ENHANCED RECOVERY AFTER SURGERY (ERAS)
IMPLEMENTATION AT A SISTER INSTITUTION:
RESULTS AND CHALLENGES EXPANDING ACROSS A HEALTH SYSTEM

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Introduction: Enhanced Recovery After Surgery (ERAS) protocols are multidisciplinary approaches to improve surgical outcomes, that have begun to emerge in neurosurgery. After establishing a protocol for elective spine and peripheral nerve surgery at a single hospital, we have implemented the same ERAS protocol at a sister institution. The authors sought to evaluate compliance with this ERAS protocol at our secondary site and describe the successes and challenges experienced.
Methods: Patients who underwent elective spine surgery at Penn Presbyterian Medical Center between December 2017 and June 2019 were prospectively enrolled in our ERAS protocol (Figure 1). The control group was a consecutive historical cohort that underwent elective spine surgery at the same institution between April 2017 and August 2017. Primary measures were compliance with the preoperative skin washing and Gatorade consumption, mobilization on postoperative day (POD) 0, and the use of patient-controlled analgesia (PCA) and a postoperative Foley catheter.
Figure 1:
**Results:** A total of 304 patients were enrolled in the ERAS protocol, compared to 55 patients in the historical control. The two groups were similar in baseline demographics and surgical type. Site wash and Gatorade consumption compliance were both 100% in the ERAS cohort. 63.4% ERAS patients mobilized on POD 0 compared to 77.8% control patients. Both PCA and postoperative Foley catheter use (per protocol) was significantly reduced in the ERAS group compared to the control groups, 2.3% vs. 61.8% and 27.7% vs. 41.8%, respectively.
Discussion
Over an 18-month period for patients undergoing elective spine surgery, we demonstrated widespread compliance for those who participated in our ERAS protocol compared to controls.

These per protocol changes are an important milestone in the creation of an effective ERAS program. They are hypothesized to decrease the use of postoperative opioids, and are an important step toward standardizing care and improving patient outcomes.
Summary Points:

- This study shows implementation of an ERAS protocol at a second institution.
- Site wash and Gatorade compliance were 100%, postoperative Foley catheter use reduced to 2.3%.
- Implementation is challenging since each hospital has unique patient demographics and challenges.
- While POD 0 mobilization appeared to be reduced with ERAS, this was thought to represent documentation barriers in early implementation of this program.