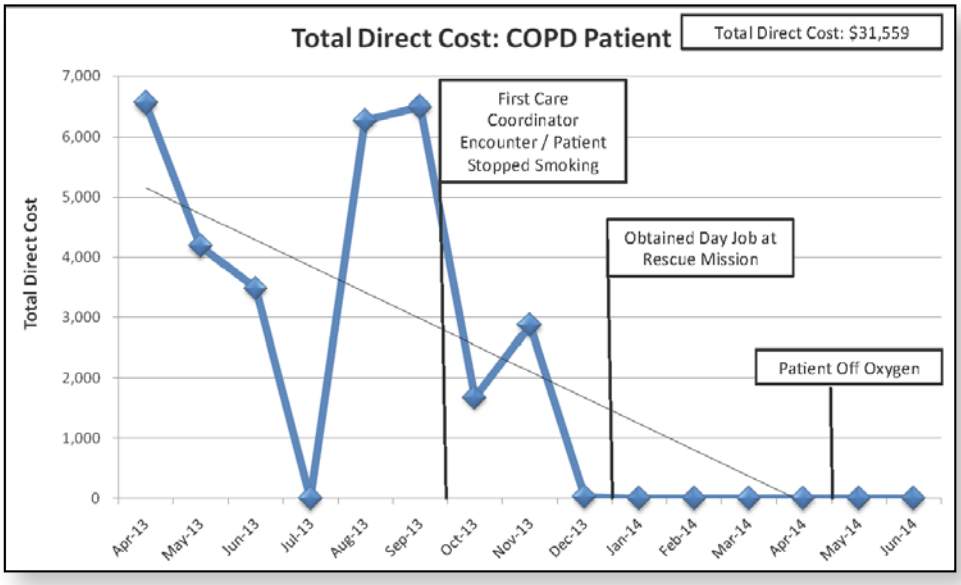
By 2013, the same physician who had vowed publicly to fight the organization now wholeheartedly endorsed Carilion's approach, noting the organization's "unwavering desire to help our practices succeed." In fact, physician leaders have been critical to Carilion's success, serving on its board of governors; encouraging a spirit of collaboration, compassion, and smart risk-taking; and leading efforts to standardize care through clinical guidelines and team-based approaches to care that include liberal use of nurse practitioners, physician assistants, care coordinators, pharmacists, social workers, and mental health providers. Carilion's PCMHs have been successful in improving management of chronic diseases, with above-average performance on HEDIS (Health Plan-Employer Data and Information Set) scores for diabetes, asthma, and pneumonia care. Case managers focus on the 5 percent of patients who account for half of all healthcare costs, helping them to manage their chronic diseases. In many cases, this assistance goes beyond medical care to address other underlying issues they face. For example, a case manager began working with a man living in a homeless shelter who suffered from chronic obstructive pulmonary disease. Each morning he had to leave the shelter and consequently did not have a place to plug in his nebulizer. The man ended up visiting the ED frequently and often had to be admitted to the hospital. The case manager first found him a temporary place to go each day to plug in his nebulizer, and then helped him find a job as a dishwasher. He performed well at this job and subsequently secured an even better one that offered health insurance. He has not been hospitalized in the past year and, as shown in **Exhibit 4**, his uncompensated care costs have fallen from over $30,000 a year to $0.

After spending four years in the red, Carilion's efforts to transform itself into a clinic model have finally begun to pay financial dividends. The organization had a 3.7 percent operating margin in fiscal year 2014, slightly above the 3.0 percent needed to sustain investments in new technologies and people. Leaders expect a 3.5 percent operating margin in the current fiscal year.

Size as a Less Important Virtue

Carilion's goal has been to become a high-reliability organization in terms of serving patients. By collaborating with key stakeholders, this relatively small health system has proven it can be resilient and successful. Carilion's leaders believe that the system as currently configured is large enough to endure and thrive. It has sufficient capital to make needed investments in technology and staff, and adequate volumes to partner with payers in meaningful ways to focus on achieving the Triple Aim, including enhanced access, higher quality, and lower costs. It is also of sufficient size to attract PCPs and specialists, and to make medicine personal.

Exhibit 4. Results, One Patient at a Time



Think Big, Act Small: The Essence of Patient-Centered Care

Marc Halley, M.B.A., CEO, The Halley Consulting Group, Inc.

Too often, large provider organizations end up getting in their own way by setting up complex systems and processes that actually create barriers to performance. To succeed, these organizations need to "think big and act small" at the same time.

Industry Context

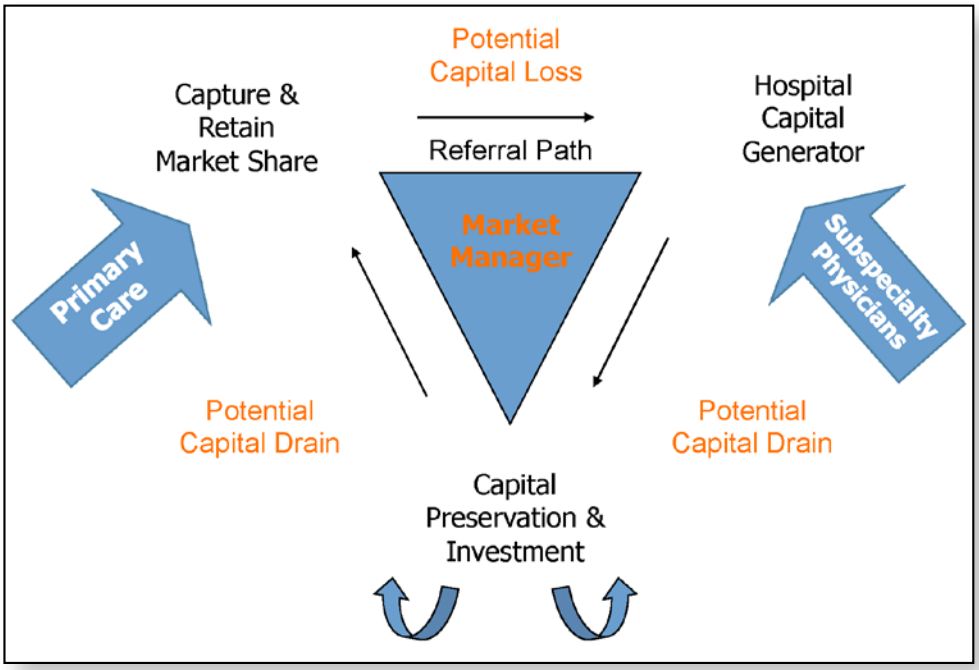
A recent study by Deloitte concluded that half of all hospitals will not be around in a decade, at least in their current form. To survive, hospitals and health systems must pursue the following "must-do" strategic imperatives:

- **Gain market share:** The organization with the largest market share (particularly in primary care) at a local level likely wins, as adequate panel size, revenues, and scale are needed to manage risk successfully and feed hospitals and subspecialists.
- **Demonstrate quality:** Successful organizations provide high-quality care and can prove that they do so. Payers are using their leverage and will not pay for services that do not meet certain standards (as defined by the government and the payers themselves). These standards relate not just to clinical outcomes, but to the patient experience as well.
- **Ensure adequate access to capital:** Winning organizations need to invest in EMR systems, new technology and equipment, advertising, and physician practices, all while reimbursement declines and the costs of complying with regulations increase. Managing the referral path ensures that capital can be generated within our hospitals to continue funding the healthcare delivery system locally.
- **Be productive:** To ensure easy access to care and manage risk effectively, the entire healthcare system needs to be more productive, driving out waste and improving efficiency. Productivity increases access, which is the foundation of high clinical quality and service quality.

