Objectives

2. Define the elements of the ERAS and apply the protocol in the acute care setting.
3. Discuss Lewin’s Theory of Change.

Enhanced Recovery Society

ASGBI
Association of Surgeons of Great Britain and Ireland
ERAS

- Restore normal physiologic functioning
- Encourage ambulation POD 1
- Successful multimodal pain management
- Timely discharge
- Organized plan of care
- Reduced length of hospital stay and costs
- Enhanced nursing autonomy

Colorectal ERAS

Restore Pathway

Pre-Hospital
Patient Education Brochure

In Hospital
Staff Education
Documentation
Data Collection

Post Hospital
Evaluation

Implementing ERAS
Colorectal ERAS

- Reduce surgical stress
- Support body function through optimizing analgesia, early mobilization, early return to normal diet.
- 16 primary components


The Lone Ranger, long since retired, makes an unpleasant discovery...
Transition Time …..

Implementation
Education
Theory application
Collaboration

Enhanced Recovery After Surgery

Pre-operative Phase
Intra-operative Phase
Day of Surgery
Post-operative Day 1
Post-operative Day 2
Post-operative Day 3-5
Discharge

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**Nutrition**
- Light diet in evening and 2 hours before surgery
- Drink fluids
- Advance diet (go slow!)
- Chew gum 3 x day

**Activity**
- No restrictions
- Sit in chair after surgery
- Walking today and stay out of bed 6 hours
- Walk and stay out of bed 8 hours

**Medication**
- Check with your provider about medications.
- Stop ASA, Coumadin, Plavix
- Intravenous and oral pain medications
- Multimodal approach
- Take pain medication only if needed

**Treatments**
- No bowel prep
- Surgical wound evaluation
- Remove urinary catheter and urinate without use of catheter

**Discharge**
- Laparoscopic: 2-3 days
- Open 4-5 days
- Plan for ride home
- Rehab Center for some
- Plan for discharge by 11:00 AM
- Continue until day of discharge

**Notes**
- Continue until day of discharge
- Continue until day of discharge
- Continue until day of discharge
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- Continue until day of discharge
Evidence

Reviewed 187 journal/research articles
- Multinational, multicultural cohort studies
- Randomized studies
- Meta-analyses and systematic reviews

Looked at 18 different ERAS programs
Including key elements: pain relief, fluid therapy, revision of care, oral nutrition, ambulation.


Evidence

Retrospective comparative study
260 patients split into 2 groups
Convention care and fast tract
Outcome measures
- Time to defecation
- LOS
- Morbidity


Results...
Traditional / conventional care patients had more medical and surgical post-op complications
Group 1 - Traditional care - 72 complications
Group 2 – ERAS - 33 complications

- Anastomotic leaks similar - 5 in each group

Evidence

Results ...
Aggressive ambulation resulted in early bowel function and reduction of pulmonary complications.
Epidural catheters - did not independently reduce LOS
Use of NG tube enforced a period of artificial ileus
Median LOS 8 days for conventional
Median LOS 2 days for ERAS


16 primary components of the ERAS

- Preoperative Counseling
- Prospective Audit
- Peri-operative fluid management
- Epidural Anesthesia
- Short Acting Anesthetics
- No Premedication
- No bowel prep
- Carbohydrate loading beverage/ no fasting
- Minimal Length incisions
- No nasogastric tubes
- Early removal of Catheters
- Prevention of ileus/ prokinetics
- Oral analgesia/ NSIADS
- Bair Hugger
- Perioperative Nutrition
- Early Mobilization
No Bowel Prep??? What!

Multicenter randomized trial- The Lancet 2007
Compared rates of anastomotic leak
1431 patients, 13 hospitals
77 patients withdrew-
Rate of leak did not differ between groups
32/670 (4.8%) had prep, and 37/684 (5.4%) no prep
Difference 0-6%, 95% CI -1.7 to 2.9%, p=0.69
BUT...more pelvic abscess in no mechanical bowel prep...


No Bowel Prep?

