



# ERAS brings value to the perioperative care and improves patient outcomes

A.B.G. Kwast, E. Huiskes, M. van Aarsen, K. Mekkelholt, R. Bretveld, E.B. van Duyn, R. van Ieperen  
Medisch Spectrum Twente, Enschede, the Netherlands

## Rationale

The ERAS (Enhanced Recovery After Surgery) programme leads to improvement of the quality of perioperative care resulting in shorter hospital stays, reduction of complications and cost reduction. In the context of Value Based Health Care (VBHC) the ERAS programme for colorectal surgery is implemented in March 2020 in Medisch Spectrum Twente. The results of the implementation of the ERAS programme are discussed.

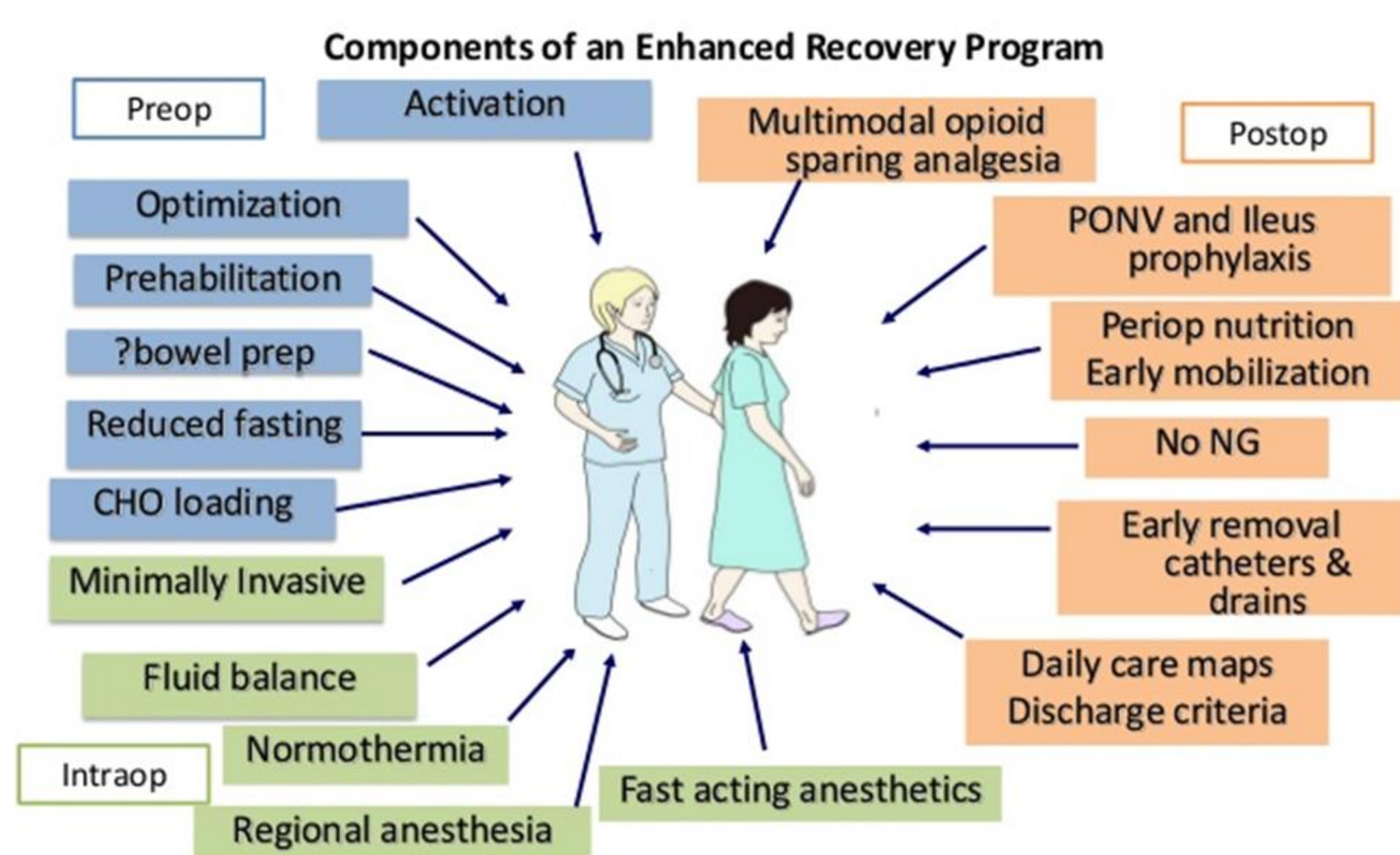


Figure 1. Components of an ERAS program

## Methods

Cohort study, comparing 2 groups:

- **ERAS group:** 128 patients (March – December 2020) who participated in the ERAS program;
- **CONTROL group:** 69 patients who underwent surgery (2018) prior to implementation of the ERAS program.

All patients received elective colorectal surgery. Clinical outcomes and compliance were obtained using the ERAS Interactive Audit System (EIAS).

## Conclusions

Full implementation of ERAS has led to improvements in the quality of perioperative care resulting in shorter hospital stays, decreased number of complications, improved patient outcomes and reduced costs. Continuous feedback through EIAS in the multidisciplinary improvement team leads to further quality improvement. The implementation of ERAS is a major contributor to the VBHC principles.

## Results

Mean compliance with ERAS care elements increased from 57% to 82 % after implementation. Mean length of stay decreased from 9.8 days to 4.7 days, a decrease of 52% without an increase of 30-day all-cause readmissions (11.6% to 7%), figure 2. The total number of complications (from nausea to anastomotic leaks) decreased from 39.1% to 32% with a decrease in anastomotic leaks complications from 6.9% to 2.6%. Patient outcomes improved. Pain scores improved on the postoperative days (mean over 3 postoperative days from 2.6 to 1.8) despite decreased opioid use. Observed nausea during the first 3 postoperative days decreased with 22% (from 39% to 17%). Moreover the length of stay reductions resulted in cost savings and freeing up beds. This without the feeling of increased workload among nurses.