As shown in **Exhibit 5**, a critical success factor under traditional fee-for-service (FFS) payments is to capture and retain market share in primary care practices. Patients want easy access to primary care, and new market entrants such as CVS and Walgreens understand this desire. Innovative provider organizations will affiliate with enough PCPs and ensure they are on the referral path to generate capital for the system. The best organizations closely track referrals to avoid leakage from the system and the community. When leakage occurs, the health system loses its ability to keep subspecialists and hospitals busy, causing the specialists to leave and hospitals to lose their operating margin and the concomitant ability to invest in new technologies.

Interestingly, this dynamic does not change appreciably under risk-based payments. As **Exhibit 6** (on the next page) demonstrates, patients still select PCPs, who in turn select specialists based on relationships. Panel size and access to care remain critical under risk-based payments, and PCPs still channel volume to a narrow network of specialists and

Exhibit 5. Physician Integration Economics: Fee-for-Service



Source: Marc D. Halley, *Owning Medical Practices: Best Practices for Sustainable Results,* Chicago, IL: AHA Press, 2011.

© 2008 The Halley Consulting Group, Inc.

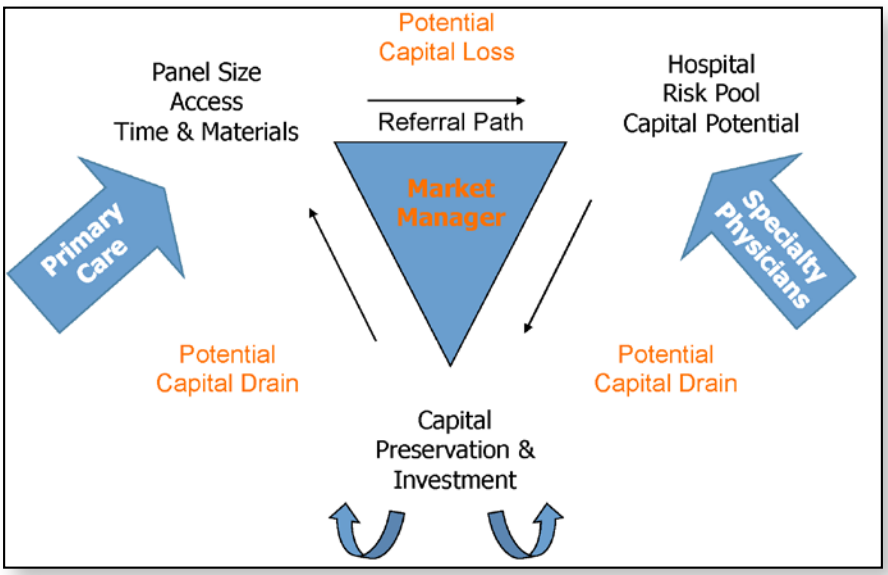
hospitals. Consequently, managing referrals and avoiding leakage remain critically important.

The traditional concept of value is quality divided by costs. However, quality encompasses a number of factors, including clinical processes, clinical outcomes, and the patient experience, which combine to determine the effectiveness of care. Cost also is multidimensional, consisting of the cost per unit and the number of units, which together determine efficiency of care. Health systems need to pay attention to all of these factors. To do so, they need to provide "patient-centered" care, which incorporates the following:

- **Health status:** For generally healthy individuals, maintaining health status has most to do with treating periodic illnesses and injuries. Many of these individuals are not interested in wellness activities, although they should be. For those with chronic diseases and/or disabilities, maintaining health status requires ongoing management of these conditions.
- **Population health management:** Effective management requires investments in health maintenance, chronic disease management, and disability management, including proactive management of those with mental illness. The goal is to provide integrated episodes of care.

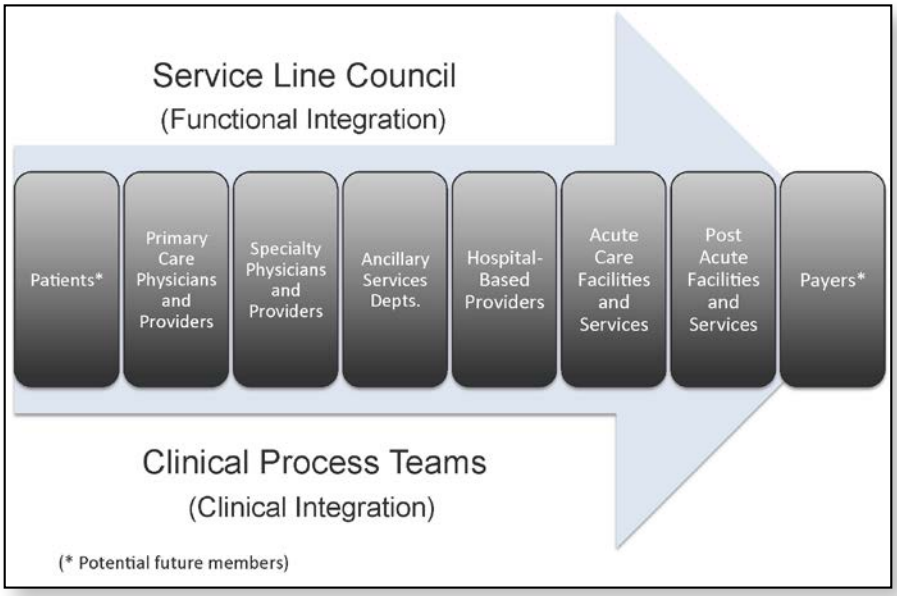
To ensure the provision of high-value care, hospitals and health systems have become increasingly interested in clinical integration with both employed and affiliated physicians. Many

Exhibit 6. Physician Integration Economics: Risk Payment Model



Source: Marc D. Halley, *Owning Medical Practices: Best Practices for Sustainable Results.* Chicago, IL: AHA Press, 2011.
© 2008 The Halley Consulting Group, Inc.

Exhibit 7. Horizontal Governance (Common Consent)



© 2014 The Halley Consulting Group, Inc.

different models for such integration exist, and no one model has emerged as an ideal approach. As shown in **Exhibit 7**, the key is to start at the functional or service line level, bringing key stakeholders together to define the ideal care episode from a service-quality perspective. Typically a PCP will chair the group, even for specialty episodes. This approach can be a "game changer," as PCPs can be confident in how their patients will be treated, and can be sure they will come back after specialty treatment ends. This approach effectively links the various silos that exist in most organizations. Of course, service quality is only one aspect of the equation, and separate clinical process teams must determine the appropriate clinical protocols for the service in question. These groups tend to be chaired by a specialty physician or nurse.

