

# CLINICAL PATHWAY

## Acute Medicine



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## Lower Gastrointestinal Bleeding

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**CHRISTIANA CARE**  
HEALTH SYSTEM

# Lower Gastrointestinal Bleeding

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## INTRODUCTION

Acute lower gastrointestinal (GI) bleeding refers to blood loss of recent onset that originates from the colon. Acute lower GI bleeding is caused by several categories: anatomic (diverticulosis), vascular (angiodysplasia, ischemic, radiation-induced), inflammatory (infectious, inflammatory bowel disease), and neoplastic. In addition, acute lower GI bleeding can occur after therapeutic interventions such as polypectomy. It is usually but not exclusively described as an acute event. The presentation of lower GI bleeding (LGIB) can be difficult to separate from upper GI bleeding (UGIB).

The disease is characterized by the passage of bloody stools. While typically red or maroon, LGIB may present with black or brown stools. Abdominal pain and lightheadedness may also accompany LGIB.

Christina Care Health System and the Acute Medicine Service Line have established a Lower GI Bleed Pathway to optimize the care delivery for patients with LGIB by focusing on effective clinical elements to improve health care delivery.

## Scope of this Pathway

This clinical pathway will serve adult patients (age 18 and older) who present to the Emergency Department with a potential diagnosis of LGIB. Patients with suspected diagnosis of LGIB will be included in the pathway unless an alternative UGIB source has been identified. The pathway will include recommendations for the acute episode of care covering the initial presentation of the patient to the emergency department to discharge from the inpatient setting.



**Exclusions:** Patients with identified upper GI bleeding source. Patient presenting to the ED with massive GI bleeding that requires immediate trauma services and massive resuscitation efforts.

## Pathway Contacts

The content of this pathway is developed and maintained by the Acute Medicine line of Christiana Care Health System. Questions or feedback about the content may be directed to:

**Administrative Lead: Kate J. Rudolph**

**phone: 302-733-4622**

**e-mail: [Katherine.j.rudolph@christianacare.org](mailto:Katherine.j.rudolph@christianacare.org)**

**Nursing Lead: Bonnie Osgood, MSN, RN-BC, NE-BC**

**phone: 302-733-4622**

**e-mail: [BOsgood@christianacare.org](mailto:BOsgood@christianacare.org)**

**Physician Lead: Warren Butt, MD & Christine Herdman, MD**

**phone: 302-738-5300**

**e-mail: [wbutt@delgi.net](mailto:wbutt@delgi.net) & [cherdman@delawaredigestivecare.com](mailto:cherdman@delawaredigestivecare.com)**



## CLINICAL PATHWAY

# Diagnosis and Initial Evaluation

## Initial Evaluation and Assessment

The initial evaluation for patients with LGIB who present to the ED should include (please reference Algorithm 1):

- Focused history with goal of determining:
  - » Patient age.
  - » Amount and frequency of bleeding from rectum/stoma.
  - » Vigor of bleeding.
  - » Accompanying symptoms: (abdominal pain, diarrhea, altered bowel habits and weight loss).
  - » Hematochezia (typically red or maroon, LGIB may present with black or brown stools).
  - » Medications.
- Assessment of Comorbidities that will increase risk for poor outcomes:
  - » Cardiopulmonary, renal, or hepatic diseases, coagulopathies (medication or other), and thrombocytopenia.
- Physician Examination:
  - » Measurement of vital signs.
  - » Cardiopulmonary, abdominal, and digital rectal examination.
  - » Assessment for abdominal pain and lightheadedness.



- Initial Laboratory Testing:
  - » CBC, CMP, PT/INR, Type and Cross/Screen.
- Assessment and Treatment of Hemodynamic Instability.
  - » Hypotension, tachycardia, orthostasis, syncope.
  - » Establish IV Access (2 large bore peripheral IVs preferred).
  - » Initiate Fluid Resuscitation.
- CEWS Scores (Christiana Care Early Warning Score).
- Consider NG tube to suction with documentation of content and color and consider GI consult.



