Enhanced Recovery After Surgery: Implementation in Rural Iowa

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Introduction

- Conventional care for colorectal surgery results in a 6-12 day hospital stay with patient morbidity of 20-30%.
- Surgical complications in the colorectal surgery patient increases the cost of care by $5,358 to $42,790 for one to three complications.
- Enhanced Recovery after Surgery (ERAS) recommendations reduce the length-of-stay by 3 days, patient morbidity by 48%, and hospital costs.
- The ERAS program for colorectal surgery includes 21 recommendations in care improvement spanning the surgical encounter, and involves multiple disciplines, units, and divisions.
- Change was accomplished through the Breakthrough Series change methodology.

Purpose

This purpose of this project was to implement ERAS recommendations to improve the quality and efficiency of care provided to colorectal surgical patients.

Objectives:
- Develop a hospital-specific protocol for colorectal surgical patients based on ERAS guideline recommendations.
- Educate all members of the health care team on use and implications of the ERAS protocol.
- Implement the protocol for colorectal surgical patients.

Methods

Project was deemed not human subjects research by the Spencer IRB committee.

Setting: Spencer Hospital in Spencer, IA.

Action steps based on Breakthrough series methodology for change.

- Develop a hospital specific ERAS protocol for colorectal surgical patients
  - Review current published guidelines
  - Present recommendations to multidisciplinary team of key stakeholders
  - Achieve consensus on hospital protocol among opinion leaders and obtain support
  - Develop targeted educational curricula for surgeons, anesthesia providers, nurses, and patients
  - Provide initial and reinforcement educational sessions for providers throughout implementation.
  - Conduct pre-implementation fiscal analysis that predicted a positive return-on-investment with 11 participating patients.

Outcomes

- Hospital specific ERAS protocol for colorectal surgery was successfully implemented.
- Initial education was provided to 100% of licensed independent practitioners (LIPs) and 82% of nursing staff prior to project implementation.

Evaluation

- Hospital specific protocol development was completed relatively easily.
- Educational interventions were successful:
  - Initial educational sessions reached most staff.
  - Follow-up sessions allowed 100% of staff to be educated prior to implementation.
  - Staff feedback from educational sessions was used to modify the protocol prior to implementation.
- Implementation of the protocol was successful:
  - Within 12 months of implementation, the ERAS protocol was used in 80% of elective colorectal surgeries and by January 2017 in 100% of surgeries.
  - Initial rates of adoption were variable.
  - Adoption was much better when project director was actively promoting the protocol.
  - Protocol adaptation based on staff feedback increased adoption rates.
- Patient outcomes were improved:
  - Average length of stay decreased 1.6 days.
  - Intraoperative opioid use decreased 240 micrograms on average.
  - Postoperative pain scores decreased an average of 4.5 pts on a 0-10 VAS pain scale.

Conclusions

- Implementation of a hospital-specific ERAS protocol for colorectal surgery patients reduced pain scores, opioid administration, and length-of-stay.
- Implementation of all aspects of a colorectal ERAS protocol are necessary to improve patient outcomes.
- An advanced practice nurse lead this system.
- Educational sessions increased awareness of pain management, PONV, antibiotic dosing, and patient recovery.
- A project champion has been identified to continue supporting this project for the foreseeable future.
- This project will be presented at the Iowa Association of Nurse Anesthetists’ Spring Meeting.

References


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