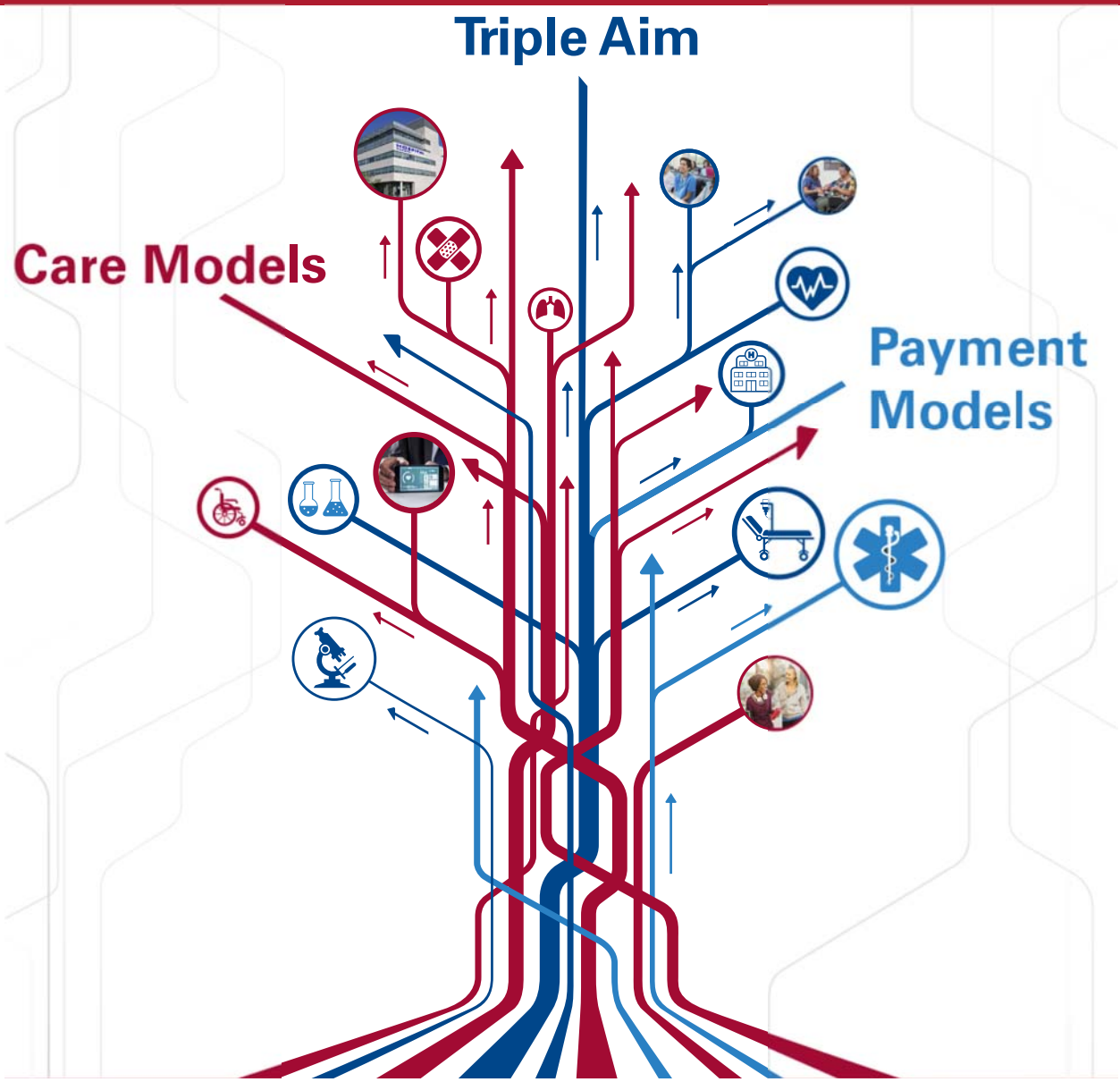
Care and Payment Models to Achieve the Triple Aim



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American Hospital Association
Committee on Research 2015

Michael G. Rock, MD
Committee Chair
Chief Medical Officer
Mayo Clinic Hospitals/
Mayo Foundation

Rhonda Anderson, RN, FACHE
Chief Executive Officer
Cardon Children's Medical Center

Tony Armada, FACHE
Chief Executive Officer
Swedish

Bud Barrow
President and CEO
Our Lady of Lourdes Regional
Medical Center

Mary Blunt
Corporate Vice President
Sentara Healthcare

Laura Caramanica, RN, PhD
Chief Nursing Officer
WellStar Kennestone Hospital

Lawrence Casalino, MD, PhD
Chief of the Division of Outcomes
and Effectiveness Research; The
Livingston Farrand Professor of
Public Health
Department of Public Health
Weill Cornell Medical
College

Michael Chernew, PhD
Professor, Department of Health
Care Policy
Harvard Medical School

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Nassau-Suffolk Hospital Council,
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King's Daughters Medical Center

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President and CEO
Indiana Hospital Association

Vi Lyles
Trustee
Novant Health

Kimberly McNally, MN, RN
Trustee
UW Medicine

Lynn Nicholas, FACHE
President and CEO
Massachusetts Hospital
Association

T.R. Reid
Author

John J. Singerling III, FACHE
President
Palmetto Health

Joseph Swedish
President and CEO
Anthem

David Tilton
President and CEO
AtlantiCare

Richard J. Umbdenstock
Past President and CEO
American Hospital Association

Lorrie Warner
Managing Director
Citigroup Global Markets Inc.

American Hospital Association
Committee on Performance Improvement 2015

Thomas W. Burke, MD
Committee Chair
Executive Vice President
MD Anderson Cancer Network

Bruce Bailey
President and CEO
Georgetown Hospital System

Barclay E. Berdan, FACHE
Chief Executive Officer
Texas Health Resources

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Miami Children's Hospital

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Hospital Council of Western Pennsylvania

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Chief Risk Counsel
Children's National Medical Center

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Poplar Bluff Regional Medical Center

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President
Iowa Hospital Association

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Chief Executive Officer
Saint Luke's Hospital of Kansas City

Michael G. Rock, MD
Chief Medical Officer
Mayo Clinic Hospitals/
Mayo Foundation

Steven A. Rose, RN, MN
President and CEO
Nanticoke Health Services

Richard J. Umbdenstock
Past President and CEO
American Hospital Association

Avilla T. Williams, MS
President
INTEGRIS Health Edmond

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Hospitals and health care systems are striving to achieve the Triple Aim – improving the patient experience of care, improving the health of populations, and reducing the per capita cost of health care. To achieve these goals, hospital leaders are designing new care delivery systems. Adoption of these new systems can be facilitated by new and innovative payment models that center on individual and community needs and reward high-quality care with desired individual and population health outcomes.

Recent changes to Medicare reimbursements support building a care delivery system based on quality and value-based payment policies. The U.S. Department of Health and Human Services has set a goal of tying 30 percent of all traditional, or fee-for-service, Medicare payments to quality or value through alternative payment models by the end of 2016, and tying 50 percent of payments to these models by the end of 2018.

The 2015 American Hospital Association Committee on Performance Improvement studied design and redesign of a new care delivery system and identified seven key principles:

Principles for Creating a Care Delivery System
1. **Design the care delivery system with the whole person at the center.** System design must start with the whole person, putting each patient's needs and ease of access to care before the needs and convenience of the system and its clinicians.
2. **Empower people and the care delivery system itself with information, technology and transparency to promote health.** Use technology and information to activate patients in their own care and to promote life-long health. For transformational health care delivery, patients who are highly "activated" will have better health outcomes.
3. **Build care management and coordination systems.** Develop effective care teams that provide quality care to patients through teamwork and delineated roles.
4. **Integrate behavioral health and social determinants of health with physical health.** The design of the health care system must include resources and services to provide support for behavioral health care, particularly diagnosis, treatment and prevention.
5. **Develop collaborative leadership.** A new care delivery system should include collaborative leadership structures with clinicians and administrators, and also focus on leadership diversity.
6. **Integrate care delivery into the community.** Participation with other organizations that offer vital community services and resources is essential if optimal health outcomes are to be achieved.
7. **Create safe and highly reliable health care organizations.** By creating a culture of high reliability, hospitals improve quality and patient safety.

Each of these principles characterizes the requirements of a new care delivery system to meet the Triple Aim. In addition, hospitals and health care systems need to determine which payment model or models will facilitate achieving these principles and also fit within the structure of their organization.

