Enhanced Recovery After Surgery (ERAS) for Colon Resection Clinical Pathway

Site Applicability

Vancouver General Hospital

UBC Hospital

Pathway Patient Goals

Inclusion Criteria

Home Discharge Criteria

Instructions

1. Review pathway once per shift for patient care goals and expected outcomes
2. Do not document on this pathway, complete documentation in the Electronic Health Record (Cerner) or paper chart as per policy

Pre-Surgery	
Category	**Expected Outcomes**
Safety	• Beside safety check
Fall Risk/Care Plan	• Fall prevention care plan in place • Risk assessed & new fall prevention care plan completed • Not at risk: reviewed & no concerns
Cognition	• Alert & Oriented x 3 (person, place, date)
Assessment	• VS and temp within patient's normal limits • Head to toe assessment (within patient's normal limits) • Anxiety level acceptable to patient • Anesthesia consult completed
Pain Management	• Pain level acceptable to patient
Bowel/Bladder	• Urine output more than 360 ml/12 hours • Note date of last BM • Abdomen soft, not distended, non-tender • Bowel prep given as per ERAS pre-op PowerPlan
Nutrition & Hydration	• Diet as per ERAS pre-op PowerPlan • Nausea controlled • Patient did NOT vomit during shift • Patient drank 2 packages of PREcovery® at 20:00hr on evening propr to surgery • Patient drank 1 package of PREcovery® 3 hours prior to slated OR time, then NPO
Skin, Dressings, Drains	• Skin integrity intact (no evidence of pressure areas) • Contact Ostomy Nurse to assess (for stoma marking) • Chlorhexidine wipes/shower completed on evening prior to surgery • Chlorhexidine wipes/shower completed on day of surgery
Functional Mobility	• Independent with ADLs as per pre-op status
Teaching & Discharge Planning • Patient received **and** reviewed ERAS booklet	

Day of Surgery – OR Day	
Category	**Expected Outcomes**
Safety	• Beside safety check
Fall Risk/Care Plan	• Fall prevention care plan in place • Risk assessed & new fall prevention care plan completed • Not at risk: reviewed & no concerns
Cognition	• Alert & Oriented x 3 (person, place, date)
Assessment	• Vital signs and temp within patient's normal limits • Head to toe assessment (within patient's normal limits) • Glucometer < 8.1 mmol per 12 hours • Anxiety level acceptable to patient
Pain Management	• Pain level acceptable to patient • Pruritus controlled • Epidural site satisfactory
Bowel/Bladder	• Night shift to remove Foley catheter at 0600hr (**even if epidural in situ**), except for rectal surgery patients. If Foley not removed, provide rationale • If Foley in situ, output more than 100 ml per 4 consecutive hours • If no Foley, urine output more than 360 ml/12 hours • Flatus passed • Note date of last BM • Abdomen soft, not distended, non-tender
Nutrition & Hydration	• Patient tolerating >75% of Post-Surgical Transition Diet (PSTD) • Patient tolerating >75% Boost 1.5 Tetra • Gum chewing (15 minutes TID) • Scheduled Ondansetron 4 mg PO/IV Q8H x 6 doses; First dose administered 8 hrs after intra-op dose • Nausea controlled • Patient did NOT vomit during shift • Oral intake recorded
Skin, Dressings, Drains	• Skin integrity intact (no evidence of pressure areas) • Dressing dry and intact (do not change dressing until POD #3, unless saturated, otherwise outline drainage with a pen and reinforce as needed) • Absence of sanguineous/bilious drainage in HMV • Strip HMV Q1H for 4 hrs, then Q6H PRN • Post-op wash completed (leave pink chlorhexidine skin preparation solution on for 6 hours post-op) • Ostomy rod in situ • Ostomy body is pink, warm, moist and raised
Functional Mobility	• Turned Q2H until fully able to reposition on their own • Ankle exercises every hour when in bed • Patient sat at edge of bed or in chair x 15 minutes • HOB elevated 30 degrees when in bed • ICOUGH protocol followed • Full night sleep achieved • SCD applied

	• SCD removed no longer than 30 min/shift to assess & perform skin care as per protocol

Teaching & Discharge Planning
• Patient is oriented to room/environment
• **ERAS Booklet**: patient has booklet at bedside
  ○ Patient is aware of daily goals starting on page 55
  ○ Reviewed and reinforced pain management on page 43	