## Admission Considerations

Consider admission if following criteria are met:

**TABLE 1: 1 ADMISION CRITERIA FOR LGIB**

| InterQual Criteria for Inpatient Setting for LGIB   |
|---|
| <b>GI Bleeding AND</b>  |
| Disorientation or   |
| Increasing Lethargy or  |
| HCT <25% or   |
| Hgb <8.3 or   |
| HR>100 or   |
| Plts <60,000 or   |
| Postural Systolic BP drop > 30 or   |
| Syncope or  |
| T ≥ 1.5 X Upper limit of normal or  |
| INR 2.0-3.0 or  |
| PTT ≥ 1.5 X Upper limit of normal or  |
| <b>Other Factors to Consider: Age &gt;65 year, Presence of syncope, hepatic disease, hepatic disease, cardiac failure, renal disease, coagulopathies (medication or other), thrombocytopenia, or poor home support.</b> |

If criteria for hospitalization are not met, patient may be discharged home with appropriate GI or primary care followup. For patients that require GI followup, patients will be referred to the GI Outpatient Rapid Access Program.



# Inpatient Management

LGIB treatment goals are to identify the source of bleeding, stop the bleeding, and educate patient and family on goals of care and outpatient management.

After the bleeding source has been identified as lower, patient will be triaged based on risk of severe bleeding (please reference Algorithm 2).

## Predictors of Severe LGIB Bleeding

- Hypotension SBP  $\leq 115$
- Tachycardia  $\geq 100/\text{min}$
- Syncope
- Bleeding in 4 hours of presentation
- $> 2$  comorbid conditions
- Aspirin, anticoagulant, or antiplatelet use
- Non tender abdomen

## High Risk

Upon presentation and evaluation/assessment, if the patient has  $\geq 3$  predictors of severe LGIB bleeding they are determined to be high risk and the care team should follow the high risk pathway. Subsequent care may include:

### Unresponsive to resuscitation efforts

- » Medical ICU alert and consult radiology.
- » Stabilization efforts focusing on hemodynamic resuscitation.
- » Triage to either surgery or CTA based on stabilization efforts.

### Responsive to resuscitation efforts





- » Continued stabilization efforts.
- » Consult GI medicine service for admission.
- » Triage to either low risk pathway or radiologic testing depending on resuscitation efforts.

## Low Risk

Upon presentation and evaluation/assessment, if the patient has < 3 predictors of severe LGIB bleeding they are determined to be low risk and the care team should follow the low risk pathway. Subsequent care may include:

- Ensure patient continues to meet admission criteria and if appropriate coordinate safe discharge and possible referral to the GI outpatient rapid access program for outpatient followup.
- Consult GI medicine service for admission.
- Defer further imaging studies until colonoscopy is completed unless colitis is suspected.
- Colonoscopy.

## Radiologic Testing

- CT Arteriogram (CTA) Preferred radiographic test for patients with vigorous bleeding and not likely to tolerate bowel preparation and urgent colonoscopy.
- Gastrointestinal Bleeding Scintigraphy (GIBS) Diagnostic imaging study to be performed only for patients who are actively bleeding. This study is the most sensitive for GI bleeding, least expensive, lowest in radiation dose and offers no nephrotoxicity. The exam will take longer than CTA (approximately 1 hour with possible delayed images as needed) and can be performed as a portable study. Because of the time required, evaluation of urgent patients is suggested, and rapidly deteriorating patients should go to CTA or IR/surgery



as clinically appropriate. This exam should NOT be ordered to define need for ICU care.

- Use of any radiologic studies in setting of subacute (slow) bleeding is discouraged. Observation is typically sufficient.

## Diagnostic Testing

Timing of blood work in preparation for diagnostic testing should be collected as a 'priority collect' to allow for timely endoscopy.

### Endoscopic Testing

Colonoscopy: Tool for evaluation of major acute GI bleeding in acute phase. It is the most important test to define etiology and treatment of bleeding after acute presentation.