The 2015 American Hospital Association Committee on Research discussed several new payment models that have emerged as the health care field transforms to a value-based care system. All of these models derive from one of three fundamental payment approaches:

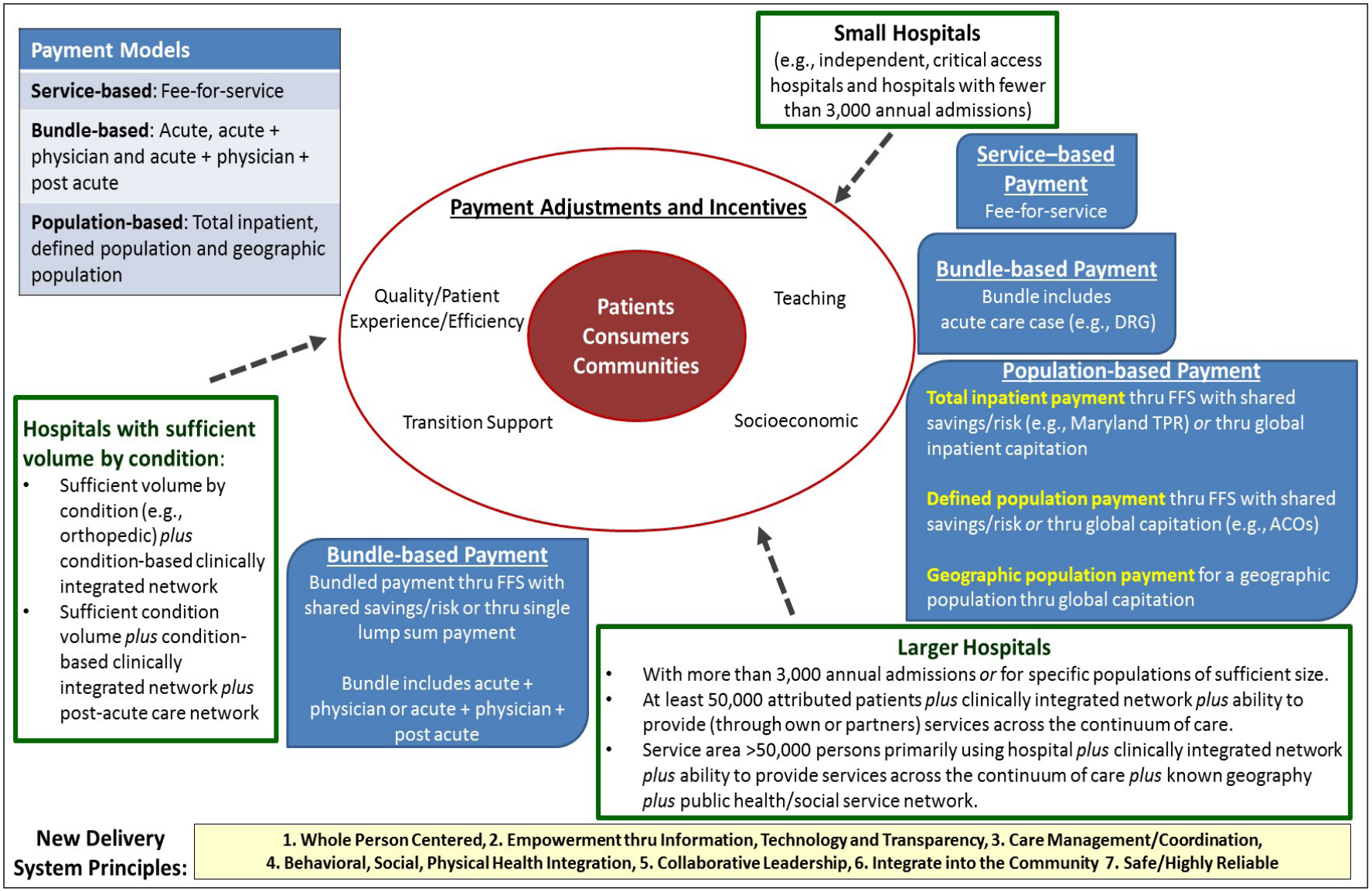
- Service-based payment, which is based on the fee-for-service mechanism
- Bundled-based payment, which aggregates different services and providers, such as hospitals, physicians and post-acute providers bundling cost for hip replacements
- Population-based payment, which seeks to aggregate total care and costs across the continuum, such as an accountable care organization for a defined population

Additionally, risk adjustments and incentives that drive care quality and efficiency include:

- patient safety and experience;
- teaching status;
- socioeconomic adjustment of the population served; and
- support for transitioning to a new model.

Hospitals and health care systems must evaluate which model to pursue, while understanding that a variety of models may be implemented across the care continuum. While service-based, bundled-based and population-based payment models all are options, critical to any model are the incentives related to value, teaching, socioeconomic status and transition support. Depending on hospital type and community needs, organizational leaders can pursue a mix of payment models. The size of the population served is an important factor in determining the payment model. For example, smaller populations are not suited for greater risk-sharing payments such as a population-based payment model. The inclusion of quality, safety and efficiency incentives means all models will serve as a fee-for-value payment model.

Figure 1. Value-based Payment Framework For Hospitals and Health Systems to achieve the triple aim



Source: American Hospital Association, 2016.

Short-term and long-term policies should be implemented to assist hospitals and health care systems in implementing new payment models. These policies are targeted at stress points that can impede the movement from volume-based to value-based care. Stress points include obtaining available data; supporting the infrastructure and bridge between payment models; and getting better tools and methods, such as risk adjustment, that more accurately reflect the intended design of the payment models.

Short-term Policy Recommendations

- Develop time-limited, bridge payment models to assist hospitals transitioning to value-based payment mechanisms. Hospitals and care systems will need assistance as they move between payment models that may have differing incentives.
- Increase access to actionable information related to care, payment and cost. Ensuring open access to information from public and private payers will allow health care organizations to make more informed decisions regarding their care delivery.
- Dedicate funding that supports critical access hospitals and small/rural hospitals. These types of hospitals will need additional support due to funding and infrastructure limitations.
- Consider upfront infrastructure development costs. Aligning new care delivery services to adjust to different payment mechanisms and community needs will require infrastructure assistance.
- Establish better, more streamlined quality measures. Metrics such as those outlined in the National Academy of Medicine's (Institute of Medicine's) "Vital Signs" could be used for quality measures applied throughout the U.S. health care system.
- Provide additional incentives for joining ACOs and bundled payment pilots. Incentivizing hospitals and health care systems to join these transformational payment models could accelerate a move toward population health for U.S. hospitals.

Long-term Policy Recommendations

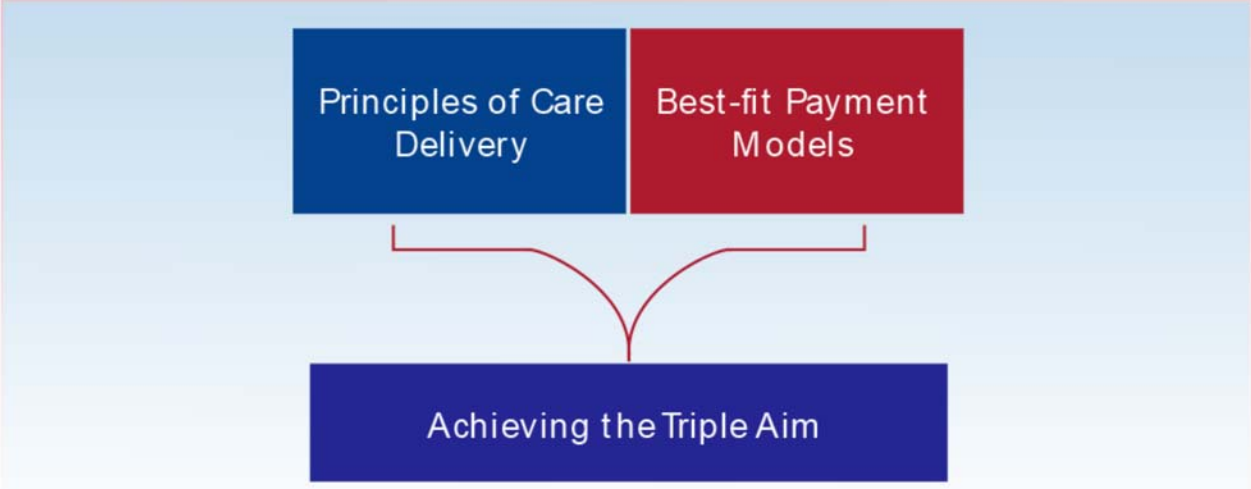
- Ensure appropriate blending of different payment models. Hospitals and health care systems will need more guidance on how to properly blend different payment models.
- Set better payment rates for bundled payments and global budgets. As more hospitals move to bundled- and population-based payment models, it will require setting better payment rates that are reflective of historical performance, not historical performance minus a discount. Additionally, new clinical delivery models and evidenced-based practices will be needed. Payment models will become more complex and thus require more investment in ensuring accuracy of payments.
- Establish better risk adjustments for payment models. More precise and detailed risk adjustments will be needed as focus on value in health care becomes more in-depth.
- Identify payment policies for high-cost/high-risk utilizers. Because a high-cost segment of the patient population will always exist, hospitals and health care systems will need additional clarification on how reimbursements are dispersed.
- Offer incentives for healthy patients. Providing incentives for hospitals and health care systems to keep healthy patients healthy will lead to long-term, positive health outcomes.

Developing health care delivery and payment models to achieve the Triple Aim will be challenging. Changes in care delivery may include new partnerships among payers, providers, government, the community, and across the continuum; greater use of technology to empower clinicians and patients with increased access to information; and a relentless focus on high reliability and safety. Hospitals and health care systems will have to develop care delivery systems focused on the whole person while improving the health of the communities they serve. All this must be done in the context of a payment and financing system that rewards high-quality outcomes and individual and population health.

Transformational change that is occurring in the health care system is focusing on value, which meets the patient's needs while promoting good health. Many hospitals and health care systems are moving to a value-based care system focused on the Triple Aim – improving the patient experience of care (including quality and satisfaction), improving the health of populations, and reducing the per capita cost of health care. Because market dynamics, geography, diverse populations and community needs all shape how hospitals design a care system and adopt payment models, there is more than one approach to transformation. Critical to success, though, is that hospital and health care system leaders select clinical and payment models that work best for their organizations and communities.

Strategically, hospitals and health care systems need to approach achieving the Triple Aim through innovative principles for care delivery design coupled with appropriate payment models that reward the adoption of these principles. See Figure 2.

Figure 2. Achieving the Triple Aim



Critical to success is hospital and health care system leaders selecting the clinical and payment models that work for their organizations and communities.

Source: American Hospital Association, 2016.

This American Hospital Association report, produced jointly by the 2015 AHA Committee on Research and 2015 AHA Committee on Performance Improvement, addresses how hospital and health care system leaders can develop new care delivery systems and innovative new payment methods that best meet the needs of their organizations and communities. The committees identified seven principles for developing a care delivery system to achieve the Triple Aim. Hospitals and health care systems are situated in different markets and have different community needs, and these principles are adaptable to each market while providing a consistent foundation for improved care delivery. Redesigning care delivery requires hospitals and health care systems to disrupt their conventional thinking and reimagine care from the patient's perspective. New care delivery systems will have to be woven into the fabric of local communities and the lives of patients and families.

