

POSTOPERATIVE MORTALITY FOR ELDERLY PATIENTS UNDERGOING ELECTIVE COLORECTAL SURGERY: A SYSTEMATIC REVIEW

Thesis: Master of Clinical Science

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ABSTRACT

Despite good evidence that reporting surgical outcomes is of value to patients, clinicians, hospitals and funders, it may be difficult for stakeholders to access the outcome data they need. The aim of this systematic review was to meet the gap in the published literature, and provide a pooled estimate for the 30 day all-cause postoperative mortality for elderly patients in highly developed countries undergoing elective colorectal surgery.

This review considered studies that included patients aged 65 years and over from highly developed countries, presenting for elective colorectal surgical resection, reported via published and unpublished studies performed between 1998 and 2013. A meta-analysis of proportions was undertaken, using a fixed effects model, in order to reduce the likelihood of giving undue weight to smaller studies. Twenty four studies were included after assessment.

The 30 day postoperative mortality rates for all studies ranged from 0.57 to 11.3%. The overall pooled mortality rate for all included patients in all studies aged 65 years and over was 5.34% (95% Confidence Intervals 5.26-5.41%). Mortality rates generally increased with increasing age. There was a noticeable difference between national-level reported mortality rates, and those reported from academic centres, and from regional and non-academic centres. In studies where a qualitative outcome assessment was reported, all eleven assessments were positively framed (as “safe”, “favourable”, or described procedures with a “small” mortality). No study referred to “unsafe” or “unfavourable” outcomes.

The implications of this systematic review for future research regarding outcomes after elective colorectal surgery in elderly patients are that more studies are needed, in order to answer the following questions:

1. How can health systems best report adverse outcomes after surgery?
2. What postoperative outcomes are of greatest importance to patients?
3. How can qualitative outcomes be incorporated with quantitative outcomes (such as mortality/survival) to produce meaningful metrics for patients?
4. How can appropriate outcome data be best incorporated into patient-level risk prediction scores for surgery?
5. How can outcome data be incorporated into shared decision-making processes for surgery, and how can patient risk- tolerance be assessed?

AUTHOR'S STATEMENT

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