- NPO status.
- Rapid bowel prep order.
- Quality prep.
- Explain procedure to patient and obtain consent.
- Interventions/medications given.
- Procedure for when to call provider if prep is inefficient.
- Clear delineation of anticoagulant and antiplatelet drug resumption needed in GI note. For some patients this will need to include discussion with cardiology, neurology and hospitalists. Attention to this issue will promote earlier discharge.

## Nursing Interventions

In addition to provider decision making, the LGIB pathway provides support and direction on appropriate nursing priorities and diagnosis.



## Nursing Priorities

- Assess and monitor hemorrhage/risk of hemorrhage.
- Maintain hemodynamic stability.
- Emotional support to patient and families to minimize emotional distress.
- Promote optimal bowel function/nutrition.
- Minimize and prevent complication.
- Maintenance of skin integrity.
- Medication management.
- Review and synthesize laboratory and diagnostic procedures and assessment findings.
- Maintain safety, ensure fall risk prevention with toiletry.
- Provide education to patient and families regarding disease process, diagnostic testing, medication management, safety complication awareness, diet and nutrition, stress management, and provider followup.

## Nursing Diagnosis & Plans of Care

### [Nursing Diagnosis & Plans of Care Link](#)

Consider initiating these plans of care as clinically indicated

- [Medical/Surgical Plan of Care](#)
  - » Pain.
  - » Bleeding precautions.
  - » Mobility.
  - » Knowledge deficit.
  - » Skin integrity.
  - » Venous thromboembolism prevention.



- » Fall prevention.
- » Impaired communication.
- [Anxiety Plan of Care](#)
- [Gastrointestinal Plan of Care](#)
- [Gastrointestinal \(GI\) Bleeding Plan of Care](#)
- [Risk of Injury following Gastrointestinal \(GI\) Procedure Plan of Care](#)
- [Risk for Fluid Volume Deficit Plan of Care](#)
- [Nutrition Plan of Care](#)

## Discharge from the Hospital

### Readiness Criteria for Discharge

#### Medical Readiness Goals for Discharge

- Bowel movement less than 4-6 in 24 hours.
- Blood pressure stable for 24 hours.
- Hemoglobin stable.
- GI Bleed source identified.
- GI Bleeding controlled.
- Tolerate a solid diet.

#### Education Goals for Discharge

- Appropriate response to condition/diagnosis.
- Understanding of disease process.



- Understanding of prognosis.
- Understanding of therapeutic regimen.
- Understanding of potential complications.

### Discharge Specific Goals

- Follow up appointment arranged.
- Discharge needs identified.

## Medication Reconciliation at Discharge

Discussion and decision around timing of anticoagulation resumption will take place within the care team for applicable patients during medication reconciliation process.

