



Improving the Quality of Bladder Cancer Patient Care across RCN Partner Institutions: Implementation, Standardization, and Analysis of an RCN ERAS Protocol for Radical Cystectomy

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INTRODUCTION

- Bladder cancer is the 5th most common cancer in Canada, 4th most common among men and 12th most common among women (Bladder Cancer Canada, 2017).
- Because of a recurrence rate of 60-70%, bladder cancer is the most expensive cancer to treat on a per-patient basis (Bladder Cancer Canada, 2017).
- 25% of bladder cancer patients are diagnosed with muscle-invasive disease. The mortality rate for muscle-invasive disease is 40% in the first 5 years. Radical cystectomy is the standard treatment for invasive bladder cancer, with curative intent in non-metastatic patients (Bladder Cancer Canada, 2017).
- Despite standardization of the surgical technique, improved anaesthesia and perioperative care, morbidity is still up to 30-40% (Shabsigh et al., 2009).
- Enhanced recovery after surgery (ERAS) perioperative protocols have shown significant reductions in complications and length of stay (LOS). It has been established as evidence-based best care for colorectal surgeries, and can be extended to other surgical specialities (Cerentola et al., 2013).

OBJECTIVES

- Implement a **standardized ERAS pathway (Figure 4)** for radical cystectomy within the RCN partner institutions with a **high rate of compliance**. This will require developing:
 - Patient Education Materials
 - ERAS Perioperative Protocols
- Improve the quality of care for bladder cancer patients**, i.e. improve recovery, decrease morbidity and complications of this procedure.

INTERVENTIONS

Implementing a Standardized ERAS Pathway

A. Patient Education Materials

- Through a collaboration between the JGH ERAS team (Dr. Bladou, M Giordanengo, N Hotakorzian), the MUHC ERAS coordinator (C Poisson) and the MUHC Patient Education Office, we developed **patient booklets** and **posters** based on ERAS guidelines for radical cystectomy.
- The patient booklets and posters have been displayed in in-patient rooms and are used by trained nurses for patient counselling at the JGH. All materials are available in French and English on the RCN website, **Figure 1**.

