

Enhanced recovery pathway for bariatric operations cuts hospital stays by half

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A change in the care protocol of patients undergoing weight-reduction operations exceeded its desired effect by cutting postoperative hospital stays in half, reducing postoperative hospital readmissions by 38 percent, and reducing the amount of opioids the patients were sent home with by 95 percent, according to study results from a large bariatric and metabolic surgery center in Charleston, S.C.

The objective of implementing the new care regimen, called an Enhanced Recovery After Surgery (ERAS) protocol, was to shorten the number of days patients spend in the hospital after their operations and to prescribe fewer [opioid pain medications](#), said Charles K. Mitchell Jr., MD, FACS, FASMBS, of Roper St. Francis Bariatric and Metabolic Services, who presented the results at the American College of Surgeons (ACS) Quality and Safety Conference 2019, concluding today in Washington, D.C.

"My concern was that patients were going to go back to the emergency room and needed to be seen again because we were sending them home too quickly or were not managing their [pain](#) properly, but the opposite was true," Dr. Mitchell said. "Our readmission rates actually dropped almost 40 percent with the implementation of this protocol."

Specifically, the hospital readmission rate went from 5 percent before implementing ERAS to 3.1 percent afterward. Likewise, the average length of stay (LOS) in the hospital after a bariatric operation went from 3.3 days to 1.5 days, and the average in-hospital, per-patient morphine

equivalents, which is a measure of pain-relieving medication administered, went from 89.1 to 4 mg. The study evaluated patient outcomes for the year before and the year after the institution adopted the ERAS protocol in December 2016.

Roper St. Francis was invited to adopt the Employing New Enhanced Recovery Goals for Bariatric Surgery (ENERGY) project because it ranked as an outlier with regard to hospital length of stay within the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP). MBSAQIP is a nationwide joint initiative of the ACS and the American Society of Metabolic and Bariatric Surgery (ASMBS) that tracks outcomes at [bariatric surgery](#) centers with the goal of identifying best practices and improving low-performing centers.

"The cost implications are quite positive," Dr. Mitchell said, not only because of the shorter hospital stays, fewer readmissions, and less pain medications, but also due to the types of pain medication used. "Some programs will implement these protocols and they'll use very expensive pain medications such as intravenous Tylenol (acetaminophen) or Exparel suspension," Dr. Mitchell said. Exparel suspension is liposomal bupivacaine, a local anesthetic that, once injected, can last at least 24 hours. "We decided that strategy was cost prohibitive, so we administered 0.25 percent bupivacaine as a local anesthetic and Tylenol tablets." The cost of that combination at Dr. Mitchell's institution was \$6.24 for the first 24 hours postoperatively compared with approximately \$672 for three doses of IV Tylenol and one vial of Exparel, Dr. Mitchell noted.

Implementing the program involved more than adopting new practices. "Anytime you start an enhanced recovery after surgery protocol, the first thing you have to get people to understand is that it's not just an order set; it's a completely different mindset," Dr. Mitchell said.

The ERAS protocol involves intense preoperative patient education about a pain-management plan that eliminates the patient-controlled analgesia (PCA) pump and avoids routine administration of opioids, which can cause constipation or nausea. It also involves training the nursing staff to give multimodal pain medication according to the protocol rather than providing opioids to relieve a patient's pain upon request.

"Before the protocol, 96 percent of our surgical patients received opioids either upon induction of anesthesia or during the case. That number now is zero," Dr. Mitchell said. "One hundred percent of patients received opioids after their operations by way of a PCA pump with morphine or dilaudid before we started this protocol, and now we have, depending on the month, somewhere between 55 and 70 percent who receive no opioids during their hospital stay."

Obese patients commonly take pain medication for arthritis before they have bariatric operations, but in this study population, Dr. Mitchell noted, "Almost all of those patients were not given any extra narcotics to go home with after their procedures." Their postoperative pain management care did not deviate from the protocol, and all patients resumed their home pain management regimen at discharge.

Beyond pain management, the ERAS protocol also has patients up, out of bed, and walking, as well as taking liquids by mouth, within six hours after their operations. Since the bariatric surgical team adopted the ENERGY ERAS protocol, other surgical services in the health system have shown interest in adopting an ERAS [protocol](#), Dr. Mitchell said.

Provided by American College of Surgeons

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