## Outpatient Post Hospitalization Treatment and Followup

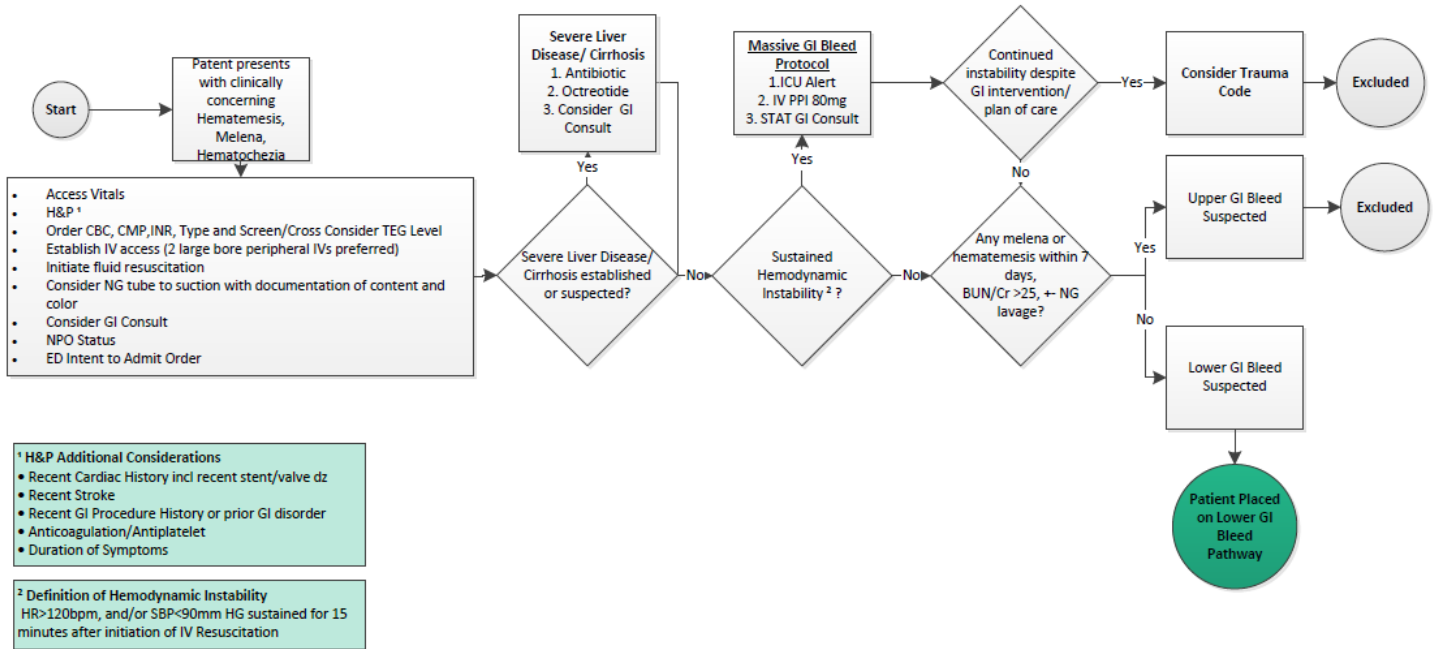
Reliable, rapid, and confirmable arrangements for outpatient care at time of discharge will advance outpatient management. Transition to outpatient management is applicable in all settings including discharge from the ED as well as discharge from the inpatient setting. If GI followup is required, GI Outpatient Rapid Access program can be utilized to ensure timely GI follow up through either an office appointment or outpatient procedure.



