

How an IDS Improves Outcomes Using a Clinical Collaborative Structure



HEALTHCARE ORGANIZATION

Integrated Healthcare Delivery System

TOP RESULTS

- Contributed to system-wide cost reduction trajectory >\$100 million over the last three years
- 75% reduction in time required to approve system-wide care guidelines and pathways
- 65% reduction in sepsis mortality rate
- Significant reductions across four different categories in readmission rates
- Significant system-wide reductions in LOS

PRODUCTS

- Late-Binding™ Data Warehouse Platform
- Healthcare Analytics Applications

SERVICES

- Installation Services
- Clinical Improvement Services



To transform the U.S. healthcare system, providers are in determined pursuit of the Triple Aim: improving the experience of care, improving the health of populations, and reducing the per capita costs of care.¹ MultiCare Health System, an integrated delivery system (IDS) serving the communities throughout Pierce, South King, Thurston, and Kitsap counties in Washington State, is fully committed to excelling in all three areas of the Triple Aim and is establishing a structure and culture to accomplish that goal. This is no small challenge for an organization with more than 10,000 employees, 500,000 annual outpatient visits, and 1,188 beds.

In the last 12 months, as part of its core strategy, MultiCare Health System launched MultiCare Connected Care, LLC, as its Accountable Care Organization (ACO) and Clinically Integrated Network (CIN). This serves as a model for value creation that benefits patients, providers and payers alike. The CIN is comprised of three buckets of select providers: physicians/advanced practitioners (employed and select independent), ancillary services, and facilities such as acute care hospitals and ambulatory surgery centers.

Providers in the CIN are linked by strong clinical care coordination, evidence-based care standards, and care pathways. The responsibility for creating and implementing these standards and pathways lies with Collaboratives—multidisciplinary, clinically focused teams charged with developing system-wide clinical care

“ Our hope was that the Collaboratives would truly function as the vehicle for improvement in clinical variation, cost, and outcomes of service. They have completely met that expectation, serving as the engine for the success of our clinically integrated network.

Kate Mundell, MBA, PMP
 Program Manager
 Clinical Collaboratives
 MultiCare Health System

standards and pathways and then collaborating with operations to get them implemented. These Collaboratives are the engine that drives MultiCare Connected Care.

CREATING A ROBUST FRAMEWORK FOR COLLABORATIVE CARE

MultiCare’s collaborative journey began in 2010 and has produced remarkable improvements in patient outcomes—but the health system learned many important lessons along the way. Specifically, MultiCare learned that building a collaborative framework is an iterative process (see Figure 1). The organization’s leaders discovered that they had to make a conscious effort to lay out a roadmap for success, recognizing that progress does not equal perfection and that the framework had to be phased in rather than implemented all at once.