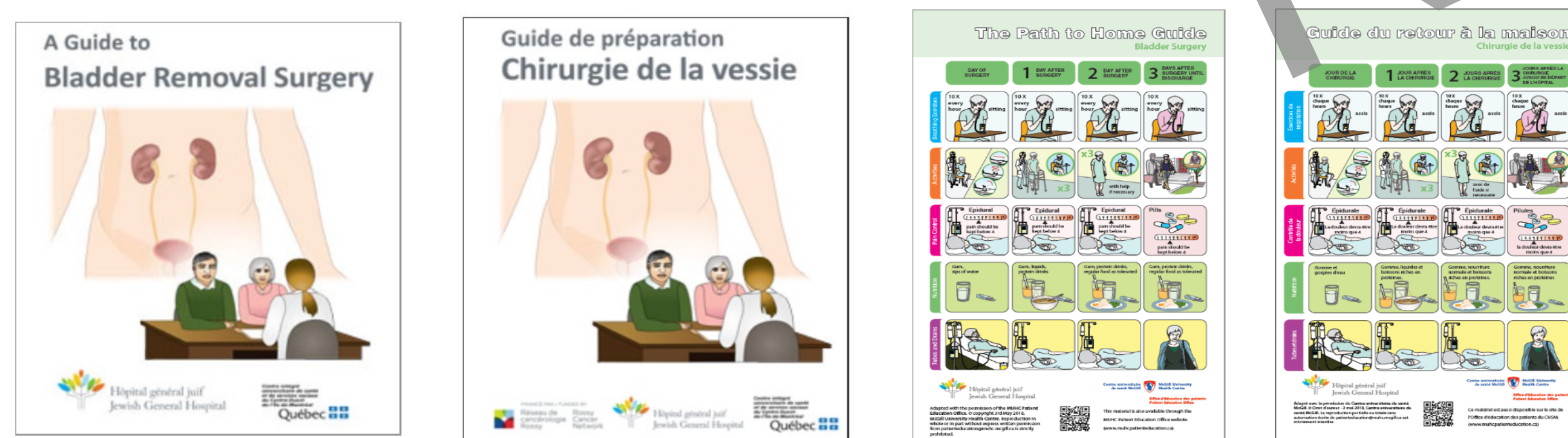


Figure 1. ERAS education materials developed in collaboration by the JGH & MUHC

B. ERAS Perioperative Protocols

- Preoperative** and **postoperative order sets** were developed by the JGH and MUHC ERAS teams.
- Multiple teaching sessions** were done to present and explain the new practice for radical cystectomy pathway to key stakeholders, i.e. admin staff, presurgical screening clinic nurses, post anaesthesia care unit.

RESULTS

Healthcare Provider Compliance to ERAS Guidelines

	Evaluation Period	Results
Pre-Intervention	Jan 1 2015 – Dec 31 2017	-
Post-Intervention	Jan 1 2018 – Jun 29 2018	64.5%

- At the JGH, ERAS pathway compliance can be measured using the ENCARE© system audit tool. **Figure 2** below shows the level of compliance for each ERAS element for all patients. While post-intervention data includes only 5 patients at this time, we still observed a compliance of 64.5% after implementing the standardized ERAS pathway. It will be important to monitor whether this will increase with time.

