

Mini Review

Role of Perianesthesia Nurses in Enhanced Recovery After Surgery (ERAS) Protocols: A Narrative Review and Comparative Outcomes Analysis

Oghogho Linda Akarogbe*, Geneva Igwama, Olachi Lovina Emenyonu and Idowu M Ariyibi

College of Health and Human Sciences, University of Akron, USA

Abstract

Background: Enhanced Recovery After Surgery (ERAS) protocols are comprehensive, interdisciplinary frameworks aimed at minimizing surgical stress, standardizing perioperative care, and expediting recovery. Perianesthesia nurses, who operate in preoperative assessment units and post-anesthesia care units (PACU), play a vital role in ensuring the integrity of ERAS implementation.

Objectives: To compile and analyze current evidence regarding the impact of perianesthesia nursing care on surgical outcomes pre- and post-anesthesia, and to compare outcomes of ERAS with traditional care practices.

Methods: A narrative review of ERAS guidelines along with recent meta-analyses and clinical trials (2016–2025) focusing on nursing-sensitive processes (such as patient education, anxiety management, adherence to PONV prophylaxis, multimodal pain management, early mobilization, and readiness for discharge) as well as outcomes (including length of hospital stay, complications, readmission rates, and time to PACU discharge).

Results: Meta-analyses across different specialties indicate that the adoption of ERAS correlates with reduced hospital stays and a decrease in complications without an increase in readmission rates or mortality. Processes led by perianesthesia nurses—including the education of patients and setting their expectations, adherence to carbohydrate loading and fasting guidelines, maintenance of normothermia, PONV prophylaxis based on risk assessment, opioid-sparing pain management, protocols for the removal of urinary catheters/lines, and encouragement of early oral intake and ambulation—contribute to these positive outcomes. Research also reveals that ERAS programs facilitate quicker fulfillment of discharge criteria in the PACU.

Conclusion: Perianesthesia nurses implement ERAS protocols at the bedside, effectively converting these guidelines into dependable practices that enhance recovery milestones and diminish complications. Ongoing benefits are contingent upon systematic documentation, effective interprofessional communication, and continuous performance audit and feedback.

Introduction

Enhanced Recovery After Surgery (ERAS) protocols reevaluate conventional perioperative methods and supplant them with evidence-based components that encompass the entire surgical pathway. These multimodal protocols are linked to enhanced outcomes across various surgical procedures, characterized by fewer complications and reduced lengths of stay. Perianesthesia nurses, who function in preoperative holding and assessment areas as well as in Phase I and II recovery, are crucial in screening patients, providing education, optimizing physiological

conditions, and facilitating early rehabilitation efforts. This review highlights the contributions of nursing practices to ERAS before and following anesthesia, and summarizes the comparative outcome data between ERAS and traditional care methods.

ERAS overview and guideline foundations

ERAS is characterized as a patient-centered, evidence-informed, multidisciplinary strategy focused on diminishing the surgical stress response and promoting recovery. These guidelines, which are specific to various specialties, are routinely updated by professional organizations, emphasizing

More Information

***Corresponding author:**

Oghogho Linda Akarogbe, College of Health and Human Sciences, University of Akron, USA,
Email: ola4@uakron.edu

Submitted: September 02, 2025

Accepted: September 09, 2025

Published: September 10, 2025

Citation: Akarogbe OL, Igwama G, Emenyonu OL, Ariyibi IM. Role of Perianesthesia Nurses in Enhanced Recovery After Surgery (ERAS) Protocols: A Narrative Review and Comparative Outcomes Analysis. *Int J Clin Anesth Res.* 2025; 9(1): 037-039. Available from: <https://dx.doi.org/10.29328/journal.ijcar.1001034>

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Keywords: Perianesthesia nursing; Enhanced Recovery After Surgery; ERAS; PACU; Preoperative nursing; Postoperative complications; Length of stay; Opioid stewardship; PONV; Early mobilization; Nursing-sensitive indicators; Implementation science

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a thorough evaluation of evidence, consensus development, and ongoing auditing practices. Key components typically comprise preoperative counseling and nutritional support, optimized fasting and carbohydrate loading protocols, multimodal and opioid-sparing analgesia, PONV prophylaxis, goal-directed fluid management, maintenance of normothermia, early oral intake and mobilization strategies, and standardized criteria for discharge.

