

How to reduce unnecessary elective deliveries



HEALTHCARE ORGANIZATION

Small Hospital System

TOP RESULTS

- Standardized workflows to improve data reliability
- Defined evidence-based early induction criteria
- Reduced elective deliveries by 75 percent in just six months
- Received a six-figure payer partner bonus payment

PRODUCTS

- Late-Binding™ Data Warehouse
- Population Analytics Advanced Application-Elective Induction Module

SERVICES

- Installation Services
- Clinical Improvement Services



Like many health systems, North Memorial Health Care in the Northwest metro area of Minneapolis-St. Paul has spent the last few years battling for financial stability. The 518-bed two-hospital system has struggled with rising costs, stiff regional pressures from an abundance of formidable competitors, and unpredictable reimbursement amid an uncertain political environment. To make matters worse, the health system was having difficulty collecting and analyzing data from its myriad IT systems, leaving hospital leaders with an incomplete view of their financial pain points and opportunities for improvement.

“What really sold us on Health Catalyst was its proven ability to help healthcare organizations build a data-driven culture of systematic quality improvement.”

J. Kevin Croston, MD,
 Chief Medical Officer
 at North Memorial

Amid these difficult market conditions, North Memorial’s leadership determined to chart a path to sustainability. The many tactics they considered had one common thread – all relied on clinical and operational insight that could only come of aggregating data from the health system’s electronic health record (EHR) and other critical IT systems. A search for solutions to accomplish this task led to the Late-Binding™ Data Warehouse and healthcare analytics from Health Catalyst® accompanied by its full-spectrum clinical and implementation services.

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“We selected Health Catalyst in part because their data warehouse is built on an open architecture that is easily customized, giving us complete flexibility to adapt to current and future needs,” said J. Kevin Croston, MD, Chief Medical Officer at North Memorial. “We aren’t locked into a proprietary black box solution or a service that requires us to send data outside of our organization to be analyzed and weeks out of date when returned as canned reports. Instead, Health Catalyst gives us immediate access to our data and the flexibility to answer questions as needed. And Health Catalyst’s process and approach to building a data-driven culture and quality improvement program is more direct, streamlined, and less cumbersome than their competitors.”

REDUCING ELECTIVE DELIVERIES

After using Health Catalyst products and services to analyze its total resources consumed, variation in care and cultural readiness, North Memorial’s leadership selected the Women and Newborns department as the first target for the new data-powered quality improvement process. Within the department, the health system identified elective deliveries occurring prior to 39 weeks of gestation as the care process family with the greatest opportunity for improvement and financial return. OB studies have shown that elective deliveries before 39 weeks increase the risk of newborn respiratory distress as well as increase the rates of C-sections where there is a higher rate of postpartum anemia and longer lengths-of-stay for both mothers and babies. Further incentive for focusing on early-term deliveries came from a savings agreement with a payer partner that promised to pay North Memorial a six figure bonus in return for lowering its rate of pre-39-week deliveries by half, from 1.2 percent of all deliveries to 0.6 percent.

“We decided to address early-term deliveries first because, while our elective delivery rate of 1.2 percent was relatively low by other hospitals’ standards, we felt there was still opportunity there for reduction and clinicians in that group were culturally ready and had embraced quality improvement projects in the past,” Dr. Croston said.

Jon Nielsen, MD, Medical Director of Women’s and Newborns service at North Memorial, added, “We also wanted a project that we could get up and running quickly. Reducing deliveries before 39 weeks was an excellent launch point because there is significant peer-reviewed research in that area. And if we solved the problem, the scale of the services would allow us to significantly improve care as well as reduce costs quickly.”

CULTURAL CHALLENGE

As with any quality improvement initiative, North Memorial had to overcome physician resistance to the changes in Women and Newborns.