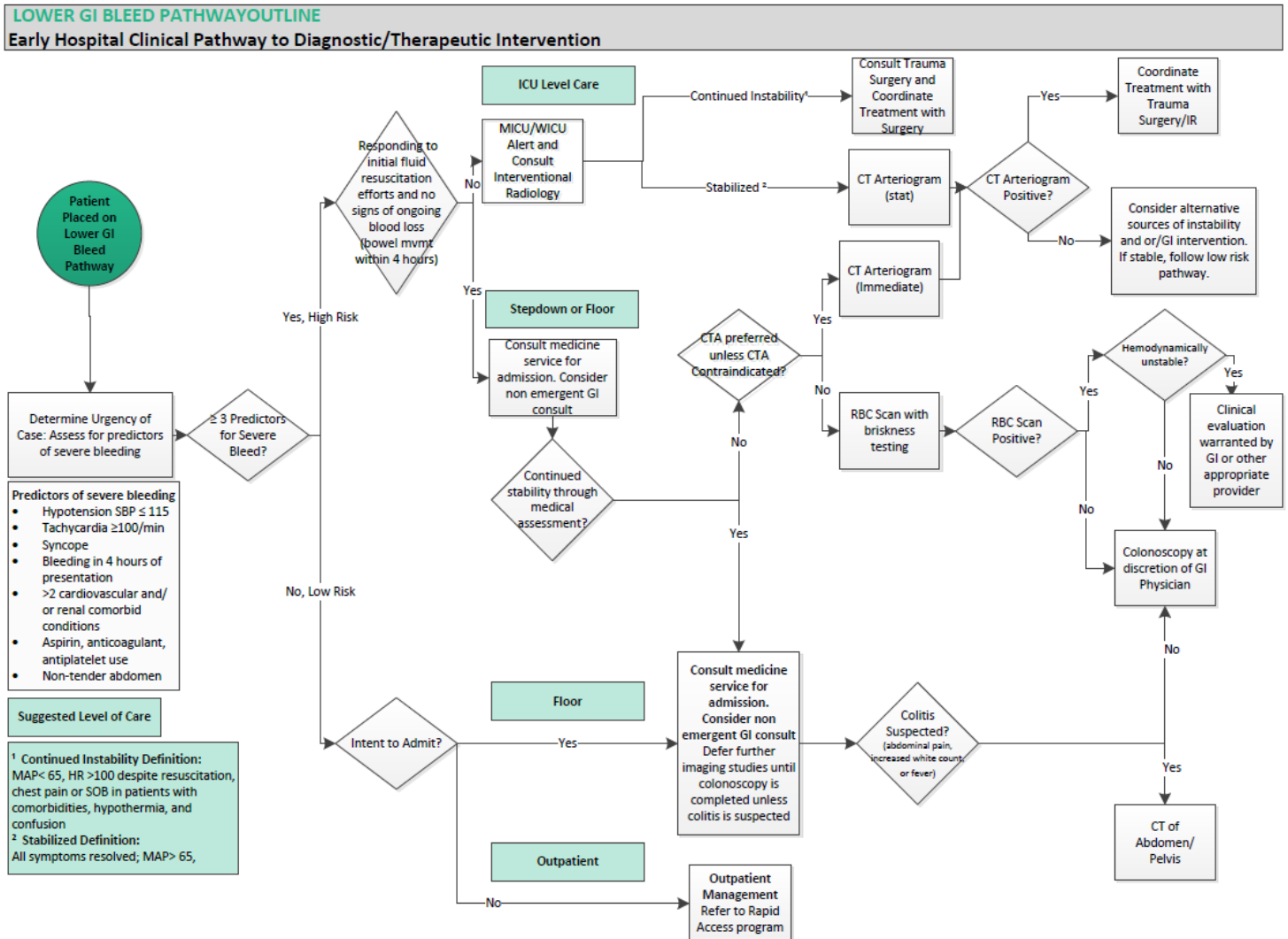
# PATHWAY ALGORITHMS

## ALGORITHM 1 DIAGNOSIS AND INITIAL EVALUATION FOR LOWER GI BLEEDING

### GI BLEEDING DIAGNOSIS AND INITIAL EVALUATION PATHWAY OUTLINE ED Arrival/Onset of Symptoms



ALGORITHM 2: LOWER GI BLEEDING PATHWAY OUTLINE



# PATIENT EDUCATION MATERIALS

Patients in both the inpatient and outpatient settings may be educated on the following, as is applicable to their clinical diagnosis: Diagnostic Testing, Stress Management, Medication Management, Safety Complication Awareness, Disease Process, Diet and Nutrition and Provider Follow Up. Please use the links below to guide you to patient educational resources.

