Project Title

ERAS (Enhanced Recovery After Surgery) Nurse in Tan Tock Seng Hospital, Singapore: A Novel Concept

Organisation(s) Involved

Tan Tock Seng Hospital

Project Period

Start date: Mar-2016

Project Category

Workforce Redesign, Clinical Improvement, Quality Improvement, Care Redesign

Keywords

Care Redesign, Process Improvement, Quality Improvement, Clinical Improvement, Workforce Redesign, Effective Care, Perioperative Care, Multi-disciplinary Team, Enhanced Recovery After Surgery Program, Colorectal Patients, Early Mobilisation, Post-operative Care, Reduce Length of Stay, Reduce Hospitalisation Cost, Improve Bed Turnover,Reduce Surgery Wait Time, Nurse-led Mobilisation, Post-operation Early Nutrition, Nurse Care Coordinator, Institute for Healthcare Improvement (IHI) improvement model, Tan Tock Seng Hospital

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Nursing Excellence

Nurses are at center of how the physicians and other hospital departments cooperate and coordinate services to serve the patient better. Nurses interpret, disperse and collect results of what the doctor ordered. They are the front line, and see the patient more often than any other service. More weight is given for a project or program that improves the patient experience because of improvements and innovations in how nursing care is delivered. Does the project help communication within departments of the hospital? Does it improve the patient experience? Does it reduce nursing or other error from any department? Does it lead to better patient well-being and comfort? Does it lead to better care, rendered faster?

Complete All Information Below:

Project Title (Maximum 256 Characters):
ERAS (Enhanced Recovery After Surgery) Nurse in Tan Tock Seng Hospital, Singapore: A Novel Concept

Date Project Started (Maximum 128 Characters) (i.e. May 24, 2015):
March 2016

Department Name (Maximum 256 Characters):
Nursing, Ward 13C

Names of Key Staff Involved in this Project (Maximum 512 Characters) (Separate names with comma):
Kong Lan Pei (Nurse), Teh Shi Yun (Nurse), Ho Pui Sim Kitty (Nurse), Foong Mei Fern (Nurse), Hu Yalan (Nurse), How Kuan Yeong (Surgeon), Tay Guan Sze (Surgeon), Liu Hui Min (Surgeon), Jonathan Tan Jit Ern, (Anaesthetist), John Tey Boon Lim (Anaesthetist), Vera Lin Qinyi (Anaesthetist), Jayachandran Balachandran (Physiotherapist) and Ong Ya Wei (Dietician).

1. **Provide some background as to how the project originated e.g. what problem/opportunity were you faced with. (Maximum number of words – 350)**

The organisation recognised that there was a need to improve perioperative care to our surgical patients. As such, a team of surgeons was sent for a learning journey on the Enhanced Recovery After Surgery (ERAS) Programme. After returning from this learning journey, a multi-disciplinary team that consisted of surgeons, anaesthetists, nurses, physiotherapists and dieticians was formed to run this programme. A retrospective comparison study was conducted to compare the length of stay for patients in the ERAS programme in other parts of the world with our own hospital's (Tan Tock Seng Hospital) data. Seeing an opportunity to adopt the ERAS programme for our surgical patients, we attended workshops to learn how to implement the ERAS programme for our major surgical patients. ERAS advocates for one ERAS nurse as a coordinator. Dedicated ERAS coordinators play a critical role in seeing the patient through the entire perioperative journey in many successful programmes. At Tan Tock Seng Hospital, in the face of limited resources and manpower, our ERAS programme introduced a novel concept of a "deconstructed" ERAS coordinator role. This study aims to describe this concept and our preliminary results.

2. **Describe what was required to address the aforementioned problem/opportunity. Outline what your targets/goals were and whether any approach was outlined to correlate this program with better patient service and quality of care. Also, provide an overview of the team that was put together to undertake this. (Maximum number of words – 350)**

Firstly, we incorporated the ERAS protocol into patient care. In the nursing aspect, the main aim is to mobilise the patient early and to start nutrition early postoperatively. We aim to achieve 6 hours of mobilisation from post-operative Day 1 to 3 and for the patient to achieve nutritional intake of 600kCal per day as per ERAS protocol. Our unique "deconstructed" ERAS nurse coordinator role is divided into three areas: (1) the pre-operative; (2) inpatient; and (3) post-operative phases. The responsibilities of the ERAS coordinator in each phase is taken up by a different lead nurse working in their pre-existing domains.

