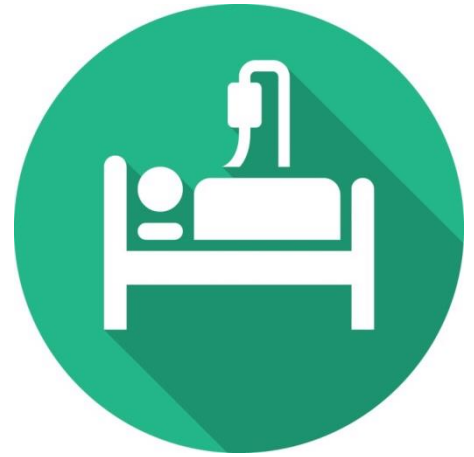


# CLINICAL PATHWAY

## Acute Medicine



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## Lower Gastrointestinal Bleeding

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**CHRISTIANA CARE**  
HEALTH SYSTEM

# Lower Gastrointestinal Bleeding

## Table of Contents (tap to jump to page)

<b>INTRODUCTION</b>	<b>1</b>
<b>Scope of this Pathway</b>	<b>1</b>
<b>Pathway Contacts</b>	<b>2</b>
<b>CLINICAL PATHWAY</b>	<b>3</b>
<b>Diagnosis and Initial Evaluation</b>	<b>3</b>
Table 1: 1 Admission Criteria for LGIB	5
<b>Inpatient Management</b>	<b>6</b>
<b>Discharge from the Hospital</b>	<b>11</b>
<b>PATHWAY ALGORITHMS</b>	<b>13</b>
Algorithm 1 Diagnosis And Initial Evaluation for Lower GI Bleeding	13
Algorithm 2: Lower GI Bleeding Pathway Outline	14
Algorithm 3: Poor Prep Protocol	15
Table 2: 1 column w/subhead	15
<b>PATIENT EDUCATION MATERIALS</b>	<b>16</b>
<b>Pathway Education</b>	<b>16</b>
Table 1: pathway education	16
<b>CLINICAL EDUCATION MATERIALS</b>	<b>17</b>
<b>REFERENCES</b>	<b>18</b>
<b>ACKNOWLEDGEMENTS</b>	<b>19</b>

## 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 LGIB and focus on effective clinical elements that can 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. 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 (i.e. receiving active blood transfusions to



maintain blood pressure) that require 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 and consider GI consult.
- 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.



## 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>

*Enter footnote text or spacebar to delete*

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.

Use of observation beds for GIB may lead to patients absorbing higher out of pocket costs. Alternative approaches should be considered. See discussion below in improved outpatient management bridge.

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 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 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 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.

## Diagnostic Testing

Timing of blood work in preparation for diagnostic testing should be collected a 'priority collect' and at time in which labs are ordered 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 patient plans of care for those on the LGIB pathway 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