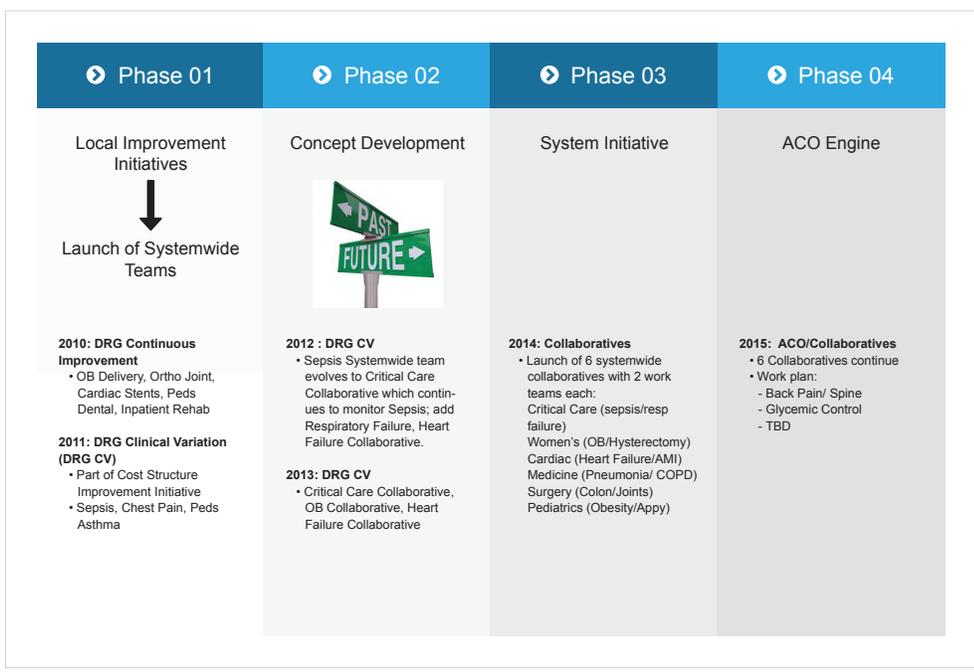


Figure 1: MultiCare Collaborative Iterative Journey

Another critical lesson that MultiCare learned in establishing its Collaboratives was the importance of combining a grassroots approach to developing improvement teams with strong support from top executives. The grassroots approach engages clinicians and other personnel on the frontlines of care. Such engagement is essential. Without it, the collaborative will fail to change practice and will not deliver the desired results. However, without leadership support, the grassroots approach can lead to disillusionment and a lack of resources that makes accomplishing the goals of the collaborative very difficult.

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The work that we’re doing with our Collaboratives resonates with physicians. When they see that they can help devise a care pathway that is evidence based, they catch the excitement of contributing at a higher level to care improvement. Engaging physicians in this way has a broad impact.

George Williams, MD
Physician Executive
for Specialty Care
MultiCare Health System

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MultiCare experienced this dynamic firsthand when it launched its first two Collaboratives, which focused on improving outcomes for sepsis and heart failure (HF). The organization launched sepsis and HF as a grassroots movement with frontline clinical operations and clinicians. The team experienced a high level of enthusiastic engagement in the beginning, but then had difficulty implementing the improvement initiative across the system. Not until strong executive sponsorship and specific dedicated resources were brought into the equation were the Collaboratives able to gain the recognition and resources necessary to do their job effectively.

Based on this early experience, MultiCare understood that without complete investment at all levels of the organization (from top executives to professionals on the frontlines of care), the adoption of concepts and tools for system-wide improvement and the necessary culture change would be variable and unreliable, leading to uneven outcomes. In launching future Collaboratives, MultiCare ensured both grassroots engagement and leadership commitment, including allocating resources dedicated specifically to support the collaborative.

Another important lesson MultiCare learned in launching Collaboratives was the importance of having a defined prioritization process. From the beginning, MultiCare leaders were faced with decisions about which clinical areas to focus on, how to start, and how many Collaboratives to launch. Improvement across such a large health system required prioritization and focus to make wise decisions and to ensure that the appropriate resources were available and committed.

To tackle questions of structured prioritization, MultiCare put oversight for these decisions in the hands of a credible body that could ensure that initiatives were sequenced appropriately. When limited resources hampered the progress of Collaboratives, this body had to make decisions about whether to take on many projects at the same time and achieve incremental results or focus on the critical few with more dramatic results.

MultiCare also discovered that the level of change management required to create a successful CIN dedicated to continuous improvement should not be underestimated—particularly when shifting from a hospital-centric focus to a system-wide approach. Participation from each hospital in the system as well as active participation from both nursing and physician representatives was essential. Importantly, MultiCare affirmed that data and evidence were essential to supporting adoption of a system-wide collaborative model and to effect a cultural paradigm shift.

