

Beaumont Health

## Beaumont Health Scholarly Works and Archives

---

Conference Presentation Abstracts

Nursing

---

8-2021

### Examining enhanced recovery after surgery (ERAS) protocol compliance

Joseph Vecore

Jonathon Baich

Linda McDonald

Follow this and additional works at: [https://scholarlyworks.beaumont.org/nursing\\_confabstract](https://scholarlyworks.beaumont.org/nursing_confabstract)



Part of the [Anesthesiology Commons](#), and the [Nursing Commons](#)

---

## **Examining Enhanced Recovery After Surgery (ERAS) Protocol Compliance**

*Joseph Vecore, BSN, RN; Jonathon Baich, BSN, RN; Linda McDonald, DNAP, CRNA*  
Oakland University

**Background:** The development of enhanced recovery after surgery (ERAS) protocols have allowed for improved patient outcomes by utilizing a multimodal approach. The use of ERAS for surgical procedures reduces perioperative complications that could lead to increased morbidity, mortality, and length of stay. Additionally, by utilizing a multimodal approach, ERAS protocols help limit opioid use during the perioperative period. The purpose of this quality improvement project was to examine the rate of compliance to the ERAS protocol during colorectal surgery at Beaumont Hospital- Royal Oak. The different levels of compliance were evaluated for their effects on the following patient outcomes: opioid consumption during the postoperative period and hospital length of stay.

**Method:** A retrospective chart review was conducted on 100 patients who underwent colorectal surgery with the use of an ERAS protocol at Beaumont Hospital- Royal Oak. The chart review focused on 12 specific components of the ERAS protocol in the three perioperative phases (pre-, intra-, and postoperative). A high rate of compliance was defined as greater than 70% of the ERAS components followed, moderate compliance included 40-70% of the ERAS components followed, and low compliance had less than 40% of the ERAS components followed. Based on the literature review, high compliance to the components of the ERAS protocol led to better outcomes. Upon completion of the chart reviews, evaluation of patient outcomes were compared between the three levels of compliance. After obtaining the results and noting where lack of compliance occurred, appropriate and specific education was provided to the perioperative staff. Intellectus Statistics was utilized for data computation.

**Results:** All components were classified as a high rate of compliance (> 70%), except for consumption of a carbohydrate drink and discontinuation of a Foley catheter on postoperative day 1, which were classified as low and moderate rate of compliance respectively. The total ERAS compliance was 9.83 out of 12 components. Opioid administration was compared by using morphine milliequivalents (MME). The average MME was 49.70 milligrams (mg), and the average hospital length of stay (LOS) was 104.84 hours. A significant negative correlation was found between total ERAS compliance and hospital LOS ( $r = -0.23$ ,  $p < .02$ ). A significant positive correlation was found between opioid consumption (MME) and hospital LOS ( $r = 0.48$ ,  $P < .001$ ). Each ERAS component was examined for significant decrease in hospital LOS. A significant decrease in hospital LOS was shown with compliance to Foley catheter removal ( $P < .001$ ) and early mobilization ( $P < .014$ ) by postoperative day 1.

**Discussion:** The average rate of ERAS compliance was 81%, indicating high compliance. A significant negative correlation existed between ERAS protocol compliance and hospital LOS—as ERAS protocol compliance increased, hospital LOS decreased. This finding is congruent with that of the literature. In addition, as MME increased, hospital LOS increased. This is likely due to the negative effects of opioids, including postoperative nausea and vomiting as well as postoperative ileus. The negative effects of opioids may require a patient to stay in the hospital longer than expected, thereby raising costs that the hospital must absorb. Patients who received ERAS protocol can have a cost savings of up to approximately \$7,000. Preoperative component documentation was lacking, resulting in low compliance. It is recommended that an ERAS tab be created in the charting system that allows for easier documentation of the components. The application of ERAS protocols involves implementing best practice evidence from the literature to improve patient outcomes and promote patient satisfaction. Our findings suggest that high ERAS protocol compliance for colorectal surgery leads to a decrease in MME and hospital LOS for patients.