

# Evidence-Based Practice Guidelines: Anesthesia for Total Knee and Hip Arthroplasty

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## Abstract



## Introduction

Postoperative complications are a significant problem for the healthcare system and the individual. Results in:

- Poor patient outcomes
- High health care costs
- THA/TKA are not immune to postoperative complications.
- 14.4% result in major complications
- 46.6% result in minor complications

ERAS protocols were developed to

- Decrease postoperative complications
- Accelerate recovery
- Promote early mobilization
- Promote early discharge from the hospital

## Patient Rights

## Problem Statement

- CRNA's contribute to perioperative period
  - Influence patient success
  - Improper judgement results in postoperative complications
- Leading to complications such as:
- Increased length of stay
  - Increased postoperative opioid consumption.
  - Constipation
  - Nausea and vomiting
  - Inadequate pain management
  - Respiratory depression
  - Poor patient satisfaction

## Significance to Anesthesia

- Patient safety
- Patient's Rights
- CRNA responsible for the patient and provide patient-centered anesthesia and create a culture of safety (AANA, 2018).

## Project Details

Evidence-based practice guidelines were developed using recommendations from ERAS protocols.

- Implemented in level one urban Ohio hospital
- Project model used:
  - Juran Trilogy model

The EBP guideline will be introduced to the chief CRNA and OR director. Steps after approval:

- Preoperative and postoperative nurses, anesthesia staff, surgeons, residents, and physician assistants (PAs)
- Meetings three times a week for one month
- Progress of adherence to EBP guidelines will be tracked electronically every month by project managers

## EBP Guidelines

EBP Guidelines	
Pre-procedure	<ul style="list-style-type: none"> <li>• Preoperative education                             <ul style="list-style-type: none"> <li>○ Enhanced recovery education</li> <li>○ Fasting guidelines</li> <li>○ Incentive spirometer demo</li> <li>○ Contact information</li> </ul> </li> <li>• Optimization/Risk stratification                             <ul style="list-style-type: none"> <li>○ Smoking cessation 4 weeks before surgery</li> <li>○ Alcohol cessation 4 weeks before surgery</li> <li>○ Labs and screening for anemia</li> <li>○ Nutritional optimization</li> <li>○ Prehabilitation</li> </ul> </li> </ul>
Pre-operative	<ul style="list-style-type: none"> <li>• NPO status</li> <li>• Antiemetics                             <ul style="list-style-type: none"> <li>○ Emend</li> <li>○ Scopolamine patch</li> </ul> </li> <li>• Administration of acetaminophen, COX-2 inhibitor/NSAID, and gabapentinoid</li> </ul>
Intra-operative	<ul style="list-style-type: none"> <li>• Spinal anesthetic or intraarticular block</li> <li>• Opioid-sparing anesthetic technique</li> <li>• Normothermia</li> <li>• Euvolemia</li> </ul>
Post-operative	<ul style="list-style-type: none"> <li>• Scheduled acetaminophen, COX-2 inhibitor, and gabapentinoid</li> <li>• Early mobilization</li> <li>• Incentive spirometer</li> <li>• Early nutrition</li> </ul>

## Analysis

- Chart review of TKA/THA patients 6 months prior to implementation of EBP guidelines
- Chart review of TKA/THA patients 6 months after implementation of EBP guidelines

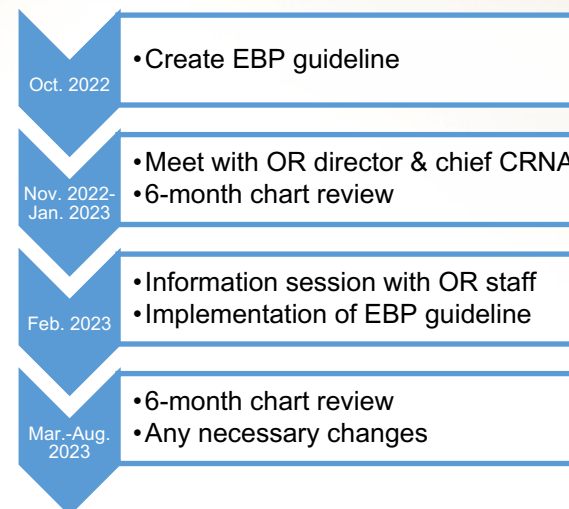
## Budget

- Chart review- \$750-\$1,000 per review
- Information session- \$1,500-\$2,000
- Paper- \$0.02 per sheet of paper

## Conclusion

ERAS protocols decrease postoperative complications, length of stay and opioid consumption. The EBP guidelines developed for this project are a combination of best practice recommendations from articles gathered during the literature review. The EBP guidelines are significant to anesthesia staff and help protect patient's safety throughout the perioperative period.

## Timeline



## References



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