Implementing an Enhanced Recovery Programme in Colorectal Surgery

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Length of stay for those patients having major, elective colorectal surgery at Guy’s and St. Thomas’ NHS Foundation Trust has been reduced by five days since the launch of an Enhanced Recovery Programme

Background
Marie Elwood is an Enhanced Recovery Nurse (ERN) at Guy’s and St. Thomas’ NHS Foundation Trust (GSTT). Under the clinical lead of Mr. Andrew Williams, consultant colorectal surgeon and the nursing lead of Fiona Hibberts, Consultant Nurse, the Enhanced Recovery Programme (ERP) was established at GSTT in October 2006.

Service innovation
The ERP is a multidisciplinary initiative aiming to improve the patients’ journey by:

• Optimising pre-operative health status
• Reducing postoperative complications and the surgical and physiological stress responses by changing traditional surgical methods
• Early feeding
• Early mobility
• Setting nutritional and activity goals
‘By using ERP,’ says Marie, ‘we have shortened length of stay by five days on average without changing the traditional discharge criteria.’ Marie says that ERP is open to all patients having major, elective, colorectal surgery regardless of the complexity of their surgery or pre-existing co-morbidities.

‘The Enhanced Recovery Nurse (ERN) role is pivotal to the programme, co-ordinating patient care, and this is my responsibility,’ she says.

**The enhanced recovery nurse’s role**

‘As the ERN I work autonomously within the colorectal team. I see patients in the pre-assessment clinic and throughout their in-patient stay, reinforcing their goals and liaising with the ward staff,’ explains Marie.

‘On discharge I review them daily on the phone. I work closely with the surgical team, colorectal cancer, inflammatory bowel and stoma nurse specialists and the ward.

‘I make referrals from pre-assessment to all members of the MDT as necessary, including the trusts’ POPS team (Proactive care of Older People who are going to have Surgery).’

Marie explains that patients were referred for cardio pulmonary exercise testing (CPET) to establish their anaerobic threshold score, helping her to triage their best place of first night recovery – ward, overnight intensive recovery or intensive care.

CPET testing is an excellent predictor of mortality from cardiopulmonary causes in the postoperative period.

She goes on to say that there is also an assistant on the ward who oversees the daily nutritional aspects of the patients and encourages their early mobility while Marie carries out the auditing of the programme.

This has been in progress from the outset.

**A different approach**

‘The ERP improves on the traditional pre-assessment process and challenges the methods of traditional post-operative care,’ says Marie.

**ERP Explained**

Pre assessment:

• Patients are informed how they are to be involved in their care and what they can do to help reduce postoperative complications.
• Advice is given on nutrition and nutritional supplement drinks provided to consume prior to admission.
• Patients are informed about pain relief and the use of epidurals.
• What is expected from them with regards to early mobilisation and feeding post operatively is explained.
• Anthropometry measurements are taken.

In patients:

• Bowel cleansing products are no longer used routinely, reducing electrolyte imbalance and dehydration
• Naso-Gastric tubes and Pelvic drains are also no longer routinely used
• It is aimed to remove urine catheters, where appropriate, on day one post operatively regardless of the use of epidurals
• Research (Basse et al 2000) suggest there is a less than 10% incidence of urinary retention in patients having on going continuous thoracic epidural analgesia when the urinary catheter is removed on day one post operatively
• Epidurals are the analgesia of choice, reducing the use of opiate analgesia which delays gastric emptying and prolongs orocaecal transit time and are now run from ambulatory machines which can be stored in a shoulder bag for ease of mobility and are placed higher by the anaesthetist (high thoracic) in order to reduce motor block
• Increased use of laparoscopic surgery minimises the need for large surgical wounds reducing the physiological and surgical stress responses
• Using transverse incisions instead of a midline laparotomy reduces postoperative incisional pain and improves postoperative pulmonary function
• Intraoperative fluid management has been fine tuned by the use of Oesophageal Doppler Monitoring

On discharge:

• Anthropometry measurements are retaken
• Patients are provided with contact numbers, information regarding return to normal activities and each patient is asked to complete an evaluation
• Each patient is telephoned daily and enquiries that follow a pro-forma of questions complied by the surgeons and stoma nurses, are used routinely in order to confirm a safe recovery at home.
• Patients can be seen in the ERP clinic where necessary, taking pressure off primary care and hopefully preventing A&E admissions.

