Creating a Culture of Optimal Care Delivery

Optimal care delivery is a necessity in today’s healthcare environment. As the foundation for long-term hospital and health system performance improvement sustainability, care delivery optimization is a systemwide effort to generate financial rewards and drive added value by improving care outcomes, eliminating unnecessary variation and ensuring consistent application of evidence-based practices across the continuum of care. This paper provides an overview of the five strategic elements behind creating a healthcare culture that is centered around care delivery optimization: assessing organizational readiness, securing clinician alignment, transforming care processes, managing patients across settings and ensuring high reliability across the continuum.

Introduction
In today’s market, value creation is the currency of differentiation.

Fed up with increasing healthcare costs, payers in both the public and private sectors continue to compress hospital payments, creating challenges for providers as they must operate with smaller, fixed budgets even as inpatient expenses, labor costs, equipment and drug prices rise.

At the same time, payers are increasingly pushing providers into risk-based contracts where payments are contingent upon cost and quality improvement. Across the market, providers are being forced to accept greater levels of accountability and risk for the quality and efficiency of the care they provide. Those operating within the traditional fee-for-service model are at risk for at least 6 percent of Medicare reimbursement, with additional losses from employed physicians that are subject to penalties in the Medicare Access and CHIP Reauthorization Act’s (MACRA) Merit-Based Incentive Payment System (MIPS). These figures only increase as providers progress from volume-based services to value-based, alternative payment models (APMs), such as accountable care organizations (ACOs) and bundled payments.

In the Medicare Hospital Readmission Reduction Program, where hospitals receive readmissions penalties of 3 percent for all inpatient revenues, 83 percent of hospitals were penalized in 2017 with an average of 73 percent cuts to hospital patient revenue. The Hospital Value-Based Purchasing Program, which is a composite of total/cost/efficiency, care coordination and clinical quality, penalized 43 percent of hospitals in 2017. Additionally, the bottom 25 percent of hospitals receive a Hospital-Acquired Condition penalty, and employed physicians are being faced with MIPS penalties of up to 9 percent, depending on the year.
The movement toward value has also unleashed a new competitive environment where new entrants, retailers, insurers and other providers are all moving to create strategic alliances or “high-value networks” that better integrate and manage the entirety of care across the continuum.\(^2\) For instance, mega-deals by CVS and Aetna, Humana and Kindred, as well as the ongoing provider acquisitions by insurance goliath UnitedHealthcare, are having an impact on the competitive environment in many communities. Similarly, physicians are getting into the game by organizing themselves or joining existing networks that either leave health systems out of the network or commoditize their participation based almost exclusively on price.

Given the market realities, it is evident that health systems need a focused, comprehensive organizational strategy that addresses the core issues of quality and efficiency as they seek to rein in costs, build new care delivery models and become the choice provider in their local market. Establishing a culture of care delivery optimization as the cornerstone for effective, high-value care is the antidote to overcoming these challenges while simultaneously competitively positioning health systems for success in this new environment.

Over the past two decades, Premier\(^6\), alongside some of the nation’s most advanced hospitals and health systems, has collected leading practices and developed a framework for evaluating provider performance, which led to the establishment of a multiphased roadmap for creating and implementing successful and sustainable care delivery practices (see Figure 1).

**FIGURE 1: Care Delivery Optimization Approach**

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**Organizational Readiness**

Health systems seeking to better coordinate and align care delivery, optimize reimbursement, remove unwarranted variation and improve clinical outcomes must first have a clear understanding of where they are and where they want to go, as well as a strategic approach to achieve their aims cost-effectively.

**STRATEGY ASSESSMENT**

A readiness assessment is essential to designing a high-level, multiphased, long-term strategic roadmap that is based on an organization’s strengths, weaknesses and opportunity areas. To achieve this, health systems, particularly newly-created and growing networks, need to evaluate what assets and financial resources are available across care settings, and if the appropriate leadership, and governance structures are in place to enable and sustain care transformation efforts. This assessment process helps the organization identify gaps in care and where to prioritize care redesign initiatives (see Figure 2).

**FIGURE 2: Sample Readiness Evaluation Criteria**

Each hospital and health system is different, so there is no single, one-size-fits-all solution to optimizing care delivery. Therefore, a multifaceted approach to achieve performance improvement should be tailored based on the organization’s resources, patient populations, unique data trends and leadership priorities.

**LEADERSHIP AND GOVERNANCE**

Perhaps the most important element of driving change is a strong leadership commitment among the C-suite, clinical leaders and administrators who will be actively engaged with care transformation.

