Impact of an Enhanced Recovery after Surgery Program on Opioid Prescribing and Colorectal Surgery Outcomes

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AIM
To implement an Enhanced Recovery after Surgery (ERAS) program for colorectal surgery and assess the impact on opioid prescribing and patient outcomes.

BACKGROUND
- Opioids are a mainstay for acute pain management, but their side effects can adversely impact patient recovery.
- The American Pain Society recommends multimodal analgesia (MMA) for treatment of postoperative pain.
- MMA has been included as a key component of bundled surgical approaches such as ERAS protocols, designed to maximize recovery by optimizing pain control, nutrition, fluid management, and mobility.
- Although several studies have linked ERAS pathways to better pain control, reduced opioid use, improved clinical outcomes and reduced costs, these pathways have not been systematically implemented as standard of care for surgical patients.

AIM
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METHODS
- This pre-post study examined differences in ERAS measure compliance and opioid use 2 years before and 9 months following the implementation of an ERAS program with a MMA care pathway.
- The study included inpatients ≥18 years of age who underwent an elective colorectal surgery from 6/1/2016 through 2/28/2019 at 3 hospitals within an integrated health care system (N=856).

RESULTS
- ERAS compliance improved from 47.1% to 59.2% (p<.0001) following implementation.
- Statistically significant (p<.0001) reductions in opioid use were observed:
  - Mean days on opioids decreased from 4.2 to 3.2.
  - Total morphine milligram equivalent (MME) doses during hospitalization decreased from 228.8 mgs to 112.7 mgs.
  - Daily MME doses decreased from 51.6 mgs to 33.4 mgs.
  - Mean maximum daily MMEs decreased from 73.4 mgs to 46.7 mgs.
- Risk-adjusted LOS decreased from 4.3 to 3.6 days (p<.05).
- No significant differences in risk-adjusted 30-day readmission, inpatient mortality, discharge status, opioid-related adverse drug events, or total direct costs were observed.

CONCLUSIONS
- Implementing ERAS programs can promote uptake of evidence-based surgical practices and judicious opioid use as well as improve recovery time, thus improving the safety and effectiveness of patient care.
- A structured, system-level approach may facilitate uptake of ERAS programs.

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