Currently there is no shared vision about what constitutes a care delivery system that meets the Triple Aim. Moving each hospital and health care system to one common approach will be challenging. Additionally, physicians and other clinical staff will require new skills and competencies to be successful in this new environment. Due to variations in the level of competencies, skills and experience, all staff will need education and training in order to advance these new principles of care delivery.

Though the principles outlined begin to move hospitals and health care systems forward in this changing environment, additional forces are in play, changing and disrupting our current vision of the delivery system. With the rise of consumerism, retail and digitalization, a new stage of health care may be emerging—where individuals have more control over their health care choices based on information and transparency and have greater financial incentives to choose more appropriate care for their needs. This evolution will not occur evenly. Some patients will continue to receive the majority of their care in health care facilities while others will utilize community settings and retail outlets. Other individuals will embrace technology, directing care themselves through constant streaming of their personal health data by monitoring devices and convenient web- and video-based encounters, and become quantified informed purchasers of their health care. The movement toward the quantified self, where technology is used to gather data on daily life, allows individuals to track the information they value for their health and health care.

Figure 3. Transition to the Third Stage of Care Delivery

	1st Stage	2nd Stage	3rd Stage
Model	Organizational	Community	Person
Organization	Hospital	Networks	Self-directed Virtual
Payer	Government Insurers	Providers Government Insurers	Government Insurers/Providers Patients/Consumers
Patient	Passive Receiver	Activated Consumer	Quantified Informed Purchaser
Focus of Control	Organizational	Retailers New Entrants	Individuals

Source: American Hospital Association, 2016.

Each aspect of the care delivery model moving to the third stage will progress separately as care migrates to individual control, with consumers using their personal health care dollars to invest in health care and nontraditional health services for monitoring and improving their health. Patients will move from passive receivers of care to active, informed participants making individual purchasing decisions. New care delivery systems should also focus on the healthy patients in the community, as keeping patients and the community healthy will lead to long-term, positive health outcomes.

Developing an ideal care delivery system model is not practical, as each health care market is unique. Instead, identifying foundational strategies on which to build a new care delivery system would be a more pragmatic approach to assisting hospitals and health care systems as they confront the rapidly changing future. This approach allows hospitals and health care systems to be adaptable and flexible in using care delivery models to meet patient and community needs.

The seven foundational principles developed by the Committee on Performance Improvement are outlined in Figure 4 and described in the following pages.

Figure 4. Seven Principles For Creating a Care Delivery System

Principles for Creating a Care Delivery System
1. Design the care delivery system with the whole person at the center.
2. Empower people and the care delivery system itself with information, technology and transparency to promote health.
3. Build care management and coordination systems.
4. Integrate behavioral health and social determinants of health with physical health.
5. Develop collaborative leadership.
6. Integrate care delivery into the community.
7. Create safe and highly reliable health care organizations.

Source: American Hospital Association, 2016.

System design must start with the whole person, putting each person's needs and ease of access to care before the needs and convenience of the system and its clinicians. When that person is the patient, the design must also consider the needs of families and caregivers. In addition, the system must be prepared to address patients' cultural needs and ensure cultural competency training throughout the health care organization. Clinicians must understand patient and consumer behavior and motivation and adapt or partner with others to meet those needs.

To develop a strong care delivery system, clinicians need to understand patient and consumer behaviors and motivations related to their care. Several core elements characterize a patient-centered care delivery system, including:

- Education and shared knowledge. Clinicians must work to educate patients with a greater focus on keeping patients healthy. With shared information and knowledge, patients will become better engaged in their care and clinicians will better understand patient's preferences and goals.
- Shared decision making. Clinicians must partner with their patients to make collaborative decisions about care needs based on the goals and motivations of the patient. To make collaborative decisions, clinicians must be culturally competent—ensuring understanding of a patient's values and beliefs—and communicate clearly with consideration and respect.
- Involvement of family and friends. Strong patient-centered care delivery systems leverage the support of the patient's family and friends in the care process. Stronger support networks will increase the patient's adherence to care regimens and thus improve outcomes.
- Collaboration and team management. Effective communication between members of the care team and with the patient leads to enhanced collaboration. Since patients may see multiple clinicians, the entire team must coordinate care delivery for each patient.
- Sensitivity to cultural and religious norms. Hospitals and health care systems see a variety of patients with different cultural and spiritual backgrounds. Understanding and supporting these beliefs are critical in a patient-centered care delivery system.
- Respect of patient needs and preferences. Engaging patients in their care requires respect for patients' priorities and goals for their care and overall health. Care delivery systems also need to address issues of access and convenience to meet patients' needs.
- Incentives for healthy behaviors. Hospitals and care systems need to design incentives that encourage and develop individual responsibility and accountability for healthy behaviors and a healthy lifestyle.

Case examples:

Funded by the Los Angeles-based **UniHealth Foundation**, the Galaxy Health Care Program was developed to build a more patient-centered care approach for a primary care clinic that serves an at-risk population. New services were developed that increased access to care, including: telephone access to physicians 24 hours a day, seven days a week; same-day urgent care appointments; medication renewals by phone; and expanded use of case management services. The health program also conducts outreach by care coordinators for patients with recent emergency room or hospital visits. After the development of the program, the composite satisfaction scores increased from 39 percent to 51 percent.[1]

Cedars-Sinai, a nonprofit hospital and research institution based in Los Angeles, changed its primary care model for the community by focusing on different care settings. Whether patients receive care at home, in a primary care clinic, ambulatory setting or hospital, they receive quality care. For example, Cedars-Sinai deployed the "ICU at home," providing care at home for patients with heart failure. Shifting this care to the home resulted in a 34 percent reduction in admissions.

For people to be truly accountable for their own health, they need to be empowered, which means receiving complete information, supported with technology and communicated transparently. Technology should be used to support patients and communities in complying with healthy lifestyles and medical treatments. Technology can also be employed to remove patient barriers, overcome delivery system design flaws and make it easier for patients to achieve their desired results. Technology also allows hospitals and health care systems to address potential care gaps within communities as the organizations work to eliminate health care disparities. Technology and real-time information should also support quality and safety efforts at health care systems and provide point-of-care decision support. The health care system must have sufficient information and technology infrastructure to prevent clinician stress, rework and nonbeneficial care.

Beyond patient engagement, studies have begun to focus on "activation" to understand patient involvement in their care. A recent Health Affairs article, "When Patient Activation Levels Change, Health Outcomes and Costs Change, Too," suggests that an activated patient "has the motivation, knowledge, skill and confidence to take on the role of managing their health and health care" and that those patients maintain healthy behaviors and have better outcomes. The article cautions that while technology can help facilitate activation, good communication between providers and patients is critical to driving full engagement and activation.[2] Also essential are education and resources for the public to understand the importance of their involvement in their care.

Health care leaders should examine the strategies that large technology and information companies such as Google and Apple have used to empower their customers. These companies have made everyday tasks faster and easier, significantly expanding their business. In health care, technology can empower patients to conduct self-examinations and screenings, communicate with their physicians, refill a prescription or monitor specific vital signs. Innovative technology designs can improve compliance by providing immediate feedback to patients and clinicians.

Hospitals and health care systems should also explore opportunities for partnership with existing and emerging technology vendors to develop or adapt products that improve patient access and ease of care delivery. Emerging technologies can foster a better connected health network, drastically changing how care is delivered. Monitoring a patient's real-time health status allows for more rapid interventions, which can lead to improved outcomes. However, as new disruptive technologies emerge, understanding how those devices and services interface with the health care system will be essential. Emerging technologies may not meet medical grade standards that hospitals and health care systems need to comply with.

Though having more targeted information can empower patients, their families and caregivers, when developing such technology, hospitals and health care systems should be aware that family members may need education and support to learn about and use new technologies. Since not everyone will embrace technology or have reliable access to the Internet, as a foundational step, information between clinician and patient should be easily accessible and provided without barriers. Patients and clinicians should have an

open dialogue at all times throughout the care continuum. While technology can make it easier for patients and clinicians and help provide more value-based care, it is an enabler of improvement, not a solution.

Technology also can help hospitals and health care systems improve quality and safety. Hospitals and care systems should explore opportunities to use technology to reduce medical errors, provide real-time decision support and enhance other quality and safety initiatives.

Case examples:

The **Collaborative Chronic Care Network** (or C3N Project) was created to develop a system that works better for patients with chronic illnesses. Housed at the Cincinnati Children's Hospital Medical Center, C3N was designed to engage patients, parents, care teams and researchers. The project focuses on ease of communication with three parts: 1) social—frequent and easy interactions between participants, 2) technical—information systems to host massive amounts of data, and 3) scientific—an arena to try out and test new ideas. Using a collection of applications focused on patient engagement, quality improvement, patient self-tracking and continuous care, C3N aims to reduce barriers and improve communication between patients with chronic illnesses and their clinicians.[3]

Connecting smartphone technology and biometric feedbacks, **Proteus Digital Health** has developed drugs that are ingestible and transmit biometric data to the patient and provider. Patients wearing sensors can receive real-time information on their condition, allowing for enhanced self-care. The pills taken by patients are coated with the same digestible metals found in multivitamins. Patients with chronic conditions that require adherence to treatment protocols can use this technology to empower and activate themselves in their treatment. While not fully deployed throughout the U.S. health care system, Proteus's "intelligent" pills have been used in several clinical trials, including patients with heart failure, mental health conditions and diabetes. Proteus has headquarters in Redwood City, California.[4]

HealthPartners, based in Bloomington, Minnesota, instituted a care management algorithm that predicts and identifies patients who could be at risk for behavioral health issues and hospitalizations. Using results from the algorithm, a case manager contacts patients and provides care education, coaching and coordination of care services. All case managers can access the electronic health record. Past results indicated that overall return on investment was $4 dollars saved in medical costs for every $1 dollar of the program's administration.[5]

Memorial Health System in South Bend, Indiana, created a telehealth care system that allows the organization's high-risk obstetrics clinic to monitor patients at home between office visits. Patients who are enrolled in the program receive a monitoring device and education on how to use the medical equipment. Data from the medical device at the patient's home is transmitted to the physician's office. Using the data, along with regularly scheduled check-ins, clinical staff keep in touch with patients by phone to answer questions. To date, 24 kits have been provided, allowing clinic staff to identify high-risk medical situations.[6]

Care management and coordination are complicated. Hospitals and health care systems need to simplify the care process for patients by aligning resources, staff and points of entry for care. Removing barriers to coordinated care will facilitate patients' ability to achieve their desired health outcomes. In refining care management, care delivery systems should focus on care team roles, teamwork, scope of practice, and community resources.