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Healthcare waste, including unnecessary treatments, overpriced drugs and procedures, and the under-use of preventive care, accounts for 34% of total healthcare spending in the U.S., or $910 billion annually.\textsuperscript{4}

Additional leadership must build structured processes and communication forums into their core business so that concerns are transparently addressed, and changes and improvements are drilled into the organization’s culture, mission and goals.

**Member Spotlight**

In 2017, Adventist Health System of Altamonte Springs, Fla., set out to enhance the way care was delivered across its enterprise in its aim to become a high-reliability organization. This meant removing unwarranted variation to provide exceptional care for all patients. As the team began examining how to meet newly outlined expectations, they wanted help determining how new practices and guidelines could be implemented across all hospitals.

Premier interviewed a cross-section of employees, from frontline clinicians to C-suite executives. This process helped ascertain employees’ understanding of care transformation and the level of organizational readiness to implement care transformation efforts. Premier found that confusion existed among the health system’s frontline staff on how to best reduce unnecessary care variation. Premier identified a need for strong leadership across the health system, including the development of a new organizational structure for the Office of Clinical Effectiveness, which Adventist Health System put into place, filling key positions with strong leaders.

In implementing Premier’s recommendations, Adventist Health System is already building momentum, as 28 of its hospitals received a Leapfrog Safety Grade “A” rating in the spring of 2018, a 40 percent improvement from the fall of 2017.\textsuperscript{3}

**OPPORTUNITY IDENTIFICATION**

Once a governance structure is in place, leaders should evaluate opportunity areas and strategize care redesign efforts on a regular basis to drive real, sustainable change. To do so requires data and insights on systemwide, local and national cost and quality trends. Integrated and robust data and analytics capabilities are essential for organizations seeking to understand priority areas for change in a single setting or multiple settings across the continuum.

Powerful analytics include vigorous benchmarking capabilities to evaluate key performance indicators based on payer, discharge type, service line, physician and diagnosis. These analytics also allow for the comparison of local outcomes performance against similar peers, local organizations and national care standards set by federal programs. Timely and actionable systemwide data can empower leadership teams with the information needed to create new care delivery efforts that support clinical efficiency, while maintaining or improving quality for focused diagnoses and across services lines (see Figure 4).

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\textsuperscript{3} “Implementing Care Transformation at Adventist Health System,” Premier Inc., August 2018

\textsuperscript{4} Eugene Kroch, PhD. “The Effectiveness of a Multicenter Quality Improvement Collaborative in Reducing Inpatient Mortality,” Journal of Patient Safety, June 2015
96% of health system C-suite seek to reduce clinical variation and standardize the use of products, resources and services as a top cost management priority.

Premier QUEST2020 members outperform peers by 29% in realizing value-based payments and by 23% in avoiding hospital-acquired conditions program penalties.

According to a 2017 Premier C-suite survey, reducing variation in care is a top cost management priority among health system leaders. Sq

For example, a group of more than 200 hospitals in Premier’s quality improvement collaborative, QUEST2020™, share, compare and benchmark their data with the goal of reducing variation between top- and bottom-performing hospital participants. By evaluating the outcomes of top performers, as well as evidence collected about the rate of improvement that can reasonably be expected, these member hospitals have outperformed the nation in mortality, avoided payment penalties and saved $18 billion.

Through the use of robust data and analytics to develop regular optimization reports, Premier hospitals are able to pinpoint cost and quality variations, as well as the sources or departments that are contributing to the problem, so that leaders can target and design efforts to improve the overall cost and quality of patient care.

Take the ICU, for example, where patients placed unnecessarily or longer than needed can be potentially harmful for patients as ICU stays have been linked to increased risk for healthcare-acquired infections (HAIs) and other adverse events. In a recent analysis, Premier looked at nearly 800 hospitals and identified opportunities to reduce ICU days by 200,000 per year for patients across various clinical service lines with diagnoses that had the greatest variation, such as sepsis patients and patients that were undergoing cardiac valve and other major cardiothoracic procedures.

Managing a healthcare organization is so complex, and resources so limited, that the only way to get a handle on where to prioritize performance improvement efforts is to benchmark data from every corner of the organization and compare that data with peers locally and nationwide. Doing so is a critical first step in prioritizing the areas where limited resources can deliver the most bang for the buck. Incidentally, it’s also the only way to measure progress.

