Executive Summary

Brief Review: Fast-track surgery and enhanced recovery after surgery (ERAS) programs

(Adapted from the report by Alun Cameron)

Background
Recent efforts to improve patient outcomes and to reduce hospital stay focus on enhancing postoperative recovery with a multimodal approach. The concept of fast-track surgery, also called enhanced recovery after surgery (ERAS) or multimodal surgery involves using various strategies to facilitate better conditions for surgery and recovery in an effort to achieve faster discharge from hospital and more rapid resumption of normal activities after both major and minor surgical procedures, without an increase in complications or readmissions. The objectives were to assess the safety and efficacy of fast-track surgery programs on patient outcomes through a systematic review of the literature; and to qualitatively explore the status of fast-track surgery in Australia through interviews with surgeons who have experience with fast-track surgery.

Methods

Search strategy – Studies were identified by searching MEDLINE from 1980 to 2009, Entrez PubMed from January 2008 to February 2009, and the Cochrane Library from inception to January 2009. The Australian New Zealand Clinical Trials Registry, Clinical Trials Database (US), NHS CRD (UK), NHS HTA (UK), National Research Register (UK) and Current Controlled Trials were searched in February 2009. The TRIP database was searched in January 2009 for available guidelines.

Study selection – Systematic reviews and randomised controlled trials (RCTs) that reported the use of a fast-track surgery program in comparison to conventional surgical care, and that reported safety and/or efficacy outcomes were included for review.

Data collection and analysis – Data from the included RCTs were extracted by one researcher. Where possible, statistical pooling was conducted. Where not possible, data were grouped as closely as possible into tables or described narratively.

Survey of surgeons – Surgeons from Australia and New Zealand who conduct fast-track surgery were
identified via literature searches or through personal referrals. An informal semi-structured interview was conducted either in person or via the telephone. Responses were deidentified, grouped into themes and reported narratively.

Results
A total of 13 documents were included for review: one systematic review, 11 RCTs and one guideline document.

Literature review
The current review looked at fast-track surgery in comparison with conventional surgery, and as such included studies examining various indications and surgical procedures. Results indicated:

- Optimising conditions before, during and after surgery reduced the length of hospital stay for patients with no increase in readmission rates.
- Using the mobilisation protocols, patients mobilised faster and spent more time out of bed shortly after surgery. Optimised patients generally had a faster return of gastrointestinal function than conventional patients.
- There appeared to be little difference in patient-reported pain, although patients in the optimised groups may have had less pain shortly after surgery.
- There were no equivocal differences in quality of life outcomes between optimised and conventional patients, but only two studies reported this outcome. One reported a significantly improved outcome for optimised patients at three months, which was a longer follow-up than the second study.
- In relation to safety, two studies reported that optimised patients had significantly lower mortality and morbidity than conventionally treated patients, with the remainder of studies either reporting no difference between the groups or not reporting any statistical analyses.
- A search of ongoing and unpublished trials demonstrated that more studies are currently underway and that this an area of increasing interest. It may be that some trials currently underway are not recorded in a manner that notes fast-track surgery to be part of the research, and may instead incorporate it into a study in a different area.
- One guideline document regarding optimising conditions for surgery was identified. One training course regarding fast-track surgery was identified (to be held on 27 April 2009 and 23 April 2010 in Auckland, New Zealand).

Survey of surgeons
Four surgeons were interviewed who presented a range of views and experience with fast-track surgery. Results indicated that:

- There is currently no uniform policy in relation to fast-track surgery in Australia or New Zealand, although it was acknowledged that many surgical units are investigating some aspects of optimised surgery.
• The surgeons generally had similar approaches to fast-track principles, although some followed protocols much more strictly than others. The area of most variation in technique was analgesia and the use of epidurals: hospitals with strict protocols generally used epidurals, while the hospitals with less formal processes used other forms of analgesia.

• There was consensus that it was important that all staff involved in fast-track programs be educated in the fast-track principles and procedures.

• It appeared that surgical units with a small number of surgeons and staff found implementation of fast-track principles and compliance with procedures easier than those who had a greater number of staff.

• There was a general view that fast-track surgery would save money in terms of reducing hospital stay, but only one surgeon had collected cost-effectiveness data.

Clinical and Research Recommendations

This report found that fast-track surgery programs can result in beneficial outcomes for patients. In particular, optimising conditions before, during and after surgery can reduce the length of hospital stay for patients with no increase in readmission rates. Further work is required to define the key aspects of optimised surgery, together with the indications and possible patient groups who are most likely to benefit. It may be that specialist societies, hospitals, health care trusts, local or federal departments of health, could play a role in facilitating this work, to assist in standardisation and implementation of any protocols, and to reduce unnecessary duplication of effort. Additional research involving larger patient numbers would provide data to show how optimised approach would differ from the conventional method.

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Important note

The information contained in this report is a distillation of the best available evidence located at the time the searches were completed as stated in the protocol. Please consult with your medical practitioner if you have further questions relating to the information provided, as the clinical context may vary from patient to patient.
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