
MONMOUTH
MEDICAL CENTER

Enhanced Recovery After Surgery Program

Monmouth Medical Center

Long Branch , NJ

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Multimodal Strategies to Improve Surgical Outcomes

Kehlet's "Fast Track"

Am Journal Surgery 2002

Multimodal Approach to Preoperative, Perioperative and Postoperative Phases of Surgical Care

Each Intervention may Contribute Small Gains

ERAS= Cumulative Benefit of Multiple Marginal Gains

ERAS Committee

- Surgical Attendings and Residents
- Anesthesia Attendings and NPs
- Nursing Leadership
- Need “Buy In”
- ERAS Protocols- Modify if Useful
- Implement and Track Results
- Goal of ERAS is to become Obsolete-Evidenced Based Practice= Standard Recovery Pathway

TABLE 1. The Grading of Recommendations, Assessment, Development, and Evaluation system-grading recommendations[14]

	Description	*Benefit vs risk and burdens*	*Methodologic quality of supporting evidence*	*Implications*
1A	Strong recommendation, high-quality evidence	Benefits clearly outweigh risk and burdens or vice versa	RCTs without important limitations or overwhelming evidence from observational studies	Strong recommendation, can apply to most patients in most circumstances without reservation
1B	Strong recommendation, moderate-quality evidence	Benefits clearly outweigh risk and burdens or vice versa	RCTs with important limitations (inconsistent results, methodologic flaws, indirect or imprecise) or exceptionally strong evidence from observational studies	Strong recommendation, can apply to most patients in most circumstances without reservation
1C	Strong recommendation, low- or very low-quality evidence	Benefits clearly outweigh risk and burdens or vice versa	Observational studies or case series	Strong recommendation but may change when higher quality evidence becomes available
2A	Weak recommendation, high-quality evidence	Benefits closely balanced with risks and burdens	RCTs without important limitations or overwhelming evidence from observational studies	Weak recommendation, best action may differ depending on circumstances or patients' or societal values
2B	Weak recommendation, moderate-quality evidence	Benefits closely balanced with risks and burdens	RCTs with important limitations (inconsistent results, methodologic flaws, indirect, or imprecise) or exceptionally strong evidence from observational studies	Weak recommendation, best action may differ depending on circumstances or patients' or societal values
2C	Weak recommendation, low- or very low-quality evidence	Uncertainty in the estimates of benefits, risks, and burden; benefits, risks, and burden may be closely balanced	Observational studies or case series	Very weak recommendations; other alternatives may be equally reasonable

Adapted with permission from Chest. 2006;129:174–181.[14]
RCT = randomized controlled trial.

Clinical Practice Guidelines for Enhanced Recovery After Colon and Rectal Surgery

- 2017-ASCRS and SAGES Clinical Practice Guidelines Committee
- Statement of Problem: LOS Open 8 days, Lap 5 days
- High Cost
- SSIs approach 20%
- PONV as high as 80%
- Readmission rates as high as 35%

Preoperative Interventions

- Preoperative Discussion re: Milestones and Discharge Criteria Should be Performed Prior to Surgery-1C
- Ileostomy Education, Marking and Counseling Should be Included in the Preoperative Setting-1B
- Clear Liquid Diet <2 Hours Prior to Anesthesia-ASA supported-1A
- Carbohydrate Loading Should be Encouraged-2B
- Mechanical Bowel Prep Plus Oral Antibiotics Reduces Complications-2B
- Preset Orders Should be used as part of ERP-2C

Perioperative Interventions

- Surgical Site Infection Care Bundle Should be in Place-1B Recent review SSI, 7% bundle group vs. 15%
- Multimodal Opioid Sparing Pain Management Plan Should be Used and Implemented Before Anesthesia-1B
- Thoracic Epidural Recommended for Open Surgery-1B
- Preemptive Antiemetic Prophylaxis for At Risk Pts to Reduce PONV-1A

Perioperative Interventions

- IV Fluids Should be Tailored to Avoid Excess Volume Overload-1B
- Goal Directed Fluid Therapy Recommended in High Risk Cases-1B
- Minimally Invasive Surgical Approach Should be Used -1A
- Routine Use of Intra-abdominal Drains and NGT for CR Surgery Should be Avoided-1B

Postoperative Interventions

- Early and Progressive Pt Mobilization is Associated with a Shorter LOS-1C
- Patients Should be Offered a Regular Diet Early after Elective CR Surgery-1B
- Sham Feeding is Safe and Results in Small Improvements in GI Recovery-1B
- Alvimopan Hastens Recovery After Open Surgery, Less Clear after Laparoscopic Surgery-1B

Postoperative Interventions

- IVF Should be Discontinued in the Early Post Op Period-1B
- Urinary Catheters Should be Discontinued in the Early Post Op Period after Colonic or Upper Rectal Resections-1B
- Urinary Catheters Should be Removed Within 48 Hours after Low or Mid Rectal Resections-1B

ERAS

- Multimodal Approach to Preoperative, Perioperative and Postoperative Phases of Surgical Care
- Emphasizes a Cumulative Benefit of Multiple Marginal Gains
- Requires a Team Approach
- Inexpensive to Implement
- Benefit to Patients
- Overall Cost Reduction