CHANGE MANAGEMENT AND ACCOUNTABILITY

Making training programs available to promote a culture that encourages communication and teamwork is essential. Anticipating and preparing for the barriers and setbacks that will occur is also critical. Dashboards that highlight progress and clinician scorecards that identify improvement opportunities, as well as best practices that are working, provide a continuous feedback loop to assess performance and hold providers...
accountable for results (see Figure 5). As the project takes shape, consistently and transparently sharing and encouraging dialogue around leadership goals, membership and timelines provides a hyper focus on the accountability of each leader, team and staff member redesigning the needed processes.

FIGURE 5: Care Variation Balanced Scorecard Example

CLINICIAN ALIGNMENT
For health systems seeking to improve efficiencies, avoid penalties or prepare themselves for payment models that reward collaboration, hospital-physician alignment is key. Engaging physicians is vital to establishing the framework and foundational elements required to determine and achieve buy-in around a care transformation effort.

GAINING BUY-IN
Whether the organization has employed physicians, partnered with independent physicians, or both, it is essential to create confidence that care transformation efforts will enhance value and improve patient outcomes for both parties.

Open channels of communication that enable shared decision making are critical to ensure care redesign efforts support all involved parties. This helps to avoid conflicts and the physician perception that requirements and changes are being foisted upon them. Health system leadership should commit to supporting physicians by being accessible, seeking their input, engaging them in leadership roles and involving them in regular leadership meetings.

Physician champions must be established to lead care transformation efforts and shape the path ahead by providing input on structures, evidence-based protocols, quality initiatives, compensation and incentives, as well as to gain approval through their medical staff governance structure. Having clinicians at the table early on in the process improves the probability of compliance around care delivery optimization efforts over the long-term.

Health system leaders can use both formal and informal channels to frequently communicate with physicians and physician champions, such as involving them in executive, board and department meetings, attending rounds, and by making themselves available in physician lounges and other areas.

The health system should also offer scalable clinician education and leadership development programs that provide the clinical evidence-based guidelines, data analytics and leadership skills necessary for the care redesign effort, integrating both virtual and in-person forums to promote community and clinical interdependence.

GOAL SETTING
Health systems must ensure that the alignment strategy dovetails with and supports clinician needs. Goals for clinician alignment need to be mutually agreed upon by both the health system organizing the providers and the physicians. To that end, goals must define expectations around collaboration, consistent communication, progress tracking and data sharing.

Physician partners should understand how the goals align with incentives that are targeted around the care transformation effort. It should be clear to physicians how these goals factor into the profit or loss generated by them as an individual, as well as how their efforts impact the overall financial health of their practices and the organization.

For instance, if the requirements for top performance goals are met, then physicians would achieve ideal MIPS scores, the hospital would avoid payment...
penalties and both parties would achieve financial rewards. After all, the only way to earn revenues for achieving care delivery optimization is through aligned, value-based incentives.

**QUALITY METRICS**

To track performance and achievement of shared goals, aligned physician networks need a streamlined set of standardized performance measures for specified improvement areas. Once the goals are agreed upon, health systems and physicians should jointly examine the range of quality metrics that focus attention on each area for lasting involvement.

Performance measures also should have evidence to support their use and be standardized to fulfill the many reporting requirements that both clinicians and health systems share, such as private payer contract requirements and federal and state quality reporting, as well as professional society and credentialing requirements.

Reports of individual performance based on the set measures should be shared with all physicians and reviewed on a regular basis (see Figure 6). Often, the simple act of widely sharing transparent financial, quality and productivity data will prompt short-term improvements in performance. Long-term improvement opportunities should also be identified and managed through detailed reporting down to the individual provider level. However, the vast majority of medical groups lack the business intelligence and peer comparisons required to manage performance and put actionable data in the hands of clinical and non-clinical leaders. A shared performance infrastructure with

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**FIGURE 6: Physician Outcomes by Attending Practitioner Example**

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integrated clinical and claims analytics, utilization management reports, and performance improvement toolkits are vital tools to support this work.

Health systems with robust clinical, financial and operational analytics can supply clinician leaders and front-line staff with reports that provide differentiated performance benchmarks to continuously track and measure improvement.