Think Big, Act Small

Health systems cannot allow their size to interfere with their relationships with individual patients and consumers. Large organizations have a tendency to centralize certain functions, but centralized departments too often put in place policies and procedures that support the department rather than their internal and external customers. Sometimes they "take on lives of their own" and make it harder for those on the front lines to do what they need to do.

Health systems need to "think big" when it comes to certain activities, such as sharing risk, negotiating with payers, positioning competitively, fighting for market share, accessing capital, sharing technology, being accountable, integrating functionally, sharing best practices, building economies of scale, and rationalizing clinical services. At the same time, health system boards and management teams need to put in place policies and procedures that allow the organization to "act small" when it matters, including supporting physician efforts to do the following: ensure easy access to care, maintain strong relationships with patients, provide high-quality clinical

care, support patients in maintaining their health, manage care for the chronically ill, provide a good service experience, promote individual accountability, be productive, manage transitions across silos, and self-report data on performance.

The Critical Need for a Shared Vision

While strong governance helps promote these activities, they cannot be mandated. Rather, they occur practice by practice and department by department. In fact, when they do not occur, it is typically because the various pieces of the organization do not have a shared vision. A compelling vision serves as the "epicenter" of governance, laying out the desired destination and hence serving as the best lever for influencing the organization for the benefit of all stakeholders.[3] Engaging these stakeholders in developing a clear vision for their common interest provides the glue that connects the various silos to a common cause. That vision must be compelling enough to keep the members together during inevitable disagreements over tactics.[4]

The best way to forge such a vision is to bring everyone together for a session focused on discussing the "ideal" patient experience (with no data shared). Once the vision has been created, the next step is to put it into action through specific initiatives that demonstrate how the organization will act small. These initiatives should focus on the "needs" and "wants" of patients, with needs typically being clinical in nature (such as a child with a sore throat needing a strep test) and wants

3 Dennis D. Pointer and James E. Orlikoff, *Board Work: Governing Health Care Organizations,* Jossey-Bass Publishers, 1999; pp. 31–33.

4 Marc D. Halley, "Moving Up the Integration Pyramid," *BoardRoom Press,* The Governance Institute, December 2014.

being preferences (such as getting the strep test, results, and needed medications all in one stop). Referring physicians also have needs and wants that should be met. For example, health systems can put in place written service commitments for PCPs that guarantee same-day appointments for any patient referred to the system. As part of this commitment, specialists and their staff should act as an "extension" of the PCP's office.

Moving Up the Integration Pyramid

The goal for health systems is to move up the "integration pyramid," beginning with structural integration focused on care coordination, and then proceeding to functional integration that connects various silos, clinical integration that rationalizes clinical services, and finally population health management (see **Exhibit 8**).

The goal is to think big and act small every step along the way. Hospitals and health systems that maintain the smallest unit of service at the core of every decision tend to build the most functionally integrated approaches to delivering care. They are patient-centered from the ground up rather than as a secondary objective or afterthought.[5] At the same time, the scale that comes from being a large system generates a compelling value proposition that includes the following:

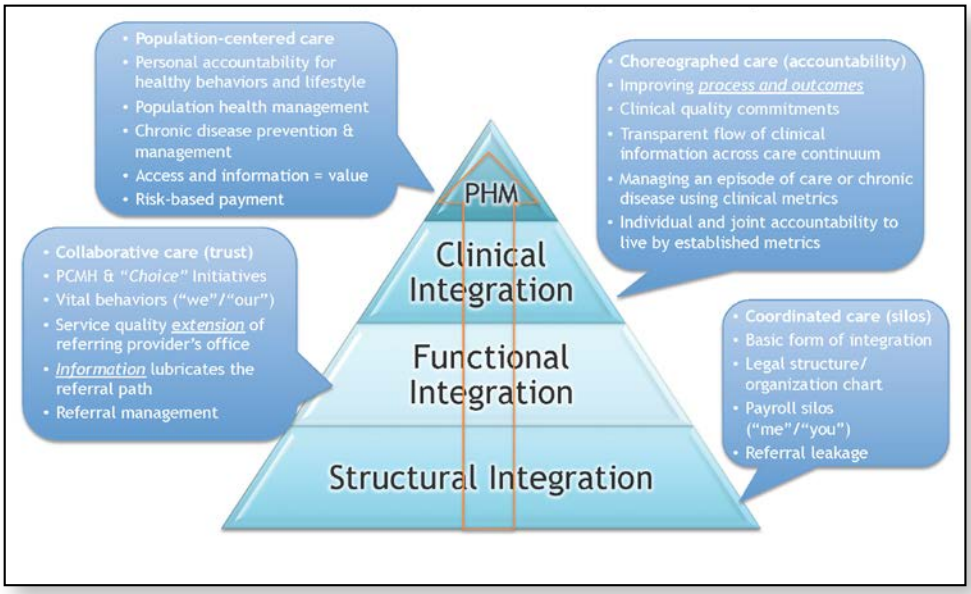
- Capital accumulation and distribution
- Content expertise (e.g., access to legal and finance experts)
- System-wide systems acquisition (e.g., IT, performance measurement)
- Market fiduciary accountability
- Best practice identification, codification, and sharing

The key is to take advantage of these benefits while still protecting the ability to act small. To do so, evaluate whether every decision, policy, and process preserves or enhances the following:

- Clinical quality as defined by physicians, payers, and evidence-based practice
- Service quality as defined by patients and referring physicians
- Physician and provider productivity
- Practice operational processes and financial viability

Successful organizations will pay attention to all four legs of this stool: clinical quality, service quality, productivity, and finances. Even successful, multi-billion-dollar health systems are built and maintained by many thousands of individual transactions that occur in small settings involving personal connections. Acknowledging and protecting these individual connections is critical for integrated delivery networks and systems of all sizes.[6]

Exhibit 8. Moving Up the Integration Pyramid



© 2013 The Halley Consulting Group, Inc.

5 Marc D. Halley, "Integration: From Structural to Functional," *Healthcare Financial Management,* June 2012; pp. 74–77.

6 Marc D. Halley, "Think Big, Act Small," *Healthcare Financial Management,* September 2012; pp. 50–54.

System "Small Ball": Doing Little Things to Win Big with the Customer

Ryan D. Donohue, Corporate Director of Program Development, National Research Corporation

Understanding Smallness

Many health systems have built themselves into large, complex organizations with scale and strength, which serves as a defense against shifting payment models. However, for system-level leaders, it can often be difficult to see what is happening on the "ground floor" of the organization and how major system-level initiatives are affecting relationships with patients. In many cases, the personal relationships between patient and provider are getting lost in the shuffle. In fact, as organizations, large health systems are woefully prepared to build one-to-one relationships with customers. Yet having such relationships is a prerequisite to success.

