Appendix 1 to Springer J, Doumouras A, Lethbridge S, et al. The predictors of enhanced recovery after surgery utilization and practice variations in elective colorectal surgery. A provincial survey. *Can J Surg* 2020.

DOI: 10.1503/jpn.009419

Enhanced Recovery After Surgery or 'Fast-track' Surgery Utilization in Ontario, Canada

1. Please complete this questionnaire if you practice ANY colorectal surgery. If you do not practice any colorectal surgery, please complete the first section of the survey entitled "Demographics and practice characteristics" so that we have this information for our records.
2. All responses will be anonymized and kept confidential.
3. By completing this survey, implied consent for the use of the data for research purposes is assumed.
4. Please note, your participation in the study is voluntary and you may stop the survey at any point before submission. Once responses are submitted, they cannot be withdrawn.
5. This study has been approved after full review by the Hamilton Integrated Research Ethics Board (HiREB). If you have any questions regarding your rights as a research participant, you may contact the Office of the Chair of HiREB at 905-521-2100 ext. 42013.
6. If we have not captured some of your preferences, please include further information in the provided comments sections.
7. To submit your survey, please either:
    a. mail the attached survey with pre-paid postage or,
    b. log onto www.surveymonkey.com to complete the survey below. The link is; https://www.surveymonkey.com/r/DWNBN6G
8. This survey will take approximately 5-10 minutes to complete.
9. If you have already completed this survey, please disregard this copy

Survey Details:
Enhanced Recovery After Surgery (ERAS) programs are multimodal approaches that have been extensively studied and proven to reduce post-operative complications, accelerate recovery, improve overall patient outcomes and reduce cost following surgery. The general aim of these programs are to reduce post-operative morbidity and enhance recovery by minimizing physiological stress and re-establishing homeostasis and organ function as early as possible. Despite the large amount of evidence that supports the use of ERAS programs (or variations of ERAS programs) in patients undergoing colorectal resection, there have been a few mainly UK studies that have demonstrated generally poor uptake of routine ERAS programs. Some studies have noted general barriers to ERAS implementation, however no study has identified the specific barriers through a surgeon targeted survey. The aim of this study will be to assess the uptake of ERAS following colorectal surgery in Ontario. In addition, to identify the specific barriers or limitations to the uptake of ERAS programs. We will identify both modifiable and non-modifiable factors that can be incorporated into an improvement proposition to enhance delivery of provincial health care for colorectal resection patients.

This study has been made possible through the support of McMaster Surgical Associates.

Appendix 1 to Springer J, Doumouras A, Lethbridge S, et al. The predictors of enhanced recovery after surgery utilization and practice variations in elective colorectal surgery. A provincial survey. *Can J Surg* 2020.

DOI: 10.1503/jpn.009419

Online appendices are unedited and posted as supplied by the authors.

Survey Incentive: Following completion of this survey, you will be given the opportunity to provide your contact information in order to be submitted into a draw to win a laparoscopic training course at McMaster University's **Centre for Minimal Access Surgery (CMAS)** (approx. value $1500) or various gift cards (valued $100).

Jeremy E Springer MSc, MD
General Surgery
Colorectal Fellow

Cagla Eskicioglu MSc, MD, FRCSC
Assistant Professor
Colorectal Surgeon

Shawn Forbes MSc, MD,FRCSC
Associate Professor
Colorectal Surgeon

McMaster University SURGERY
CMAS
Faculty of Health Sciences
Department of Surgery

Appendix 1 to Springer J, Doumouras A, Lethbridge S, et al. The predictors of enhanced recovery after surgery utilization and practice variations in elective colorectal surgery. A provincial survey. *Can J Surg* 2020.

DOI: 10.1503/jpn.009419

Online appendices are unedited and posted as supplied by the authors.

A) Demographics and Practice Characteristics (*Circle the most appropriate response).*

1. Age: _____
2. Sex: Male Female
3. Years in Practice: < 5 years 5-10 years 11-15 years > 15 years
4. Have you had **COLORECTAL** fellowship training? Yes No
5. If you have had formal training in Minimally Invasive Surgery, was it
   During residency During fellowship Additional training after beginning practice
6. Please list any other or additional fellowship training you have had.
   _____
7. Where is your practice based?
   Academic Centre Small Community Hospital (<100 beds)
   Large Community Hospital (>100 beds)
8. How many elective colorectal resections did you perform last year?
   ① Less than 10 10-29 30-49 50 or more
   I do not perform colorectal surgery

B) ERAS Questions (*Circle the most appropriate response)*
The questions below refer to ALL colon and/or rectal resection patients

1. Were you exposed to **ERAS** during your surgical training? Yes No

   2. If yes, was it during (residency / fellowship) training *circle one or both*

3. Do you follow a formal ERAS or 'fast track' program that is supported by your institution and multi-disciplinary team? Yes No

   4. If yes, when was your program formally implemented? _____ Month _____ Year

Appendix 1 to Springer J, Doumouras A, Lethbridge S, et al. The predictors of enhanced recovery after surgery utilization and practice variations in elective colorectal surgery. A provincial survey. *Can J Surg* 2020.

DOI: 10.1503/jpn.009419

Online appendices are unedited and posted as supplied by the authors.

