Total Hip Replacement
Enhanced Recovery After Surgery Pathway Synopsis

February 2026

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Table of Contents

Objective of Total Hip Replacement Enhanced Recovery After Surgery (ERAS) Pathway

The Total Hip Replacement ERAS pathway aims to reduce care variation and improve outcomes by accelerating recovery, minimizing opioid use, and promoting early mobilization. This is achieved through standardized preoperative, intraoperative, and postoperative practices using a multimodal perioperative approach.

Background

Total hip replacement (THR), or arthroplasty, is an established and effective treatment for a range of pediatric hip disorders, and its use continues to rise[1]. However, performing THR in children presents distinct considerations and challenges. Anatomical considerations, such as smaller joint size, often necessitate the use of smaller or custom-made implants[2]. Many pediatric patients also present with pathomorphological deformities that limit bone stock, which may require bone grafting[3]. Additionally, because children undergo surgery at a younger age, implants must provide long-term durability across several decades of life[4] (Gademan et al., 2021). These factors can influence surgical outcomes, including implant longevity and complication rates[2].

Enhanced Recovery After Surgery (ERAS) protocols offer a multidisciplinary, evidence-based approach that has been shown to reduce postoperative complications, shorten hospital stays, and support early rehabilitation[5-7]. In alignment with these principles, the Total Hip Replacement ERAS Committee developed this protocol to minimize complications associated with THR, standardize perioperative care, and enhance functional outcomes for patients undergoing hip arthroplasty.

Target Users

- Physicians (Anesthesiologists, Pediatric Orthopedic Surgeons, fellows, and residents)
- Advanced Practice Nurses (Anesthesiology and Orthopedic Surgery)
- Staff nurses

Target Population

Inclusion Criteria

- Neuraxial anesthetic inclusion criteria:
    - Patient consent, surgery below the umbilicus requiring motor and sensory blockade

Exclusion Criteria

- Neuraxial anesthetic exclusion criteria:
    - Absolute contraindications: Patient refusal, systemic infection or infection at the site, history of bleeding disorder (hemophilia, thrombocytopenia, etc.), patients on anticoagulant therapy (warfarin, heparin, etc.), allergy to medications, inability to cooperate or position for the procedure, conditions that increase intracranial pressure (brain tumor, trauma, intracranial bleed), uncorrected hypovolemia.
      Relative contraindications: Pre-existing neurological disease such as multiple sclerosis, neuropathy, spinal cord disease, extreme obesity, cognitive impairment, aortic stenosis, or a fixed cardiac output, severely uncontrolled hypertension, scoliosis, or history of spinal surgery.

Core Principles of ERAS

- Preoperative education of patients and their families with an introduction to ERAS
- Reduced pre-operative fasting, with clear liquid oral carbohydrate loading until 2 hours prior to surgery
- Goal-directed strict intraoperative intravenous fluid therapy guidelines to avoid hypo-or hypervolemia
- Avoidance of pre-operative mechanical bowel preparation
- Avoidance of routine nasogastric tube use
- Minimizing long-acting opioid analgesia in favor of regional anesthesia with epidural and/or local anesthesia for intra-operative and postoperative pain control when appropriate and using alternative non-opioid medications when appropriate (e.g., non-steroidal anti-inflammatories or acetaminophen)
- Early postoperative mobilization
- Early postoperative enteral feeding

ERAS Management Recommendations:

Pre-Operative Care

- **Goals**
  - Discuss the suitability of neuraxial anesthesia with sedation versus general anesthesia
  - Enhance preoperative mobility and education to support quicker postoperative participation in physical therapy

Intra-Operative Care

- **Goals**
  - Provide optimal anesthesia (neuraxial or regional) to minimize pain and promote early return to function
  - Use minimally invasive techniques, multimodal opioid-sparing analgesia, and Tranexamic acid (TXA) to reduce blood loss

Post-Operative Care

- **Goals**
  - Early mobilization, rapid resumption of diet, and proactive nausea/pain management

Additional Questions Posed by the ERAS Committee

No clinical questions were posed for this review

Key Metrics To Be Monitored:

Pre-Op	Intra-Op	Post-Op
Carbohydrate-rich drink	Spinal Anesthesia	Fentanyl
Midazolam		Diazepam
		Hydromorphone
		Length of Stay

Value Implications

The following improvements may increase value by reducing healthcare and non-monetary costs (e.g., missed school/work, loss of wages, stress) for patients and families, and by reducing costs and resource utilization for healthcare facilities.

- Decreased inpatient length of stay
- Decreased unwarranted variation in care
- Improved communication between patients and care teams throughout the perioperative period
- Improved post-operative pain control

Organizational Barriers and Facilitators

Potential Barriers

- Variability of the acceptable level of risk among providers
- Challenges with post-op pain management

Potential Facilitators

- Collaborative engagement across care continuum settings during ERAS development
- High rate of use of the ERAS pathway

Bias Awareness

Our goal is to recognize the social determinants of health and minimize healthcare disparities, while acknowledging that unconscious biases can contribute to these disparities.

Order Sets

- There are no order sets associated with this ERAS pathway

Associated Policies

- There are no associated policies with this ERAS pathway

Education Materials

- ERAS overview handout
  - Intended to be a general handout encompassing the key concepts and plan for an ERAS pathway
  - Found on the CM external website for each ERAS pathway
  - Available in English and Spanish

ERAS Pathway Preparation

This pathway was prepared by the EBP Department in collaboration with the Total Hip Replacement ERAS Pathway Committee, composed of content experts at Children's Mercy Kansas City. If a conflict of interest is identified, the conflict will be disclosed next to the committee member's name.

Total Hip Replacement ERAS Committee Members and Representation

- Anne Kancel, DO | Anesthesiology | Committee Chair
- Chris Halphen, DO | Orthopedic Surgery | Committee Member
- Emily Weisburg, MD | Anesthesiology | Committee Member
- Erin Adams, MD | Anesthesiology | Committee Member
- Heather Sambol, RN, APRN | Anesthesiology | Committee Member

EBP Committee Members

- Todd Glenski, MD, MSHA, FASA | Anesthesiology, Evidence Based Practice
- Andrea Melanson, OTD, OTR/L | Evidence Based Practice

ERAS Development Funding

The development of this ERAS pathway was underwritten by the following departments/divisions: Anesthesiology, Orthopedic Surgery, and Evidence Based Practice.

Conflict of Interest

The contributors to the Total Hip Replacement ERAS have no conflicts of interest to disclose related to the subject matter or materials discussed.

Approval Process

- This pathway was reviewed and approved by the EBP Department and the Total Hip Replacement ERAS Committee, after the committee members garnered feedback from their respective divisions/departments.

Review Requested

Department/Unit	Date Obtained
Anesthesiology	January 2026
Orthopedic Surgery	January 2026
Evidence Based Practice	January 2026

Version History

Date	Comments
February 2026	Version one – algorithms and synopsis

Date for Next Review:

- **February 2029**

Implementation & Follow-Up

- Once approved, the ERAS pathway was presented to appropriate care teams and implemented.
- Key metrics will be assessed and shared with the appropriate care teams to determine if changes are needed.

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- Pathways are reviewed every 3 years (or sooner) and updated as necessary within the EBP Department at CMKC. Pathway committees are involved with every review and update.

Disclaimer

When evidence is lacking or inconclusive, options in care are provided in the supporting documents that accompany the ERAS pathway.

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