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Evaluating Patient Education Efforts in a New Surgical Protocol

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Background:
Enhanced Recovery After Surgery (ERAS) protocols are comprehensive, multidisciplinary care pathways focused on accelerating surgical recovery times by enabling earlier mobilization, feeding, and return to normal bowel function. By formulating standardized protocols utilizing evidence-based best practices, ERAS protocols are designed to maintain pre-operative organ function and attenuate the body’s stress response. In doing so, ERAS protocols decrease length of stay without increasing complications, reduce overall complication rates, and in many cases decrease costs. Figure 1, taken from the ERAS Society website, illustrates the multitude of care components that affect recovery times and complication rates in ERAS protocols.

ERAS protocols are not a novel idea; they were pioneered in the 1990s in Denmark and have been used in the US for the past decade. However, adoption has been slow; so much so that research has examined why. However, experts see these protocols as the new fast-coming future of surgical care.

This April, as part of a pilot program by the American College of Surgeons National Surgical Quality Improvement Program, LVHN began operating in its own ERAS protocol for a small group of colorectal surgeries. Its major tenets are creating a non-stressed state prior to surgery, utilizing goal-directed fluid management intraoperatively, providing adequate pain control with avoidance of opioids, encouraging early mobilization and ambulation postoperatively, and educating and empowering the patient and family to actively participate in the care process. Specifically, these tenets were developed into a process outlined in Fig. 2.

Patient education, with its benefits to patient satisfaction and clinical outcomes, has been a strong focus of healthcare since being mandated by the Joint Commission on Accreditation of Healthcare Organizations in 1993. This emphasis has only continued to grow in today’s era of patient-centered, value-based care. Printed educational materials are generally viewed among the most effective and economical forms of educational materials. As a group, such as a project of ERAS project leaders across all disciplines involved in the protocol determined all pertinent information, and with the help of patient education experts, they created an educational booklet. This booklet, given to patients during their initial surgical consult, details each and every aspect of the ERAS patient’s care.

Given that the LVHN ERAS protocol is part of the ACS NSQIP, it being rigorously studied through a large number of samples. However, there was not yet any formal evaluation of the patient education efforts. Considering the resources and time spent creating this booklet, one was certainly necessary.

Conclusions:
• Validated tests of educational materials widely endorsed the ERAS patient booklet.
  – Reading grade level average of 6.3 is certainly comprehensible to the vast majority of patients (several health agencies recommend readability should not be higher than 6 to 8th grade level)
  – SAM score of 86.6% is safely viewed as superior material (>70% is considered superior)
  – PEMAT-P results of 94% for understandability and 100% for actionability are both outstanding
  – Survey results also extremely positive
  – Booklet generally viewed as of appropriate length, easy to read, and well-organized with good quality content that sufficiently taught patients about their care
  – Very few complaints or suggestions for improvements

Methods:
• Booklet Evaluation:
  – Peer Review – for content and style
  – Analysis by validated tests of educational materials:
    – Reading grade level analysis
    – SAM analysis
    – Understanding of Materials Instrument
    – Patient Education Materials Assessment Tool (Printed Materials)
  – Patient Survey (Fig. 3)
    – Developed based on prior researches and with the assistance of the CMS’s Toolkit for Making Written Material Clear and Effective
    – Administered via telephone interview post discharge
    – Attempted to interview all patients who underwent the ERAS protocol between 5/21/15 and 6/30/15

Results:
• Average Grade: Level 6.3
• SAM: 86.6%
• PEMAT-P: Understandability 94%, Actionability 100%

Discussion:
• Results were very positive, both objectively and subjectively.
• Results are limited by small sample size (small number of patients have participated in ERAS protocol to date) and no comparison group.
• Questioning patient engagement
  – Q10 and 11 with nearly no responses vs 82.4% saying they felt engaged in care
• Additional question raised
  – Purpose of project was to justify the cost of production of the booklet. Need to clarify what justifies this goal. Does patient education solely for the purpose of patient-centered care do this? Or does education need to be linked to better clinical outcomes or cost savings?
• Future Directions:
  – Continue to collect data to increase sample size; stratify results based on Length of Stay
  – Lack of responses to Q10,11 has been addressed – patient participation in completing charts will be stressed: review of pre- and post-intervention results may be beneficial.
  – Further study utilizing hospital surveys measuring patient satisfaction may also be helpful in comparing pre- and post- implementation of the ERAS protocol.
  – Research needed to evaluate effect on clinical outcomes

Literature cited: