

# Patient-centered protocols help eliminate excess opioid use after lung surgery

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Lung surgery patients who utilize a comprehensive, evidence-based enhanced recovery after surgery (ERAS) program require fewer opioid prescriptions when discharged and this effect was sustained over the 4-year study period, according to research presented today at the 18th Annual Perioperative and Critical Care Conference from The Society of Thoracic Surgeons.

"The main role of research like ours is to increase the awareness among [health care providers](#) about the important role of ERAS in reducing patient exposure to opioids both during and after [hospital discharge](#)," said Andres Zorrilla Vaca, MD, a resident physician at Brigham and Women's Hospital in Boston, Massachusetts. "Reducing opioid exposure during hospitalization and practicing rational discharge prescribing should reduce the risk of long-term opioid dependence, as well as mitigate against opioid overprescribing that leads to diversion and abuse."

Dr. Zorrilla Vaca and colleagues collected opioid prescribing information for 2,081 patients who

received lung resections at MD Anderson Cancer Center in Houston, Texas, between March 2016 and April 2020, and were enrolled in the ERAS program. The ERAS protocol included a standardized pain medication regimen and other interventions such as patient education and counseling, carbohydrate drink before surgery, fluid management, no prolonged fasting, and early mobilization following the operation.

Researchers found that from 2016—when the ERAS program was implemented—to 2020, the rate of opioid prescriptions at discharge was reduced from 35% to 25%.

"We have shown that patients who undergo lung surgery on an ERAS pathway have better pain control, require fewer opioid medications in hospital as well as at discharge, have fewer postoperative complications, and also have quicker recovery," said Dr. Zorrilla Vaca.

In addition, the study showed that there was a gradual and sustained downward trend in opioid prescriptions over the 4-year study period, with the total amount of opioids prescribed declining by 51%. According to the researchers, the use of minimally [invasive surgical techniques](#) such as video- and robotic-assisted thoracoscopic surgery was one of the main drivers of this.

"The ERAS program has provided significant benefits in the reduction of opioid prescriptions at hospital discharge, which seems to be correlated with the duration of the program, the use of minimally invasive surgical techniques, and lower administration of opioids during surgery," said Dr. Zorrilla Vaca. "Working together as a multidisciplinary team is pivotal to getting substantial benefits from ERAS. In our case, surgeons' preference toward minimally invasive surgery and anesthesiologists' efforts to decrease opioid administration during surgery were important factors that impacted opioid prescriptions at

discharge."

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ERAS is a set of predetermined activities, steps, and guidance designed to achieve quicker recovery and the best possible outcomes for patients undergoing major surgery. First popularized in Denmark in the 1990s, it since has been incorporated into many surgical specialties.

Provided by The Society of Thoracic Surgeons

"Enhanced recovery after surgery has been an extremely important and disruptive topic—in a good way—in the field of cardiothoracic [surgery](#)," said Rakesh C. Arora, MD, PhD, from St. Boniface Hospital in Winnipeg, MB, Canada, who was not directly involved in this research. "Developing processes that improve the patient experience throughout the surgical journey and improve patient flow through the health care system are the goals of an enhanced recovery program. This research provides new information on how key aspects of the overall program can reinforce and sustain outcomes."

Over the past several years, many institutions have adopted ERAS protocols in a concerted effort to improve patient recovery. However, ERAS programs often omit post-discharge patient care; thus, many surgical patients are prescribed an excessive amount of opioid pain medications for home use. In fact, unrelated research has shown that opioids are widely overprescribed after common operations, with up to 92% of patients having leftover medication. This often creates opportunities for misuse and abuse.

Dr. Zorrilla Vaca explained that other opioid-sparing strategies such as shared decision-making and [opioid](#) prescribing guidelines should be adopted within ERAS programs and could lead to additional improvements in pain management after patient discharge.

Future studies and ongoing efforts by the researchers will focus on patient-reported, long-term outcomes within the ERAS [program](#) and specific components in the ERAS pathway that may require improvement.

**More information:** 18th Annual Perioperative and Critical Care Conference:

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