Since 2012, National Research Corporation (NRC) has conducted a "blue-sky exercise" that uses quantitative and qualitative research to better understand customers' views on healthcare. The most recent research involved focus groups with 208 consumers in 48 states, a national survey of 395,147 consumers, and conversations with 78 CEOs and board chairs. Across the country, the direct message from the consumer was quite clear, as captured in the following statement: "Treat me like the person I am and empower me to make the best healthcare decisions (for me) and guide me every step of the way." Whether fair or not, customers want health systems to empower and support them, and if health systems do not play that role, someone else (e.g., the insurer) will.

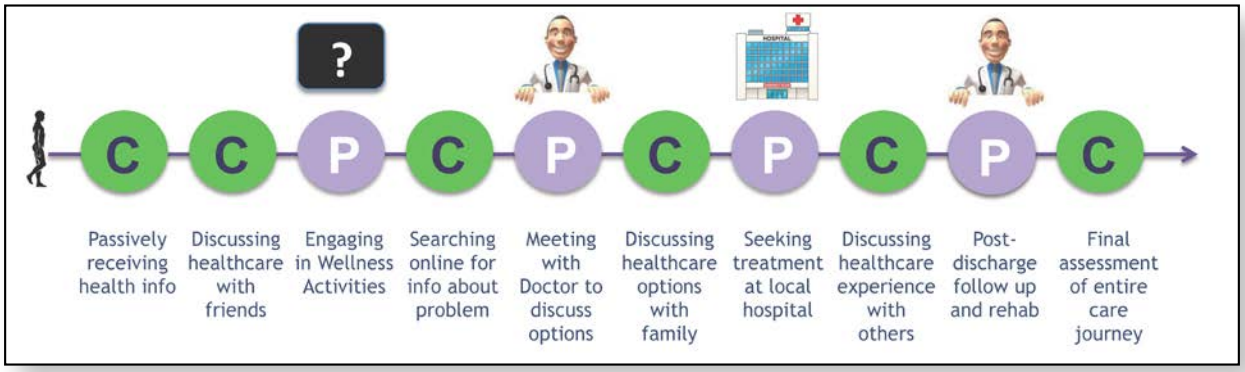
To meet the customer's wishes, one-to-one relationships must be tailored to the individual's desire for care. In addition, customers must trust their partner(s), feel as though they are being listened to, and feel supported and guided along their care journey. Trust is the most important consideration and a prerequisite to having a good relationship.

The Nuances of "Experience"

To build a good relationship with a customer, health systems need to consider the "care journey" from his or her perspective. Most individuals see their care journey as somewhat of a roller coaster, with their roles alternating between being "customers" and "patients" along the way (see **Exhibit 9**). It begins as a customer, passively receiving information and discussing health-related issues with a friend or family member (with costs of care being the most common topic discussed). In some cases, customers become patients by engaging in wellness activities. At some point, a health issue arises, which typically leads to a search for information (often online) as a customer. After this search, the customer typically becomes a patient and for the first time interacts in a personal way with the healthcare system, usually by visiting a doctor.

After this meeting, the individual returns to his/her role as a customer by discussing options with family members, getting a second opinion, and/or conducting additional research. Finally, the individual may seek treatment at a local facility as a patient, which likely represents the first time that a hospital or health system may directly serve the individual. Yet from the patient's perspective, this encounter is the seventh step along the care journey, with many interactions having occurred (and impressions having been formed) along the way. After treatment, the care journey continues, with the individual discussing his/her experience with others, engaging in follow-up care and rehabilitation, and eventually assessing the entire journey. The entire process takes at least several months and often several years, and only at the end will the individual decide if the whole experience was worthwhile.

Exhibit 9. The Patient/Customer "Care Journey"



Source: NRC's Blue Sky Exercise, 2012–2015.

Too often health systems and hospitals focus only on the middle part of the journey, when individuals come to them as patients seeking treatment. Too little attention is paid to the earlier steps, including wellness activities that can be an excellent opportunity to build relationships with individuals. Hospitals and health systems must also recognize that individuals interact with them both as customers and as patients, and want to be treated accordingly. As shown in **Exhibit 10**, there can be advantages and disadvantages to being treated as either a patient or a customer; the goal for health systems should be to focus on the advantages of both.

To build strong relationships, hospitals and health systems need to begin segmenting customers, since different segments have different needs and desires. For example, customers can be segmented by age, since today's millennials (those now in their 20s and 30s) behave quite differently than seniors (and will likely continue doing so even as they age). Hospitals and health systems tend to be good at catering to older patients but not as well to younger ones. As **Exhibit 11** demonstrates, some innovative organizations segment customers by cohort or personality type, typically based on psychographic characteristics, and then develop a different strategy for each cohort.

Exhibit 10. Treating the Patient + the Customer

	Advantages	Disadvantages
Treated as a **PATIENT**	• Respected as a person • Rendered personalized care • Treated with respect • Family is included throughout • Progress is celebrated • Genuine care for well-being	• Treated as a number • Steered through a queue • Doctors/nurses talk past/over you • Isolated and left alone • Confusion about what's next • Disease is treated, not the person
Treated as a **CUSTOMER**	• Choice for care is valued • Everything is explained thoroughly • Feedback is encouraged • Comments are received • Desire for repeat business • Treated as an adult with a mind	• Treated as transaction • Care is impersonal • Brushed aside quickly • Seen as revenue not a person

THE IDEAL: BOTH

Source: NRC's Blue Sky Exercise, 2012–2013.

Exhibit 11. Segmenting Customers (By Cohort)

"Sara"	"Matt"	"Cal"	"Lisa"	"Elizabeth"
• Mom • Avg income • Making decisions for household	• Bachelor • High income • Unfamiliar with healthcare, no preferences	• Semi-retired • Commercial insurance • Good relationship with doc	• Single, new to area • Owns small consulting company	• Empty nester • Medicare • Many preferences based on care events
Sara Strategy	**Matt Strategy**	**Cal Strategy**	**Lisa Strategy**	**Beth Strategy**
• Messaging to parent and child holistic healthcare • Invitation to pediatric health events • Educate through Mom blogs	• Messaging to basic preventative care • Social media mentions and engagement • Customized health survey mailer	• Messaging to integrated physician network • Personalized invitation to screenings • Heavy traditional media	• Messaging to "new mover" angle • Custom iPhone app on healthy eating • Sponsored online ad links	• Messaging to dedicated customer service • Promotion of individualized payment options • Call-to-action advertising

Segmenting allows for the development of tailored marketing and communications, which in turn create the feel of personalization and help build trust (which can be hard to obtain, especially with individuals who have not had a positive—or any—direct experience with the organization). Any personal interaction with any caregiver serves as an opportunity to build customer trust. Physicians and nurses generally have gained the trust of their patients (see **Exhibit 12**). To a lesser extent, hospitals have as well, with 67.7 percent of patients saying they trust their hospital (as defined by a score of four or five on a five-point scale). Closer examination of these data show that patients trust hospitals for emergency and acute care (that is, when something "bad" happens), but less so when it comes to addressing other health issues, such as wellness programs designed to change eating habits.