Pre-operative patients are briefed on how to prepare themselves nutritionally at home and the lifestyle changes that need to be adopted before the operation. Patients are counselled on what to expect before the operation in order to gain their cooperation after the operation, especially on early nutrition and mobilisation.

In collaboration with the physiotherapist, surgeon and anaesthetist, nurses designed an assessment tool for nurses to decide when to mobilise a post-operative patient. With this tool, mobilisation is led by nurses rather than physiotherapists, after the patient is first seen by a physiotherapist. The definition of mobilisation is sitting the patient out of bed and ambulating patient as per ERAS protocol. Some work processes were also changed. We discussed with ward nurses and designed a daily patient activity schedule which assists nurses in planning their activities with patient care while giving them a goal in mobilising patients.

For early nutrition, we discussed with the dietician on how to best optimise calorie intake and what type of feeds is recommended. We also collaborated with anaesthetists and provided feedback on post-op nausea and vomiting which affects the patient's oral intake. Besides the anaesthetists, we worked with pharmacy to store oral nutritional supplements (ONS) in the ward for easy access to ONS supply as turn-around time to obtain ONS can take about 2 to 3 hours.

An administrative colleague will then enter the collected data into the electronic system for data analysis and ultimately, process improvement for better patient care.

3. Outline the steps or stages of the project and how these were executed by the team. (Maximum number of words – 300)

Stage one:

A multidisciplinary team as the core member for the workgroup was first formed. We decided to start with colorectal patients as this group of patients has the highest number of patients among the surgical patients in our organisation. Ward 6C (Surgical High Dependency) and Ward 11C (Surgical General Ward) were chosen to pilot the ERAS protocol as all colorectal post-op patients will be admitted to Ward 6C while Ward 11C receives these patients as a step-down care from high dependency care. The multidisciplinary team members then conducted an introductory workshop to introduce ERAS protocols to the clinical team. This is then followed up by multiple short workshops that an ERAS nurse conducts to emphasise and reinforce nursing processes. Ward-based ERAS champions, who act as leaders, are identified to guide other nurses.

Stage two:

Nursing leads use the Institute for Healthcare Improvement (IHI) improvement model and tools to spread ERAS concepts, perform daily audit of compliance, obtain feedback and perform root-cause analysis when areas of non-compliance are identified.

Weekly nursing huddles allow for continuous feedback from ground staff to the ERAS nursing leads, with fortnightly meetings between nurses from various areas that help to fine-tune micro-processes workflow when implementing ERAS within our institution.

With physiotherapist, surgeon and anaesthetist collaboration, we have set a guideline for nurse-led mobilisation. This has led to better patient care.

4. Demonstrate the results of the project and how this was beneficial for the patient. How did you measure this? Present quantifiable information such as before and after measurements and percentage improvement. (Maximum number of words – 200)

Since its official implementation in March 2016, 234 consecutive patients had undergone elective colorectal surgery under our institution's ERAS programme. Data on length of stay, nutrition and mobilisation achievement (as per ERAS aims) was captured in an electronic system in the ERAS Interactive Audit System (EIAS). Generally, mobilisation and nutrition compliance have improved from 20% to 60% and 20% to 50% respectively. Length of stay has been reduced from an average of 10 days before ERAS implementation to an average of 6 days post ERAS implementation.

A reduction in length of stay has a direct impact on hospitalisation cost for patients. A reduced length of stay also means that patients are getting back to their pre-op activities of daily living earlier. Theoretically, this has led to better care. In addition, shorter patient stay will improve bed turnover, thus reducing wait time for surgery. As patients are getting back to their pre-op activities of daily living faster now, nurses can redeploy their hours to other nursing tasks which in turn benefit other patients as well.

5. **Please give any other information, including third party testimonial regarding your project which you think would help convince the judges that this project (or program) should win this category. (Maximum number of words – 300)**

A point prevelance was conducted in the surgical wards to check if the ward nurses are aware of the nurse-led mobilisation criterion and to obtain their perceptions on whether the assessment tool aids them in mobilising patients. A total of 103 ward nurses participated in the survey. 76.9% of them are aware of the nurse-led mobilisation criterion and 84.4% of the participants agreed that the assessment tool helps them in mobilising patient. Current compliance rate for mobilisation on POD 1 is 60%. Workshops and introducing of ward champions serve a great purpose to achieve the compliance rate of ERAS guidelines and therefore improve patient's outcome.