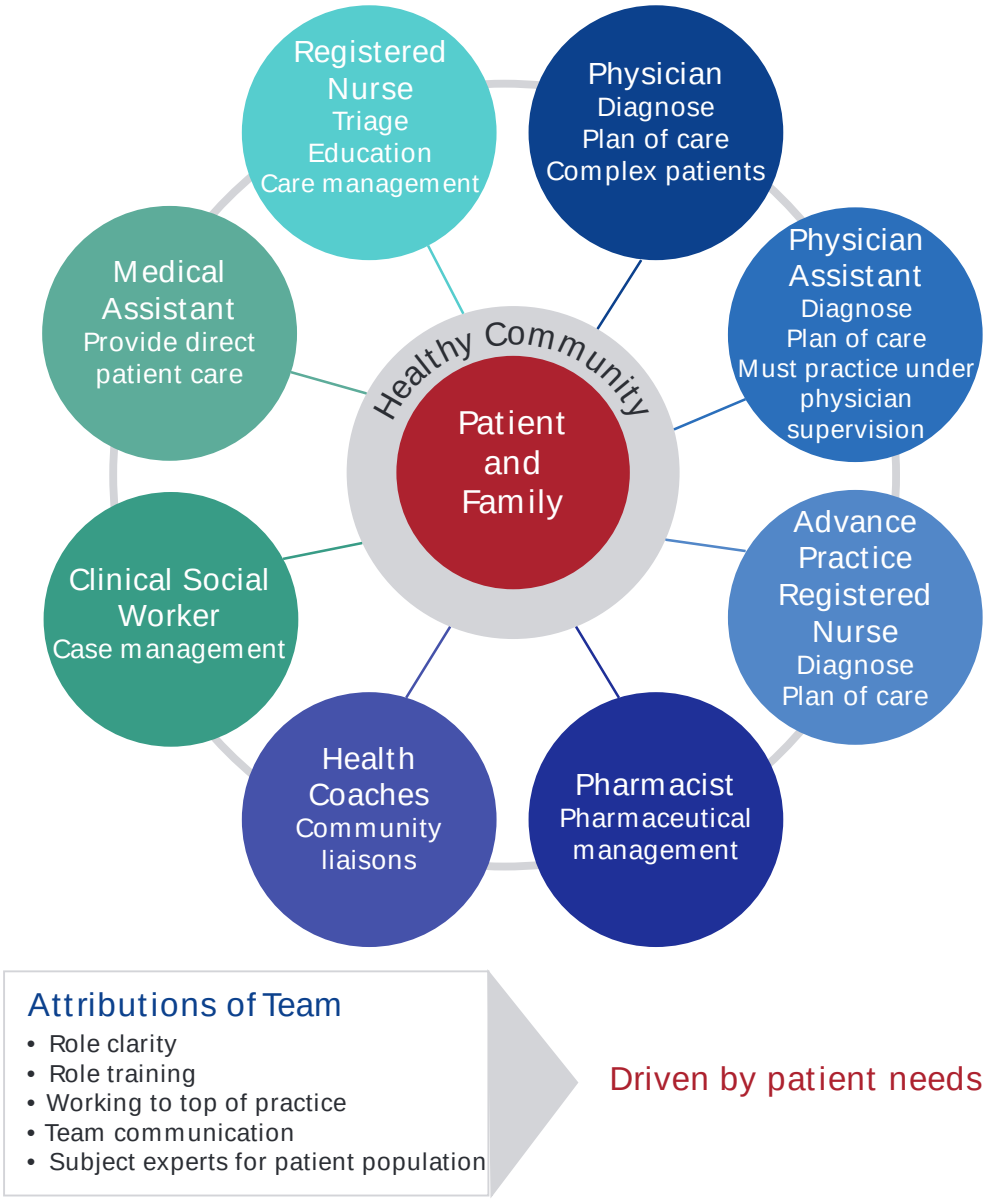
To be effective, care management and coordination systems must be built across the entire health care system and community. As hospitals and care systems move toward population health management and work to align primary and preventive care resources, a robust infrastructure will be essential for success. Hospitals and health care systems will need to establish and nurture strong linkages to social service agencies to ensure better care management and coordination across the continuum, particularly to address community health needs.

In addition, to maintain effective care delivery systems across the continuum, hospitals and health systems must develop efficient, well-coordinated care teams. Teams that communicate and collaborate effectively reduce the potential for error, resulting in increased safety and quality and improved clinical performance. However, teamwork is not innate; it must be learned. Moving a hospital's or health care system's culture to one that embraces team-based care delivery can be a challenge. Many health care organizations have had success employing structured interventions such as TeamSTEPPS – Team Strategies and Tools to Enhance Performance and Patient Safety. With TeamSTEPPS training, clinical and nonclinical providers learn to communicate more effectively and become more empowered and engaged in working as a unified team to mitigate risk and reduce errors.

Highlighting the need for teamwork in primary care delivery, the 2013 AHA report "Workforce Roles in a Redesigned Primary Care Model" outlines four recommendations to define workforce roles for the primary care environment and develop a more effective model of primary care delivery across the entire continuum.

The report suggests that "hospitals can serve as conveners and enablers in primary care delivery…. hospitals should form effective partnerships with the community and patients in a way that provides the infrastructure primary care teams need to deliver quality care." The report discusses coordination of a full team, including coaches who help connect patients with community resources. The report recommends that all health care professionals be educated within the context of interdisciplinary clinical learning teams. In addition to addressing culture change to embrace team-based care delivery, clinical education system redesign should include curricula to support interdisciplinary, team-based learning, which prepares a workforce to function in integrated, multidisciplinary care teams.[7]

Figure 5. Accountability-based Primary Care Workforce Model



Source: American Hospital Association, 2016.

Case Examples:

Memorial Hermann, a large not-for-profit health system in Texas, uses an online tool called ScheduleNow that allows patients and nurses to set up a variety of care services including a CT, MRI, ultrasound or X-ray, physical therapy, colonoscopy, sleep study and wound care. Once appointments are made, patients receive automatic appointment reminders. Patients can choose the location of their desired care services. Along with patients having the ability to make appointments, nurses at Memorial Hermann can use ScheduleNow to set up follow-up appointments for patients who are being discharged. ScheduleNow connects the various care delivery services for the patient and allows patients to schedule all their care in one spot.[8]

Health Share of Oregon is partnering with the Oregon Health and Sciences University to implement the first Project ECHO (Extension for Community Healthcare Outcomes) in Oregon. The mission of Project ECHO is to develop the capacity to safely and effectively treat chronic, common and complex diseases within the medical home, and improve primary care provider comfort level in treating more complex cases. Deployment of Project ECHO involves didactic teaching and case presentations via live videoconferences with specialists. ECHO has been used successfully in Oregon to support primary care providers in addressing more complex behavioral health needs for which they may not have the appropriate specialty care available.[9]

Twelve years ago, **Rutland Regional Medical Center** in Vermont created the Community Health Centers of Rutland, a federally qualified health center that now operates separately in the region. Together, both providers focus on care coordination for the community through the use of medical homes. The FQHC sends out community health teams that are supported by Rutland Regional Medical Center's specialized resources. On a regular basis, both providers come together to review difficult patient cases, which has enhanced the coordination and management for care. This collaboration has led to a reduction in emergency room visits and lower costs of care for patients who are treated within the medical home model.

Montefiore Medical Center is a large, academic medical center in New York City that has created a large integrated system for its low-income patients. The Care Management Organization is a for-profit subsidiary of the medical center, and it receives capitated payments for more than 140,000 patients to provide medical and behavioral care management in addition to traditional health plan administrative functions. The CMO's success is derived from a standardized care management approach for population health. Process, work systems and work flows all have been mapped out within the CMO. Each of these work systems can address a variety of patient needs. Additionally, the CMO utilizes a tracking tool to coordinate care management for the clinical teams. With this tool, patient care is effectively carried out through the CMO.[10]

At **Presbyterian Healthcare Services**, based in Albuquerque, New Mexico, leaders and staff have worked to build an integrated care delivery model. Hospital at Home is one model implemented by the health care system to improve care and reduce hospitalizations for acute hospital-level care within patients' homes. Through this program patients have had better clinical outcomes (similar to inpatients), along with cost savings on length of stay and the use of fewer diagnostic tests. From October 2008 through August 2013, 806 patients participated in the Hospital at Home program. As of July 2013, patient satisfaction scores from Hospital at Home patients were 97.9 percent. In addition, rates for readmission and mortality were lower for patients in the program in comparison to similar patients receiving inpatient care.[11]

For care delivery systems to improve the overall health and well-being of each patient, behavioral health and social determinants of health must be integrated with physical health. The design of the health care system must include resources and services to provide support for behavioral health and address the social determinants of health, particularly in diagnosis, treatment and prevention.