Systematic Review and Meta-Analysis
Rate of leak, and septic complications - pelvic abscess
14 trials, including 4859 patients.
Divided into 2 groups evenly
No statistical difference between groups
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<td>pelvic abscess</td>
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<td>wound sepsis</td>
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Gum Chewing

Meta-analysis of randomized controlled studies- "SHAM Feeding"
Chewing gum post operatively
End points
- length of hospital stay
- return to normal bowel function

Gum Chewing

How does it work?
Direct cephalic-vagal stimulation, triggers gastrointestinal hormone release, increasing saliva and pancreatic secretions.
Craniosacral parasympathetic innervation stimulates gut function.

Early Feeding?
Reviewed 15 studies, 1352 patients
Well tolerated, LOS was reduced
Assuaged the concepts that early feeding contributed to leak and aspiration.

Support for nurses to use research to drive practice.


Early Feeding
Cochrane Review 2009
Identified 13 RCT, total 1173 patients
"Individual clinical complications failed to reach statistical significance, but the direction of effect indicates that earlier feeding may reduce the risk of post operative complications.
Conclusion- no advantage in keeping patients "nil by mouth " after GI surgery

Implementing Protocol

Employee resistance is one of the most frequent impediments to change.

Whatever, blah, blah, blah.

Implementing Protocol

Outpatient stoma clinic staffed by a certified stoma nurse
Division based guidelines for protocol implementation
Initiating preoperative carbohydrate loading
Preoperative patient education
Discontinuing preoperative dietary restrictions
Post op multimodal analgesia
Early diet, and mobilization
Audit outcomes

Implementing Protocol

ERAS asks everyone involved to deviate from the familiar perioperative protocols

No bowel prep/sterilization
Regular diet day before surgery/CHO loading
Early feeding post op without waiting for bowel function to return
No drains or NG tube
Using Theory to Implement Change

Needed regimented format to move forward with protocol
Lewins’ Theory of Change chosen

Lewins’ Theory of Change

3 step process

UNFREEZE → CHANGE → REFREEZE
Unfreezing
Old behaviors discarded or unlearned
Create awareness of the change
Develop urgency to embrace change
Present benefits of change
Status quo is not acceptable

Unfreezing
• Meeting with anesthesia/nursing staff/residents
• Division meeting updates
• Developed written pathway
  • Clear direction
  • Shared sense of the goal

Moving or Transitioning
THE CHANGE
Actual transition to the new pathway which become engrained
Most difficult due to the unknown and prior engrained process
CHO loading - most resistance
• APPs implemented during preop assessment
• Once this occurred, the remainder followed
I. The use of pre-operative oral carbohydrate loading in the Enhanced Recovery Protocol for elective colorectal surgical patients has been found to offer patients optimal postoperative recovery. Pre-operative carbohydrate loading results in reducing post operative insulin resistance, reduced post operative nausea and vomiting, quicker return of bowel function and less loss of muscle mass and ultimately a reduced hospital stay.

II. Patients are instructed to preoperatively purchase 24 ounces of Gatorade Prime (providing 150 grams of carbohydrates), and to consume 16 ounces (100 grams CHO) the evening prior and 8 ounces (50 grams CHO) 2 hours prior to arrival for surgery.

III. Patients with insulin dependent diabetes mellitus, morbid obesity quantified by a BMI over 40 kg/m², significant cognitive impairment, uncontrolled gastric reflux or known delayed gastric emptying are excluded.

Guidelines are intended to be flexible. They serve as reference points or recommendations, not rigid criteria. Guidelines should be followed in most cases, but there is an understanding that, depending on the patient, the setting, the circumstances, or other factors, guidelines can and should be tailored to fit individual needs.
Early Phase Results

Full Implementation Results

Conclusions

Theory can be applied in real life practice
Collaboration is essential for change
Diligent follow through essential
Ongoing education and monitoring imperative
A Colorectal Surgical Site Infection (SSI) bundle now incorporates the ERAS pathway
Plans for the Future

Continue to monitor data
Project nurse recently hired
Smart phone technology