Decreasing Length of Stay and Cost in Colorectal Surgery Using an Enhanced Recovery Program

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Disclosures

- No disclosures
- No funding
Background

• Enhanced recovery after surgery (ERAS) pathways

  – Evidence based best practice to reduce length of stay (LOS) and complications.
  – No increases in readmission rates or mortality.
Methods

- Four surgeons, patients undergoing bowel resection, starting Jan 1, 2015.
- 17 variables defined in The Enhanced Recovery Program in NSQIP (ERIN).
  - pre-operative, operative, and post-operative elements
- Aim: institute an ERAS program at EUH for colorectal surgery.
  - Goals:
    - Decrease LOS by 1 day
    - Decrease complications by 20%.
**POHA**
- Colorectal "preoperative" ERAS orderset completed day before surgery
- ERAS identification on patient chart
- Sports drink early am
- PO Gabapentin, celecoxib, acetaminophen (if patient appropriate)
- SQ heparin 5000 units (if patient appropriate)
- PONV risk factor reviewed
- Bair Paws gown applied
- Chlorhexidine cleanse confirmed
- PO antibiotics for mechanical bowel prep
- Stoma education provided (if appropriate)

**OR**
- ERAS patient discussed during surgical time-out CTO
- Bair Paws gown connected during induction
- Upper body warmer used
- Temperature > 36.0 throughout case
- Fluid warmer used
- OGT/NGT if used removed at the end of the case
- LR or Plasmaplyte used
- Fluids less than or equal to 8 ml/kg/hr with blood loss replaced with colloid (5% Albumin)
- Goal directed fluid monitor used (esophageal Doppler monitor or PPV with arterial line)
- Magnesium sulfate 2 gm IV after induction (> 10 min)
- Toradol 15mg or 30mg CrCl and age appropriate
- Narcotic sparing anesthetic
- Intraop TAP block per surgeon
Emory ERAS Team

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- **Emory Office of Quality**
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The Purpose of Your Procedure

Your doctor will talk to you about having this procedure because you have a medical condition that is stopping a part of your bowel from working properly.

Use the images below when discussing your procedure with your doctor.
Results

- Length of stay, complications, readmission, and direct variable cost were compared between years.

- A total of 102 patients undergoing elective colorectal surgery in the ERIN program were compared to 110 cases performed in 2014.

Complication rate: 15.7% in 2015 compared to 18.2% in 2014. Complication rate was decreased by 2.5% from 2014 to 2015.

Thirty day readmission rate: 9.8% in 2015 compared to 8.2% in 2014 (p = 0.68).
Conclusion

• A defined 17 variable Enhanced Recovery Program through NSQIP (ERIN) can decrease LOS and cost without increasing the re-admission rate.

Keys for Success:

- Team-based care
- Continuous measurement of outcomes
- Checklist-based patient care
- Communication

Goals for Improvement:

- Decrease complications
- Ongoing assessment of improving adherence to ERIN variables
Thank you!

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