HRET HIIN: Safety Network to Accelerate Performance (SNAP)

Enhanced Recovery After Surgery (ERAS) – Colorectal Surgery Summary

Safety Network to Accelerate Performance (SNAP):

What's a SNAP?

A SNAP is a voluntary learning network of approximately 15 hospitals that collaborate to learn more about emerging best practices related to HIIN topics across a wide variety of hospitals. Learnings from these SNAPs are shared with all HRET HIIN hospitals.

Why ERAS? - Rationale:

A recent study showed that enhanced recovery after surgery (ERAS) programs reduced the need for hospital stays by about 30 percent, or more than two days, after major surgery. ERAS protocols are multimodal perioperative care pathways designed to achieve early recovery after surgical procedures by maintaining preoperative organ function and reducing the profound stress response following surgery. Perioperative counseling is an important element of ERAS and it supports HRET's efforts to enhance patient/family engagement in care. Central elements of the ERAS pathway address factors that keep patients in the hospital after surgery and help clarify how they interact to affect patient recovery. Additionally, the ERAS pathway provides guidance to all involved in perioperative care, helping them work as a well-coordinated team to provide the best care. ERAS also nicely aligns with other HIIN efforts including but not limited to SSI reduction, Wake UP and Get UP.

The key elements of ERAS protocols include:

- Preoperative counseling
- Optimization of nutrition
- Standardized analgesic use
- Anesthetic regimens
- Early mobilization

Despite the significant body of evidence indicating that ERAS protocols lead to improved outcomes, they challenge traditional surgical doctrine, and thus their implementation has been slow. Although they were first introduced by Professor Henrik Kehlet in the 1990s[1] they are not fully implemented across the United States. By using a SNAP, highly motivated organizations can work together to better understand and overcome these barriers to implementation and can create an implementation guide to serve that can be used by other HIIN hospitals.

Description:

The ERAS SNAP planned to recruit up to 15 hospitals who had:

[1] Review Multimodal approach to control postoperative pathophysiology and rehabilitation. Kehlet H Br J Anaesth. 1997 May; 78(5):606-17. [PubMed] [Ref list]

- No prior ERAS implementation and expressed interest in implementing ERAS for colorectal surgeries;
- Implemented ERAS in one other surgical subspecialty and are looking to spread ERAS to colorectal units; or
- Completely implemented ERAS in colorectal surgeries and are interested in serving as SNAP

By the end of the recruitment period, 13 implementing hospitals and three advisor hospitals were accepted into the ERAS SNAP. Implementing hospitals ranged in bed size from 25 – 849 with 50% being 100 beds or less. Throughout the course of the ERAS SNAP, three hospitals dropped out due to insufficient resources (e.g., only having one surgeon left at the hospital).

The following hospitals completed the ERAS SNAP:

Implementers	Advisors
Siloam Springs Regional Hospital, AR	Lee Health, FL
Lakeland Regional Medical Center, FL	Franklin Woods Community Hospital, TN
Flagler Hospital, FL	Baylor University Medical Center, TX
Florida Hospital, FL	
Memorial Hospital and Manor, GA	
Madison Memorial Hospital, ID	
Baptist Health--La Grange, KY	
University Medical Center, LA	
Hospital Episcopal San Lucas Guayama, PR	
Potomac Valley Hospital, WV	

Participating hospitals tested key bundle elements (preoperative counseling, optimization of nutrition, standardized analgesic, anesthetic regimens and early mobilization), had monthly internal team meetings that preceded SNAP virtual sessions, had ad hoc TA/subject matter expert calls with team leaders and other members (as needed) and had champions who were responsible for communicating with constituencies.

Time frame:

Launch – February 2017

End – September 2017

AIM:

- To develop an ERAS implementation summary to support HIIN hospitals in their implementation of current ERAS protocols.
- To have 100% implementation of applicable ERAS protocols in participating SNAP hospitals for colon surgery.

Measurement:

Hospitals tracked their progress using a simple Excel tracking sheet for adherence to ERAS bundle elements, both individually and as an all-or-none-measure. Hospitals submitted baseline and monitoring data for the quality outcomes. *(NOTE: advisors were not required to submit data).*

The original measurement plan included the following measures:

Pre-op	Pre-op counseling regarding ERAS
	Oral Bowel Prep Avoided
	Preoperative carbohydrate drink given
Intra-op	Normothermia
	Epidural or Regional Analgesia
	Goal Directed Fluid Therapy
Post-op	Post-Op Nutrition
	Multimodal Pain Therapy
	Early mobilization
	Post-Op Follow Up
All	All or none

However, it was soon discovered that oral bowel prep avoidance was controversial because of both mixed literature and strongly held provider beliefs. For this reason, the "oral bowel prep avoided" measure was changed to optional and disconnected from the all-or-none measure.

Outcome measures such as surgical complications, LOS or readmissions were not collected due to the short duration of the ERAS SNAP. It is reported in the literature that as compliance with process measures outcomes improve.

See measurement summary for additional information.

Education:

Throughout the eight-month duration of the ERAS SNAP, virtual monthly sessions were held that included both didactic content and peer-to-peer sharing.

Relevant resources related to ERAS, nutrition, protocols, patient education and SSI prevention were shared with all participants.

Additional technical assistance from an improvement or clinical subject matter expert were available to all participants. Two to three improvement calls occurred with each participating hospital, but the uptake of calls with SMEs was much lower, with only two to three calls in total.

Support Team:

- Subject matter experts (SMEs)
  - Vijay P. Khatri, MBChB, FACS, MBA
  - Muhammad Jaffar, MD
- Performance improvement facilitator
  - Pat Teske, RN, MHA
- Project manager
  - Jose Lopez
- Data specialist
  - Mark Plunkett, PhD

Project Evaluation:

Key learnings:

Although 100% implementation of applicable ERAS protocols was not accomplished in all facilities, facilities learned the content of the ERAS bundle. Progress was noted in all areas: pre-op, intra-op and post-op as compared to baseline. Learnings and adaptations based on hospital size and other factors were gathered. It was learned that smaller hospitals have an added challenge, as they may often only have one general surgeon on staff. The frequency of colorectal elective cases was also very low in the smaller hospitals, making the opportunity for change less common. When asked about their greatest barriers to implementation, six out of six hospitals said that the ability to influence surgical providers, suggesting a need to better address the concerns of surgeons, is necessary. Further ERAS implementation efforts may benefit from an upfront required one-on-one learning session with a surgeon and anesthesiologist SME.