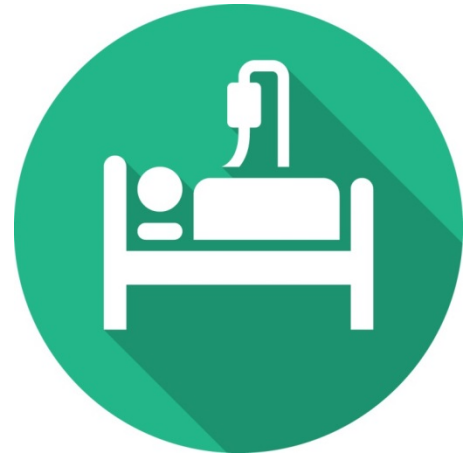


CLINICAL PATHWAY

Acute Medicine



Lower Gastrointestinal Bleeding



CHRISTIANA CARE
HEALTH SYSTEM

Lower Gastrointestinal Bleeding

Table of Contents (tap to jump to page)

INTRODUCTION	1
Scope of this Pathway	1
Pathway Contacts	2
CLINICAL PATHWAY	3
Diagnosis and Initial Evaluation	3
Table 1: 1 Admission Criteria for LGIB	5
Inpatient Management	6
Discharge from the Hospital	10
PATHWAY ALGORITHMS	12
Algorithm 1 Diagnosis And Initial Evaluation for Lower GI Bleeding	12
Algorithm 2: Lower GI Bleeding Pathway Outline	13
PATIENT EDUCATION MATERIALS	14
Table 3: pathway education	14
REFERENCES	19
ACKNOWLEDGEMENTS	20

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:

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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
GI Bleeding AND
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
Other Factors to Consider: Age >65 year, Presence of syncope, hepatic disease, hepatic disease, cardiac failure, renal disease, coagulopathies (medication or other), thrombocytopenia, or poor home support.

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 ≤ 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 ≥ 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

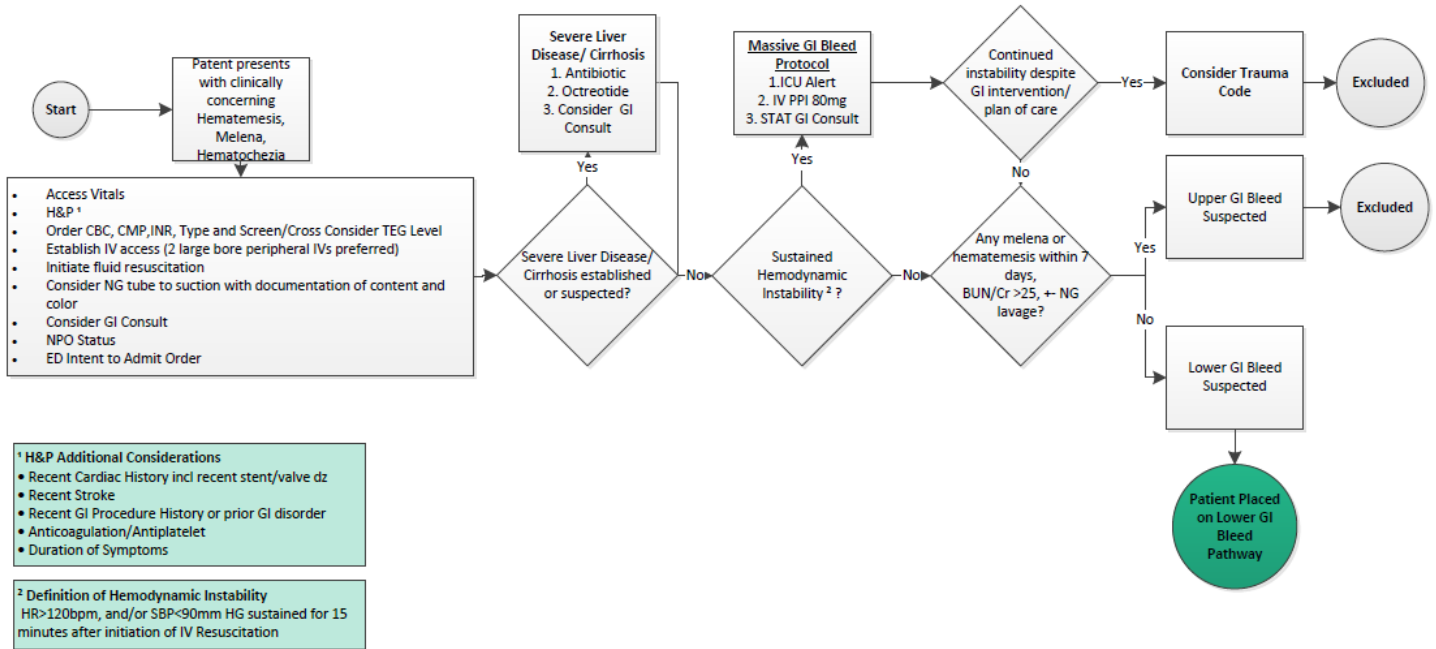
Reliable, rapid, and confirmable arrangements for outpatient care at time of discharge will advance outpatient management. Transition to outpatient management is applicable in all settings including discharge from the ED as well as discharge from the inpatient setting. If GI followup is required, GI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