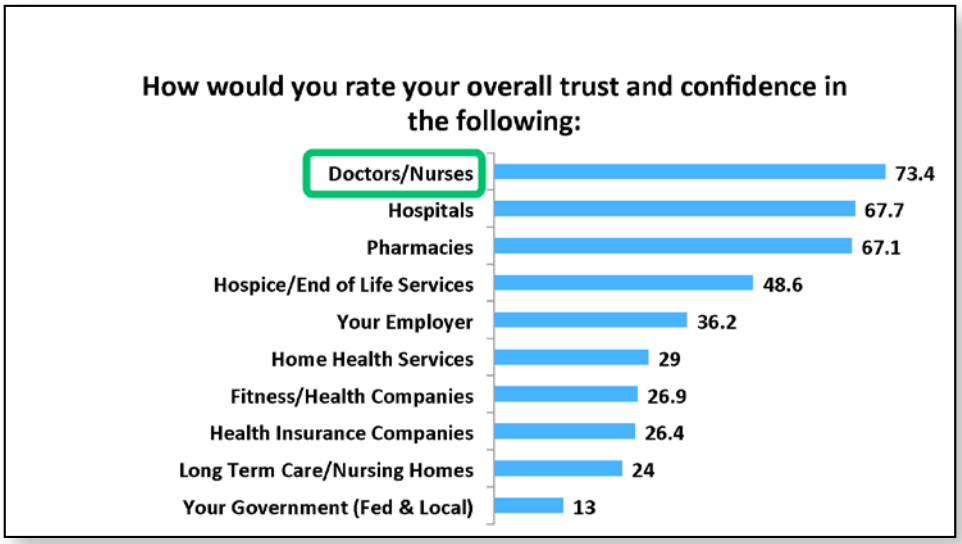
As noted, physicians enjoy a high level of trust. But not all customers have a regular physician. In fact, only 75 percent of consumers have a PCP and many do not visit him or her regularly. Of those with a PCP, over three-quarters (77 percent) feel some kind of loyalty toward the doctor. But only 49 percent feel "exclusively" or "very loyal" to the PCP. Moreover, one in two describe the care provided by the PCP as "routine" in nature. These views suggest that they may be vulnerable to defecting to a local clinic opened by Walgreens, CVS, or a competing health system.

To avoid such defections, hospitals and health systems need to build trust and loyalty with their customers and patients. But what specifically creates such trust and loyalty? Many consumers cite the physician as being the key, since this person is the first they encounter on a typical care journey. In particular, customers cite communication-related issues as being critical to ensuring an ongoing relationship, particularly with respect to listening to them and explaining things well. These skills are often not taught in medical school.

Unfortunately, consumers do not always make the connection between a physician and a hospital/health system, even when the physician is employed by or otherwise affiliated with the organization. In other words, a good experience with a doctor may not "dial up" to the hospital/health system level. In addition, many customer/patient decisions are made before the individual enters the "system." As a result, guiding customers through their healthcare experiences means guiding them through their health, which happens every minute of every day. The good news is that customers very much want a health partner, and many see hospitals as being a logical choice. In fact, just over two-thirds of U.S. consumers believe hospitals are "responsible" or "highly responsible" for the health of the local population, a figure that has risen by 15 percentage points in two years. While consumers recognize that health begins with their own behaviors, they also know it extends into their healthcare experiences. At the same time, they know that much of that experience occurs outside of the doctor's office and, even more so, outside of the hospital or health system.

To address this issue, hospitals and health systems need to shift their emphasis from managing the physical experience (e.g., in-person appointments, actively receiving information) to managing the virtual experience, which is where most consumers spend their time. This virtual experience includes passively receiving information, discussing healthcare issues with others, researching healthy habits and healthcare options, dieting and exercising, tracking health via a personal device, engaging in telemedicine and virtual visits, and rating healthcare experiences. While most healthcare executives admit to spending only 10 percent of their time on the virtual experience, most marketing experts suggest a 50-50 split. Going forward, significantly more resources need to go into managing the virtual experience, with marketing, finance, and IT executives all involved in these discussions.

Exhibit 12. Gaining Customer Trust



Source: NRC's national consumer survey, April 2013, n size = 23,105, Top 2 Box responses only.

A "Small-Ball" Plan

Hospitals and health systems need to learn to play "small ball" when it comes to gaining customer loyalty. Yet every time a large initiative comes into existence or is moved to the next stage, the risk rises of missing the "small picture." In many cases, customers are the last to find out about the "big things" the organization is doing. But they remember the little things, such as how they are treated when they interact with an employee or clinician. Across industries, the most successful large organizations recognize the importance of customer relationships and hence focus on the small things (see sidebar, "A Small-Ball Plan").

A Small-Ball Plan

- Mercy didn't rebrand its system—it rebranded the experience all customers receive.
- Once core competencies were installed, the ability to tailor each experience arose.
- The success of Mercy's rebrand was really an outcome of a shift in small-picture thinking.
- Customer preference has increased 21 percent.

Within healthcare, one example of successfully playing "small ball" comes from Mercy in St. Louis, a 32-hospital system with over 300 outpatient sites that serves three million individuals across four states. Mercy became a system in 2008 as a fragmented brand, with hospitals bearing several different names and only being loosely endorsed by the Mercy Health System. Not surprisingly, consumers did not identify Mercy as a health system offering integrated services. To address this issue, the marketing department facilitated a "soul search" among senior leaders to find the right way forward. This process led to the discovery that people outside the organization seemed unaware of several significant internal investments made at Mercy, including investments in a single supply chain, a shared EMR, and physician integration. The organization needed a brand that reflected these internal structures and that could survive and thrive under healthcare's coming changes. To that end, system leaders began to push toward a unified brand under the single-word name "Mercy," with the goal of getting full credit among consumers for its "systemness." In addition, the effort included a thorough revamping of the little things that make a brand, such as uniforms and interior aesthetics, again with the goal of reinforcing one brand name throughout all facilities. More than just names and logos, however, the effort focused on branding the entire care experience for every consumer. Staff were trained to understand what patients and customers were looking for, and hence to say and do the right things. By installing core competencies across the organization, caregivers could focus on the individual customer.

The effort has clearly paid off, as customer preference for Mercy facilities increased by 21 percent (a huge jump) over a seven-year period. (Customer preference is a leading indicator for market share.) As one representative St. Louis-area consumer noted, "I understand Mercy needs to make money to keep the doors open, but I never get that feeling when I'm there. I feel as though they only need me to keep going and that's just a great feeling." This success, moreover, did not come from some large initiative, but rather from a series of "small-ball" changes and "small-picture" thinking.