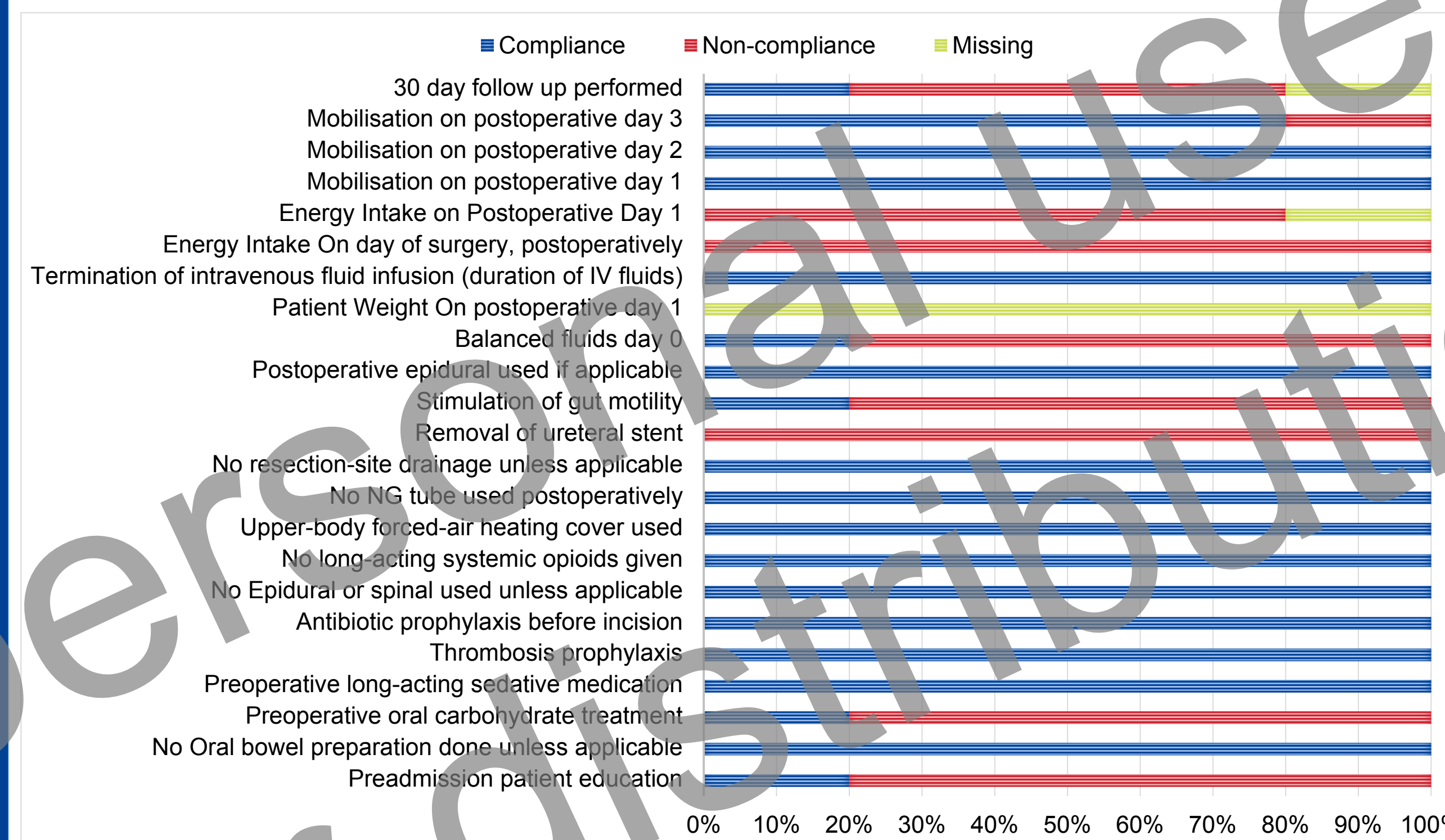


Figure 2. Level of compliance for each ERAS pathway element

Improving Quality of Care – Length of Stay

	Evaluation Period	Results
Pre-Intervention	Jan 1 2015 – Dec 31 2017	Median LOS 10 days
Post-Intervention	Jan 1 2018 – Jun 29 2018	Median LOS 6 days

- Since implementation of ERAS pathway guidelines we have observed a correlation between increasing compliance and decreasing median LOS from 10 days in 2016 to 6 days in 2018, **Figure 3**.