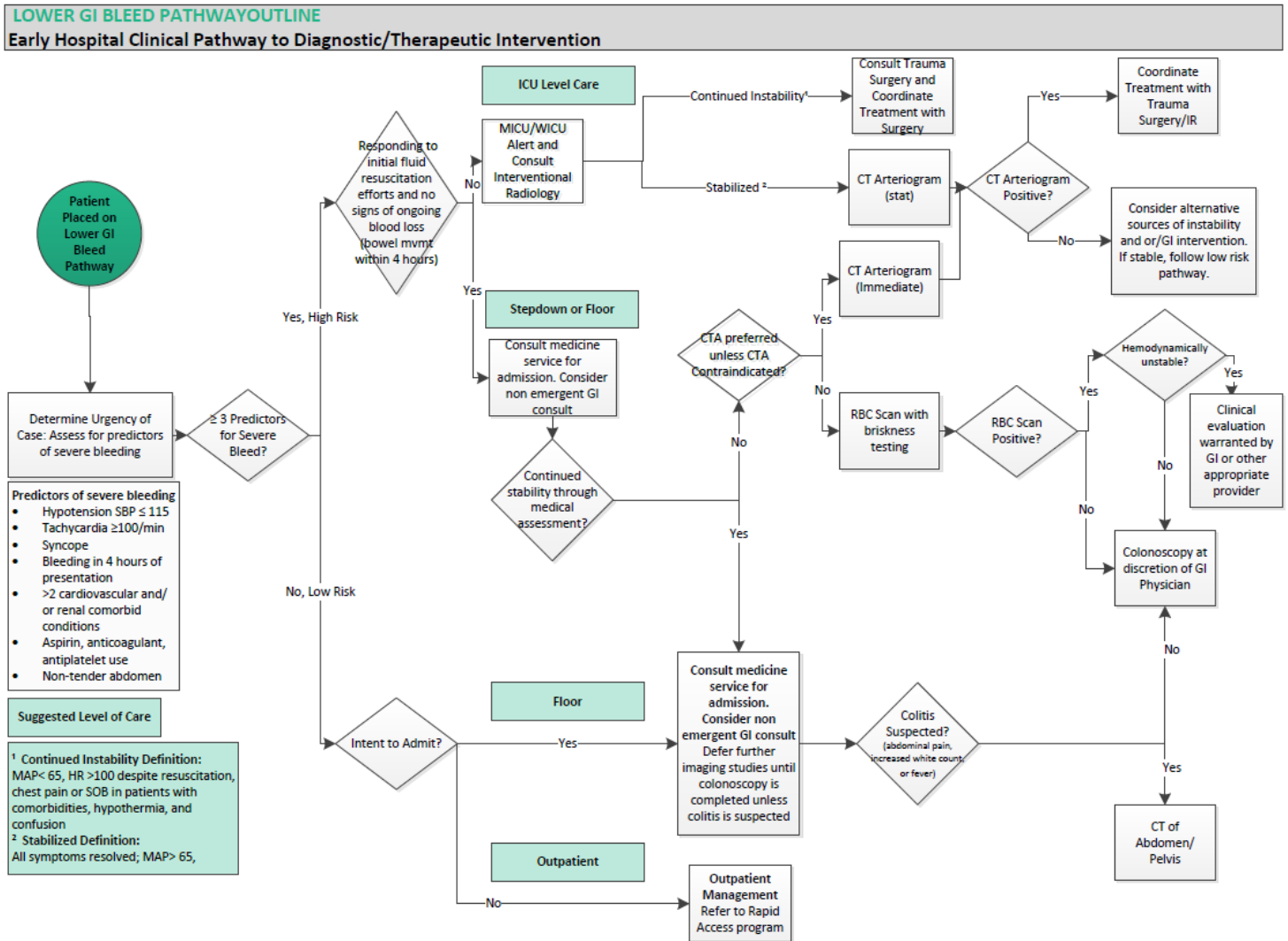
PATHWAY ALGORITHMS

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



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



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



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



PATIENT EDUCATIONAL NEEDS	SOURCE(S)	PATIENT EDUCATION	STAFF REFERENCES
		Discovering your smoking triggers Lapses while quitting smoking Reasons to quit smoking Exercise: Exercise Safety Tips, Overcoming Your obstacles to exercise, the benefits to regular exercise	
	Lippincott Advisor	Exercise	
PROVIDER FOLLOWUP			
	Exit Care	Review of discharge instructions	



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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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