Day of Surgery – Post-Op Day 1	
Category	**Expected Outcomes**
Safety	• Beside safety check
Fall Risk/Care Plan	• Fall prevention care plan in place: reviewed and no changes • Risk assessed & new fall prevention care plan completed • Not at risk: reviewed & no concerns
Cognition	• Alert & Oriented x 3 (person, place, date)
Assessment	• Vital signs and temp within patient's normal limits • Head to toe assessment (within patient's normal limits) • Glucometer < 8.1 mmol per 12 hours • Anxiety level acceptable to patient
Pain Management	• Pain level acceptable to patient • Pruritus controlled • Epidural site satisfactory
Bowel/Bladder	• Urine output more than 360 ml/12 hours • **Colon Resection**: No issues with first void post Foley removal • **Colon Resection**: If Foley in situ, provide rationale • **Rectal Surgery:** If Foley in situ, output more than 100 ml per 4 consecutive hours • **Rectal Surgery:** Night shift to remove Foley catheter at 06:00hr. If Foley not removed, provide rationale • Flatus passed • Note date of last BM • Abdomen soft, not distended, non-tender
Nutrition & Hydration	• Patient tolerating >75% of Post-Surgical Transition Diet (PSTD) to DAT • Patient tolerating >75% Boost 1.5 Tetra 240 ml BID • Gum chewing (15 minutes TID) • Scheduled Ondansetron 4 mg PO/IV Q8H x 6 doses • Nausea controlled • Patient did NOT vomit during shift • Oral intake recorded • Saline lock IV when drinking well ≥ 600 ml/12 hr • If CVC in situ, remove and insert peripheral IV
Skin, Dressings, Drains	• Skin integrity intact (no evidence of pressure areas) • Dressing dry and intact (do not change dressing until POD #3, unless saturated, otherwise outline drainage with a pen and reinforce as needed) • Absence of sanguineous/bilious drainage in HMV • Strip HMV Q6H PRN • Ostomy rod in situ • Ostomy body is pink, warm, moist and raised
Diagnostics	• Blood work complete and electrolytes balanced
Functional Mobility	• HOB elevated 30 degrees when in bed • Ankle exercises every hour when in bed • ICOUGH protocol followed • Up in chair for all meals (with assistance or independently)

	• Walked in hallway x 2 (with assistance or independently) • Up to bathroom (with assistance or independently) • SCD discontinued after first dose of anticoagulant, unless contraindicated • SCD removed no longer than 30 min/shift to assess & perform skin care as per protocol

Teaching & Discharge Planning

- **ERAS Booklet**: patient has booklet at bedside
  - Patient is aware of daily goals starting on page 57
  - Reviewed and reinforced pain management on page 43
  - Patient is aware of discharge criteria on page 65
- Patient received teaching re: self administration of VTE prophylaxis
- Patient received ostomy teaching by WOCN
- Patient has arranged for support person at home for 72 hours post discharge
- Patient met the following discharge criteria:
  - Independent with ADLs
  - Pain managed on oral analgesics
  - Tolerating regular diet
  - Passing gas or has had a bowel movement
  - Capable to self manage ostomy
- Discharge destination confirmed

Day of Surgery – Post-Op Day 2	
Category	**Expected Outcomes**
Safety	• Beside safety check
Fall Risk/Care Plan	• Fall prevention care plan in place: reviewed and no changes • Risk assessed & new fall prevention care plan completed • Not at risk: reviewed & no concerns
Cognition	• Alert & Oriented x 3 (person, place, date)
Assessment	• Vital signs and temp within patient's normal limits • Head to toe assessment (within patient's normal limits) • Anxiety level acceptable to patient
Pain Management	• Pain level acceptable to patient • Pruritus controlled • Epidural site satisfactory
Bowel/Bladder	• Urine output more than 360 ml/12 hours • **Colon Resection**: If Foley in situ, provide rationale • **Rectal Surgery:** No issue with first void post Foley removal • **Rectal Surgery:** If Foley in situ, provide rationale • Flatus passed • Note date of last BM • Abdomen soft, not distended, non-tender
Nutrition & Hydration	• Patient tolerating >75% of Post-surgical Transition Diet (PSTD) to DAT • Patient tolerating >75% Boost 1.5 Tetra 240 ml BID • Gum chewing (15 minutes TID) • Scheduled Ondansetron 4 mg PO/IV Q8H x 6 doses • Nausea controlled • Patient did NOT vomit during shift • Oral intake recorded • Patient drinking well ≥ 600ml/12 hr and IV saline locked
Skin, Dressings, Drains	• Skin integrity intact (no evidence of pressure ulcers) • Dressing dry and intact (do not change dressing until POD #3, unless saturated, otherwise outline drainage with a pen and reinforce as needed) • Absence of sanguineous/bilious drainage in HMV • Strip HMV Q6H PRN • Discontinue drain as per MD order • Ostomy rod in situ • Ostomy body is pink, warm, moist and raised
Functional Mobility	• HOB elevated 30 degrees when in bed • Ankle exercises every hour when in bed • Independent with ADLs as per pre-op status • Up in chair for all meals (with assistance or independently) • Walked in hallway x 2 (with assistance or independently) • Up to bathroom (with assistance or independently) • ICOUGH protocol followed
Teaching & Discharge Planning • **ERAS Booklet**: patient has booklet at bedside	