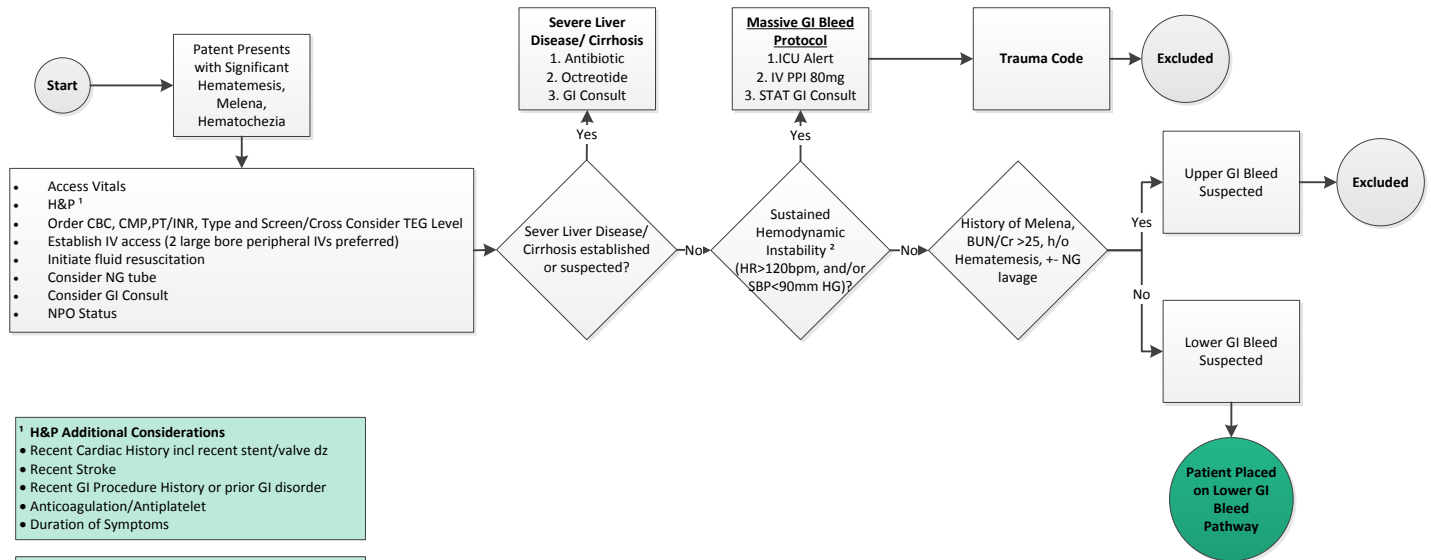
Reliable, rapid, and confirmable arrangements for outpatient care at time of discharge will advance outpatient management. Transition to outpatient management is applicable in all settings including discharge from the ED as well as discharge from the inpatient setting. If GI followup is required, GI 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

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



**<sup>1</sup> H&P Additional Considerations**

- Recent Cardiac History incl recent stent/valve dz
- Recent Stroke
- Recent GI Procedure History or prior GI disorder
- Anticoagulation/Antiplatelet
- Duration of Symptoms

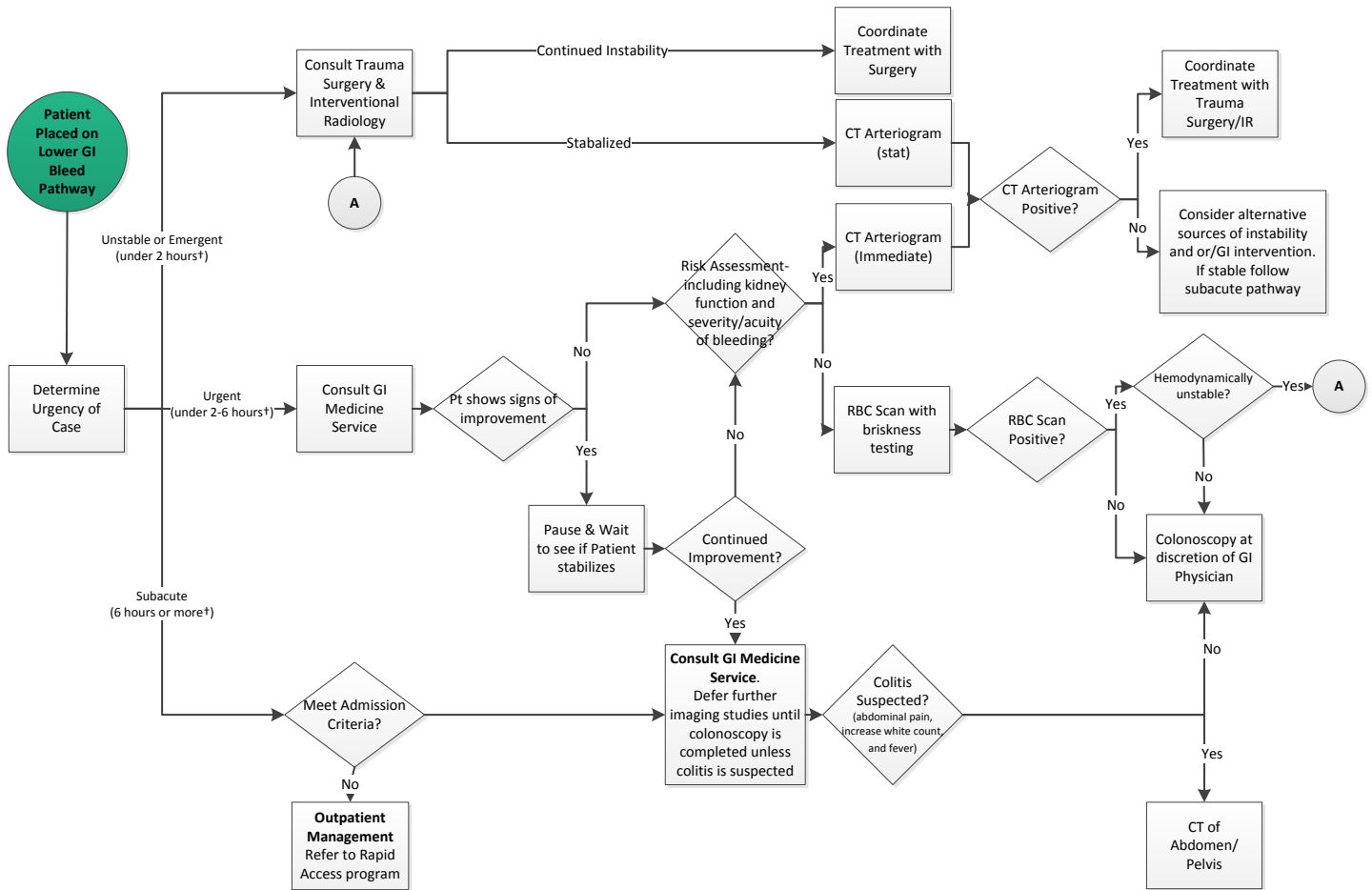
**<sup>2</sup> Definition of Hemodynamic Instability**