### Member Spotlight

In 2012, Mercy Health, a health system with 22 acute care facilities serving residents in Ohio and Kentucky, saw an opportunity to improve care and reduce costs by optimizing blood use. Overall, blood products and indirect expenses accounted for $26 million in spending. Working with Premier, leaders at Mercy Health were able to conduct an in-depth analysis of the current state of blood utilization and create the infrastructure needed to ensure compliance around new blood use protocols. Strategies to foster optimization of blood use included physician engagement; enlisting cross-functional clinical and operational teams for feedback and engagement of frontline providers; creation of committees in each hospital to carry out the work; ongoing conversations around feedback and monitoring of performance; engagement of quality team members to assess appropriateness of blood products administration; and education on blood conservation strategies. Data was monitored for trends to see if physicians were ordering more than one unit of blood or transfusing outside of electronic health record protocols – allowing leaders to follow up with clinicians on best practices.

During a three-year period, Mercy realized $6.2 million in savings as a result of conserving red blood cell, platelet, plasma and cryo use (70 percent of savings was result of reducing blood use). The savings reflect conservation efforts in both inpatient and outpatient facilities, without compromising quality.9

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**ALIGNING INCENTIVES**

Set metrics should integrate compensation structures and ensure a financial return on value-based contracts, and/or quality improvement and federal reimbursement programs by aligning incentives to support focused care redesign initiatives.

Incentive structures must be inclusive and attractive to all parties. As part of the Quality Payment Program and other value-based arrangements, physicians can be compensated or penalized based on adequate patient assessment as a clinical practice improvement activity. Therefore, broad-based agreement around compensation models that include value-based contracts offering performance bonuses, such as accountable care organizations (ACO), clinically integrated networks (CIN), co-management agreements and joint ownership models, should be a key part of the care transformation plan.¹⁰

**Cross-Continuum Care Transformation**

A cross-continuum accountability structure using evidence-based clinical care pathways, checklists and scorecards based on objective and accurate data must be set in place to increase speed to results, solidify alignment efforts, standardize care practices and sustain success within any care redesign effort.

**EVIDENCE-BASED CARE PATHS**

Providers across pre-acute, acute and post-acute settings need to be engaged as leaders in the development and implementation of standardized care pathways that optimize care delivery. Care paths are diagnosis specific and can be used at the patient and service line level to ensure the appropriate level of care using evidence-based guidelines. Using a collection of standardized interventions that can be executed together results in better outcomes than interventions implemented individually.

Adherence to evidence-based care pathways across the system is critical for care delivery optimization. Care paths should be comprised of evidence-based medical, nursing and ancillary practices, and implemented through redesigned screening assessments, standardized handoff communication tools, and evidence-based care paradigms. An effective care pathway can reduce length-of-stay through care coordination, facilitating hand-off communication and making multidisciplinary rounds much more robust.

**Member Spotlight**

To tackle variation and improve efficiencies an early leader in bundled payment, St. Luke’s University Health Network of Bethlehem, Pa., had to develop trusted partnerships with post-acute care providers. They met with them quarterly to review performance data, discuss opportunities and engage in two-way progress report sharing. Through these meetings, they found they needed to restructure their care model alongside their post-acute care clinicians. St. Luke’s embedded physicians and nurse practitioners within post-acute provider facilities, helping to drive interdisciplinary daily rounds, team meetings, development and implementation of new care pathways, and alignment treatment protocols.

As a result, SNF length-of-stay for patients in the St. Luke’s bundled payment program was reduced by 22 percent, and SNF readmissions were reduced by 23 percent. Additionally, SNF length-of-stay for total joint replacement alone was reduced by more than 50 percent.¹¹
Significant improvements in efficiency can be made when evidence-based practices are standardized across care settings. A nationwide Premier analysis of 645 hospitals found that provider efforts to optimize care by improving stewardship of evidence-based blood use practices led to a 20 percent decrease in blood utilization across 134 diagnoses that accounted for 80 percent of red blood cell use, while maintaining or improving quality.12

**MULTIDISCIPLINARY TEAMS**

It's often best if the health system forms multidisciplinary workgroups to manage and inform the care paths, as well as engage individuals across the organization who are affected and may play a role in the development process.

Multidisciplinary care path teams should include an administrative, department/service line and a clinical lead, as well as stakeholders in care management, finance, quality, information technology, education and communications. The major benefit of a multidisciplinary team is having all the patient’s care providers together at the same time to collaboratively determine the next steps in the most efficient way.

Smaller teams or subcommittees may be needed depending on the scope of work to be done. As with any infrastructure or governance effort, clear charters and expectations are important to the management process. With respect to senior leadership, a C-suite or comparable champion is a critical part of the care transformation effort to lead the planning, development, implementation and operations.

