

Reducing Variation and Costs by \$7M with a Scalable Improvement Framework and Analytics Platform



\$7M in cost reductions, including **\$5.4M through reducing care variation** and **\$1.4M associated with efficiencies gained** by adopting the Health Catalyst analytics platform.

PRODUCTS

- Health Catalyst® data platform
- Health Catalyst® Analytics Improvement Program

EXECUTIVE SUMMARY

Healthcare organizations face increasing pressure to improve care while reducing costs—and unwarranted clinical variation remains a top improvement opportunity. Novant Health New Hanover Regional Medical Center (New Hanover) lacked high-value data and analytics and a systematic approach to identifying improvement opportunities. The organization had invested years in developing a homegrown data warehouse but needed a scalable solution to help identify actionable insights required for improvement. New Hanover decided to adopt a modern data and analytics platform to systematically enhance its processes and improve organizational performance, patient outcomes, and financial performance.

DECREASING CARE VARIATION: UNCOVERING OPPORTUNITIES FOR IMPROVEMENT

In the current healthcare industry, organizations are constantly facing pressure to improve the quality of care while reducing costs, despite increasing complexity across health systems. Unwarranted clinical variation remains a top improvement opportunity. It is estimated that most provider organizations have \$20M-\$30M (per \$1B in revenue) in actionable savings opportunities.¹

THE NEED FOR HIGH-VALUE DATA AND ANALYTICS

New Hanover had developed multiple high-performing clinical programs, but it did not have high-value data and analytics and a systematic approach to identify opportunities and drive outcomes. Lacking high-value data and analytics, and standard processes for implementing evidence-based practices, opportunity prioritization, governance, and change management resulted in pockets of excellence and fragmented resources intended to align teams and engage providers.

The organization had analyzed care variation, taking months to pull encounter data from the EHR to identify opportunities for improvement. While it recognized it had the opportunity to improve, the organization did not have the high-value data and analytics required to prioritize and drive improvement. At the same time, its homegrown data warehouse was not scalable or sustainable, and could not be further developed to provide the value-based care analytics required to support population health and payer strategies.

The organization needed a new solution that would enable it to become a data-informed organization, supporting efforts to identify and reduce care variation, improve outcomes for its patients, and enhance value-based care success.

A NEW ANALYTICS STRATEGY

New Hanover elected to adopt the Health Catalyst® data platform and a robust suite of analytics applications, enabling the organization to create a scalable data ecosystem that can adapt to changing organizational needs. The organization developed a new analytics strategy, including data governance and the enhancement of analytics to:

- Improve clinical and operational performance improvement.
- Enhance payer strategies and accountable care performance.
- Decrease care variation.

The analytics organization strategy is aligned with the clinical, operational, and service-line strategies. The analytics team can use the analytics platform to provide its clinical and operational leaders with the high-value data and insights necessary to improve performance.

New Hanover established a performance excellence improvement governance structure. Performance excellence teams, led by a physician and program director, partner with the performance excellence council comprised of clinical, operational and physician leaders, as well as senior executives, to decrease clinical variation and improve outcomes. The performance excellence council leverages high-value data and analytics from the analytics platform to identify opportunities for improvement, drive systemwide prioritization, endorse improvement initiatives, ensure accountability for achieving outcomes, and evaluate the costs and benefits of the analytics platform and improvement efforts. The performance excellence council spreads the mission to improve the value of care provided to patients across the organization. Clinical and operational teams are empowered to accelerate and sustain improvements in clinical outcomes.



ABOUT NOVANT HEALTH NEW HANOVER REGIONAL MEDICAL CENTER

Novant Health New Hanover Regional Medical Center is a not-for-profit 800-bed teaching hospital, regional referral center and UNC School of Medicine branch campus. It is part of Novant Health, an integrated network of hospitals, physician clinics and outpatient facilities that delivers a seamless and convenient healthcare experience to communities in North Carolina, South Carolina, and Georgia. The Novant Health network consists of more than 3,184 medical staff providers, 3,297 licensed beds, over 35,500 team members who provide care at 15 medical centers and over 700 outpatient facilities and physician clinics. In 2021, Novant Health provided more than \$1.1B in community benefit, including financial assistance and services.

New Hanover's improvement methodology is based on science, adaptive leadership, data and analytics, in addition to the application of best practices from the Health Catalyst® Analytics Improvement Program. The organization invests in data literacy professional development to understand performance, identify improvement opportunities, evaluate the effectiveness of changes on the outcome measures of interest, and improve performance.

New Hanover developed and implemented evidence-based care standards, standardizing the administration of blood products, clinical criteria for placement of patients with sepsis in intensive care units, criteria for elective induction, improved management of high-cost medications, activities to decrease the length of stay, and actions to prevent unnecessary utilization—providing the right care in the right setting, and more. The organization optimizes EHR content to ensure alignment with each of the care standards.

New Hanover promotes interoperability by integrating health data and information systems into the analytics platform. The organization advances analytics maturity by ensuring analytics applications provide the right information at the right time. New Hanover uses augmented intelligence and prescriptive tools and technologies to support population health and risk-based contracting.



Our systematic performance improvement approach, combined with high-value data and analytics from the Health Catalyst analytics platform, enables us to transform our organization. Clinicians and operational leaders use data to proactively identify and drive improvements.

Claire Corbett, MBA, Director, Performance Excellence, Novant Health

Self-service analytics is a buzzword that few organizations have realized. With the Health Catalyst analytics platform, our clinical and operational leaders own and actively use high-value data and analytics to manage and improve their business.

Susan Mays, Director, Enterprise Analytics, Novant Health

RESULTS

New Hanover's scalable, data-informed improvement methodology is producing the desired results. In just 2.5 years, the organization achieved a \$7M cost reduction, including:

- **\$5.4M reduction** by reducing unwarranted clinical variation. The organization standardized spine care, blood utilization, high-cost medication use, and treatment of sepsis in the emergency department. It also optimized care for patients with COVID-19 and improved transitions of care.
- **\$1.4M reduction** through improved analytics efficiency. Adopting the Health Catalyst analytics platform reduced the labor costs associated with reporting and analyses.



WHAT'S NEXT

New Hanover plans to keep its patients at the forefront of improvement efforts and will continue to expand the adoption of its improvement framework and analytics platform, further improving organizational performance and quality while reducing costs. 🏆



We've stopped just writing reports. Health Catalyst high-value data and analytics help us partner with our clinical and operational leaders and translate data into actionable information that is important to them. We can work elbow-to-elbow with our teams to improve organizational performance and our patients' clinical outcomes.

Susan Mays, Director, Enterprise Analytics, Novant Health

REFERENCES

1. LaPointe, J. (2018). Care variation reduction key to improving care quality, costs. *RevCycleIntelligence*. Retrieved from <https://revcycleintelligence.com/news/care-variation-reduction-key-to-improving-care-quality-costs>

ABOUT HEALTH CATALYST

Health Catalyst is a leading provider of data and analytics technology and services to healthcare organizations committed to being the catalyst for massive, measurable, data-informed healthcare improvement. Its customers leverage the cloud-based data platform—powered by data from more than 100 million patient records and encompassing trillions of facts—as well as its analytics software and professional services expertise to make data-informed decisions and realize measurable clinical, financial, and operational improvements. Health Catalyst envisions a future in which all healthcare decisions are data informed.

Learn more at www.healthcatalyst.com, and follow us on **Twitter**, **LinkedIn**, and **Facebook**.