

# Real-Time Data Enables Improvement, Reducing Bariatric Surgery Costs by \$840K



CHNw has achieved **\$840K in reduced costs** annually, the result of a:



**15.7 percent** relative decrease in the average length of stay.



**15.5 percent** increase in the number of patients with zero milligram morphine equivalents (MMEs).



**59.4 percent** relative reduction in average MMEs.

## PRODUCTS

- ▶ Health Catalyst® Data Operating System (DOS™)

## EXECUTIVE SUMMARY

Opioid misuse and dependence are a growing concern for patients who have undergone bariatric surgery. As a provider of bariatric surgery to hundreds of patients annually, Community Health Network (CHNw) determined that it needed to focus on improving bariatric surgery care and patient outcomes, helping lower the risk of its patients undergoing bariatric surgery becoming dependent on opioids. By leveraging its analytics platform and a smartsourced clinical chart abstraction team, CHNw was able to gather data about patients undergoing bariatric surgery, resulting in improved care and patient outcomes, leading to reductions in opioid use, complications, and costs.

## BARIATRIC SURGERY MAY INCREASE OPIOID DEPENDENCE

More than 10 million people misused opioid prescriptions last year, and close to two million people suffered from opioid use disorder in the U.S.<sup>1</sup> Patients undergoing bariatric surgery may be more vulnerable to opioid dependence after surgery.<sup>2</sup>

## EVALUATING OPIOID USE AMONG BARIATRIC PATIENTS

CHNw provides bariatric surgery to hundreds of patients annually. As part of its efforts to address the opioid epidemic, the organization sought to evaluate opioid use among bariatric patients. The organization has long participated in the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP), submitting standard data to the MBSAQIP registry, documenting patient outcomes, and participating in ongoing improvement activities. CHNw wanted to improve the use of its clinical chart abstraction data and better understand if there was an opportunity to reduce the risk of opioid dependence among its bariatric patients.

## DATA-DRIVEN BARIATRIC SURGERY IMPROVEMENTS AND OPIOID USE REDUCTION EFFORTS

CHNw relies upon the Health Catalyst® Data Operating System (DOS™) platform and the smartsourced clinical chart abstraction team to collect and submit registry data. The smartsourcing team gathers more than 100 distinct data points for patients undergoing bariatric surgery at CHNw and submits the information to the registry. CHNw regularly reviews the registry data, gaining insight into performance to support ongoing improvement efforts. In addition, the organization analyzes outcomes data for each patient, and even by surgeon, to identify improvement opportunities that may not have otherwise surfaced.

As part of its ongoing performance improvement activities, CHNw reviewed its bariatric surgery registry data and identified the opportunity to reduce opioid use. As a result, the organization elected to participate in the Bariatric Surgery Targeting Opioid Prescriptions initiative, a nationwide metabolic and bariatric surgery quality-improvement collaborative. As part of participating in the improvement program, CHNw added 19 data points to the registry data for its patients undergoing bariatric surgery.

CHNw has standardized workflows and improved processes, resulting in bariatric surgery improvements. Patients undergoing bariatric surgery receive comprehensive preoperative education. The organization uses a standard protocol to ensure patients receive consistent, evidence-based care. The protocol includes specific guidelines for multimodal pain control, regional anesthetic therapy, and limited opioids, including minimized opioid use during the pre-, intra-, and postoperative care phases.

CHNw leverages the data from DOS and the smartsourcing team to regularly monitor performance. Key insights derived from the data analyses are disseminated to the bariatric surgeons at quarterly meetings. These data-informed providers are then able to further improve upon the bariatric surgery care model.



### ABOUT COMMUNITY HEALTH NETWORK

CHNw is consistently ranked among the nation's most integrated healthcare systems, leading the way in providing care across the full continuum through hundreds of physicians, specialty and acute care hospitals, surgery centers, home care services, behavioral health services, and employer health services.



Leveraging our analytics capabilities and clinical chart abstraction smartsourcing partnership with Health Catalyst has enabled the organization to better utilize our registry data for improvement. We were able to reduce bariatric surgery costs by \$840K and reduce opioid use.

**Patrick McGill, MD, FAAFP, Executive Vice President, Chief Analytics Officer  
Community Health Network**

## RESULTS

CHNw has improved its bariatric surgery care and patient outcomes. The organization also achieved a reduction in opioid use, complications, and costs. Results include:

- ▶ **\$840K in reduced costs annually**, the result of a:
  - ▶ **15.7 percent relative decrease** in average length of stay.
    - ▶ Patients are no longer taking as many opioids, are more alert and ambulatory earlier, facilitating readiness for discharge.
  - ▶ **15.5 percent increase** in the number of patients with zero MMEs and 59.4 percent relative reduction in average inpatient MME.
- ▶ **Elimination of postoperative renal insufficiency.**
- ▶ **4.5 percent relative reduction** in open/space surgical site infections.



## WHAT'S NEXT

CHNw continues to leverage DOS and the smartsourced clinical chart abstraction team to track long-term outcomes for patients undergoing bariatric surgery to ensure sustained quality. 📈

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## REFERENCES

1. Assistant Secretary of Public Affairs (ASPA). (2021). What is the U.S. opioid epidemic? *U.S. Department of Health and Human Services*. Retrieved from <https://www.hhs.gov/opioids/about-the-epidemic/index.html>
2. Preidt, R. (2017). Opioid addiction a risk after weight-loss surgery. *WebMD*. Retrieved from <https://www.webmd.com/diet/obesity/news/20171024/opioid-addiction-a-risk-after-weight-loss-surgery>

## 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. Our customers leverage our cloud-based data platform—powered by data from more than 100 million patient records, and encompassing trillions of facts—as well as our analytics software and professional services expertise to make data-informed decisions and realize measurable clinical, financial, and operational improvements. We envision a future in which all healthcare decisions are data informed.

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