Perianesthesia nursing contributions: Perianesthesia phase

- Conducting preoperative assessments and risk stratification (considering medical, psychosocial, and anesthesia-related factors), supplemented by targeted educational approaches utilizing teach-back methods and culturally/linguistically suitable materials.
- Implementing anxiety-reducing strategies through brief interventions (such as guided imagery and patient-selected music), which may decrease the need for sedatives and enhance patient experiences.
- Confirming proper fasting and carbohydrate-loading protocols, making adjustments to diabetes medications, and providing hydration counseling to minimize insulin resistance and the risk of PONV.
- Assessing PONV risk and implementing prophylactic measures in a checklist-driven manner (for instance, using 2 to 3 agents for those at high risk) while documenting allergies and contraindications effectively.
- Prehabilitation coaching, which includes practices such as the use of incentive spirometry, guidance on sleep and obstructive sleep apnea, and reinforcement of smoking cessation, alongside education related to bowel preparation and antimicrobial prophylaxis, tailored to specific procedures.
- Preparation for handoff: developing a succinct perioperative plan, reconciling medications, verifying enhanced recovery after surgery (ERAS) order sets, and effectively communicating patient preferences and associated risks.

Perianesthesia nursing contributions: Post-anesthesia care unit (PACU/Phase I-II)

- Stabilization and monitoring of physiological parameters with proactive measures aimed at sustaining normothermia, euolemia, and adequate oxygen levels while preventing delirium and postoperative nausea and vomiting (PONV).
- Implementation of multimodal, opioid-sparing pain relief strategies (scheduled non-opioids, coordinated regional anesthesia) and facilitating early oral intake in accordance with ERAS protocols.

- Prompt mobilization and timely removal of catheters and lines, guided by specific criteria, with structured nurse-led ambulation pathways and plans for fall prevention.
- Conducting comprehensive assessments of discharge readiness (for instance, utilizing a modified Aldrete score) and providing education to patients and caregivers to prepare for recovery at home, emphasizing clear return precautions.
- Ensuring consistent handoffs to hospital wards or ambulatory units using the SBAR method or similar approaches, thus guaranteeing the continuation of ERAS orders (nutrition, pain management, mobilization) and documenting any variances for audit purposes.

Comparative outcomes: ERAS versus conventional pathways

Numerous meta-analyses spanning various surgical specialties indicate that ERAS pathways result in reduced hospital lengths of stay and fewer complications without an increase in readmission rates or mortality. Prospective and randomized studies further show that ERAS nursing protocols contribute to earlier achievement of functional recovery milestones, including time to ambulation, restoration of bowel function, and readiness for discharge. Institutions that embrace the ERAS framework emphasize the importance of audit and feedback mechanisms to sustain outcomes and identify factors that lead to variances, with perianesthesia documentation, such as PONV prophylaxis, the timing of analgesia, and maintenance of normothermia, acting as essential indicators of adherence.

Implementation considerations and nursing-sensitive measurement

The effective execution of ERAS initiatives depends on interprofessional governance structures, established standardized order sets, the education and competency verification of nursing staff, and the use of real-time monitoring dashboards. Key nursing-sensitive indicators pertinent to Perianesthesia teams comprise compliance with fasting and carbohydrate-loading protocols; the administration of PONV prophylaxis based on risk classification; maintaining a temperature of 36.0°C or higher upon arrival in the PACU; the timing of the first oral intake and mobilization; the percentage of patients satisfying discharge criteria within designated timeframes; and the experiences reported by patients. Measures aimed at equity—including multilingual educational resources, materials designed for those with lower literacy levels, and culturally appropriate counseling—enhance accessibility and reliability.

Limitations and future directions

The variability across procedures and components within



ERAS complicates the attribution of outcomes to individual elements; nonetheless, the benefits of cohesive bundles are evident. Future research should focus on pragmatic trials aimed at isolating nursing-led interventions (such as standardized protocols in the PACU), as well as analyzing costs, staffing considerations, and outcomes stratified by equity factors.

Conclusion

Nurses in Perianesthesia play a crucial role in ensuring the fidelity of ERAS practices and improving outcomes. By implementing patient education, targeted prophylactic measures, strategies for opioid-sparing analgesia, facilitating early oral intake, and promoting mobilization, nursing professionals help to expedite recovery and diminish complications. Integrating these practices within systematic documentation, effective handoffs, and ongoing audits can enable sustained enhancements across the board.

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