5. Do your patients receive pre-operative education and/or instruction about the post-operative recovery process? Yes No

6. If so, which of the following (please check all that apply):
   - ☐ Verbal
   - ☐ Written
   - ☐ Electronic
   - ☐ Pamphlets
   - ☐ Direction to internet

7. If you provide pre-operative education and/or instruction about the post-operative recovery process, where does this occur? (please check all that apply)
   - ☐ Surgeon's clinic/office
   - ☐ Pre-operative clinic
   - ☐ Other: _____

8. Do you have a standardized pre-/post-operative ERAS order set? Yes No

9. Do you routinely leave NG tubes in situ following colorectal resection? Yes No

10. On what post-operative day do you normally commence oral intake? (please check <u>one</u>)
    - ☐ POD #0
    - ☐ POD #1
    - ☐ POD #3
    - ☐ POD #5
    - ☐ When passing flatus

11. Do you utilize pre-operative pre-habilitation techniques (nutritional optimization, pre-operative analgesia etc.)?
    Yes No

12. Do you restrict IV therapy postoperatively? Yes No

13. Do you use epidural anesthesia (when not otherwise contraindicated) and reduce narcotic use as much as possible for post-operative analgesia? Yes No

14. Are you aware of the concept of balanced analgesia? Yes No

15. Does your anaesthesiologist maintain intra-operative normothermia? Yes No
    Uncertain

Appendix 1 to Springer J, Doumouras A, Lethbridge S, et al. The predictors of enhanced recovery after surgery utilization and practice variations in elective colorectal surgery. A provincial survey. *Can J Surg* 2020.

DOI: 10.1503/jpn.009419

Online appendices are unedited and posted as supplied by the authors.

16. Does your anaesthesiologist utilize non-invasive fluid monitors? Yes No Uncertain

17. Do you enforce early post-operative mobilization (facilitated by physiotherapy)? Yes No

18. Do you have a standardized protocol that directs removal of catheters/lines and tubes? Yes No

19. Do you discharge patients immediately upon return of bowel function, adequate oral diet and analgesia? Yes No

20. You have a right hemi-colectomy planned for tomorrow. What time period did you tell your patient was their expected length of stay?
    - ☐ 1-3 days
    - ☐ 4-5 days
    - ☐ >5 days
    - ☐ I do not counsel on a specific length of stay to prevent discouraging patients if they remain longer

C) Barriers/Limitations to ERAS (*Select most appropriate)*

1. Please choose all applicable "barriers to ERAS" that you experience at your institution?

Support based Barrier
- ☐ Lack of surgeon/colleague support
- ☐ Lack of nursing support
- ☐ Lack of anesthesia support
- ☐ Lack of support from Allied Health (physiotherapy, occupational therapy, dietician etc.)
- ☐ Poor communication/collaboration amongst team members

Resource based barrier
- ☐ Lack of institutional financial resources
- ☐ Lack of patient education
- ☐ Lack of physical resources
- ☐ Variability of patient population that doesn't allow a standardized approach
- ☐ Other:_____ _ _____ _____

2. Do you feel that ERAS utilization would increase at your institution if there was a standardized pre/post-operative order set? Yes No Not Applicable (we have ERAS pre/post orders sets)

3. **IF** you **DO NOT** utilize a formal ERAS program, Why?
    - ☐ I have never heard of ERAS

Appendix 1 to Springer J, Doumouras A, Lethbridge S, et al. The predictors of enhanced recovery after surgery utilization and practice variations in elective colorectal surgery. A provincial survey. *Can J Surg* 2020.

DOI: 10.1503/jpn.009419

Online appendices are unedited and posted as supplied by the authors.

- ☐ I have heard of ERAS but don't really know how to institute it into my practice
- ☐ I use some ERAS principles but not in a formal way
- ☐ I am not convinced with the available evidence enough to change my practice
- ☐ I would like to utilize ERAS, however do not have the support required from my institutions multi- disciplinary team
- ☐ Other:_____
  _

_____

4. **IF** you **DO NOT** utilize a formal ERAS program, would you start using ERAS if you were given adequate education and data that supports ERAS?
   Yes No Maybe

5. **IF** you **DO NOT** utilize a formal ERAS program, would you start using ERAS if you had your institutions multidisciplinary support
   Yes No Maybe

D) Comments (PLEASE <u>PRINT</u> CLEARLY):

E) If you are interested in the results of this survey and would like to be entered into a draw to **WIN a FREE CMAS course at McMaster**, please provide your contact information below. **(PLEASE <u>PRINT</u> CLEARLY):**

First Name: _____

Last Name: _____

Institution: _____

Email: _____

Telephone: _____

Appendix 1 to Springer J, Doumouras A, Lethbridge S, et al. The predictors of enhanced recovery after surgery utilization and practice variations in elective colorectal surgery. A provincial survey. *Can J Surg* 2020.

DOI: 10.1503/jpn.009419

Online appendices are unedited and posted as supplied by the authors.

Thank you for taking the time to complete this survey. Your input is appreciated. If you are interested in obtaining more information on study results or have any specific questions or comments, please feel free to contact the corresponding investigator:

Dr. Jeremy Springer, MSc, MD, General Surgery McMaster University
jeremy.springer@medportal.ca