**Member Spotlight**

CAMC worked with ICU staff to standardize care around the appropriate placement and length-of-stay for all ICU patients, especially targeting preventable conditions and interventions such as healthcare-acquired infections and complications, respiratory failure, ventilator support and tracheostomies. Practices and protocols included the use of multidisciplinary team rounds led by an intensivist to improve patient flow. Mapping the entire patient journey and holding staff accountable for achieving specific daily recovery goals was important in order to standardize ICU and medical ICU length of stay, and reduce fragmentation.

*These efforts helped the health system reduce length-of-stay within the ICU and medical ICU by 1.15 days over a 21-month period.*13

**MEASURES REPORTING, MONITORING AND TRACKING**

According to Premier data, an average of 168 data transactions occur per patient per day, adding up to about 59,000 total daily clinical transactions for a typical hospital. Managing these data transactions without an actionable reporting, monitoring and tracking technology platform is a potential risk, where missed information could lead to inappropriate care, increased costs and/or damage to a hospital’s reputation.

Multidisciplinary teams need the ability to easily access and maintain patient information, identify specific patients to target with care management and other interventions, communicate and share information rapidly and with ease, and keep track of the care patients receive outside of their network. To evaluate care pathway performance, successful health systems use cross-continuum reporting by monitoring and tracking analytics to understand financial, clinical and operational outcomes on a rolling basis. To accomplish this, the health system may need to invest in measure tracking and reporting infrastructure, as well as common network performance technologies that support quality and federal reimbursement program requirements. These technologies make multifaceted care delivery optimization strategies a seamless part of day-to-day patient care and enable hospital leaders to continually drive higher levels of performance.

Providers must also ensure they are documenting the all the work they have performed in an accurate manner. An effective clinical documentation improvement program should be in place.

**Use of checklists to assure all evidence-based care has been received prior to discharge.**

**Physician order sets that include all evidence-based care components.**

**Multidisciplinary care teams (pharmacists, nurses, doctors, anesthesiologists) for delivering evidence-based care.**
In one study, interdisciplinary rounds reduced length-of-stay from 6.1 to 5.5 days and costs by 17% with no documented changes to patient outcomes.16

Across service lines for the accurate and comprehensive capture of patient information and appropriate risk-adjustment. Proper documentation and coding supports reporting required by federal payment programs by determining comparison groups for risk-adjusted penalty, incentive and DRG-based reimbursement, as well as expected values for quality metrics (see Figure 7). Ensuring that clinical documentation and coding accurately reflect core measures is critical for accurate organizational quality profiles, optimal outcomes and quality scores, and maximized reimbursement across the continuum.

**FIGURE 7: Clinical Documentation Technology Capabilities**

Additionally, capturing the rate of evidence-based care adherence is important to ensure a shift in the right direction. Organizations should comprehensively evaluate missed opportunities to identify causes and develop action items, follow-up on documentation issues, adopted evidence-based order sets, and emphasize education around the science behind the core measures.

**Patient Progression**

Patient-centered care that aligns all the resources that touch the patient, including pre- and post-acute services, is essential to reduce readmissions, length-of-stay and improve the quality of care for patients.

**CARE MANAGEMENT**

A strong care management program can support multidisciplinary teams and is an integral part of the design of a highly reliable system of care that provides seamless coordination across sites. Care managers, working in tandem with a patient’s primary care team, can serve as a “home base” to manage services delivered across sites and provider types. This approach promotes whole-person, patient-centered care, while streamlining and coordinating care to avoid duplicative or unnecessary, high-cost services.

**Member Spotlight**

When Henry Ford Allegiance Health of Jackson, Mich. experienced an increase in multiple admissions to the emergency department for reasons related to behavioral health, they worked with Premier to address the needs of the community and the hospital. After assessing the current state of the behavioral health unit and creating measurable objectives, the health system developed a cross-continuum care management program to align its behavioral health services with a care coordination process that spanned the continuum of behavioral health services and community resources.

Since embarking on its journey, Henry Ford has seen streamlined points of access across the care continuum, along with decreased wait times in the emergency department. They saw an uptake on contribution margin, reduced opioid overdoses and readmissions, and realized $430,000 in consolidated savings.15

Effective care management programs incorporate streamlined communication strategies, such as interdisciplinary rounds, which integrate care provided by the staff nurse, hospitalist/attending physician, care manager and patient/family. Interdisciplinary rounds help to improve communication between multidisciplinary teams, clear barriers that may impede success, and support patient and family engagement.