- To achieve a true patient-centered care model, integrating treatment plans developed by behavioral health clinicians, social services and other clinical staff is essential. Developing a comprehensive care plan can create a sense of well-being necessary for achieving health.
- Access to behavioral health care must be integrated into the community, in concert with providing all other care.
- Clinicians who understand and embrace the whole-person care model must take responsibility for all health outcomes—and carry out and adjust care not only for the individual patient but also for the entire patient population for which they are accountable.
- Protocols and shared workflows need to be established for nearly all processes of integrated care and implemented consistently. Primary care physicians need to receive training on screening patients for behavioral health issues.
- Extending the care delivery system by increasing community partnerships allows the system to address the social determinants of health and care needs in the community.

Case examples:

The **Medical Respite Program at Jefferson Terrace** (Edward Thomas House) in Seattle provides homeless individuals a safe place to recover from acute injury or illness. Short-term shelter, nursing and behavioral health services are the key elements of the program's recuperative care. Respite staff use the opportunity provided by daily contact with clients in a safe and structured setting to provide primary medical care, psychosocial assessments and case management services to link clients with housing, ongoing substance abuse and mental health treatment, housing placement and other needed services. The goals of medical respite care include resolving current medical concerns; providing psychosocial assessments and appropriate referrals for entitlements, medical and mental health issues, and substance abuse services; and initiating the process of housing stabilization.[12]

Located in Portland, Oregon, **Unity Center for Behavioral Health**, the state's first comprehensive behavioral health care center, will open in 2016. The center is a partnership between Adventist Health, Kaiser Permanente, Legacy Health and Oregon Health & Science University. Unity Center will provide emergency services for people who are having acute psychiatric events, along with inpatient care services. The goal of the new center is to provide emergency care for behavioral health issues that otherwise would be provided in a traditional emergency room.[13]

Texas Health has worked extensively to integrate behavioral health into the care continuum. Opening new clinic sites that focus on behavioral health determinants and are connected and coordinated with primary care sites has allowed Texas Health to identify at-risk patients. Primary care physicians are trained on how to use depression screening tests to identify patients who need behavioral health treatments. This coordinated effort has resulted in a significant decrease in readmissions and length of stay at Texas Health facilities.

Health Leads partners with hospitals and health centers across the United States to integrate and align resources for patients to address their social needs and help them stay healthy. Focusing on basic resources, Health Leads works with health care providers to screen and connect patients with community resources and public assistance to provide for basic needs such as food and shelter. Health Leads staff also work with patients to help facilitate their care. More than 13,000 patients in seven cities were served in 2014 by Health Leads.[14]

A new care delivery system should include collaborative leadership structures with clinicians and administrators, along with a focus on leadership diversity. Creating collaborative leadership structures establishes shared goals and values that develop trust and reflect patient needs agreed upon by all leaders. Collaborative leadership clearly identifies roles and aligns responsibilities to optimize efficiency and engage patients in their care. Additionally, a multidisciplinary, collaborative structure is needed for discussing and making joint decisions. Clinical insights must be integrated throughout the continuum of care management.

Successfully integrated leadership structures include the following characteristics.

1. Clinician and hospital leaders with:
   - » Shared vision and mission
   - » Similar values and expectations
   - » Aligned financial and nonfinancial incentives
   - » Goals aligned across the board with appropriate metrics
   - » Shared responsibility for financial, cost, and quality targets
   - » Service line teams with accountability
   - » Shared strategic planning and management and
   - » Shared focus on engaging patients as partners in their care
2. An interdisciplinary structure that supports collaboration in decision making between clinicians and hospital executives. It is important that physicians preserve the clinical autonomy needed for quality patient care while working with others to deliver effective, efficient and appropriate care.
3. Integrated clinical and hospital leadership, including physicians, nurses and other clinicians, present at all levels of the integrated health system and participating in all key management decisions.
4. A collaborative, participatory partnership built on trust. This sense of interdependence among leaders working together to achieve the Triple Aim—better care and improved health at a lower per capita cost—is crucial to better alignment and engagement. It is important for clinicians and hospital leaders to trust each other's good faith and abilities.
5. Open and transparent sharing of clinical and business information across the continuum by all leaders to improve care.
6. A clinical information system infrastructure that captures and reports key clinical quality and efficiency performance data for all participants, as well as accountability across the system for those measures.

Case examples:

Memorial Hermann, a large not-for-profit health system in Texas, has developed a collaborative physician leadership structure by focusing on a common understanding of current issues and a vision for future. Using the physician board, hospital system board and the medical executive committee, Memorial Hermann focused on quality, safety and cost. One key element of the collaborative relationship is the development of expectations as new members join the system. All members have to agree to report on metrics, advance accountable care, report and share data, be held accountable for care and be on the preferred electronic medical record. With a collaborative leadership structure, Memorial Hermann achieved a 10.5 percent reduction in costs related to inpatient days, average length of stay, and emergency room visits.[15]

In the metro Chicago area, **Advocate Health Care** is the largest health system with eight acute hospitals and more than 5,200 physicians on its medical staff. Through the Clinical Integration Program of Advocate Physician Partners, the health system collaborates with 3,400 of its physicians (of whom about 800 are employed by the system or one of its affiliates) in one of the largest clinical integration efforts in the nation. Through a governing board consisting of physicians and administrators from across the medical groups and hospitals, the Advocate clinical integration network ensures unified leadership and accountability to clinical protocols and systemwide sharing of data and information.[16]

To effectively provide comprehensive health care, hospitals and health care systems must be integrated into other aspects of community life. Collaboration with other vital community services and resources is essential to achieve optimal health outcomes. Connecting to existing community organizations and groups will create an enhanced delivery system capable of addressing the multiple factors that influence health and define health outcomes.

Integration of care delivery into the community involves reaching out to a wide audience of community agencies that provide a range of needed services. These services can be directly health-related but also include social and community services, such as housing, safety, education and nutrition. The AHA report "Redefining the H" outlines three actions that hospitals and health care systems should take:

- Appropriately allocate resources and define a shared responsibility for improving community health.
- Bring insight, perspective and support from the community into the hospital board room as hospital leaders consider paths for transformation.
- Enter into strategic partnerships for improving community health and health outcomes.

The "Redefining the H" report highlights the importance of maintaining a strong linkage with the community through a diverse group of community stakeholders to better understand a community's needs. Conducting and reviewing community health needs assessments and collaborating on other strategic endeavors will be vital as a foundation for planning and aligning health priorities and goals to achieve the best outcomes for health. The report also includes an overview of community engagement strategies that health care leaders can use to begin creating the connections needed to integrate care delivery into the community.[17]

Case examples:

Camden, New Jersey, has developed a coalition of hospitals, clinics, medical practices, payers, housing advocates, mental health providers, state agencies and other entities to provide direct outreach to the city's most frequent utilizers of the local emergency departments and hospitals. Camden's multidisciplinary Care Management Initiative team identifies patients with frequent hospital admissions and asks them to participate in care coordination services. Enrolled patients work with a community-based team of nurses, social workers, community health workers, and health coaches to address not only medical issues but also behavioral and social barriers to wellness. The success of the work in Camden is attributed to the strong use of data to understand the needs of the community and identify those who could most benefit from targeted interventions and care coordination.[18]

The Siouxland PACE, located at **UnityPoint Health – St. Luke's**, is Iowa's first PACE program—Program of All-Inclusive Care for the Elderly. PACE is designed to provide care to "frail" patients who are 55 years of age and older. UnityPoint uses PACE to coordinate care for patients so they can remain in their own homes. The PACE program addresses social and other support services in addition to medical care to ensure patients can live independently for as long as possible.[19]

The principles of high reliability should be incorporated into any health care redesign. By creating a culture of high reliability, hospitals and health care systems can better predict and manage risk and prevent potential catastrophic failure.

According to Weick and Sutcliff in "Managing the Unexpected," highly reliable organizations have the following characteristics:[20]

1. Sensitive to operations. Leaders and staff need to be constantly aware of how processes and systems affect the organization. There are no assumptions. This steady concentration on processes leads to observations that inform decision making and new operational initiatives.
2. Reluctant to accept "simple" explanations for problems. High reliability organizations resist simplifications and conduct deeper examinations.
3. Preoccupied with failure. Every employee at every level in a high reliability organization is encouraged to think of ways their work processes might break down. This sense of shared attentiveness is constant. It is applicable to small inefficiencies and major failures, including medical errors. Employees are encouraged to share their concerns for potential failures, which can help create best practices across departments.
4. Defer to expertise. Leaders at high reliability organizations listen to people who have the most developed knowledge of the task at hand. Sometimes those individuals might not have the most seniority, but they are still encouraged to voice their concerns, ideas and input — regardless of hierarchy.
5. Resilient. Leaders at high reliability organizations stay the course. They are prepared to respond to failures and continually find new solutions. They might improvise more, or quickly develop new ways to respond to unexpected events. High reliability organizations might experience numerous failures, but it is their resilience and swift problem-solving that prevent catastrophes.