**TABLE 2: PATHWAY EDUCATION**

| PATIENT EDUCATIONAL NEEDS                   | SOURCE(S)                          | PATIENT EDUCATION  | STAFF REFERENCES   |
|---|------------------------------------|--|--|
| <b>DIAGNOSTIC TESTING</b>                   |                                    |  |  |
| Colonoscopy                                 | Christiana                         |  | Prep Guides: <a href="#">Colonoscopy - Standard Prep Go-Lytely/Colyte ((PEG-3350)</a><br>Colonoscopy - Alternative Prep Fleet Phospho-Soda |
|   | <a href="#">Exit Care</a>          | Colonoscopy: Colonoscopy, Care After   |  |
|   | <a href="#">Get Well Network</a>   | SWARM: colonoscopy   |  |
|   | <a href="#">Lippincott Advisor</a> | <a href="#">Lippincott Advisor- Colonoscopy</a><br><a href="#">Lippincott Advisor- Colonoscopy Discharge Instructions</a>                        | <a href="#">Lippincott Advisor- Staff Reference Colonoscopy</a><br><a href="#">Lippincott Advisor- Enema Administration</a>                |
| CTA Abdomen                                 | Christiana Care                    |  | <a href="#">Prep Guide</a>   |
| Gastrointestinal Bleeding Scan              | Christiana Care                    |  | Prep Guides: <a href="#">Gastrointestinal (GI) Bleeding Scan</a>   |
|   | <a href="#">Exit Care</a>          | Gastrointestinal Bleeding Scan   |  |
|   | <a href="#">Lippincott Advisor</a> |  | <a href="#">Gastrointestinal Bleeding Scan</a>   |
| <b>STRESS MANAGMENT</b>                     |                                    |  |  |
| Guided Imagery/<br>Deep Breathing Exercises | <a href="#">Get Well Network</a>   | Power Chart: Education: Stress Management<br>Videos: Coping with Stress, Finding Support<br>Pain Management<br>Guided Imagery and relaxation (8) |  |
|   | <a href="#">Lippincott Advisor</a> | <a href="#">Meditation</a>   |  |
| Patient Educational Needs                   | Source(s)                          | Patient Education  | Staff References   |
| <b>MEDICATION MANAGMENT</b>                 |                                    |  |  |
| Medications                                 | <a href="#">Get Well Network</a>   | How to order videos: Click Power chart, type 'Education', select:  |  |





| PATIENT EDUCATIONAL NEEDS            | SOURCE(S)                          | PATIENT EDUCATION   | STAFF REFERENCES   |
|--------------------------------------|------------------------------------|---|--|
|                                      |                                    | Anticoagulants Videos (8 available)<br>Medication videos : pain medications, benzo meds, anticoagulants, Phenergan  |  |
|                                      | <a href="#">Lexicomp</a>           | Medication Printouts  |  |
|                                      | <a href="#">Lippincott Advisor</a> | <a href="#">Medication Safety</a>   |  |
| <b>SAFETY COMPLICATION AWARENESS</b> |                                    |   |  |
| Blood Transfusion                    | Christiana Care                    |   | <a href="#">Blood and Blood Product Transfusion</a><br><a href="#">Blood and Blood Product Transfusion Reaction Management</a>   |
|                                      | <a href="#">Exit Care</a>          | Blood Transfusion, Blood Transfusion CCHS Custom  |  |
|                                      | <a href="#">Lippincott Advisor</a> | <a href="#">Blood Transfusion</a><br><a href="#">Blood Type Testing</a>   |  |
| Dehydration                          | <a href="#">Exit Care</a>          | Dehydration, Adult<br>Dehydration, Elderly  |  |
|                                      | <a href="#">Lippincott Advisor</a> | <a href="#">Dehydration</a><br><a href="#">Dehydration Discharge Instructions- Adult</a>  | <a href="#">Deficient Fluid Volume</a>   |
| Gastrointestinal Bleeding            | <a href="#">Exit Care</a>          | Bloody Diarrhea, Gastrointestinal Bleeding,   |  |
|                                      | <a href="#">Lippincott Advisor</a> | <a href="#">Gastrointestinal Bleeding Discharge Instructions</a><br><a href="#">Bloody Stools</a><br><a href="#">Bloody Stools, Discharge Instructions</a><br><a href="#">Gastrointestinal Bleeding</a> | <a href="#">Hematochezia</a><br><a href="#">Melena</a>   |
| Patient Educational Needs            | Source(s)                          | Patient Education   | Staff References   |
| Orthostatic Hypotension              | Christiana Care                    |   | <a href="#">Postural Vital Signs Measurement</a><br><a href="#">Fall Prevention, Evaluation, and Treatment: Inpatient, Outpatient, VNA, Adult Day Care Guideline</a><br><a href="#">Risk for Falls</a> |
|                                      | <a href="#">Exit Care</a>          | Orthostatic Hypotension   |  |
|                                      | <a href="#">Get Well Network</a>   | Preventing Falls, Safety  |  |
|                                      | <a href="#">Lexicomp</a>           | Orthostatic hypotension, orthostatic hypotension, discharge instructions  |  |
|                                      | <a href="#">Lippincott Advisor</a> |   | <a href="#">Orthostatic Hypotension</a>  |
| Pain                                 | Christiana Care                    |   | <a href="#">Pain Management</a><br><a href="#">CCHS Pain Management Policy</a><br><a href="#">CPG Patient Controlled Analgesia (PCA) Pump,</a>   |