Service development
GSTT is a large London teaching hospital and has great enthusiasm towards research-based practice. GSTT was one of the first ten trusts in the UK to develop an ERP and one of the first to accept all complexities of colorectal surgery and patients with already complex co-morbidities.

Overcoming challenges
‘Change in practice has been our greatest challenge,’ says Marie. ‘Repeated teaching sessions with all new nurses and doctors with regular feedback to all involved has been essential and continues even now.'
Monthly MDT meetings helped to customise the initial programme into one that can better meet the needs of our patient group,’ she says.

She explains that time restrictions on the ward used to make it difficult for the nursing team to offer necessary nutritional support, encourage the patients to use the ward dining room and supervise the patients in the increased mobility asked for in the goals.

‘With an ERP assistant, these issues are now better supported, ‘ she adds.

‘In order to audit the ERP, and ensure that daily goals are met, an integrated care pathway (ICP) document was created to be used on a daily basis from pre assessment to discharge, to document all patient care.

‘It was difficult, at first, to get the nurses and doctors to fill in their sections and not to use the traditional continuation sheets.

‘We gave the doctors and nurses ownership of the document and asked for their suggestions on how to make it more user friendly.

‘All members of the MDT are asked to give their comments regularly and the ICP is amended taking these suggestions in to consideration,’ says Marie.

**Learning from experience**

Marie says that in order to coordinate change everyone must be kept involved and ideas must be shared from the beginning, this certainly drives the programme forward.

‘Change in practice is difficult but we set out all aspects of what needed changing and did it all at once, which helped the process to run smoothly.

‘The evidence is essential to support the change and regular feedback as to how the change has benefited improves morale and willingness to continue. The ERN is a vital component to ensuring successful implementation of the system. At GSTT, the ERP is now being rolled out in upper GI surgery,’ she says.

**Benefits to patients and staff**

Marie explains that ERP has significantly reduced average length of stay from 14 to nine days (results of first 114 patients on the ERP having major colorectal surgery at GSTT).

‘Effective reduction of a hospital’s average length of stay is not a question of simply discharging patients earlier,’ she says. ‘Instead, it is ensuring that patients recover more quickly and reach the point at which they are ready to leave hospital sooner.’

She points out that the patient journey now has improved co-ordination and the telephone helpline ensures that the patient has a direct contact at the hospital where calls can hopefully avoid A&E re admissions.
‘Patients have the benefit of seven follow up phone calls on discharge and optional clinic appointments with the ERN consultant as necessary between discharge and their surgical appointment. Feedback shows that patients really value the ongoing contact with a dedicated nurse.

‘The ward staff now have prior knowledge of all the ERP admissions with detailed information regarding each patient’s individual needs. The ward has increased dietetic support and their documentation is far less time consuming,’ she adds.

**Cost savings through innovations**

‘By enabling patients to leave hospital sooner and recover more quickly,’ says Marie, ‘we are saving the trust a significant amount of money. She goes on to say that there was a potential five hospital-day saving for each patient on the programme.

**Advice for practice**

- A sense of ownership from the whole team is important to the success of ERP
- It is essential that everyone is involved from the start
- Continuous feedback and regular ‘improvement’ meetings are necessary
- Audit of individual care is vital from the first day and there must be an ERN to co-ordinate the programme

For further information, contact Marie Ellwood or Fiona Hibberts on 0207 188 2568. They will be organising a study day on the Enhanced Recovery Programme in late September 2008.

**References**