Specific Examples of Small Changes That Have a Positive Impact

- Mobile applications to make appointments and track experiences
- Round-the-clock urgent care clinics to treat minor issues
- Payment plans that offer manageable payments
- Easy access to the pharmacy and ability to refill prescriptions over the phone
- Accessible online medical records
- Same-day appointments
- Virtual appointments
- Short ED wait times
- Monitors in waiting areas and hallways that provide useful information
- Way-finding machines
- Satisfaction surveys offered during the care experience
- Use of physician assistants and/or nurse practitioners to see patients faster and more frequently
- Loyalty and reward programs for repeat purchases

Lessons Learned and a Plan for Moving Forward

Customers want a one-to-one relationship with their providers and provider organizations, and often admire big companies for doing the little things. Hence a commitment to small ball is essential as organizations increase in size and scale to ensure that system complexities and politics do not get in the way. To make that commitment a reality, health systems and hospitals should engage in the following activities:

- **Increase visibility and access:** Relatively low-cost changes can help consumers find the organization. For example, Scott & White created mobile applications after asking customers what features they were most likely to use. This process led to the creation of ElderGuide, an easy-to-use application to help seniors find local facilities that meet their needs.
- **Treat people well:** Small changes can make a big difference, such as redesigning the MRI room in a children's hospital to be less scary to patients.
- **Encourage feedback:** People love to provide feedback and to have access to other people's perspectives. Most people have positive experiences, so there is no reason not to make it easy for them to share such experiences with others.

Key Takeaways and Implications for Health Systems

System Invitational attendees broke into small groups to discuss the major implications of the material presented by Mr. Halley and Mr. Donohue. Key points include the need to do the following:

- **Focus on small things to create seamless experience:** The small things make the biggest difference over the long run. The goal should be to make everything easy for consumers, with the experience being as seamless as possible.
- **Support physicians and nurses in communicating with patients:** Consumers trust physicians and nurses more than other healthcare stakeholders. Yet this trust depends on their ability to listen and clearly explain things to patients. Physicians often struggle with this aspect of their jobs, and likely need help in learning how to communicate with patients.
- **Strive for customer-focused service line integration:** Service lines should be integrated from the patient's (not the provider's) perspective. To that end, PCPs should head up efforts to integrate service lines across a large system. However, the right PCP must lead the effort, and the right people must be in the room.
- **Treat PCPs as customers:** Specialty groups have two sets of customers—PCPs and patients—and should elicit their feedback and consider their perspectives in everything they do.
- **Consider written compacts for care transitions:** These compacts can lay out the rules with respect to moving patients through various service lines.
- **Promote price transparency:** Providers can either take the lead in promoting price transparency or be "dragged along" by government initiatives. At present, 40 states have regulations related to posting prices, although the information posted generally is of limited value to consumers. Provider-led efforts will need to be collaborative in nature, allowing consumers and purchasers to make apples-to-apples comparisons across provider sites.
- **Focus on virtual experience, particularly with millennials:** Many customers want opportunities to interact virtually with hospitals and health systems, including accessing information online and having virtual or telephone-based visits and consultations. These options are particularly important to young adults who feel invincible and do not yet value an in-person relationship with providers. To address this need, some organizations are experimenting with same-day, flat-fee virtual appointments.

Reconfiguring the Clinical Delivery Network

Mark Grube, Managing Director, Kaufman, Hall & Associates, LLC
Walter Morrissey, M.D., Senior Vice President, Kaufman, Hall & Associates, LLC

The Case for Delivery System Reconfiguration

The migration to value-based care delivery and payment is not a fad or trend, but rather is fundamentally reshaping the industry. Innovative health systems are actively working with major health plans to accelerate this transition.

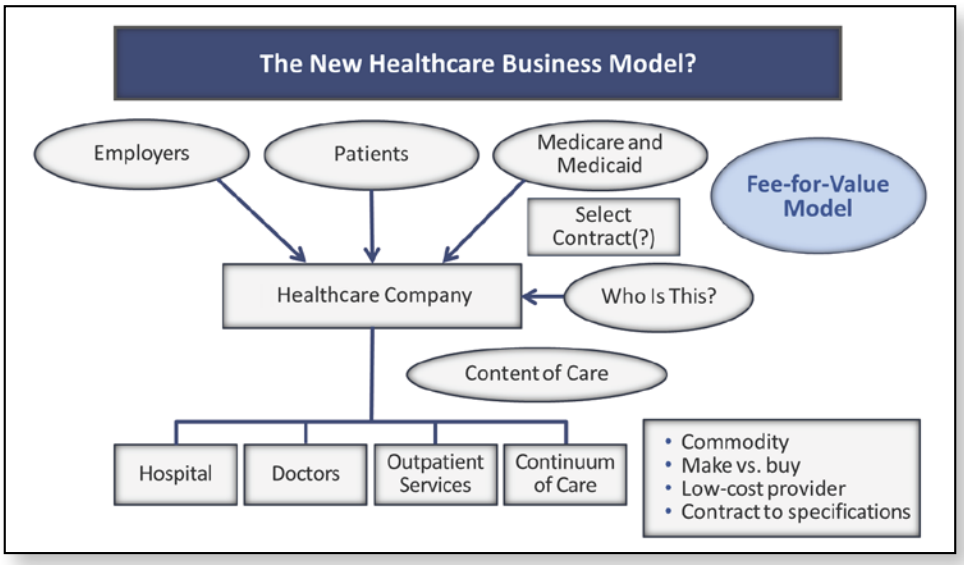
Six factors described below are driving healthcare's business model transformation. The importance of such factors to provider organizations varies across markets based on the market's stage of evolution toward value and risk-based care and payment. The first two of these six factors are particularly important:

- **Insurer/employer market transformation:** Numerous changes in the insurer/employer marketplace, including the adoption and evolution of public and private exchanges, the organization of employer networks, the migration from defined-benefit to defined-contribution models, and the increased penetration of managed products and strategies in government-financed programs, have changed the way providers access the populations they serve. Similar to what happened with retirement benefits 25 to 30 years ago, many major employers are effectively getting out of the business of healthcare decision making, giving employees responsibility for deciding how much—and what type of—insurance to buy.
- **Healthcare as a retail transaction and the new consumerism:** The transformation in the insurer and employer markets has increased responsibility among employees for the costs of healthcare services, which in turn has led to the emergence of consumerism. As a result, price transparency and access to care have become important. This transition has created new shopping behaviors among consumers, including increased demand for comparative information on costs and quality. A whole new industry has emerged that is trying to meet this demand.
- **Emergence of new competitors:** In addition to traditional competitors, new market entrants are targeting the $1.6 trillion healthcare space, ranging from innovative startups to mega-competitors such as Walgreens, CVS Health, and large insurers.
- **Declining inpatient use (and outpatient use in some high-margin services):** Inpatient volumes are declining in many areas, as is demand for high-margin outpatient services in some markets, including laboratory testing, high-end imaging, and ambulatory surgery. Many of these services also face reimbursement rate pressures.
- **Delivery model dislocations:** Consumer preferences are shifting from inpatient-centric sites to ambulatory and virtual settings. For example, Kaiser projects that a majority of primary care visits will be virtual within the next five years.
- **Population health management (PHM):** Integrated delivery systems are transforming themselves to organize care delivery and manage population health effectively under risk-based contracts.