| PATIENT EDUCATIONAL NEEDS | SOURCE(S)                          | PATIENT EDUCATION  | STAFF REFERENCES  |
|---------------------------|------------------------------------|--|---|
|                           |                                    |  | <a href="#">Adult/Pediatric (&gt; 25 kilograms)</a><br><a href="#">Wong-Baker FACES</a> |
|                           | <a href="#">Get Well Network</a>   | Describing and rating your pain<br>What is pain<br>Your right to pain management<br>Pain management options<br>Pain management<br>Morphine<br>Oxycontin<br>Oxyfast<br>Percocet<br>Percodan<br>Valium                   |   |
| <b>DISEASE PROCESS</b>    |                                    |  |   |
| Anal Fissure              | <a href="#">Exit Care</a>          | Anal Fissure, Adult  |   |
|                           | <a href="#">Lippincott Advisor</a> | <a href="#">Anal Fissure</a><br><a href="#">Anal Fissure Discharge Instruction</a>   |   |
| Patient Educational Needs | Source(s)                          | Patient Education  | Staff References  |
| Colitis                   | <a href="#">Exit Care</a>          | Colitis, Ulcerative Colitis  |   |
|                           | <a href="#">Get Well Network</a>   | SWARM: inflammatory bowel disease  |   |
|                           | <a href="#">Lippincott Advisor</a> | <a href="#">Ulcerative Colitis in Adults</a><br><a href="#">Ulcerative Colitis Discharge Instructions</a>  | <a href="#">Ulcerative Colitis</a>  |
| Diverticulosis            | <a href="#">Exit Care</a>          | Diverticulitis, Diverticulosis and diverticulitis,<br>Presurgical and postsurgical guidelines CCHS<br>(custom) English and Spanish,<br>Meckel Diverticulum   |   |
|                           | <a href="#">Lippincott Advisor</a> | <a href="#">Diverticulitis</a><br><a href="#">Diverticulitis Discharge Instructions</a>  | <a href="#">Diverticular Disease</a>  |
| Hemorrhoids               | <a href="#">Exit Care</a>          | Hemorrhoid Banding, Hemorrhoidectomy,<br>hemorrhoids   |   |
|                           | <a href="#">Get Well Network</a>   | SWARM: Hemorrhoids   | SWARM: Hemorrhoids  |
|                           | <a href="#">Lippincott Advisor</a> | <a href="#">Hemorrhoid Banding</a><br><a href="#">Hemorrhoidectomy</a><br><a href="#">Hemorrhoidectomy Discharge Instructions</a><br><a href="#">Hemorrhoids</a><br><a href="#">Hemorrhoids Discharge Instructions</a> | <a href="#">Hemorrhoids</a>   |
| Patient Educational Needs | Source(s)                          | Patient Education  | Staff References  |