“
We deployed a specific model in developing our Collaboratives that would accommodate the intersection of traditional quality improvement and technology-enabled analytics. The result is a structure that is physician-led, evidence-based, and multidisciplinary, with dedicated resources.
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Christopher Kodama, MD, MBA, FAAP
President
MultiCare Connected Care

MULTICARE'S SUCCESSFUL PARTNERSHIP BETWEEN COLLABORATIVES AND ANALYTICS

MultiCare recognized up front the importance of data and analytics to effectively drive performance and quality improvement. The organization therefore designed and deployed a specific model for its Collaboratives that accommodated the intersection of traditional performance improvement and technology-enabled analytics. Key characteristics of the model included the following:

- The Collaboratives were led by physicians.
- Their decisions and improvement recommendations were based on evidence.
- Collaborative teams were multidisciplinary, including clinicians, operations, finance, data analysts, and more.
- The Collaboratives were supported with dedicated resources—including clinical resources as well as technology and analytics experts who could work with frontline teams to interpret the data.
- Technology enabled analytics were used to support the hardwiring of best practices, providing validated data to support decision making and prioritization, and near real-time feedback on performance.

As it developed its Collaboratives, MultiCare also embarked on a business intelligence development strategy in partnership with an expert consultant to focus on three important domains:

- Technology: implementing an enterprise data warehouse (EDW) that aggregates data across systems and facilities and makes it available for actionable analytics
- Standards: building a mechanism to establish data standards (definitions, presentation of data, and architecture)
- Clinical improvement: determining opportunities for improving care and cost-per-discharge methodology using the Medicare Diagnostic Related Group (DRG)

By working on these three areas, the Collaboratives became not only the engine driving the CIN, but also the mechanism for integrating technology, standards, and clinical improvement throughout the health system. This made them a key factor in the success of the business intelligence strategy. The Collaboratives quickly discovered that without data it was nearly impossible to know where to focus efforts in order to drive improvement and where to refocus effort if performance slipped.

In fact, MultiCare credits ready access to data as the fundamental driver for successfully implementing evidence-based practice through the Collaboratives. The ability to engage the physicians with data and results that were readily available, reliable, and relevant—and then show them the impact on outcomes of their improvement efforts—proved very effective in driving adoption. Having an EDW with advanced analytics made this possible. It supplied the Collaboratives with the data they needed to identify opportunities for improvement, measure the impact of interventions, and see results quickly (see Figure 2).

FIGURE 2: SAMPLE INTERVENTION COMPLIANCE DASHBOARD

- 1 Interventions and current performance
- 2 Trending of performance on interventions over time
- 3 Ability to filter to narrow down the population represented



Figure 2: Sample intervention compliance dashboard

With insights provided by the EDW, the Collaboratives became adept at identifying changes in documentation that would increase structured data elements and subsequently improve strategic insight and results trending. Due to the work of the Collaboratives, there is now an ever-increasing amount of standardized data to pull from and drive advanced analytic applications. Instead of asking analysts to do manual chart audits and run reports to get the answer to a question, the Collaboratives now use advanced analytics applications to readily view the information themselves.

SETTING THE DIRECTION AND CLINICAL CONTENT FOR THE COLLABORATIVES

As MultiCare’s leaders gained experience in successfully organizing and resourcing Collaboratives, they also aligned the objectives of the Collaboratives with the strategic plan of the health system. As such, the Collaboratives were tasked with accomplishing the following:

- Reduce clinical variation across the system and standardize care
- Improve and monitor clinical outcomes

“The Collaboratives provide a platform for us to articulate the value proposition of our services to purchasers. Our ability to not only build clinical pathways but also to measure adoption and results is what creates a compelling product to take to market.”

Christopher Kodama, MD, MBA, FAAP
 President
 MultiCare Connected Care

- Improve patient satisfaction
- Reduce costs
- Improve documentation and collections

Strong physician leadership in partnership with other clinicians was absolutely essential if the Collaboratives were to deliver on that set of objectives. Engagement of clinical operations and nursing was also critical, particularly given the level of coordination and education of providers and patients that was involved in spreading best practices across the care continuum. To achieve this partnership, MultiCare structured the leadership of each collaborative to include a physician champion, a strong representative from operations, and a dedicated program manager.