Success in this new environment requires provider organizations to deliver services of consistently high quality at a consistently lower cost to a defined population. Doing so entails a level of coordination and efficiency that most healthcare systems do not have today.

Consequently, leaders need to evaluate how their delivery systems are configured, including their scope, scale, and access points. As depicted in **Exhibit 13**, healthcare is moving to a

Exhibit 13. It Starts and Ends with the Business Model



Source: Kaufman, Hall & Associates, LLC

new business model where a "Healthcare Company" will play a central role in connecting consumers and purchasers to those who deliver care. The challenge for provider organizations is to figure out what role to play in this new model, including whether and how they can play the "Healthcare Company" role.

Throughout the country, leading provider organizations are driving toward PHM. In fact, at least one provider network in each major market seems to be organizing the effort, experiencing first-mover advantages to doing so. In many cases, these large organizations have the clout to convince major insurers to let them take on risk and handle functions previously performed by the insurer. As part of this effort, they are building new competencies and investing in delivery network reconfiguration. As shown in **Exhibit 14**, this transformation is not occurring at the same pace throughout the country, with some markets being quite advanced, some in a transition stage characterized by increasing prevalence of provider risk-sharing agreements, and others still dominated by traditional FFS payments.

As this transformation takes place, a disruptive progression is occurring within the delivery system, with rapid movement away from inpatient-centric models toward ambulatory and Web-based models. In fact, 20 percent of Kaiser's visits in California already take place virtually, often over the phone or through video services such as Skype. Cleveland Clinic offers same-day virtual consultations with its doctors. Technologies are redefining access to care, particularly as digital imaging technologies improve.

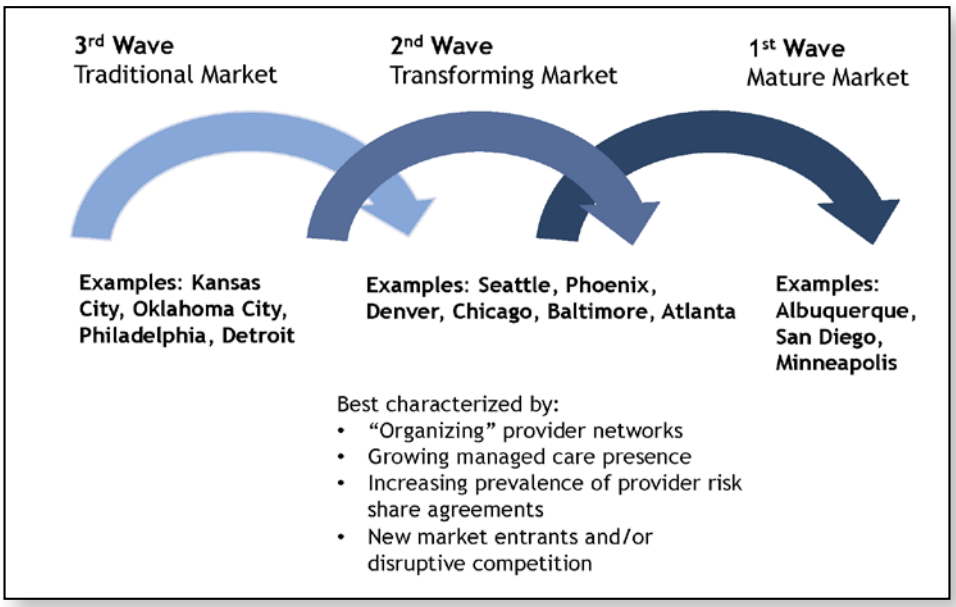
This progression has significant implications for value creation, delivery capacity, customer connectivity, and human resource and IT requirements. With significant investment dollars being directed to this space from companies inside and beyond healthcare, health system leaders need to rethink how their capital gets redeployed, with any proposed

investments in inpatient capacity being scrutinized carefully. The focus going forward needs to be not only on ambulatory and virtual care, but also on the entire care continuum, including post-discharge care (e.g., skilled nursing facilities, home health). Hospitals must make sure they partner with the right post-acute providers to avoid readmissions, which, for the most part, are no longer eligible for reimbursement by public and private payers, and may result in penalties.

Conceptual Approach for Delivery System Optimization

Although it feels rapid to many providers, the pace of change in healthcare today is probably slower than it will be for the foreseeable future. Major transformational changes are on the way and needed, but less than 15 percent of the leaders of legacy provider organizations today appear to be truly willing to make the required changes. To do so, they must answer a very fundamental question: what is the most high-quality, cost-effective way to configure the delivery network?

Exhibit 14. The PHM/Value-Based Model at Different Levels and Tipping Points



Source: Kaufman, Hall & Associates, LLC

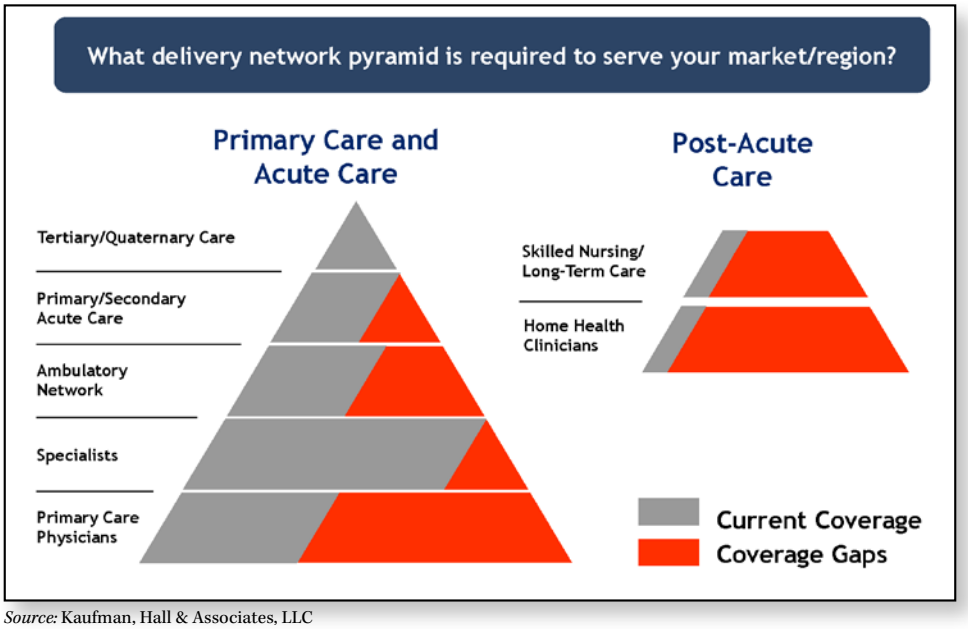
The optimal delivery network design is quite different than in the past (see **Exhibit 15**). System leaders must determine what gaps exist in their ability to provide care across the entire continuum. In doing so, they should keep in mind that consumers may be willing to drive an hour for specialty services such as cardiac surgery, but prefer to go to a nearby primary care physician or clinic for more regular appointments.