| PATIENT EDUCATIONAL NEEDS   | SOURCE(S)                          | PATIENT EDUCATION   | STAFF REFERENCES             |
|---|------------------------------------|---|------------------------------|
| Polyps/Neoplasm   | <a href="#">Exit Care</a>          | Colorectal cancer, colorectal cancer screening, colorectal surgery discharge instructions CCHS (Custom), Colo rectal cancer surgery discharge instructions SPANNISH CCHS (Custom)   |                              |
|   | <a href="#">Get Well Network</a>   | SWARM: colorectal cancer  |                              |
|   | <a href="#">Lippincott Advisor</a> | <a href="#">Colon Polypectomy</a><br><a href="#">Colon Polyps</a><br><a href="#">Colon Polyps Discharge Instructions</a><br><a href="#">Colon and Rectal Cancer</a><br><a href="#">Colon and Rectal Cancer Discharge Instructions</a><br><a href="#">Colon and Rectal Cancer Screening</a><br><a href="#">Rectal Cancer Discharge Instructions</a>  |                              |
| Stomach Ulcers/Peptic Ulcer   | <a href="#">Exit Care</a>          | Peptic Ulcer  |                              |
|   | <a href="#">Get Well Network</a>   | SWARM: Stomach ulcers   |                              |
|   | <a href="#">Lippincott Advisor</a> | <a href="#">Peptic Ulcers</a><br><a href="#">Peptic Ulcer Discharge Instructions</a>  | <a href="#">Peptic Ulcer</a> |
| DIET & NUTRITION *Diet & nutrition information can also be found in patient education regarding disease processes and discharge instructions. |                                    |   |                              |
| Diet & Nutrition  | <a href="#">Exit Care</a>          | Select 'ALL' and search: 'DIET'   |                              |
|   | <a href="#">Get Well Network</a>   | Healthy eating<br>My plate: introducing my plate<br>Health Food Choices<br>The Challenges of Health Eating<br>Choose A Variety of Foods<br>Healthy Eating: Fats and Carbohydrates<br>Healthy Eating: Reducing Calories, Salt and Alcohol<br>Mindful Eating<br>Shopping and Cooking<br>Reading the Food Label<br>Buying Health Foods 22<br>Healthy Ways to Prepare Food 33<br>Managing Portion Sizes: Meals and Snacks 44<br>Dining Out<br>Restaurants: Making Healthy Choices<br>Managing Portion Sizes While Dining Out 22 |                              |
|   | <a href="#">Lippincott Advisor</a> | <a href="#">Diet &amp; Nutrition</a>  |                              |
| Lifestyle changes   | <a href="#">Get Well Network</a>   | Smoking Cessation<br>Choosing a Method to quit Smoking<br>Coping with nicotine cravings   |                              |



| PATIENT EDUCATIONAL NEEDS | SOURCE(S)                          | PATIENT EDUCATION   | STAFF REFERENCES |
|---------------------------|------------------------------------|---|------------------|
|                           |                                    | Discovering your smoking triggers<br>Lapses while quitting smoking<br>Reasons to quit smoking<br>Exercise:<br>Exercise Safety Tips, Overcoming Your obstacles to exercise, the benefits to regular exercise |                  |
|                           | <a href="#">Lippincott Advisor</a> | <a href="#">Exercise</a>  |                  |
| <b>PROVIDER FOLLOWUP</b>  |                                    |   |                  |
|                           | <a href="#">Exit Care</a>          | Review of discharge instructions  |                  |



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| Nursing Champion: Bonnie Osgood, MSN, RN-BC, NE-BC                 |                        |                               |
| Project Managers: Kate J. Rudolph, MS & Lisa Clayton, MBA, BSN, RN |                        |                               |
| <b>Team Members/Participants</b>                                   |                        |                               |
| Ryan Arnold, MD  | Christy Dolinay, MD    | Matthew Man, MD               |
| Kelly Barlow, RN   | Christopher Grilli, DO | Carmen Pal, RN                |
| E. Dorraine Barnes, BSN, RN, RN-BC                                 | Erin Grady, MD         | Tea Ramishvili, MD            |
| Mike Benninghoff, DO   | Kristin Hover, RN      | Shanthi Shakamuri, MD         |
| Muge Capan, PhD  | Dina Hussam, MD        | Michelle Solimeo, MSN, RN-BC  |
| Christian Coletti, MD  | Rejy Joseph, MD, MRCP  | Denise William, MSN, RN, CCRN |
| Nichole DiBattista, BSN, RN, CEN                                   | Jill Kane, RN          | Amy Whalen, RN                |



# THE CHRISTIANA CARE WAY

We serve our neighbors as respectful, expert, caring partners in their health. We do this by creating innovative, effective, affordable systems of care that our neighbors value.



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**HEALTH SYSTEM**

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