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To win physicians over, Drs. Croston and Nielsen attended multiple staff meetings to explain the reasoning behind the process changes for early-term deliveries, and to share the supporting data. Gradually, North Memorial’s physicians began

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to see the light. North Memorial accelerated the transformation by appealing to their physicians’ competitive natures. At Health Catalyst’s suggestion, each North Memorial clinic posted internal provider report cards indicating the number of elective pre-39-week deliveries approved by each provider.

“It was impressive how fast things started to move when doctors saw their performance being compared to peers,” Dr. Croston said.

SUCCESS WITH PAYERS

North Memorial’s use of Health Catalyst technology and the team process it put in place reduced the health system’s rate of elective early-term deliveries by 75 percent in just six months. The percentage of all deliveries that were elective pre-39-week surgeries plummeted from 1.2 percent to just 0.3 percent, shattering the payer’s goal of 0.6 percent and earning North Memorial a six-figure bonus payment.

The results of this initial Health Catalyst engagement were so promising that North Memorial has since approached other insurers in the Twin Cities about entering into shared cost-reduction reimbursement contracts for additional care processes.

“We have proven our ability to reduce complications and NICU admissions for newborns, saving money for insurers and employers,” Dr. Nielsen said. “We are optimistic that both groups will agree to reward us for delivering ever higher quality at reduced costs, as it aligns perfectly with value-based purchasing.”

EXPANDING THEIR SUCCESS

After seeing first-hand how the Health Catalyst approach reduced elective pre-term deliveries, North Memorial’s physicians have embraced the data warehouse-enabled quality improvement process. As a result, Dr. Croston’s team has been deluged with requests for different projects, which are now being prioritized. First on the list is a program that Dr. Nielsen hopes will replace most traditional hysterectomies with the far less expensive and less invasive laparoscopic version of the surgery.

“We’ll use the data to show the variation in care to clinicians who are outliers and they will either learn to do the minimally invasive procedure or refer their patients to others,” explained Dr. Nielsen. “Then we can go to a payer and say ‘we can do outpatient hysterectomies with improved outcomes, patients can be back at work in two weeks rather than six, there will be fewer complications and it will cost less.’ We’re hoping they will either provide a financial incentive for us to meet targets, or direct their patients to North Memorial, or both.”

Health Catalyst’s focus on mentoring North Memorial’s guidance teams will be critical to the success of these additional programs, Dr. Croston noted.

“Early on, Health Catalyst folks were around all the time, spoon feeding the Women and Newborns team and making sure we were up and running but they don’t come to any of our work group meetings now because we don’t need them; they’ve taught us to be self-sufficient,” Dr. Croston said. “As we expand into additional service lines, we’ll bring Health Catalyst back in but we won’t ask them to fish for us; we’ll ask them to teach another group of us how to fish.”

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Jon Nielsen, MD,
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Women & Children's Services

SUSTAINING RESULTS

As they look to the future, North Memorial's leadership is increasingly confident they have mapped the path to sustainable long-term success.

“We've transformed into a data-driven health system,” Dr. Croston said. “The best part of this is when we use and pull up data in meetings with physicians, they pay attention and are engaged. They start asking questions and coming up with ideas. It makes them willing agents of change when they trust the information and you start moving in a new direction with them.”

Thanks in part to its decision to engage Health Catalyst, North Memorial today is making solid progress toward its goal of continuously improving quality, removing waste, ensuring adherence to evidence-based medicine, eliminating clinical variance and better managing population health.

“Health Catalyst is the best partner we've ever worked with,” said Dr. Croston. “They have a lot of integrity, have been very supportive and helped us come up with solutions to problems we encountered that we wouldn't have come up with ourselves. We have benefited immensely from our partnership with them.” Dr. Nielsen agreed. “We wouldn't have had a chance to do some of the things we've done in the last 18 months to enhance care, reduce waste and lower costs without Health Catalyst,” he said. “It's amazing how differently and effectively we can gather and use data now. I have learned the importance of data and I would challenge other provider organizations to open their eyes to Health Catalyst's very methodical, analytic approach to success.”

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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