
Table 1 – Preop

Steve Shapiro

- Lori Becker
- Mohammed Badruddoja
- Stacy Blank
- Monte Hinchman
- Stephanie Knudsen
- Michael Roskos

Table 2 – Intraop

Greg Van Winkle

- Therese Delarwelle
- Misty Fagan
- Miki Gould
- Jodi Hibbard
- Peggy LeBlanc
- Linda Rathun

Table 3 – Postop

Tracie Halvorsen

- Cassie Hartwig
- Chuck Heise
- Sarah Kent
- Brian Hong
- Aos Karim
- Scott Liebl
- Mollie Peterson

Colorectal Surgery Breakout Session

SCW Summer Meeting

Red Crown Lodge

July 19, 2019



Goal: Facilitate development,
implementation, and continuous
improvement of enhanced recovery
protocols for patients undergoing elective,
inpatient colorectal surgery in Wisconsin

- Use MSQC colectomy care pathway as a starting point for discussion
 - Assembled from various clinical practice guidelines and best practices
- Small group discussion of enhanced recovery elements (30 min)
- Small group report out and discussion (30 min)
- Action planning (10 min)
- Wrap up (10 min)

MSQC Colectomy Care Pathway

PreOp	Patient Education/Prehabilitation -Surgery goal/expectation setting -Pain management -Tobacco cessation -Nutrition assessment and counseling -Functional status and exercise guidance -Incentive spirometer education -Mental health assessment	Preoperative Planning -MIS approach when expertise available and appropriate -Anticipate discharge needs/care coordination	Ostomy Team Consult -Stoma marking and education	Labs -BMP -CBC -INR -PTT -Type and Screen -HbA1c	Glycemic Control -HbA1c screening for all patients. Note: assess for patient out of pocket cost -HbA1c $\geq 6.5\%$: Consider patient comorbidities, surgical priority and glycemic control plan -HbA1c $\geq 8\%$ or glucose >250 mg/dL: Consider alternative surgery date -Consult to endocrinology or medicine for management
Immediate PreOp	Shower -Shower with soap or antiseptic agent on at least the night before surgery -Provide product and clear instruction	Carbohydrate Loading -Carb loading in nondiabetic patients Examples: white grape juice, clearfast, maltodextrin	Reduced Fasting -Clear liquids up until 2 hours prior to surgery	Glycemic Control -Check baseline glucose level on all patients	Oral Antibiotics with Mechanical Bowel Prep -Oral antibiotics with mechanical bowel prep Example: Nulytely 420g solution; Neomycin 500mg tab; Metronidazole 500mg tab -Zofran prn for nausea
	Appropriate IV Prophylactic Antibiotics -MSQC Recommendation: Cefazolin 2g IV for patients <120 kg Cefazolin 3g IV for patients ≥ 120 kg AND Metronidazole 500mg IV -Administer 15 to 60 minutes before incision -PCN allergy: Conduct thorough review of reported reaction to evaluate if alternative regimen necessary. Consider allergy testing to confirm. -See ASHP guidelines in resources for other acceptable antibiotic regimens and beta-lactam alternatives	Alvimopan -12mg PO every 12 hours while patient is in hospital. Max number of doses 15 tabs -Start in preop and continue until return of bowel function -Contraindicated in patients taking therapeutic opioid for >7 consecutive doses	Multimodal Analgesia -Administer ≥ 2 non-opioid analgesia strategies Examples: -For open cases, thoracic epidural -For laparoscopic cases, TAP block -Acetaminophen -Gabapentin -Review pain management plan before anesthesia induction	Prevention of PONV -Screen all patients for PONV risk -Administer antiemetic regimen based risk assessment score -Risk Assessment Example: 4 Primary Risk Factors: Female; Non-smoker; History or motion sickness; previous PONV; Expected administration of postoperative opioids Score 1 for each applicable risk factor 0-1 risk factors: Ondansetron 4mg 15min prior to end of case 2 risk factors: Choose one or two agents listed below 3 risk factors: Choose one or two agents listed below 4 risk factors: Apply Scopolamine patch at least 2 hours before induction, Administer Dexamethasone 4-8mg IV after induction, Ondansetron 4mg IV at end of surgery	
IntraOp	Alcohol-based Skin Preparation -Use alcohol-based prep unless contraindicated	Glycemic Control -DM: Check glucose every 1-2 hours -NDM: Consider at discretion of preop glucose/HbA1c -Goal <180 mg/dL -Treat with subcutaneous rapid acting insulin or IV insulin infusion	Normothermia -Maintain body temperature of 96.8°F (36°C)	Lung Protective Ventilation -For patients with normal pulmonary function undergoing general anesthesia with endotracheal intubation, administer increased FiO_2 during surgery and after extubation in the immediate postoperative period. -To optimize tissue oxygen delivery, maintain perioperative normothermia and adequate volume replacement	Euvolemia -Avoid excess fluid administration. Discuss minimal fluid strategy with anesthesia. -ASCRS CPG: 1.5-2mL/kg/hr. Hospital examples: 6mL/kg/hr. 5mL/kg/hr. 3mL/kg/hr with Max rate of 300mL/hr -Use balanced chloride-restricted crystalloid solution -In high-risk patients and those undergoing major surgery with significant intravascular losses, use goal-directed fluid therapy
	Wound Protector and Clean Closure -Wound protector -Change of gloves and use of separate instrumentation for portions of operation involving open intestine and abdominal closure	Avoid Drains -Avoid routine use of NG tubes or intra-abdominal drains	VTE Prophylaxis Within 2 hours before surgery Examples: -Heparin 5000 units subcutaneous -Lovenox -Place SCD's	Redosing of Antibiotics -Cefazolin: 4 hour interval -Metronidazole: If operative time >8 hours consider redosing	Multimodal Analgesia -Administer ≥ 2 non-opioid analgesia strategies Examples: -IV Lidocaine -Wound infiltration with long-acting anesthetic at surgical site -IV Ofirmev (acetaminophen) if not given preop -TAP block if not done preop -Spinal analgesia with local anesthetic -Ketamine -Ketorolac at end of case
	Multimodal Analgesia -Follow Michigan OPEN opioid prescribing recommendations: Oxycodone 5mg 15 tablets	Early Ambulation -Ambulation at least once within 24 hours of surgery	Early Alimentation -Chewing gum 3-4 times per day	Glycemic Control -Goal: <180 mg/dL -NDM patients with normoglycemia before or during surgery:	