Delays in achieving the care management goals or milestones can add hours and/or days to the length-of-stay, affecting outcomes overall. Communication across disciplines is imperative. Documentation needs to be timely, but communication

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15 “Henry Ford Allegiance Health,” Premier Inc., December 2017
16 Priscilla Sandford Worrai, RN, PHD, “Interdisciplinary Rounds Reduced Hospital Stay and Costs and Improved Staff Satisfaction,” BMJ Journals, 1998
Capabilities provide patient population views and trend data, helping to ensure that resources are targeted toward at-risk patient populations. This helps streamline infection surveillance through quicker identification of HAIs and time to isolation, allowing infection preventionists to spend more time in patient care areas educating and observing practice.

Clinical surveillance systems that provide comprehensive pharmacy management tools also help ensure the appropriate use of medications, improve stewardship (antibiotics, opioids, etc.), save time and reduce costs. One study that examined the clinical surveillance use in ambulatory care settings showed a 32 percent reduction in inappropriate antibiotic use.17 Additionally, Robert Wood Johnson University Hospital showed that infection preventionists spent an average of five hours and eight minutes per day completing National Healthcare Safety Network (NHSN) reporting tasks.20 Clinical surveillance systems that facilitate state and federal regulatory reporting requirements, including HAI reporting and antimicrobial use (AU) and antimicrobial resistance (AR) data submission to the NHSN, help to remove these task-based burdens.

Foundation Of High Reliability
Parallel to care transformation, there is a need to ensure every best practice – big or small – is sustained over time. The ultimate goal for healthcare organizations seeking to remove unwarranted variation and provide safer care is to become a high-reliability organization (HRO). A true HRO not only relies on Toyota’s Lean philosophy of continuous quality improvement, but also ensures those improvement efforts involve all staff and are regularly reassessed to “hardware” high reliability into practice.

CLINICAL SURVEILLANCE
Clinical surveillance systems provide care management teams with meaningful insights that help address risk to patients, identify healthcare-associated infections (HAIs), improve medication safety and stewardship, as well as reduce length-of-stay and costs. A specialized clinical surveillance system can reduce clinical variation, help healthcare leaders better understand a variety of issues and trends affecting patients and their facilities, expand team structures to include care coordinators, clinical pharmacists, nurse practitioners, and others, and arm patient care teams with tools to deliver efficient, quality care. Acting on this clinical data has become a priority in the movement toward a more consumer-centric and accountable care delivery system.

It is essential to have clinical surveillance technology that is integrated and aligned with clinical workflow to deliver customizable user interfaces that present the information needed by individual clinicians and teams, according to their roles. Customizable reporting should be face-to-face whenever possible to increase collaboration and satisfaction among those providing care. Additionally, efficient patient and operational care progression strategies help move patients through the system in a smooth and timely manner.

Methods for a successful care management program include:
• Evaluating every patient for post-acute care needs within 24 hours of admission.
• Closely following patients who are at risk for readmission or have a high risk score.
• Starting discharge planning within 24 hours of admission.
• Working collaboratively with the patient, family and the nursing care team.
• Updating patients daily on their discharge plan.

Premier hospitals have seen significant cost savings directly related to the use of clinical surveillance technology:

**Good Shepherd Medical Center**

~$1.5M

SAVED

in incremental savings within the first year using clinical surveillance technology.

**CHRISTUS Health**

NEARLY

$2.5M

SAVED

in intervention savings within a year after implementing clinical surveillance.19

Member Spotlight

As part of Premier’s quality improvement collaborative and other Premier quality and cost improvement initiatives, University Hospitals of Ohio embarked on a care delivery optimization journey to evaluate operations and foster a culture of continuous improvement that resulted in improved patient safety, patient satisfaction and clinical outcomes coupled with reduced costs and increased revenue.

Ultimately, they have generated an estimated return on investment of 25 to one over the past four years.22

Premier’s performance improvement methodology is focused on continuously identifying areas where further improvements are needed, isolating gaps where data or research may be lacking, and creating plans to tackle those areas systematically. There also must be a process in place to phase in new measures and remove measures that no longer represent opportunities for improvement, to ensure progress is continual and ongoing.

Participating in forums to share best practices with peers is essential. Premier collaborative members that share their experiences and knowledge to rethink status quo have been able to implement changes quickly, broadly and consistently. Effective best practice sharing scales the best ideas and ensures systemwide excellence. For example, when Premier quality improvement collaborative members found that sepsis was the number one cause of death in excess of expected, they set up specific performance improvement efforts around sepsis using best practices from the top performers.