Aligning with organizational goals and using data to drive its prioritization process, MultiCare determined that it could support six active Collaboratives in 2014: Critical Care, Women’s, Surgery, Medicine, Cardiac, and Pediatric. Within each collaborative, active workgroups focused on particular clinical improvement areas (see Figure 3).

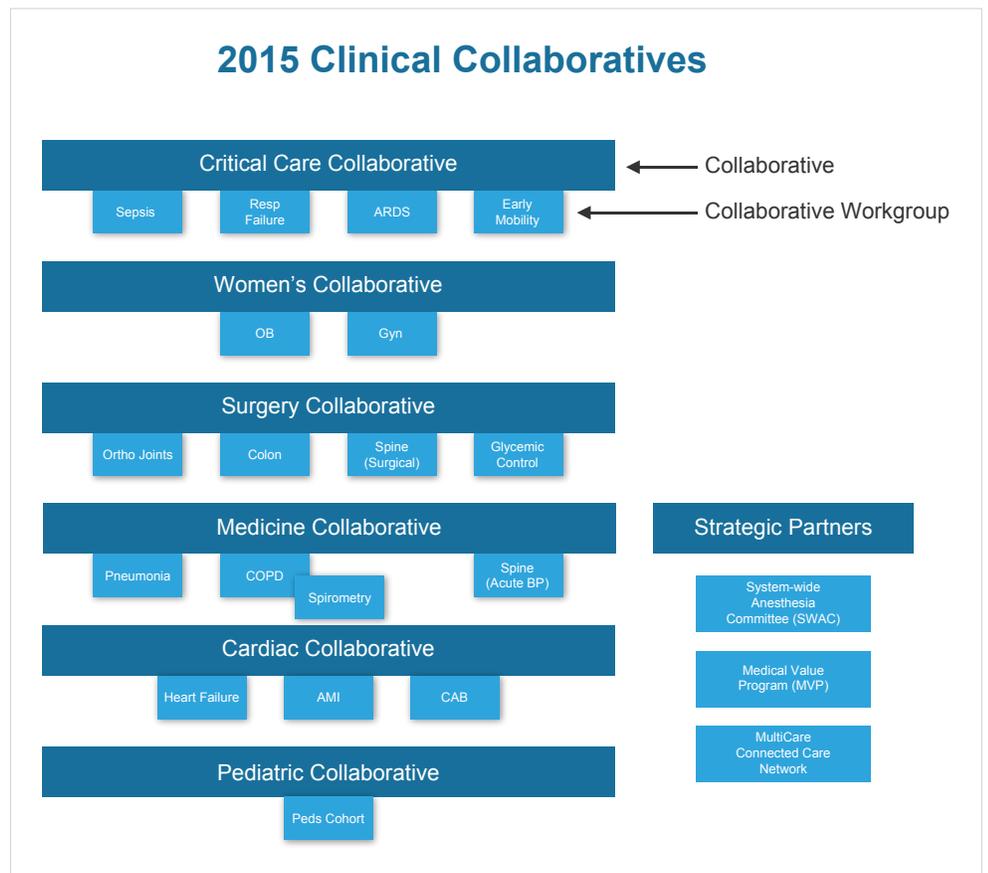


Figure 3: Current MultiCare Collaboratives and associated work groups

Each collaborative was charged with delivering the following system-wide materials for their focused patient populations:

- Written evidence-based guideline for each patient population studied
- Order sets
- Patient pathway
- Patient education materials
- Staff education support materials
- Process and clinical metrics to gauge success
- Implementation plan
- Communication plan

Engaged practitioners developed evidence-based guidelines and pathways through the Collaboratives. Once developed, all care guidelines went through a standardized approval process. MultiCare instituted a single approval process for care guidelines and pathways before they are distributed to all practitioners across the system.

TRANSFORMING CULTURE AND ACHIEVING QUALITY AND COST IMPROVEMENT

The ability to standardize practice and eliminate unnecessary clinical variation differentiates MultiCare from its competitors and has delivered significant results for the organization. The following are key achievements of MultiCare's Collaboratives to date.