- Patient is aware of daily goals starting on page 59
- Reviewed and reinforced pain management on page 43
- Patient is aware of discharge criteria on page 65

- Patient received teaching re: self administration of VTE prophylaxis
- Patient received ostomy teaching by WOCN
- Patient has arranged for support person at home for 72 hours post discharge
- Patient met the following discharge criteria:
  - Independent with ADLs
  - Pain managed on oral analgesics
  - Tolerating regular diet
  - Passing gas or has had a bowel movement
  - Capable to self manage ostomy
- Discharge destination confirmed

Day of Surgery – Post-Op Day 3	
Category	**Expected Outcomes**
Safety	• Beside safety check
Fall Risk/Care Plan	• Fall prevention care plan in place: reviewed and no changes • Risk assessed & new fall prevention care plan completed • Not at risk: reviewed & no concerns
Cognition	• Alert & Oriented x 3 (person, place, date)
Assessment	• Vital signs and temp within patient's normal limits • Head to toe assessment (within patient's normal limits) • Anxiety level acceptable to patient
Pain Management	• Pain level acceptable to patient • Pruritus controlled • Epidural site satisfactory
Bowel/Bladder	• Urine output more than 360 ml/12 hours • **Rectal Surgery:** If Foley in situ, provide rationale • Flatus passed • Note date of last BM • Abdomen soft, not distended, non-tender • No evidence of urinary tract infection
Nutrition & Hydration	• Patient tolerating >75% of Post-surgical Transition Diet (PSTD) or regular diet • Patient tolerating >75% Boost 1.5 Tetra 240 ml BID • Gum chewing (15 minutes TID) • Nausea controlled • Patient did NOT vomit during shift • Oral intake recorded
Skin, Dressings, Drains	• Incision approximated, edges approximated (no signs of infection) • Dressing changed • Skin integrity intact (no evidence of pressure ulcer) • Absence of sanguineous/bilious drainage in HMV • Strip HMV Q6H PRN • Discontinue drain as per MD order • Ostomy rod in situ • Ostomy body is pink, warm, moist and raised
Diagnostics	• Blood work completed and electrolytes balanced
Functional Mobility	• HOB elevated 30 degrees when in bed • Ankle exercises every hour when in bed • Independent with ADLs as per pre-op status • Up in chair for all meals (with assistance or independently) • Walked in hallway x 2 (with assistance or independently) • Up to bathroom (with assistance or independently) • ICOUGH protocol followed

Teaching & Discharge Planning
• **ERAS Booklet**: patient has booklet at bedside
  ○ Patient is aware of daily goals starting on page 61
  ○ Reviewed and reinforced pain management on page 43
  ○ Patient is aware of discharge criteria on page 65	

- Patient self administering LMWH
- Patient able to assist with ostomy care and management
- Patient has home support arranged
- Patient has home & equipment prepared for discharge
- Patient met the following discharge criteria:
    - Independent with ADLs
    - Pain managed on oral analgesics
    - Tolerating regular diet
    - Passing gas or has had a bowel movement
    - Capable to self manage ostomy
- Discharge destination confirmed

