

Implementation of Enhanced Recovery After Surgery (ERAS) Guidelines: A Comprehensive Interdisciplinary Approach

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Purpose

The purpose of this scoping review project is to compare and evaluate patients treated with current perioperative practices with those treated with Enhanced Recovery After Surgery (ERAS) pathways.

Objectives

- ❖ To determine whether the use of ERAS pathways improves patients' recovery from surgery during the first week postoperative period by minimizing complications and reducing length of stay (LOS).
- ❖ To determine whether patients report higher levels of satisfaction when ERAS pathways are utilized.
- ❖ To determine if there are financial benefits from implementation of ERAS pathways.

Background

- ❖ Elective surgery is a major aspect of healthcare expenditure for the United States, with over **36 million** surgical procedures being performed in 2012 alone.
 - As the U.S. population ages, surgical volumes and complexity of medical care are predicted to drastically increase.
- ❖ ERAS pathways were initially developed for colorectal surgery, but implementation has broadened into **many specialties** including pancreatic, gynecologic, cardiovascular, thoracic, pediatric, orthopedic and urology.
- ❖ A standardized, patient-center approach in the surgical specialty is critical to improve patient outcomes and combat evaluating healthcare costs.
 - ERAS provides an **average savings of \$880 to \$5,560** per patient.
 - ERAS **reduces patient LOS by 3-4 days** on average.
 - ERAS **reduces 30-day patient readmission rates & costs.**
 - ERAS helps patients **return to normal activities** more quickly.
- ❖ ERAS guidelines are evidence-based pathways utilizing all members of the **interdisciplinary team** involved in the surgical specialty.
 - ✓ Anesthesiology
 - ✓ Nursing
 - ✓ Nutrition
 - ✓ Physical therapy
 - ✓ Other dedicated staff members

Methods

Study Design

- ❖ Scoping review

Study Population

- ❖ Adults undergoing surgical procedures eligible for the application of ERAS pathways

Article Eligibility

- ❖ An initial search was conducted in EBSCO, CINAHL, PubMed and Medline using the headings:
 - *Enhanced Recovery After Surgery*
 - *Improved Recovery Time*
 - *ERAS*
- ❖ Inclusion criteria:
 - Available in full-text
 - English
 - Published within last 5 years
 - Peer reviewed

Study Duration

- ❖ June 2021 – May 2022

IRB

- ❖ UTHSC Institutional Review Board has deemed the project exempt.

Results

The most common outcomes analyzed throughout the literature regarding ERAS pathways included LOS, patient outcomes, LOS, potential savings and postoperative complications.

	1	2	3	4	5	6	7	8	9	10
LOS	↓	—	↓	↓	↓	↓	—	↓	↓	↓
Patient Satisfaction	↑	NE	NE	↑	NE	NE	↑	↑	NE	NE
Cost-effectiveness	✓	NE	NE	✓	✓	✓	✓	✓	✓	✓
Postoperative Complications	↓	—	↓	↓	↓	↓	↓	↓	NE	↓

SYMBOL KEY

↑ = Increased; ↓ = Decreased; — = No Change; NE = Not Examined; NR = Not Reported; ✓ = Statistically significant findings; LOS = Length of stay; Postoperative complications include pneumonia, venous thromboembolism, UTI, surgical site infection, readmission within 30 days & death

LEGEND

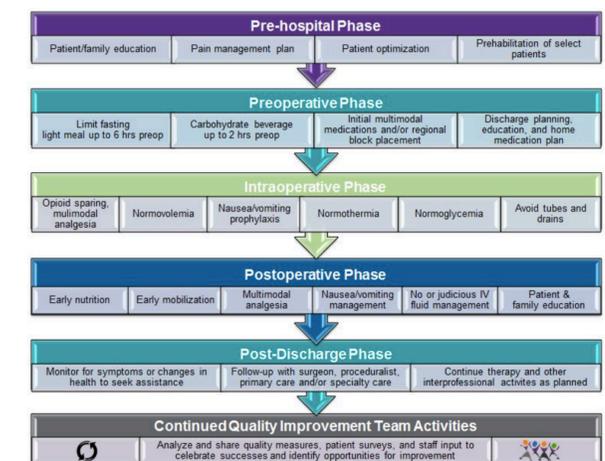
1 = American Association of Nurse Anesthetists (2021); 2 = Bansal et al. (2020); 3 = Gan et al. (2018); 4 = Joliat et al. (2018); 5 = Li et al. (2021); 6 = Nelson et al. (2016); 7 = Pan et al. (2020); 8 = Reede, Lukyanova, & Chappell (2017); 9 = Shanahan et al. (2016); 10 = Shodhan et al. (2016)

Implications for Practice

Overwhelming evidence supports that the standardized, evidence-based ERAS pathways **improve surgical outcomes and decrease associated surgical costs** across multiple specialties.

Next Steps

- ❖ ERAS pathways should be initiated before admission and extend to the post-discharge period.



Key interventions of ERAS

- ✓ Patient & family education/engagement
- ✓ Patient optimization before admission
- ✓ Minimal fasting that optimally included a carbohydrate beverage &, at a minimum, clear fluids up until 2 hours before anesthesia
- ✓ Goal-directed fluid therapy
- ✓ Multimodal analgesia with appropriate use of analgesia
- ✓ Return to normal diet & activities within 24 hours after surgery
- ✓ Return home in expedited timeframe

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