Case examples:

Memorial Hermann in Texas has moved to becoming a high reliability organization through a systematic process of collaboration throughout the health system, transparent reporting, continuous self-assessment and strong leadership. The development of the System Quality and Patient Safety Council allowed for greater focus on reducing medical errors. Quality improvement projects on patient safety have yielded significant gains for the health system. By 2010, there had been more than 827,000 blood transfusions with zero cases of blood incomparability. Several hospitals within the system have gone years without a ventilator-associated pneumonia or central line-associated bloodstream infection. Memorial Hermann was recognized for efforts to become a high reliability organization with the 2012 John M. Eisenberg Patient Safety and Quality Award, which is presented jointly by the National Quality Forum and the Joint Commission.[21]

Cincinnati Children's Hospital Medical Center has been moving to becoming a high reliability organization through the development of the James M. Anderson Center for Health Systems Excellence. The center is focused on transformational change that leads to the best health outcomes for patients, families and the hospital. Beginning the journey to becoming a high reliability organization involved first understanding and defining for the hospital the patient experience. Having a shared definition for patient experience allows for focused quality improvements. New processes around communication also have been deployed, including daily huddles to increase teamwork among the clinical staff. Using the HRO mentality in the neonatal intensive care unit, Cincinnati Children's sought to reduce ventilator-associated pneumonia. An education program using evidence-based practices was instituted for all clinical staff and led to eliminating ventilator-associated pneumonia within the unit.[22,23,24]

The Affordable Care Act, signed into law in 2010, is fundamentally changing the way health care is delivered. It has encouraged health organizations to innovate and redefine payment and care delivery. Pioneering health care systems have tested various integrated models and improved care coordination, physician alignment, performance measures and patient outcomes— accomplishing the four top priorities presented in the AHA's "Hospitals and Care Systems of the Future" report. Other health care organizations are testing new payment and service delivery models. The Center for Medicare & Medicaid Innovation, a provision of the Affordable Care Act, funds some of these developments.

Recently, the Department of Health and Human Services proposed tying 30 percent of all traditional, or fee-for-service, Medicare payments to quality or value through alternative payment models, such as accountable care organizations or bundled payment arrangements by the end of 2016, and tying 50 percent of payments to these models by the end of 2018. Other proposals include tying 85 percent of all traditional Medicare payments to quality or value by 2016 and tying 90 percent by 2018, through such programs as the Hospital Value-based Purchasing and Hospital Readmissions Reduction programs.

The health care field will also face a shift in patient and workforce demographics. Over the next decade, the demand for health care services will rise when baby boomers retire; most baby boomers are projected to live longer as a result of new treatments and technology. The current and projected labor supply will not be able to meet future health care demands. Nursing and physician shortages alone will continue to get worse. Hospitals and health care systems will need to evolve into organizations that are more team oriented and patient centered to adapt to the new workforce culture.

Meeting these challenges requires rethinking how U.S. hospitals and health care systems are paid. To redesign the payment system for care, as rooted in the Triple Aim, the AHA recommends:

1. Accelerating payment models that reward better value and more efficient and integrated care for patients.
2. Spurring efforts to better manage the health of defined populations and communities.
3. Reforming payment and delivery systems to achieve a reduction in the per capita cost of care.
4. Improving and incentivizing quality, safety and the patient experience of care.
5. Incentivizing individuals to share in accountability for their health and health care.
6. Ensuring predictability and stability in payment while providers build the infrastructure and capability to redesign care delivery.

The current payment system is unsustainable, and all U.S. hospitals and health care systems will need to adapt to a new payment model. Fee for service—the current payment model—will become outdated, as government entities, payers, consumers and providers focus on a value-based payment system. Hospitals and health care systems will have to deploy a variety of different payment models for their care delivery.

Figure 6 illustrates how different types of hospitals can use a patient-centered care delivery approach with different payment models. Bundled, population-based and service-based payments can be deployed by hospitals and health care systems to meet the Triple Aim. Integrated incentives that focus on quality lead to successful payment models.

Val Ue-BaseD paYmeNT FRa meWORK

A service-based payment model provides payment by each type of service during care delivery. Bundle-based payment models group related care services together into one payment. Population-based payment models are for a group of patients or the community.

As a hospital or health care system moves from service-based to population-based payment, there is increased financial risk, increased integration of services and additional infrastructure needed to integrate care delivery. Currently, many hospitals and health care systems will use a mixture of payment models to support their new care delivery systems. Payment frameworks can take many different forms in terms of how hospitals and health care systems are paid. For example, in Maryland, providers are paid in a fee-for-service model, although payments are capped. These types of payment systems differ from an overall payment model because of how the hospital is reimbursed.

Each emerging payment model has challenges and opportunities for hospitals. These challenges and opportunities directly impact which payment models are the best fit for the hospital. Service-based payment models are based on fee-for-service and primarily intended for small hospitals. Lack of sufficient patient or population volume is the biggest challenge in moving beyond a fee-for-service payment mechanism. The challenges with this model are the difficulties in containing costs and in enabling a population health focus. However, incentives for quality can significantly impact the delivery model. Small hospitals may be able to form alliances so they can increase their population size and take on bundled- or population-based payment models. Innovative partnerships among smaller health care organizations—through affiliations, joint ventures, mergers and other vehicles—may provide the scale needed by smaller hospitals to adequately manage financial and clinical risk.

Bundled-based payment models may serve as a glide path to larger financial bundles, but these models require sufficient volume for specific conditions or diseases. Bundles also encourage coordination with other providers. Bundled payments can utilize a fee-for-service or capitation payment mechanism.

Population-based payment models require a substantial patient population, substantial infrastructure to manage the care, and the ability to provide a continuum of services, through partnership or owned services. The population-based models can utilize fee-for-service or capitated payments and provide the greatest incentive for population health and cost management focus.

Switching to new payment models could require operational changes for hospitals and health care systems. For example, agreements between the hospital and hospitalists may require contract changes that include more incentives. Hospitals also will need to have more data and a greater understanding of their communities, which will involve new operational considerations.

Payment Mechanisms

Each of these three payment models has payment mechanisms for hospitals and health care systems. Service-based models use a fee-for-service payment mechanism, which focuses on volume rather than value. Fee-for-service, which is the current payment mechanism for most hospitals, pays hospitals and health care systems a predetermined fee for that service. This type of payment mechanism focuses more on volume than value. Hospitals and health care systems determine the price for each care delivery procedure aligned on the local consumer market. The amount paid for services is negotiated between providers and payers. Reimbursement for patients with government-funded or government-assisted health insurance coverage is outlined by the government payers with a defined rate for each procedure. Fee-for-service does provide flexibility as a variety of health care organizations can deploy this payment mechanism.

Bundled-based payment mechanisms can occur throughout the care continuum, especially in the acute care setting. In Figure 6, the bundled payments are found in the acute care setting, the acute care setting plus physicians or the acute care setting, physicians and post-acute care. Expanding bundled-based mechanisms requires a sufficient volume for the conditions that are included in bundles. Additionally, it can be difficult to define the boundaries or the episodes of care. Bundled payment models can improve coordination among the providers, increase flexibility for where care can be delivered and provide incentives to manage care in an efficient manner with clear accountability.

With a population-based payment mechanism, payment can be through global capitation or a mixture of fee-for-service coupled with shared savings/risk arrangements. This payment is intended for a group of individuals. There is greater financial risk in caring for a defined population. Population-based payment mechanisms require a larger attributable population. Table 1 provides a closer examination of the disadvantages and advantages of each payment mechanism.

Table 1. Advantages and Disadvantages For Payment Mechanisms

Payment Model	Advantages	Disadvantages
Fee-for-service (no shared savings)	» Encourages productivity and delivery of care » Relatively flexible in terms of provider size or structure, type of care provided, place of service or geographical location of care » Has a straightforward payment model	» Creates misaligned incentives between payers and provider » Does not include provider accountability » Creates incentives for providers to provide unnecessary care » Focuses on volume not value and thus provides a different form of financial risk, as markets may shift to more value-based payment

Payment Model	Advantages	Disadvantages
Fee-for-service with bonus payments for quality and efficiency	» Has some incentives to increase efficiency and quality	» May lead to misaligned incentives; can reward organizations that were previously inefficient and punish cost-efficient providers » If an individual provider's share of pool is small relative to its FFS reimbursement, financial incentive to improve efficiency may be weak
Per episode (bundled payments)	» Encourages coordination among multiple caregivers » Supports flexibility in care delivery » Creates incentive to efficiently manage episodes » Establishes clear accountability of care for single episodes	» Defining boundaries of an episode can be difficult » May increase barriers to patients' choice of provider and/or geographic availability » Does not have incentives to reduce unnecessary episodes » Requires a certain number of cases/episodes to become viable and may not be applicable to all hospitals
Global payments/partial capitation	» Includes incentives to avoid overutilization and coordinate care among multiple providers or replace inappropriate care settings » Includes incentives for providers to try new and nontraditional methods	» Solvency is a real risk
Alternative quality contracting	» Has similar advantages in terms of cost controls and overutilization as global payments and capitation » May promote better patient outcomes and health care quality	» Solvency is also a risk

Source: Adapted from "State actions to promote and restrain commercial accountable care organizations," 2015.[25]

Hospitals

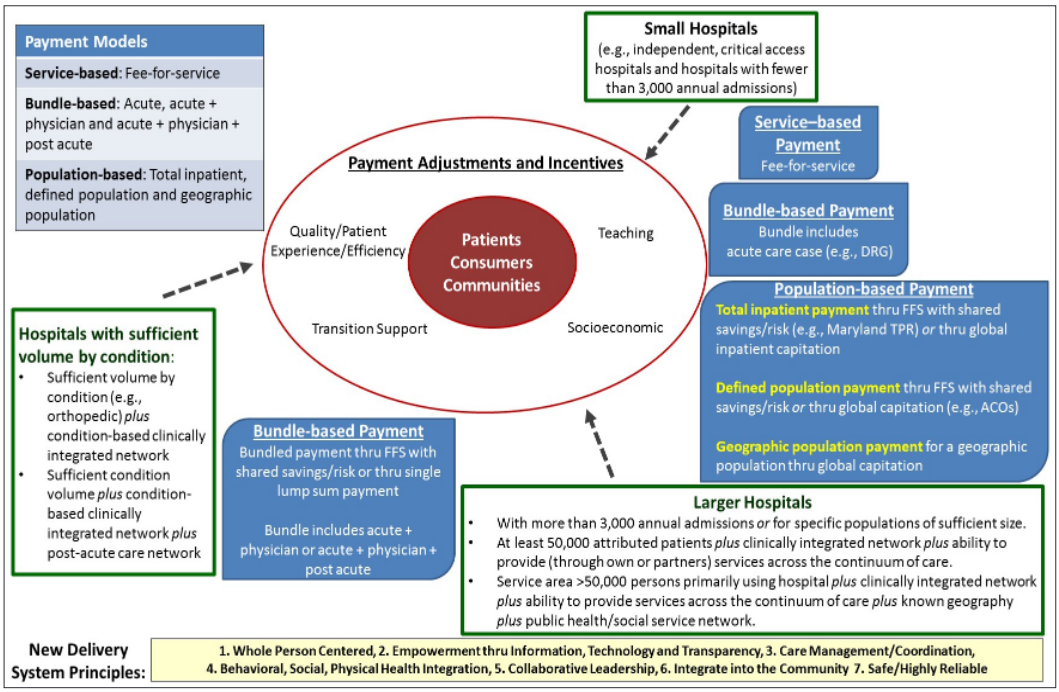
Because of the large variety of hospitals, different payment models fit for certain types of hospitals. Some hospitals may not significantly move along the explained payment continuum, but there will be adjustments and incentives for all payment models. As shown in Figure 6, smaller and rural hospitals will have greater difficulty moving along the payment continuum. Therefore, some form of fee-for-service or bundled payments are more likely. Larger-sized hospitals will be able to transition further along the payment continuum due to greater volume and resources.