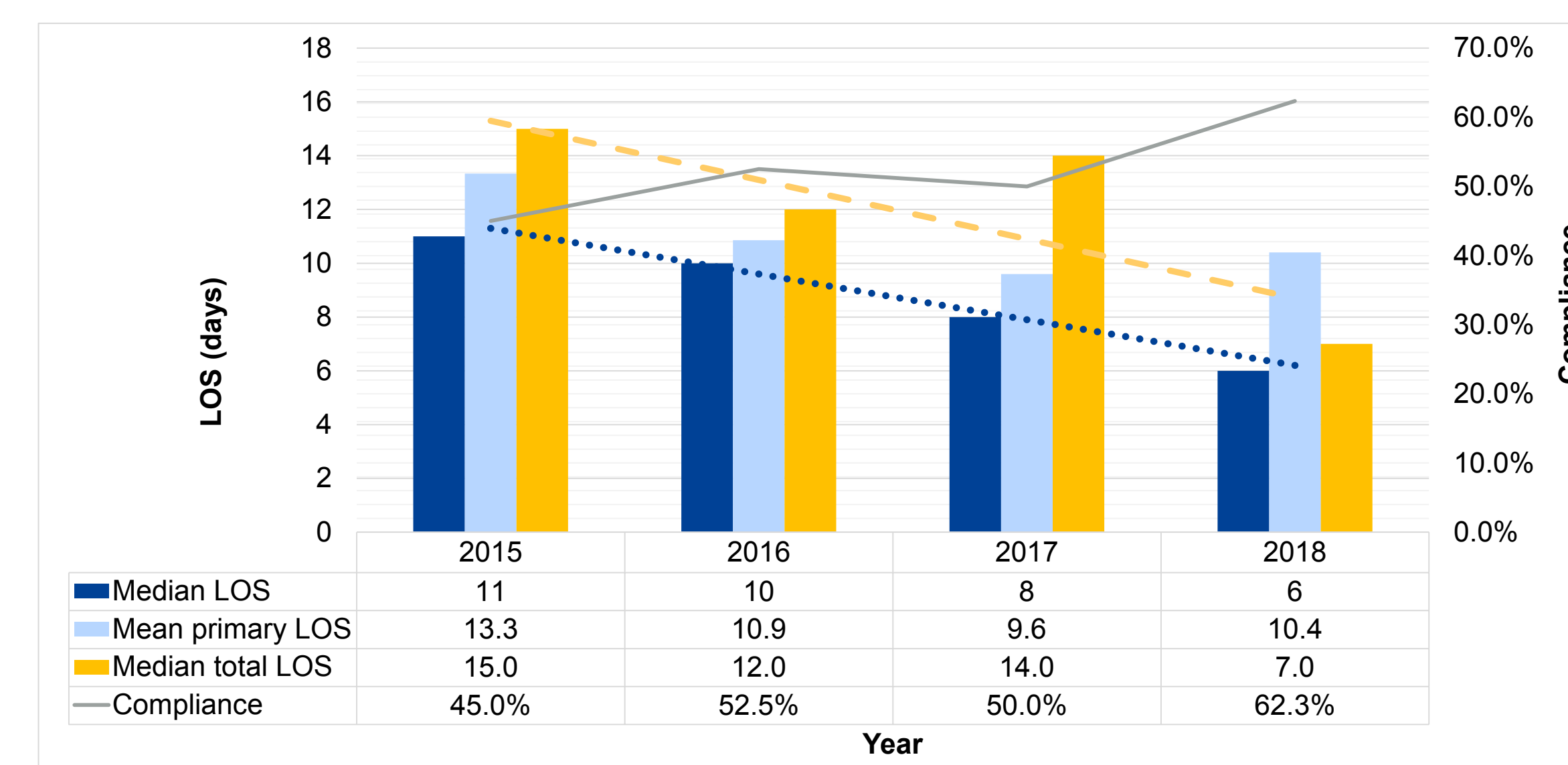


Figure 3. Level of compliance and length of stay (LOS) from 2015 to 2018

IMPORTANT LESSONS

- Having a **dedicated nurse ERAS coordinator** was key. This coordinator played a crucial role in:
 - Development of order sets & patient education materials
 - Implementation of ERAS pathway
 - Training all key stakeholders involved in the pathway
 - Tracking changes in compliance and postoperative complications
- Maintaining frequent communication** between ERAS team members and other stakeholders (i.e. perioperative nurses, anesthesiologists, MUHC patient education office, etc.) is important and challenging.
- Approval processes for patient education materials can be difficult to navigate. Recommend **careful planning and understanding of meeting schedules for respective approval committees**.
- Include intraoperative stakeholders (i.e. surgeons and anesthesiologists) earlier** in project planning to encourage involvement and to increase ERAS guidelines compliance.
- Important that **surgeon secretaries receive good training** – they are first to flag ERAS-eligible patients and are key to establishing compliance early.
- Maintain regular training** – staff rotation is frequent and it is necessary to ensure all nurses are up-to-date.