Day of Surgery – Post-Op Day 4	
Category	**Expected Outcomes**
Safety	• Beside safety check
Fall Risk/Care Plan	• Fall prevention care plan in place: reviewed and no changes • Risk assessed & new fall prevention care plan completed • Not at risk: reviewed & no concerns
Cognition	• Alert & Oriented x 3 (person, place, date)
Assessment	• Vital signs and temp within patient's normal limits • Head to toe assessment (within patient's normal limits) • Anxiety level acceptable to patient
Pain Management	• Pain level acceptable to patient • Pruritus controlled
Bowel/Bladder	• Urine output more than 360 ml/12 hours • Flatus passed • Note date of last BM • Abdomen soft, not distended, non-tender • No evidence of urinary tract infection
Nutrition & Hydration	• Patient tolerating >75% of regular diet • Patient tolerating >75% Boost 1.5 Tetra 240 ml BID • Gum chewing (15 minutes TID) • Nausea controlled • Patient did NOT vomit during shift • Oral intake recorded • Remove saline lock
Skin, Dressings, Drains	• Incision approximated (no signs of infection) • Skin integrity intact (no evidence of pressure ulcer) • Ostomy rod in situ • Ostomy body is pink, warm, moist and raised
Functional Mobility	• HOB elevated 30 degrees when in bed • Ankle exercises every hour when in bed • ICOUGH protocol followed • Independent with ADLs as per pre-op status • Up in chair for all meals independently • Walked in hallway x 2 independently • Up to bathroom independently

Teaching & Discharge Planning
• **ERAS Booklet**: patient has booklet at bedside
  ○ Patient is aware of daily goals starting on page 63
  ○ Reviewed and reinforced pain management on page 43
  ○ Patient is aware of discharge criteria on page 65
• Patient self administering LMWH
• Patient independent with ostomy care and management
• Patient has home support arranged
• Patient has home & equipment prepared for discharge
• Patient met the following discharge criteria:
  ○ Independent with ADLs
  ○ Pain managed on oral analgesics	

- Tolerating regular diet
- Passing gas or has had a bowel movement
- Capable to self manage ostomy

- Discharge destination confirmed

Day of Surgery – Post-Op Day 5	
Category	**Expected Outcomes**
Safety	• Beside safety check
Fall Risk/Care Plan	• Fall prevention care plan in place: reviewed and no changes • Risk assessed & new fall prevention care plan completed • Not at risk: reviewed & no concerns
Cognition	• Alert & Oriented x 3 (person, place, date)
Assessment	• Vital signs and temp within patient's normal limits • Head to toe assessment (within patient's normal limits) • Anxiety level acceptable to patient
Pain Management	• Pain level acceptable to patient • Pruritus controlled
Bowel/Bladder	• Urine output more than 360 ml/12 hours • Flatus passed • Note date of last BM • Abdomen soft, not distended, non-tender • No evidence of urinary tract infection
Nutrition & Hydration	• Patient tolerating >75% of regular diet • Patient tolerating >75% Boost 1.5 Tetra 240 ml BID • Gum chewing (15 minutes TID) • Nausea controlled • Patient did NOT vomit during shift • Oral intake recorded
Skin, Dressings, Drains	• Incision approximated (no signs of infection) • Skin integrity intact (no evidence of pressure ulcer) • Ostomy rod in situ • Ostomy body is pink, warm, moist and raised
Functional Mobility	• HOB elevated 30 degrees when in bed • Ankle exercises every hour when in bed • ICOUGH protocol followed • Independent with ADLs as per pre-op status • Up in chair for all meals independently • Walked in hallway x 2 independently • Up to bathroom independently

Teaching & Discharge Planning
• **ERAS Booklet**: patient has booklet at bedside
  ○ Patient reviewed daily goals and discharge information on page 63-66
  ○ Reviewed and reinforced pain management on page 43
  ○ Patient is aware of discharge criteria on page 65
• Patient self administering LMWH
• Patient independent with ostomy care and management
• Patient has home support arranged
• Patient has home & equipment prepared for discharge
• Patient met the following discharge criteria:
  ○ Independent with ADLs
  ○ Pain managed on oral analgesics
  ○ Tolerating regular diet	