Cultural Transformation

MultiCare's Collaboratives successfully made the transition from being improvement projects—as they would be considered in most organizations—to an integral part of the way MultiCare does business. In fact, MultiCare's Collaboratives now serve as the foundation of a culture of continuous improvement across the health system.

Measurable Financial Results

The immense effort behind MultiCare's collaborative structure has contributed to a system-wide cost reduction trajectory of greater than \$100 million over the last three years.

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The Collaboratives that are the most successful are those that enjoy a significant amount of physician engagement. I am always amazed at how much can be accomplished when you put the right people at the table with a common goal. Our collaborative teams get excited about doing the work, and things happen because we are allowing them to do what is their passion—to really make a difference in improving the health of patients.
”

Christi McCarren, RN, MBA, CPHQ
Vice President
Retail Health & Service Lines
MultiCare Health System

Creation and Adoption of System-wide Best Practices

The health system achieved a 75 percent reduction in the time required to approve system-wide care guidelines and pathways. Instituting a central body to review guidelines and pathways reduced the approval time from six months to six weeks. This streamlined process is important not only because of administrative time saved but also because it speeds the time between the development of a guideline to improved practice at the point of care.

The work of the Collaboratives also led to high adoption of clinical best practices. For example, MultiCare achieved 92 percent utilization of the pre-op order set and 100 percent utilization of the post-op order set for elective colon surgery patients. The health system has also reached near 100 percent utilization of the standardized delivery note for obstetrics.

Clinical Outcome Improvements

Empowering Collaboratives with clinical decision support and the ability to identify and monitor compliance with in-process measures led to the following clinical outcome improvements:

- Reduction in mortality:
 - 65 percent reduction in sepsis mortality rate
- Reduction in readmissions:
 - 37 percent reduction in pneumonia readmissions
 - 25 percent better than national average for HF readmissions at two hospitals
 - 18.8 percent reduction below target in readmission rates for elective colon surgery patients
 - 50 percent reduction below target in readmission rates for total joint surgery patients
- Reduction in length of stay (LOS)
 - 21.8 percent reduction in median LOS for elective colon surgery
 - Elimination of vaginal deliveries with LOS > 4 days
 - 71 percent reduction in C-section deliveries with LOS > 6 days

WHAT'S NEXT?

Up to this time, MultiCare has focused principally on achieving clinical results, addressing such outcome measures as complication rates, readmissions, and mortality. Although the Collaboratives intend to continue to deliver improved clinical outcomes, they will

also purposefully renew their focus on patient experience and cost reduction. This three-pronged approach puts MultiCare in a better position to deliver on the Triple Aim.

Furthermore, MultiCare will focus on becoming more agile and flexible in order to respond quickly to patient needs and market pressures. The need for agility is fueled by increasing pressure nationwide to adopt value-based care delivery strategies and to adapt quickly to new information, findings, and regulatory changes. For example, recent studies revealed that spine and back care are associated with a large amount of variation and waste, and the media and payers are placing this area under greater scrutiny. Although back and spine care had not risen to the top in MultiCare's original prioritization process, the health system needed to address them in response to the media and market attention. Health system leaders will be modifying their processes to ensure that they can respond quickly to such demands. 📌

REFERENCES

1. Berwick, D.M., Nolan, T.W., & Whittington, J. (2008). The triple aim: care, health, and cost. *Health Affairs*, 27(3), 759-769.

ABOUT HEALTH CATALYST

Health Catalyst is a mission-driven data warehousing, analytics, and outcomes improvement company that helps healthcare organizations of all sizes perform the clinical, financial, and operational reporting and analysis needed for [population health](#) and [accountable care](#). Our proven enterprise data warehouse (EDW) and analytics platform helps improve quality, add efficiency and lower costs in support of more than 50 million patients for organizations ranging from the largest US health system to forward-thinking physician practices.

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