☑ Sustained for 15 minutes after initiation of IV Resuscitation



ALGORITHM 2: LOWER GI BLEEDING PATHWAY OUTLINE

**LOWER GI BLEED PATHWAY OUTLINE**  
**Early Hospital Clinical Pathway to Diagnostic/Therapeutic Intervention**



† Tolerable time to definitive therapy





**ALGORITHM 3: POOR PREP PROTOCOL**

**TABLE 2: 1 COLUMN W/SUBHEAD**

Poor Prep Protocol- In Development
<b>1. Define Poor Prep</b>
<ul style="list-style-type: none"> <li>• Prep for colonoscopy in setting of LGIB may be challenging</li> </ul>
<b>2. Standardize interventions to achieve quality colonoscopy prep</b>
<ul style="list-style-type: none"> <li>• The Colyte dose given the night before can be delayed if patient is nauseous without physician permission</li> </ul>
<b>3. Define Expectations</b>
<ul style="list-style-type: none"> <li>• Discissions with physician regarding failing preps should be delayed till 2 hours after magnesium citrate dosing</li> <li>• Recommend automatic order to allow patient up to one hour delay when nauseous or vomiting</li> <li>• The morning dose of magnesium citrate has far less volume and its delay complicates timing of colonoscopy</li> </ul>
<b>4. Potential Reasons to terminate colonoscopy</b>
<ul style="list-style-type: none"> <li>• Ingestion of clear liquids less than 2 to 4 hours before coloscopy will delay its initiation</li> </ul>
<b>5. Order Set Created (linked to colonoscopy ordering provider</b>
<ul style="list-style-type: none"> <li>• All efforts to give magnesium citrate in a timely manner are appropriate</li> </ul>



## 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.

### Pathway Education

TABLE 3: PATHWAY EDUCATION

Key (or suggested) educational issues to address:

- ✓ Diagnostic Testing
  - Colonoscopy
  - CTA Abdomen
  - Gastrointestinal Bleeding Scan
- ✓ Gastrointestinal Bleeding
- ✓ Medications
- ✓ Stress management/relaxation techniques



# CLINICAL EDUCATION MATERIALS

Optional clinical education materials.



## REFERENCES

- [UpToDate Approach to Lower Gastrointestinal Bleeding in Adults](#)
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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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