Health system leaders must look at each section of the pyramid and ask more detailed questions (see sidebar, "Additional Questions to Consider…"). It may take several years to come up with a blueprint and then several more to execute those changes, as it takes time to reallocate capital and resources.

Additional Questions to Consider When Designing a PHM Blueprint

- How do we reduce inpatient costs and drive quality to effectively compete in population health?
- How do we position our ambulatory services to compete in a retail-driven market?
- How do we build physician alignment to reposition clinical services and execute across our network?
- What businesses are we in today? What businesses will we be in tomorrow?
- How are we addressing our portfolio of services? If we are a multi-market system, are we concentrating efforts and resources in markets that will result in long-term relevancy and sustainability? If we are a single-market system, are we concentrating efforts and resources in relevant and sustainable business units and service lines?
- How are services offered across our footprint? How are they performing?
- Are all services at each location living up to their potential, or are some just "along for the ride"?
- What changes need to be made to realize a fully aligned, rational service delivery model?
- How will we reach our goal?

Exhibit 15. A New View of Delivery Network Design and Optimization



Source: Kaufman, Hall & Associates, LLC

Successfully Approaching Detailed Delivery Network Optimization

As shown in **Exhibit 16**, successfully approaching delivery network optimization begins at the board level. Board members must believe in the change, develop a set of guiding principles for it, and then enable the transformation by empowering a steering committee to lead the process, charging it with being both bold and accountable for results. Made up of senior executives and physician leaders from the system/regional level, this committee drives the strategic planning process and provides oversight and guidance.

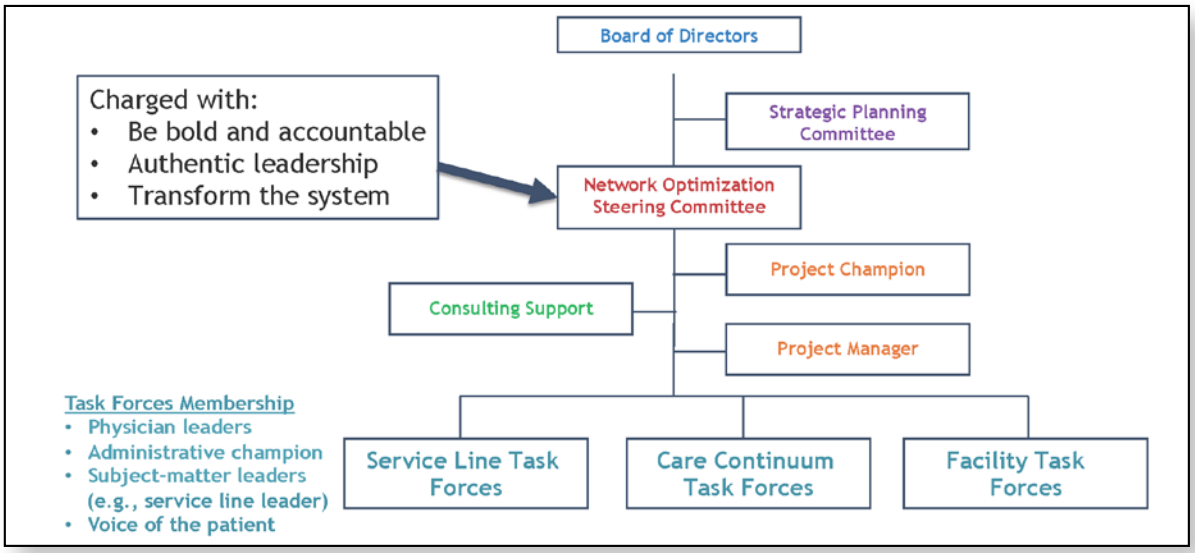
The planning itself should be a bottom-up process, led by service line-specific and facility-level task forces made up of physician leaders, administrative champions, subject-matter experts, and patient representatives. These task forces develop, quantify, and identify implementation issues related to the service reconfiguration plan. Throughout the process, senior administrators and the board must be prepared to respond to those who object to the changes being made. This process has the advantage of eliciting physician and executive leadership opinions throughout, promoting broad engagement and securing commitments to proposed changes.

Lessons Learned and Keys to Success

Many hurdles exist when attempting such a transformation, but they can be overcome. Key lessons in overcoming them include the following:

- **Start early:** There will never be a perfect time to lead a market transformation, as the strategy will accelerate demand destruction and consequently can have a negative impact on the FFS side of the business. If health systems do not act, however, someone else will transform the market, reaping significant first-mover advantages and forcing the rest of the market to scramble to catch up.
- **Ensure commitment from the top:** Commitment to and ownership of the transformation must come from the highest levels of the organization, including the board.
- **Communicate the "why":** A well-coordinated communication plan is needed to highlight the rationale for change to all key stakeholders, including the community at large.
- **Avoid incrementalism:** Many organizations choose to proceed incrementally due to a reluctance to drive transformational change. This approach will not result in the magnitude of operational savings or capital avoidance needed to succeed; these goals can only be achieved by *fundamentally* transforming where and how care is delivered.
- **Proactively address barriers to execution:** These barriers include realigning incentives, setting up the right organizational and physician structures, building the required ambulatory infrastructure, and managing cultural change.
- **Engage physicians through bottom-up planning:** While it may take longer to get through the planning process, fully engaging physicians at the outset positions the organization for accelerated execution farther down the line, once planning has been completed.
- **Focus on enhancing access to care:** The transformed system should make it as easy as possible for consumers to access care, both at physical sites and virtually, making liberal use of technology.
- **Remain patient:** This type of effort requires multiple years of planning and implementation. By starting early and focusing on major (rather than incremental) change, proactive systems should have adequate time to plan and execute the needed steps.

Exhibit 16. Delivery Network Optimization Organization Chart



Source: Kaufman, Hall & Associates, LLC

Conclusion

Among many key lessons discussed during the System Invitational, four key messages stand out:

- **The promise (and potential perils) of technology:** Digital medicine and related technologies offer tremendous potential to improve care, but the day-to-day consequences in many cases may be unintended. Overseeing the digital transformation remains "mission-critical" for health system leaders.
- **Commit to standardization:** Leaders need to fully commit to reducing variations in processes, outcomes, and costs.
- **Think big, act small:** The ideal size for a health system remains a matter of debate. While achieving significant scale within a local market seems wise, the merits of a multi-state presence (both at a regional and national level) remain unclear. Regardless of actual size, health systems should strive to "think big" but "act small," particularly when it comes to serving individual patients and consumers with unique preferences and needs.
- **Invest in leadership:** Developing effective, proactive leaders (especially physician leaders) has never been more important.