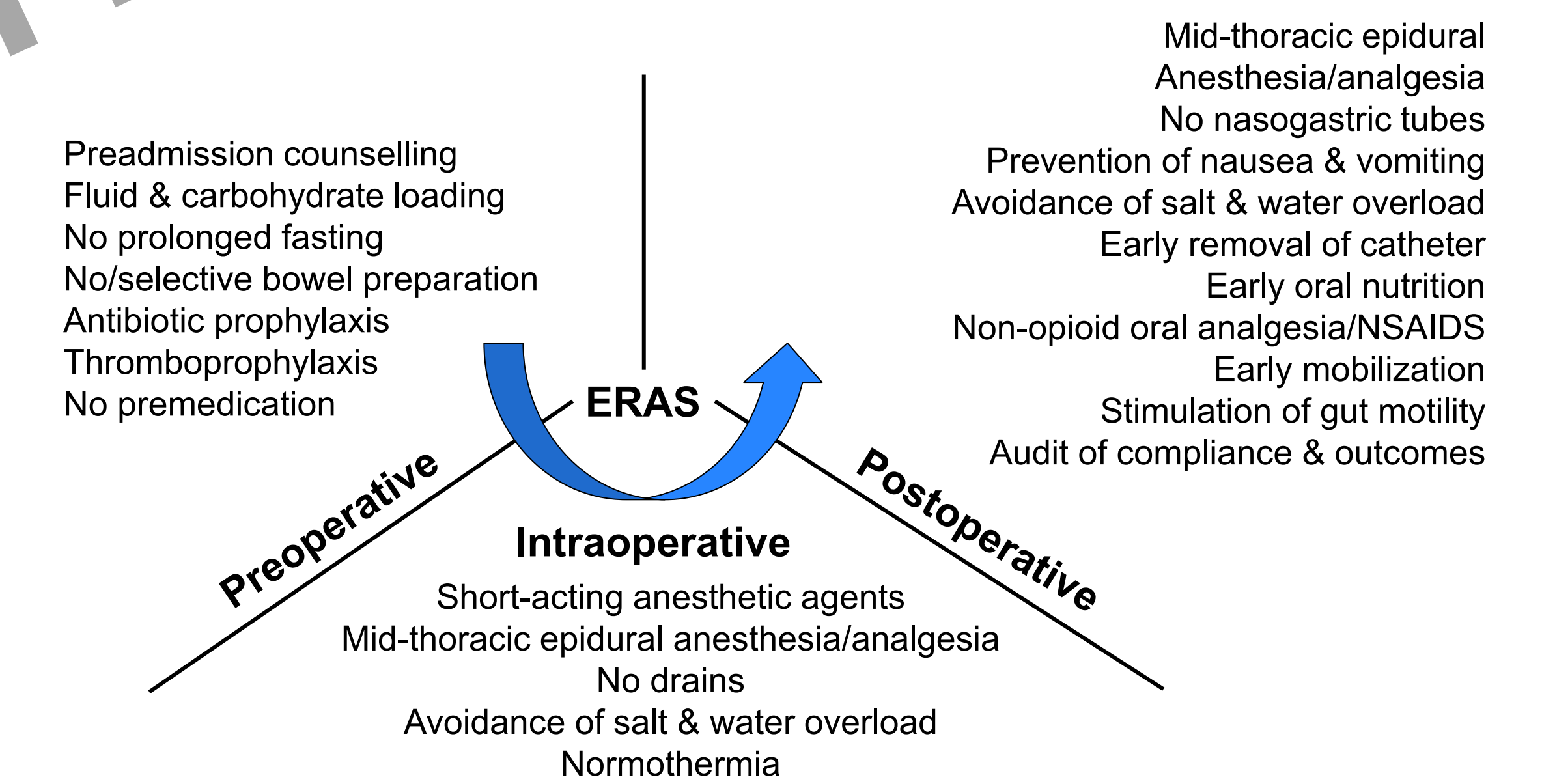


Figure 4. The principles of the ERAS pathway

FUTURE DIRECTIONS

- Continue collecting data for cystectomies.
- Redefine the role of ERAS coordinator so that it can be expanded to other specialities; it needs to become a nursing educator role.
- Schedule regular training sessions due to regular staff rotation.
- Allocate resources to keep staff up-to-date and also to follow-up with patients to encourage compliance.
- Additional funds to meet the continuous cost of booklet and poster printing
- Increase collaboration across ERAS community – enable knowledge transfer and communication of lessons learned.

TRANSLATION ACROSS THE RCN

- We are now in the process of sustaining the standardized ERAS pathway across the JGH and MUHC. We aim to continue collecting data on cystectomies at these sites.
- Since ERAS pathways is transferable to other surgical specialities, any **lessons learned** can be applied to **other disease sites across RCN partnered hospitals** in the future.