Early success in implementation of a division-wide eras program utilizing an outcomes manager-led interdisciplinary team

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Background
Enhanced Recovery after Surgery (ERAS) programs improve postoperative outcomes and decrease overall recovery time. While awareness of the benefits provided by these programs has grown, there is little formal understanding of the implementation strategies and auditing processes undertaken by adopting institutions. Outcome Managers (OM) that are formally trained with a master's degree in Clinical Nurse Leadership are paramount to the early success of the implementation process due to their ability to apply process-improvement strategies. An OM facilitates collaboration of stakeholders to participate in root-cause analysis to identify specific interventions. Key interventions are then prioritized using an impact and frequency matrix, and are incorporated into an ERAS intervention program. Duties of an OM include developing strategic implementation methods, collecting data through chart abstraction, and continuous auditing for quality improvement. Our goal is to (1) demonstrate that OM oversight of an interdisciplinary team to implementing a division-wide colorectal ERAS program accelerates success, (2) describe the obstacles encountered with implementation and (3) offer strategies for implementation and long-term success.

Methods
This is a retrospective review of colorectal surgery patients undergoing major abdominal surgery over a five-month OM-led implementation period. Data for the post-intervention group was prospectively collected. A matched cohort of pre-intervention colorectal surgery patients were retrospectively collected by chart review using a defined set of standards and definitions for abstraction. All elective colorectal cases were eligible for the study. The institutional ERAS program is comprised of 22 care components spanning preoperative, intraoperative and postoperative periods for elective colorectal resections. The primary endpoint is compliance to bundle variables, considered the measure of success attributed to having an OM in a longitudinal role for implementation of the ERAS program. Secondary endpoints included length of stay (LOS) and readmission rates. Descriptive statistics and student's t-test were used for analysis.

Results
358 patients were included in the analysis, pre-intervention (n=183) and post-intervention (n=175). The median age was 59.5 years (range: 21-95 years) and the median ASA score was 3. Mean compliance of ERAS interventions increased from 41% to 65% over the study period, (p= 0.001). Length of stay decreased to 5.2 days from 6.0 days over a five-month period, (p=0.0445). Readmission rates remained stable (4.42% and 4.04%). Bundle variables that were least adhered to included carbohydrate loading (29%), transversus abdominus plane (TAP) block placement (48%) and patient ambulation day of surgery (31%). To improve

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compliance with these variables, prescreening phone calls were initiated to ensure patient understanding of surgery expectations and carbohydrate loading, and TAP block education with appropriate staff members was initiated. Awareness of compliance with all variables was publicly reviewed at team meetings and with leadership staff of each department.

Conclusions

An OM-lead multidisciplinary team for implementation of ERAS results in accelerated compliance to bundle variables with a resultant decrease in postoperative LOS. The role of an OM is a novel consideration that is instrumental in both intervention inception and continuous real-time auditing to improve intervention compliance and patient outcomes over an accelerated time period. Application of an OM in other specialties and service lines may be considered to enhance adoption of new programs and achieve early success.