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Commentary regarding a baseline assessment of enhanced recovery protocol implementation at pediatric surgery practices performing inflammatory bowel disease surgeries

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ABSTRACT

This is a commentary on the manuscript by Vacek J, Davis T, and Many B, et al., titled "A Baseline Assessment of Enhanced Recovery Protocol Implementation at Pediatric Surgery Practices Performing Inflammatory Bowel Disease Surgeries".

The authors administered a survey to one staff surgeon at 18 sites. The survey assessed demographics of each department and common utilization of 19 Enhanced Recovery after Surgery (ERAS) elements during three perioperative phases in each institution. It is important to remember that this is observational survey data from one provider, not a series of measured outcomes involving several providers from the institution. The results indicate an average of 6.3 ERP (Enhanced Recovery Protocol) elements being practiced at each site. Lack of buy-in from colleagues, electronic medical record adaptation, and lack of resources for data collection and analysis were identified as barriers. Elements requiring system-level or multidisciplinary changes had lower use. The study characterizes the scope of ERP utilization and the need for effective tools to improve adoption.

Implementation of ERP has been challenging in pediatrics. This preamble study to a multi-institutional, prospective study involving the same institutions uncovers some important insights that will help participants learn how to use the ERP. It also identifies hidden weaknesses of their program – things they didn't know – and didn't know that they didn't know. It identifies some barriers to address directly, and suggests some important next steps to help people understand how to implement. The following observations are based on 8 years of experience implementing an ERP in our institution, and on the comments of fellows who have done the same at their institutions.

1. ERAS is the ultimate Quality Improvement (QI) and multidisciplinary (MD) "team sport". Perhaps the most important step in successfully developing an ERAS program is getting your anesthesia and nursing teams on board and committed to its success. Helping the anesthesia team to understanding the "why" of ERAS (reducing trauma, inflammation and perioperative "stress" to experience "enhanced recovery" by reducing complications, speeding return to work, school and full function) is important to keep in the cross-hairs and not get distracted by length of stay (LOS) which is a secondary benefit. Getting a few anesthesiologists to lead as your partners was a huge step forward in our institution. Early in our journey, I gave Grand Rounds to the Anesthesia department on ERAS, and helped one of their fellows prepare their Senior talk on ERAS. The Emory Anesthesia Department Chair was present at both talks, was hugely supportive of the efforts, and encouraged the pediatric leadership to commit to ERAS. We heavily invested in helping a high-functioning pain team get lots of experience with blocks. We also reminded them that much of the literature about key ERAS components, like NPO times for clears, minimizing perioperative opioid use, regional blocks, and multimodal analgesia comes from their journals.
2. Identifying, training, and supporting a committed Nurse Coordinator to help "ride herd" on the ERAS patients are key components of a successful program. They communicate with the patients before the procedure and see them in the preop clinic with other team members like anesthesia, pain team, child life and pain psychology. They reinforce your instructions during the surgical consultation ("yes, we really want your child drinking sugary clear liquids while driving to the hospital…"), remind them of components of the recovery that are in "the parent's and patient's control", and help clarify misunderstandings. They lead the QI ERAS audit meetings and will be your most important partner in the successful creation of an ERAS team.

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3. Centralized ERP patients on one surgical floor. Much of what we are doing is in conflict with traditional surgical nursing training. It takes committed and experienced floor nursing to focus multidisciplinary care on getting ERAS patients to drink and walk on POD 0. Getting nursing leadership on one floor to take this on as your partners is a huge step forward. They attend the audit meetings and take on QI efforts to address defects in compliance. If postoperative patients are housed on several floors, it will help early on to transfer them to your primary surgery floor. Otherwise, you should expect to struggle and lengthen the implementation time dramatically.
4. Clearly identify protocol elements and communicate them with the surgery, anesthesia and nursing teams to improve compliance and implementation. Write down the order set and get it into your electronic medical record. Working through the flow with your patients, your NPs and partners are key so that they will understand the "why" and the principles guiding ERP. The multidisciplinary audit meetings reviewing the patients with the ERAS team (preop, operating room, floor and PACU nursing, surgeons and anesthesiologists and pain service, child life and pain psychology) are essential as they identify compliance problems and training issues and bring QI tools to bear. Meeting as an ERAS team and reviewing the care of each patient using the protocol as a compliance tool help caregivers see how they are helping or hurting the process. Please note that programs in this study claiming familiarity with ERPs were surprisingly unsuccessful at implementing more than 5–6 components. The inflection point for improving outcomes needs compliance closer to 10 components to see dramatic improvements. This suggests that the observed/expected care really getting to the patients may be quite different than what the surgeons think. One example is the inconsistent and variable preoperative antibiotic usage in these institutions, which must be frustrating and disappointing to the providers, and is an example of system barriers that will need to be addressed at those institutions to be successful. An ERP will consistently get the appropriate antibiotics to the patient within 60 min of the incision, and provide re-dosing in longer cases.
5. Centralize IBD care to 2–3 providers, so the protocol isn't implemented 3–4 times/year, but is a monthly or bimonthly event. This will be a controversial principle as the protocol is rolled out in these institutions. Some centers and groups will centralize and some won't. EVERY institution needs more than 1 focused ERAS provider working on IBD …. But not 7 in an institution that has 28 cases/year. How does one become an expert in this when the frequency is so small? This controversial attitude threatens a central tenet of Pediatric Surgery: "we all do everything…." Using the protocol every other month is much tougher than using it weekly or biweekly.
6. While the discussion and data presentation are well written, spending some time reviewing Table 1 in this article will be very instructive. One can see the great diversity in programmatic and institutional readiness, IBD volume, and available surgeons. Implementation is best done when the team is all on the same page. When there are too many surgeons, the frequency of using the protocol is diminished and takes longer to internalize these principles, change culture, and train the team to support it.

The information in this article can be helpful as one reflects on the characteristics of their own institution and how they would answer these questions. ERAS protocols can be written for pectus repairs, urologic reconstructions, craniofacial, thoracic, oncologic, and gynecologic procedures, as well as acute care surgery. Time and experience have helped us evolve from the observation by Ure and colleagues in 2009 that ERAS would be helpful for only about 30% of a pediatric surgeon's practice [1]. When considered as a series of surgical principles that are consistently delivered to surgical patients with highly compliant protocols, one can see that this is as useful for an outpatient laparoscopic hernia repair or umbilical hernia repair as it is for a laparoscopic colectomy, nephrectomy, or oophorectomy, although maybe not as dramatic.

This interesting article is a nice review of ERP. It is also an opportunity for each of us to consider the readiness of our institution to move into the 21st century in delivering care that will improve outcomes, patient satisfaction and engagement, reduce resource utilization, and help the patient to return to full function because we "enhanced their recovery" by reducing trauma, inflammation, stress, and complications using a thoughtful, contemporary, evidence-based protocol.

Reference

[1] Reismann M, Dingemann J, Wolters M, et al. Fast-track concepts in routine pediatric surgery: a prospective study in 436 infants and children. Langenbecks Arch Surg. 2009;394:529–33.