- Passing gas or has had a bowel movement
- Capable to self manage ostomy

- Discharge destination confirmed

Day of Surgery – Post-Op Day 6	
Category	**Expected Outcomes**
Safety	• Beside safety check
Fall Risk/Care Plan	• Fall prevention care plan in place: reviewed and no changes • Risk assessed & new fall prevention care plan completed • Not at risk: reviewed & no concerns
Cognition	• Alert & Oriented x 3 (person, place, date)
Assessment	• Vital signs and temp within patient's normal limits • Head to toe assessment (within patient's normal limits) • Anxiety level acceptable to patient
Pain Management	• Pain level acceptable to patient • Pruritus controlled
Bowel/Bladder	• Urine output more than 360 ml/12 hours • Flatus passed • Note date of last BM • Abdomen soft, not distended, non-tender • No evidence of urinary tract infection
Nutrition & Hydration	• Patient tolerating >75% of regular diet • Patient tolerating >75% Boost 1.5 Tetra 240 ml BID • Gum chewing (15 minutes TID) • Nausea controlled • Patient did NOT vomit during shift • Oral intake recorded
Skin, Dressings, Drains	• Incision approximated (no signs of infection) • Skin integrity intact (no evidence of pressure ulcer) • Ostomy rod in situ • Ostomy body is pink, warm, moist and raised
Functional Mobility	• HOB elevated 30 degrees when in bed • Ankle exercises every hour when in bed • ICOUGH protocol followed • Independent with ADLs as per pre-op status • Up in chair for all meals independently • Walked in hallway x 2 independently • Up to bathroom independently

Teaching & Discharge Planning
• **ERAS Booklet**: patient has booklet at bedside
  ○ Patient reviewed daily goals and discharge information on page 63-66
  ○ Reviewed and reinforced pain management on page 43
  ○ Patient is aware of discharge criteria on page 65
• Patient self administering LMWH
• Patient independent with ostomy care and management
• Patient has home support arranged
• Patient has home & equipment prepared for discharge
• Patient met the following discharge criteria:
  ○ Independent with ADLs
  ○ Pain managed on oral analgesics
  ○ Tolerating regular diet	

- Passing gas or has had a bowel movement
- Capable to self manage ostomy

- Discharge destination confirmed

Day of Surgery – Post-Op Day 7 and Onwards	
Category	**Expected Outcomes**
Safety	• Beside safety check
Fall Risk/Care Plan	• Fall prevention care plan in place: reviewed and no changes • Risk assessed & new fall prevention care plan completed • Not at risk: reviewed & no concerns
Cognition	• Alert & Oriented x 3 (person, place, date)
Assessment	• Vital signs and temp within patient's normal limits • Head to toe assessment (within patient's normal limits) • Anxiety level acceptable to patient
Pain Management	• Pain level acceptable to patient • Pruritus controlled
Bowel/Bladder	• Urine output more than 360 ml/12 hours • Flatus passed • Note date of last BM • Abdomen soft, not distended, non-tender • No evidence of urinary tract infection
Nutrition & Hydration	• Patient tolerating >75% of regular diet • Patient tolerating >75% Boost 1.5 Tetra 240 ml BID • Gum chewing (15 minutes TID) • Nausea controlled • Patient did NOT vomit during shift • Oral intake recorded
Skin, Dressings, Drains	• Incision approximated (no signs of infection) • Skin integrity intact (no evidence of pressure ulcer) • Ostomy rod in situ • Ostomy body is pink, warm, moist and raised
Functional Mobility	• HOB elevated 30 degrees when in bed • Ankle exercises every hour when in bed • ICOUGH protocol followed • Independent with ADLs as per pre-op status • Up in chair for all meals independently • Walked in hallway x 2 independently • Up to bathroom independently

Teaching & Discharge Planning
• **ERAS Booklet**: patient has booklet at bedside
  ○ Patient reviewed daily goals and discharge information on page 63-66
  ○ Reviewed and reinforced pain management on page 43
  ○ Patient is aware of discharge criteria on page 65
• Patient self administering LMWH
• Patient independent with ostomy care and management
• Patient has home support arranged
• Patient has home & equipment prepared for discharge
• Patient met the following discharge criteria:
  ○ Independent with ADLs
  ○ Pain managed on oral analgesics
  ○ Tolerating regular diet	

  - Passing gas or has had a bowel movement
  - Capable to self manage ostomy
- Discharge destination confirmed

Day of Discharge	
Category	**Expected Outcomes**
Discharge	• Discharged, accompanied • Has discharge prescriptions • Has sharps container & appropriate LMWH teaching sheet • Has post-op instruction sheet • Has follow up information • Has all belongings • Understands when to seek medical attention for complications • Arrangements made for staple removal • Discharge destination confirmed

Developed By

Effective Date:	
Posted Date:	
Last Revised:	
Last Reviewed:	
Approved By:	
	Endorsed By: **Final Sign Off:**
Owners:	VCH
	Developer Lead(s): • Clinical Nurse Educator, General/Vascular Surgery, OTL-HNS & GI Medicine, VGH • Clinical Nurse Educator, High Acuity Unit, UBCH