Small and rural hospitals may be able to participate in more population-based payment models through different collaborations. They may be able to partner—in an affiliation, joint venture or merger, for example—with other like organizations or with larger health systems that may be more invested in population-based payment models, such as an accountable care organization. These collaborations provide small and rural hospitals with the infrastructure and volume to effectively manage financial and clinical risk that is not feasible with a small population.

Risk Adjustments/Incentives

Every payment model will have quality, patient experience and efficiency incentives built into the payment mechanism. Thus, even if a payment model focused more on volume is deployed, that hospital or care system will still have certain metrics focused on Triple Aim goals. Socioeconomic adjustments will be made for hospitals as they become more integrated with their community and begin to address the factors that directly impact health outcomes. Hospitals and health care systems that provide significant teaching functions may receive additional incentives within their payment mechanism. All hospitals will require support for transitioning to alternative payment models. Additionally, all payment mechanisms will have adjustments and incentives.

Figure 6. Value-based Payment Framework



Source: American Hospital Association, 2016.

New incentives could be based on the Institute for Medicine's "Vital Signs: Core Metrics for Health and Health Progress." For example, providers could receive additional incentives for properly matching the care provided to the patient with the patient's own goals or develop a community engagement program to provide access to healthier foods.[26]

To assist hospitals and health care systems in moving toward new payment models, short-term and long-term policies are needed that target stress points that can impede the movement from volume- to value-based care. Stress points include obtaining available data; supporting the infrastructure and bridge between payment models; and getting better tools and methods, such as risk adjustment, that can more accurately reflect the intended design of the payment models.

Short-term Policy Recommendations

Develop time-limited, bridge payment models to assist hospitals in the transition. Bridging the gap between volume and value will require unique payment models to assist hospitals and health care systems. These payment models likely will not be designed for long-term use but could be used to move hospitals to focus on value. These may include additional bundled payment models, payments for services such as care coordination, and payments for additional services such as virtual care. Any transition to more risk-based payment structures will need a fee schedule. Defining a case management fee that is similar to chronic disease management fees can support infrastructure development.[27]

Increase access to actionable information as it relates to care, payment and cost. Guidance is needed for hospitals and health care systems in approaches to becoming more transparent as it relates to care, payment and cost. Dissemination of best practices will assist providers in developing their own approaches to transparency.

Dedicate funding for critical access hospitals and small/rural hospitals. Due to small volumes, critical access hospitals and small/rural hospitals may be largely dependent on a fee-for-service payment model. Policies will be required to assist these hospitals in developing the requisite infrastructure to meet a value-based delivery system. Policies may be for funding care delivery infrastructure and bundling of services across care settings. Additionally, these hospitals will need assistance in transitioning from inpatient acute care to matching the community's needs. The AHA Task Force on Ensuring Access in Vulnerable Communities is examining alternative models for care delivery in these small and rural areas, as well as in inner city urban communities.

Identify upfront infrastructure development costs. A significant number of hospitals may not have the necessary funds to develop their organizational infrastructure to meet the Triple Aim. Policies related to developing a fairer risk/reward equation to identify priority infrastructure needs would be helpful. Current new payment models, such as accountable care organizations, place too much risk and burden on providers with too little opportunity for reward in the form of shared savings. These new models should be designed to focus on incentives and rewards to providers, rather than penalties.

Develop better, streamlined quality measures. Bridging the gap requires quality measures to continue to progress toward a value-based payment system. Short-term policies should continue to move hospitals and health care systems more toward value. Additionally, these new quality measures that are used for rate setting and payments should be applicable to

all types of hospitals and health care systems. Having meaningful measures, such as those discussed in the IOM's "Vital Signs," will lead to improvement in health.

Gather data from all payers. Because new payment models are emerging, gathering data on the progress and impact of these new initiatives is critical to determining success. Centers for Medicare and Medicaid initiatives related to bundles and the impact of accountable care organizations are examples of initiatives that hospitals and health care systems could learn from with more data. Access to timely and accurate clinical and financial patient data is needed to better coordinate care and improve health.

Create additional incentives to join accountable care organizations and bundled payment pilots. Additional incentives could be created for hospitals and health care systems that are not already part of an ACO to join or form a new one. While results have been mixed in the federal ACOs, private ACOs have had more success.

Establish incentives to increase bundling. Although bundling has increased in use across providers, additional incentives that focus on bundling episodes of care, such as the mandatory hip and knee replacement bundle, will likely push hospitals and health care systems to create additional standardization and effective care delivery.

Ensure appropriate blending of different payment models. During the transition, hospitals and health care systems will use a multitude of payment models. However, in the long term this mixing may not be sustainable unless there are additional policies that provide guidance and requirements for hospitals and health care systems.

Set better payment rates for bundled payments and global budgets. As more hospitals move to bundled- and population-based payment models, it will require setting better payment rates that are reflective of historical performance, not historical performance minus a discount. Additionally, new clinical delivery models and evidenced-based practices will be needed. Payment models will become more complex and thus require more investment in ensuring accuracy of payments.

Develop better risk adjustments for payment models. More precise and detailed risk-adjustments will be needed as focus on value becomes more in-depth. Hospitals and health care systems will need policies that provide guidance for risk adjustments as they begin addressing more socioeconomic issues that serve as health determinants. Models could use a regional average per-person cost, adjusted for risk, then progress to an adjustment based on the national economy. Over time, as the risk adjustments are tied to the national economy, variation in payments could decrease.[28]

Clarify payment policies for high-cost/high-risk utilizers. Because a high-cost segment of the patient population will always exist, additional clarification on how reimbursements are dispersed for high-cost/high-risk utilizers will be necessary. Greater focus on population health management will identify these patients, allowing for better access and care, though they will require specific payments.

Offer incentives for healthy patients. Providers should be incentivized to focus not only on caring for chronically ill patients but also on maintaining the health of healthy patients and the local population. Engaging and activating these individuals will lead to long-term, positive health outcomes.

Case Study 1: Maryland All-Payer Demonstration

Background

The state of Maryland has been setting rates for hospital services since the mid-1970s through the Health Services Cost Review Commission. This commission is an independent seven-member body that uses a public utility model, serving as the watchdog and regulator for the state. Maryland hospitals are waived from the federal Medicare payment methods (the Medicare waiver). All payers in the state participate, making this a unique model for the country. Value from an all-payer system comes from:

- Cost containment
- Equitable funding of uncompensated care
- Stable and predictable payment system for hospitals
- Avoiding cost shifting
- Funding by all payers for graduate medical education
- Transparency
- Leadership in linking quality and payment
- Local access to regulators

New Model Demonstration

Approved in January 2014, the five-year demonstration for 2014–2018 has an all-payer total hospital per capita revenue growth ceiling at 3.58 percent. Medicare payment savings must be a minimum of $330 million. Additionally, there are patient- and population-centered measures including:

- Reducing Medicare readmission rate to the national average
- Reducing health care-acquired conditions by 30 percent over five years
- Monitoring and reporting other measures
- Improving patient experience of care
- Focusing on population health
- Reducing other health expenditures

The CMS contract requires population-based or global models for hospital rate setting by the end of the five years. In Maryland, all hospitals elected to adopt a global budget by July 1, 2014; so the budget is set at the beginning of the year to cover all services, and not dependent on volume.

The demonstration will occur in two phases. Phase 1, from 2014–2018, will focus on hospital inpatients and outpatients. Phase 2, if approved, will focus on controlling the growth on total health spending in the state of Maryland.

results

- From January to July 2015, all-payer hospital spending growth per capita rose 2.28 percent, which was lower than the annual target of 3.58 percent.
- From January to December 2014, Medicare hospital spending growth per beneficiary decreased by 1.12 percent, which was lower than the annual target of 0.5 percent growth.
- From January to July 2015, the Medicare readmission rate was reduced by 0.7 percent, which was off target from 0.96 percent.
- From January to July 2015, Maryland hospital-acquired conditions rate decreased by 14.42 percent, which was a significant improvement from the annual target of 6.89 percent.

Contact

John Colmers
Johns Hopkins Medicine
Vice President, Health Care Transformation and Strategic Planning
3910 Keswick Rd., Suite N-2200
Baltimore, Maryland 21211
jcolmers@jhmi.edu

Case Study 2: Mount Auburn Hospital, Cambridge, Massachusetts

Background

Focusing on the patient, Mount Auburn Hospital established a delivery system to meet patient and community needs and negotiated payment arrangements that allowed it to support its delivery system. Located in Cambridge, Massachusetts, Mount Auburn is a regional teaching hospital for Harvard Medical School, serving the Boston and Cambridge metropolitan area. With 210 beds, Mount Auburn Hospital provides comprehensive inpatient, outpatient and specialty services at its main campus and 25 off-site locations.

