

# Preparing for elective colorectal surgery

## Then

In 2003,[1] we reported that:

Since the 1970s, evidence began to emerge that with the routine use of antibiotics in colorectal surgery there appeared to be no additional benefit from bowel preparation in reducing rates of surgical complications. A systematic review and a subsequent Cochrane systematic review were cited.[2,3]

A national survey in 2000 found that 9 out of 10 patients having elective colorectal cancer surgery received some form of bowel preparation, yet there was no evidence that it improved patient outcomes.

## Now

**A review of developments from 2004 to 2007 has found that:**

There is increasing evidence that routine mechanical bowel preparation (MBP) has no benefit and may actually increase the likelihood of surgical complications associated with elective intra-abdominal colorectal surgery.

However, in the absence of up-to-date data on what is happening in clinical practice in Australia we cannot conclude whether the identified evidence-practice gap is being closed.

## What has changed since Volume 1?

### Best available evidence

MBP before elective colorectal surgery has been the standard of care for decades. MBP aims to reduce total faecal mass to facilitate operative manipulation of the colon and enhance the action of oral antibiotics. Most often, whole-gut lavage with polyethylene glycol (PEG)-electrolyte solution or sodium phosphate is used on the day before the operation. This may be combined with dietary restriction and cathartics over two days.[4]

Since publication of the *Evidence-Practice Gaps Report, Volume 1* (the Gaps Report 1), the Cochrane systematic review has been updated as additional randomised controlled trials (RCTs) have been published.[5] Two meta-analyses have also arrived at similar conclusions, namely that “there is good evidence to suggest that mechanical bowel preparation using PEG should be omitted before elective colorectal surgery”[6] and “there is no evidence to support the use of MBP in patients undergoing elective colorectal surgery. Available data tend to suggest that MBP could be harmful with respect to the incidence of anastomotic leak and does not reduce the incidence of septic complications”.[7]

More recently, further studies have shown that intra-abdominal surgery without pre-operative MBP is safe for colon[8,9], rectal[10] and colorectal surgery.[11,13] Several evidence-based reports have drawn attention to the fact that not only is there level I evidence that demonstrates no benefit from MBP when compared with no preparation, there is level I evidence that demonstrates a higher incidence of anastomotic dehiscence (leakage) in patients undergoing MBP.[14–16]

However, with high risk anastomoses, no preparation may carry an increased penalty. A recently-published RCT found an association between severe, symptomatic anastomotic leaks and a bowel loaded with faeces.[18,19] This was the first RCT sufficiently powered to define benefit or risk associated with MBP in patients having high risk anastomoses below the peritoneal reflection.

### Current practice

A search of the published literature did not locate any information on the frequency of use of MBP in the pre-operative care of patients requiring elective colorectal surgery in Australia.



## Initiatives to help close the gap

### Guidelines

The Australian clinical practice guidelines cited in the Gaps Report 1 were updated in 2005 by the Australian Cancer Network Colorectal Cancer Guidelines Revision Committee.[20,21] These guidelines state that “Bowel preparation is current standard practice before elective colorectal operations. However, recent randomised controlled trials have not demonstrated any conclusive benefit from this procedure. Accordingly, the previous guideline has been revised as follows: Mechanical bowel preparation is not indicated in elective colorectal operations unless there are anticipated problems with faecal loading that might create technical difficulties with the procedure, e.g. laparoscopic surgery, low rectal cancers”.

These guidelines state that routine pre-operative bowel preparation is not recommended practice.

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