As a result of these interventions, Premier members were able to reduce sepsis mortalities by 18 percent in just six years.21

Additionally, when positive outcomes are achieved, there must be heightened organizational awareness of the new care delivery models that have been developed, enabling leaders and frontline staff to connect the dots between quality improvement and cost reduction.

CONCLUSION

As healthcare organizations navigate the maze of federal regulations, the public and private sector transition to value-based care, and the new competitive environment, they are struggling to find practical solutions to improve quality and reduce costs. Through its collaboratives and other initiatives, Premier and its members have created a care delivery optimization framework that can be used to consistently deliver the most efficient, effective and caring healthcare experience to every patient, every time. The essential components of creating a culture of care delivery optimization include having the right data and analytics to analyze opportunities and continuously monitor and improve performance, engaging physicians in every care redesign project, following systemwide evidenced-based protocols with effective care management programs, keeping leadership and staff accountable, and ensuring every practice follows established high reliability standards. Stated simply, dollars follow investments in care delivery optimization. Instilling a culture of care delivery optimization is essential for survival in today’s healthcare environment.

AUTHORS:

Kelly Conklin, MSN, RN  
Vice President of Quality and Safety Advisory Services, Premier

Erika Sundrud, MA, LSSMBB  
Principal Performance Partner, Premier

Madeleine Biondolillo, MD, MBA  
Vice President of Engagement and Delivery, Premier

Andy Edeburn, MA  
Principal Performance Partner, Premier

21 “Journey to High Reliability”  
Premier Inc., September 2017

22 “University Hospital Wins 2018 Premier Alliance Excellence Award”  
Press Release, Premier Inc., June 2018
Figure 1: Care Delivery Optimization Approach

Figure 2: Sample Readiness Evaluation Criteria

Sample Readiness Evaluation Criteria

1. Services Across the Care Continuum:
   - Does the organization have a long-term plan to measure market capture/leakage and system capacity to understand demand?
   - Is there a commitment to wellness and health promotion through partnerships with community, post-acute and primary care providers?

2. Patient Focus
   - Does the organization operate a patient-centered philosophy that focuses on population-based needs?
   - Do patients have the vision and ability to instill a strong, cohesive culture?

3. Geographic Coverage
   - How is the organization maximizing patient accessibility and minimizing duplication?
   - Is the organization using a roster to track and monitor patients as they transition across care settings or outside the system?

4. Standardized Care Delivery
   - Does the organization have well-established interprofessional teams across the continuum of care?
   - Are care standards in place and upheld across the system?

5. Performance Management
   - Does the organization demonstrate a commitment to quality of services, evaluation of outcomes and accountability for continuous care improvement?
   - Are hospitals, treatment and care interventions linked to clinical outcomes?

6. Information Systems
   - Are management systems in place to collect, track and report activities?

7. Organizational Culture and Leadership
   - Is the organization committed to wellness and health promotion?
   - Do leaders have the vision and ability to instill a strong, cohesive culture?

8. Physician Integration
   - Are physicians involved in the creation and maintenance of electronic medical records?
   - Are physicians engaged in leading roles?

9. Governance Structure
   - Does the organization have a strong, focused, diverse governance structure represented by a comprehensive membership from all stakeholder groups?

10. Financial Management
    - Are diagnosis, treatment and care interventions linked to clinical outcomes?

Sample based on exceptionally condensed Premier readiness evaluation criteria assessment.
Figure 3: Sample Governance Structure

GOVERNANCE
Regional Care Delivery
Optimization Oversight Committee

- Length of Stay/Capacity
- Sepsis Cross Continuum
- CHF Cross Continuum
- Level of Care Progression of Care

Focused Hospital Support

Hospital & Continuum Care Delivery Committee

Figure 5: Care Variation Balanced Scorecard Example

### 2017 Care Continuum Scores
- **Type**: Finance, Operations
- **Score**: Range from -2 to 4.07

### Target Opportunity Summary

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<td>AMI</td>
<td>360</td>
<td>$3M</td>
<td>$70K</td>
<td>$66K</td>
<td>$63K</td>
<td>$50K</td>
<td>$198K</td>
<td>5.47%</td>
</tr>
<tr>
<td>Non-Inf Ortho</td>
<td>216</td>
<td>$2M</td>
<td>$19K</td>
<td>$2K</td>
<td>$35K</td>
<td>$5K</td>
<td>$63K</td>
<td>1.74%</td>
</tr>
<tr>
<td>Total</td>
<td>9,474</td>
<td>$121M</td>
<td>$1,683K</td>
<td>$467K</td>
<td>$1,371K</td>
<td>$87K</td>
<td>$3,616K</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

