Maintaining compliance and ongoing support for a successful long-term enhanced recovery program

Authors: Desiree Chappell, CRNA[1], Patrick Shanahan, MD[1]

[1]Norton Healthcare, Louisville, KY

Background

Over the past two years, our facility has maintained an Enhanced Recovery After Surgery program (ERAS) for colorectal and urological patients. The anesthesia group designed the program based upon the ERAS society guidelines[1] and instituted utilizing a multidisciplinary team approach. Within the first year of implementation, a significant reduction of length of stay (LOS) and variable direct costs (VDCs) occurred. It was during the second year of the program that a reversal in the LOS data and VDCs were observed. We did not have specific compliance data to explain the divergence; therefore, the initial team leaders performed a root-cause analysis directed at determining a correlation between the program evolution and the decline in the results.

Objective

Determine the factors affecting the program resulting in increased LOS and VDCs from initial outcomes.

Results

Initial results over year 1 of ERAS implementation showed a significant decrease in LOS and VDCs for colorectal and urology patients (Fig. 1). Over year 2, the LOS for colorectal cases, although significantly decreased from baseline, gained a day and a half and costs started to climb (Fig. 2). More apparent was the increase in LOS and VDCs for urosurgical cases (Fig. 2) The root cause analysis resulted in five predominant factors pointing to the diminished success:

1. A decline in leadership from the initial start-up team
2. Waning of communication and engagement of the multidisciplinary team
3. Lack of process auditing
4. Inherent turnover of nursing creating a lack of consistency
5. The heuristic and cognitive biases of program providers affecting their judgment and long-term acceptance of the evidence based practices of ERAS

Conclusions

Compliance within Enhanced Recovery programs is not well documented in professional healthcare literature. The lack of data and information may well be because the program demonstrates initial success; but often, a report of a back slide in data may be interpreted as

---

[1] U.O. Gustafsson, M.J. Scott, W. Schwenk, N. Demartines, D. Roulin, N. Francis, *et al.*
Guidelines for perioperative care in elective colonic surgery: enhanced recovery after surgery (ERAS®) society recommendations
*World J. Surg., Volume 37, 2012, pp. 259–284, doi:*10.1007/s00268-012-1772-0

program failure. As part of the ER initiatives in this country, an emphasis in the sustainability and long-term compliance should be addressed. The beginning stages of the program development should include a framework to prevent the previously mentioned issues. Suggested interventions to improve compliance within an existing program include the utilization of software and APPS for auditing providers and tracking the surgical patient, development of provider education and team engagement strategies, as well as strengthening of administrative support for the ER coordinator/navigator. The cost-prohibitive nature of these interventions may prevent early adoption by hospital organizations even though the potential return on investment exists. Business plans for ER programs should address these needs for longevity as well as a detailed, comprehensive picture regarding the loss in savings as compliance drops off year to year. The hospital multi-disciplinary team has a responsibility to create a program with these issues in mind to ensure the long-term sustainability of ER initiatives.

	Baseline 2014			Improvement 2015			Improvement 2016		
	Avg. per patient	Std dev	# Discharges	AVG.	Std dev	# Discharges	AVG.	Std dev	# Discharges
Length of Stay	11.13	7.69	159	5.14	3.68	66	6.2	4.45	69
	Avg. Per Patient	Std dev	# Discharges	AVG.	Std dev	# Discharges	AVG.	Std dev	# Discharges
Variable Direct Cost	$10,729	$8,590	159	$6,261	$2,951	66	$7,087	$4,780	69

Figure 1. Enhanced Recovery Outcomes for Colorectal Surgery in 2015 and 2016

	Baseline 2014			Improvement 2015			Improvement 2016		
	Avg. per patient	Std dev	# Discharges	AVG.	Std dev	# Discharges	AVG.	Std dev	# Discharges
Length of Stay	6.37	4.37	47	3	0.55	14	5.44	5.84	34
	Avg. Per Patient	Std dev	# Discharges	AVG.	Std dev	# Discharges	AVG.	Std dev	# Discharges
Variable Direct Cost	$6,464	$3,038	47	$4,850	$1,850	14	$6,656	$5,565	34

Figure 2. Enhanced Recovery Outcomes for Urosurgery in 2015 and 2016