Payment Model Interventions

With an accountable care organization mindset focused on the patient and community, Mount Auburn, which has both full-risk and fee-for-service payment arrangements, is trying to focus on value-based payment structures, allowing it to develop a population-based operation. Revenue from risk-based contracts is 30-plus percent of the hospital's total patient revenue. Additionally, the hospital employs more than 150 physicians under a physician organization, with one-third of the revenue from the physician organization coming from risk payers.

In addition to the 30 percent risk-based revenue with the new preferred provider organization risk being added, Mount Auburn has the following payment model breakdowns:

- 25 percent of commercial hospital payments from pay-for-performance
- 20 percent of admissions from an aligned group managing under risk
- Medicare/Medicaid under a value-based payment

Along with the hospital, the Mount Auburn Cambridge Independent Practice Association, founded in 1985 to organize physicians and manage care contracts, has a value-based payment model. MACIPA has full-risk capitation with Mount Auburn Hospital from the three major local health plans, with 50,000 lives under the risk payment arrangements. Global contracts between the hospital and MACIPA are budgeted with close to 100 percent risk. For example, a contract signed with a local health payer was an alternative quality contract. In the second round of a five-year agreement, the contract focuses on quality, cost of membership and streamlined administration.

Results

The alternative quality contract has led to significant cost savings and improved patient safety for Mount Auburn Hospital:

- Prior to the contract, Mount Auburn Hospital's maximum scores for patient experience and quality were 60 percent. By the end of year 5, the hospital achieved 93 percent.
- Prior to the contract, Mount Auburn Hospital's total medical expenses trends were 10 percent per year; since the contract implementation, there is a low, single-digit percent increase or decrease.

Lessons Learned

Mount Auburn Hospital has tremendous experience with risk contracting and pay-for-performance. With this experience, the hospital is still on a learning curve and continual journey. For inexperienced providers transitioning into the new payment models in the current environment, Mount Auburn's lessons learned include:

- Culture changes for physicians and administrators take time to develop. Make sure the organization's contracts account for this.
- Keys for transitioning from volume to value:
  - Leadership support
  - Hospital and physician community working together with the same goals
  - Collaboration with payers for success/support
    - Benefit design and member support need to be aligned with providers' incentives
    - Transparency is required—full data needs to be shared between providers and payers.
  - Critical mass of patients is necessary before assuming risk.
    - Then hospitals need to be careful of how to scale these arrangements and understand the tipping point for operations to be transitioned.
  - New skill sets and resources need to be developed including:
    - Financial modeling and accounting
    - Case management
- Quality metrics need to be based primarily on nationally accepted measures, and they should line up across payers to the extent possible.
- When negotiating arrangements, be careful of how achievable continually toughening targets can be over time.

Contact

Kathryn Burke
Vice President of Contracting and Business Development
Mount Auburn Hospital
330 Mt Auburn St.
Cambridge, Massachusetts 02138
Kburke1@mah.harvard.edu

Case Study 3: Carilion Clinic, Roanoke, Virginia

Background

Carilion Clinic located in Roanoke, Virginia, is a 1000-plus bed system, with 49,000 admissions a year. Since 1996, Carilion has had a strong primary care focus centered on quality. The use of an electronic medical record and internal score cards supports this quality effort. In 2007, Carilion became an accountable care organization and a revised administrative structure was created with a new physician group led by a chief medical officer and with nine clinical departments each led by a physician chair. Each chair also has an administrative dyad partner.

Payment Model Interventions

Financially, Carilion Clinic has remained very stable for the past several fiscal years. Initial funding sources that the clinic participated in were the Meaningful Use Incentive, PMPM for Care Management and Care Coordinator Visits. Currently, Carilion Clinic participates in pay-for-performance opportunities (Medicare Advantage, Commercial and Medicare Shared Savings Program) and CMS billing options (Transitions of Care Management, Annual Medicare Wellness and Chronic Care Management). Additionally, the clinic is part of Medicare Advantage with shared savings and incentive payments for focused quality metrics. Carilion also has risk-based contracts with commercial payers with similar payment models and they joined the MSSP in 2013. Efforts in 2014 resulted in earning more than 75 percent of available revenue for this value-based work in the ambulatory setting. For the MSSP, the clinic had good quality scores but did not meet the 2 percent shared savings threshold.

Team Structure

A new "pay-for-performance" team was created in 2014 to address increased opportunities for Carilion Clinic. The lead team is comprised of a senior medical director, senior vice president—accountable care strategies, director of contracting, manager of performance and quality improvement and a project consultant. Focused on more than 100 metrics, the team tracks progress and works with payers and IT. The work team is comprised of project consultants, RN/LPNs, certified medical assistants and medical office associates, the team combines payer data with EMR report data. Using the subsequent data set, the team performs chart reviews for non-discrete data. The purpose of this team is to close gaps in care.

Another team was created to address care coordination. A central care coordination group examines efforts around care coordination within the clinic; focuses on high-risk patients; and helps to develop comprehensive action plans to assist the work of embedded care coordinators and primary care physicians.

Developing Quality Metrics

To align data with incentives, Carilion chose quality metrics that were determined to be important for the health of patients and likely to result in financial returns to sustain the efforts. Developing score cards/report cards was critical to informing physicians and medical staff on their performance. Carilion is focused on the following:

- Appropriate testing for children with pharyngitis
- Rheumatoid arthritis management
- Breast cancer screening
- Colorectal cancer screening
- Diabetes A1c screening
- Diabetes A1c < 8.0
- Diabetes nephropathy screening
- Adult BMI assessment
- High-risk medications in elderly
- Osteoporosis management in women with a fracture

Results

Between 2009 and 2014, Carilion Clinic has seen significant impact on the health outcomes through the organization's focus on quality and use of the medical home model:

- Percentage of diabetics 18-75 years of age with HbA1c test in the past six months: 26.7 percent increase
- Percentage of patients with hypertension 18-75 years of age with blood pressure <140/90 mm Hg: 16.2 percent increase
- Percentage of women 40-69 years of age with a mammogram in the past two years: 45.4 percent increase
- Percentage of patients with persistent asthma 5-64 years of age on a controller medication: 21.9 percent increase
- ED utilization in 139 patients two years after care coordinator engagement: 55 percent decrease
- Hospitalization in 130 patients two years after care coordinator engagement: 57 percent decrease

Contact

Michael P. Jeremiah, MD, FAAFP
Chair of the Department of Family & Community Medicine, Carilion Clinic & the Virginia Tech-Carilion School of Medicine
Senior Medical Director of Ambulatory Quality, Carilion Clinic
1 Riverside Circle, 4th Floor
Roanoke, Virginia 24016
MPJeremiah@carilionclinic.org

Case Study 4: Cedars-Sinai, Los Angeles, California

Background

Cedars-Sinai is a large nonprofit academic medical center in the Los Angeles, with 886 licensed beds, 2,100 physicians, 2,800 nurses and thousands of other health care professionals and staff. Clinical programs range from primary care for preventing, diagnosing and treating common conditions to specialized treatments for rare, complex and advanced illnesses. In addition, Cedars-Sinai serves the community through its medical network, which includes the Cedars-Sinai Medical Group and Cedars-Sinai Health Associates.

Focusing on value-based and transformational care, Cedars-Sinai has sought out new and innovative care delivery strategies to enhance patient care. Cedars-Sinai has a number of innovative programs as part of its population health management efforts. Two programs are highlighted here, the ambulatory care management and the clinical decision support alert system for clinical staff.

Value-Based Interventions

Interventions at Cedars-Sinai focused on providing better care outside the hospital and within the community setting and patient's home. Using a strategy of providing physician, nurse practitioner, and case manager home visits, Cedars-Sinai uses this model for patients with certain medical conditions that meet specific clinical criteria. While patients may have been hospitalized in the past, now clinical staff may visit and provide care in the patient's home. Cedars-Sinai clinical staff may also train family members to provide basic health care. The home care team may include physicians, nurses and case managers. Hospital-at-home is used for selected patients who can be safely cared for at home. Within population health management systems, Cedars-Sinai reviews all patients who are hospitalized to identify avoidable admissions that could have been prevented through improved care either in the physician office and/or the patient's home for quality improvement gaps.

Part of Cedars-Sinai's focus on value-based care has been decision support integrated into care. This decision support system provides potential warnings for clinical staff, but allows the clinical staff to override decision support at their discretion and decide on the best course of action for each and every patient. Clinical staff receive approximately 200 alerts total each day in either the hospital or ambulatory setting. Physicians in the medical group receive reports on how often they override Choosing Wisely alert recommendations compared to their peers.

results

Through its population health programs, Cedars-Sinai has had several positive clinical results. In addition, Cedars-Sinai has received significant cost savings while improving quality of care.

For example, with the hospital-at-home program:

- Significant reduction in inpatient utilization. For example, one large insurance company reported a 34 percent reduction in inpatient utilization for Cedars-Sinai medical group patients.
- Admission rates for the Cedars-Sinai medical group perform in the Milliman "well managed" range. This makes the medical group one of the best performing nationwide in reducing avoidable admissions.
- Significant reductions in length of stay for medical and surgical patients. Cedars-Sinai is a better performing health system compared with other academic health systems. The alert system has led to a reduced rate of inappropriate orders per 1,000 orders.
- Projected to save nearly $6 million dollars from April 2014 to March 2015.

Contact

Scott Weingarten, MD
Senior Vice President for Clinical Transformation
Cedars-Sinai Health System
8700 Beverly Blvd.
Los Angeles, California 90048
Scott.Weingarten@cshs.org

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