### Target Opportunity Summary (Facility)

<table>
<thead>
<tr>
<th>Facility</th>
<th>Total Cases</th>
<th>Total Cost</th>
<th>RUM Opp.</th>
<th>LOC Opp.</th>
<th>LOS Opp.</th>
<th>Read Opp.</th>
<th>% Total</th>
<th>% Cost Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premier General</td>
<td>6,003</td>
<td>$70M</td>
<td>$1,017K</td>
<td>$446K</td>
<td>$1,006K</td>
<td>$87K</td>
<td>$2,556K</td>
<td>70.69%</td>
</tr>
<tr>
<td>Premier Medical Center</td>
<td>3,436</td>
<td>$51M</td>
<td>$665K</td>
<td>$31K</td>
<td>$364K</td>
<td>$50K</td>
<td>$1,060K</td>
<td>28.31%</td>
</tr>
<tr>
<td>Total</td>
<td>9,474</td>
<td>$121M</td>
<td>$1,683K</td>
<td>$467K</td>
<td>$1,371K</td>
<td>$87K</td>
<td>$3,616K</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

### Care Variation Indicators

<table>
<thead>
<tr>
<th>Population</th>
<th>Read.</th>
<th>Mort.</th>
<th>Comp.</th>
<th>Quality Indicator</th>
<th>Cost/Case</th>
<th>LOS Efficiency</th>
<th>Overall Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Inf Ortho</td>
<td>0.75</td>
<td>0.00</td>
<td>0.45</td>
<td>1.26</td>
<td>0.25</td>
<td>0.03</td>
<td>0.65</td>
</tr>
<tr>
<td>Major Joint</td>
<td>0.67</td>
<td>0.01</td>
<td>0.29</td>
<td>1.37</td>
<td>0.04</td>
<td>0.02</td>
<td>0.67</td>
</tr>
<tr>
<td>AMI</td>
<td>0.64</td>
<td>0.33</td>
<td>0.07</td>
<td>0.97</td>
<td>0.01</td>
<td>0.01</td>
<td>0.65</td>
</tr>
<tr>
<td>Sepsis</td>
<td>0.46</td>
<td>0.03</td>
<td>0.18</td>
<td>0.67</td>
<td>0.01</td>
<td>0.01</td>
<td>0.64</td>
</tr>
<tr>
<td>CHF</td>
<td>0.16</td>
<td>0.02</td>
<td>0.29</td>
<td>0.47</td>
<td>0.05</td>
<td>0.04</td>
<td>0.40</td>
</tr>
<tr>
<td>COPD</td>
<td>0.12</td>
<td>0.09</td>
<td>0.34</td>
<td>0.56</td>
<td>0.02</td>
<td>0.02</td>
<td>0.39</td>
</tr>
</tbody>
</table>

Sample data
Consulting and Technology White Paper

Figure 6: Physician Outcomes by Attending Practitioner Example

<table>
<thead>
<tr>
<th>Region</th>
<th>MS-DRG Group</th>
<th>MS-DRG Tag</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>SEPTICEMIA OR SEVERE SEPSIS</td>
<td>All</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Facility</th>
<th>Physician Specialty</th>
<th>Principal Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>All</td>
<td>All</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Physician O/E Indexes</th>
<th>O/E Comp.</th>
<th>O/E Mort.</th>
<th>O/E Read.</th>
<th>Quality O/E Index</th>
<th>O/E LOS</th>
<th>O/E Cost/Case</th>
<th>Efficiency O/E Index</th>
<th>Q&amp;E O/E Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cases</td>
<td>2,006</td>
<td>1.29</td>
<td>0.81</td>
<td>0.88</td>
<td>1.00</td>
<td>1.20</td>
<td>1.22</td>
<td>1.21</td>
</tr>
</tbody>
</table>

Sample data.

Figure 7: Clinical Documentation Technology Capabilities

Hospital Value-Based Payment Program
Physician Value Modifier
Medicare Accountable Care Organizations
Health Insurance Exchanges
Medicare Spending Per Beneficiary
Commercial Accountable Care Organizations
Medicaid Demonstration Projects
Medicare Advantage
Merit-Based Incentive Payment System
Programs of All-Inclusive Care for the Elderly
Long-Term Care Readmission Prediction Models

Clinical Documentation Education & Technology Should Support Payment for Federal and Commercial Reimbursement Programs
Figure 8: Premier Performance Improvement Framework