Questions to guide discussion of enhanced recovery elements

- Is this worth doing?
- Will it improve outcomes?
- Is this feasible to do?
- Are you already doing this?
- Is this measurable?

Name: _____



Enhanced Recovery Protocol for Colorectal Surgery Quality Initiative



Component of Enhanced Recovery Protocol	Status of implementation	Notes
Preoperative:		
Patient education and expectation setting (written materials, teaching)	<input type="checkbox"/> Already done <input type="checkbox"/> Needs improvement <input type="checkbox"/> In process <input type="checkbox"/> Future project <input type="checkbox"/> Not interested <input type="checkbox"/> Unknown	
Prehabilitation (tobacco cessation, nutrition, functional status/exercise)	<input type="checkbox"/> Already done <input type="checkbox"/> Needs improvement <input type="checkbox"/> In process <input type="checkbox"/> Future project <input type="checkbox"/> Not interested <input type="checkbox"/> Unknown	
Ostomy team consult (stoma marking and education)	<input type="checkbox"/> Already done <input type="checkbox"/> Needs improvement <input type="checkbox"/> In process <input type="checkbox"/> Future project <input type="checkbox"/> Not interested <input type="checkbox"/> Unknown	
Glycemic control (HbA1c screening, consult for management)	<input type="checkbox"/> Already done <input type="checkbox"/> Needs improvement <input type="checkbox"/> In process <input type="checkbox"/> Future project <input type="checkbox"/> Not interested <input type="checkbox"/> Unknown	
Preoperative bathing (instructions, product provided)	<input type="checkbox"/> Already done <input type="checkbox"/> Needs improvement <input type="checkbox"/> In process <input type="checkbox"/> Future project <input type="checkbox"/> Not interested <input type="checkbox"/> Unknown	
Carbohydrate loading	<input type="checkbox"/> Already done <input type="checkbox"/> Needs improvement <input type="checkbox"/> In process <input type="checkbox"/> Future project <input type="checkbox"/> Not interested <input type="checkbox"/> Unknown	
Reduced fasting (clear liquids up until 2 hours prior to surgery)	<input type="checkbox"/> Already done <input type="checkbox"/> Needs improvement <input type="checkbox"/> In process <input type="checkbox"/> Future project <input type="checkbox"/> Not interested <input type="checkbox"/> Unknown	
Mechanical bowel prep with oral antibiotics	<input type="checkbox"/> Already done <input type="checkbox"/> Needs improvement <input type="checkbox"/> In process <input type="checkbox"/> Future project <input type="checkbox"/> Not interested <input type="checkbox"/> Unknown	
Alvimopan	<input type="checkbox"/> Already done <input type="checkbox"/> Needs improvement <input type="checkbox"/> In process <input type="checkbox"/> Future project <input type="checkbox"/> Not interested <input type="checkbox"/> Unknown	
Multimodal pre-anesthesia analgesia: Acetaminophen	<input type="checkbox"/> Already done <input type="checkbox"/> Needs improvement <input type="checkbox"/> In process <input type="checkbox"/> Future project <input type="checkbox"/> Not interested <input type="checkbox"/> Unknown	

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- Already done
 - Needs improvement
 - In process
 - Future project
 - Not interested
 - Unknown

Sticker Activity

GREEN

1-2 elements you are
focused on
implementing NOW

RED

1-2 elements you would
like to work on
SOMEDAY

BLUE

1-2 elements you are
interested in
implementing NEXT

Potential Next Steps

- Connect providers with similar interests
 - Keep in touch between meetings
- Trial using Abbott nutritional drinks?
- Regional block workshop at WSS?
- Develop SCW Enhanced Recovery documents?
 - Adaptable for each hospital
 - Patient education materials
 - SCW Enhanced Recovery Protocol (similar to MSQC)