

MDmetrix

CASE STUDY

Bellevue Surgery Center Eliminated Opioids From Ambulatory Surgery

"MDmetrix's OR Advisor allowed us to quickly implement non-opioid alternatives and dramatically improve care for our patients".

Dr. Greg Latham, Anesthesiology Director



THE CHALLENGE

The opioid epidemic caused 43,000 deaths in the U.S. in 2019. Surgery is a recognized gateway to persistent opioid use. 7-12% of adults and 5-6% of adolescents develop persistent opioid use following surgery. Traditionally, opioids are used during and after surgery to treat surgical pain. Despite advances in non-opioid therapeutics, adoption of non-opioid approaches has been very slow. Shifts in medicine traditionally occur over decades, largely because clinicians struggle to distinguish "change" from "improvement" following adoption of new treatments and techniques. While data that could resolve such questions exists in the electronic medical record, clinicians have lacked the practical ability to use this real-world data to drive improvements for their patients.

FOR MORE INFORMATION, CONTACT US

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THE SOLUTION

MDmetrix's OR Advisor was introduced as a self-service clinical performance platform. This allowed clinical teams and their leaders to directly access real-world data collected by their EMR. Now, they could look across similar patients having specific procedures, to understand the performance of their protocols.

Opioid use

↓ 10x

RESULT

Implemented opioid-free anesthesia protocols across most outpatient surgeries (5,000 cases per year, spanning many surgery specialities).

Drug cost

↓ 85%

RESULT

Improved patient outcomes by eliminating side effects of opioids, and reduced costs for the institution.

THE DETAILS

Clinicians and their leaders can now quickly and easily leverage their EMR data to find actionable answers to clinical and operational questions. And, they can track key clinical and operational metrics over time, investigating treatment and workflow outcomes on-the-fly. As a result, they are empowered to rapidly improve and manage care.

Physicians, for example, asked "How does reducing morphine by 0.1 mg/kg and replacing with dexmedetomidine 1mcg/kg effect the post-operative recovery profile of patients with a BMI of 19-25 undergoing an outpatient case tonsillectomy?" And: "What is the effect of non-opioid approaches on length of stay, pain score, nausea rate, and pain rescue medications?"

While the surgery center had historically taken years to review drug protocols, MDmetrix enabled improvement cycles of mere weeks. With embedded AI and intuitive data visualizations, clinical teams quickly learned from their real-world data, improving care without burdening scarce analyst and data science resources.

THE RESULTS

In 18 months, the surgery center virtually eliminated opioid administration. Patient outcomes dramatically improved: the post-operative nausea and vomiting (PONV) rate fell 10x, from 3% to under 0.3%. Patients' post-operative pain experience also improved; the need for "rescue" pain medication in recovery dropped from 11% to under 6%. And, the center was able to reduce its costs for analgesic drugs by over 85%. All of this has been achieved without extending patients' length of stay.

PATIENT SATISFACTION SCORES:

>95%



WOULD RECOMMEND TO FRIEND

"MDmetrix revolutionizes quality. Data analyses that used to take months are now accomplished in minutes."

Dr. Lynn Martin, Medical Director

THE BENEFITS

• Patient Outcomes

Avoiding opioids improved patient recovery after surgery. The most frequent side effect (nausea and vomiting) was practically eliminated. This led to dramatic improvement in patient satisfaction scores.

• Drug Costs

Many of the non-opioid medications used were less expensive, so BCSC was able to reduce its drug spending by 85%.

• Increased Bed Capacity

The average 250-bed hospital wastes over 650 days per year treating side effects of opioids administered around surgery.

• Increased Demand

With increased public awareness of the risks of opioids, many patients are seeking an opioid-free surgery experience.

↓ 45%
Reduction in
post-operative pain

RESULT

Frequency of "rescue" pain medications in post-op recovery is a key measure of patients' pain experience. Rescue meds dropped from 11% to under 6%.

↓ 10x
Reduction in
PONV

RESULT

The most common side effect of surgical anesthesia is post-op nausea and vomiting (PONV). PONV dropped from 3% to under 0.3%.



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