# 1.10 GASTROINTESTINAL BLEED

Gastrointestinal (GI) bleed refers to any bleeding that originates in the GI tract. Bleeding is generally defined as upper (between the mouth and the ligament of Treitz) or lower (from the ligament of Treitz to the anus). Acute GI bleeding complicates about 7% of all hospital stays in the United States and has an approximate 3% in-hospital mortality rate. Annually, more than 245,000, 130,000, and 165,000 hospital discharges occur with upper GI bleed, lower GI bleed, and unspecified GI bleed as the primary diagnosis, respectively.[1] The degree of blood loss can vary from microscopic amounts to noticeable or massive volumes that can cause hemodynamic instability. Between 19% and 28% of patients with GI bleeding have complications that require intensive care unit admission.[2-5] A well-orchestrated approach that includes prompt assessment for risk stratification, evaluation for early endoscopy, initiation of pharmacotherapy, and treatment of comorbid diseases is necessary for a favorable outcome. Hospitalists provide immediate care for patients presenting with GI bleeding while coordinating care across multiple specialties. Hospitalists lead quality improvement initiatives that optimize the efficiency and quality of care for patients with GI bleeding.

## KNOWLEDGE

*Hospitalists should be able to:*

- Explain the etiologies and pathophysiologic processes that lead to GI bleeds.
- Describe and differentiate the clinical features and presentations of upper and lower GI bleeds.
- Describe the tests required to evaluate GI bleeds.
- Explain the risk factors for upper and lower GI bleeds and clinical indicators of patients at high risk for complications.
- List the indications for early specialty consultation, which may include interventional radiology, gastroenterology, and surgery.
- Describe the approach to transfusion therapy in GI bleeds.
- Describe the treatment for concomitant coagulopathy in patients with GI bleeds.
- Compare the advantages and disadvantages of medical, endoscopic, and surgical treatments for patients with GI bleeds.
- Explain indications, contraindications, and mechanisms of action of pharmacologic agents used to treat GI bleeds.
- Identify clinical, laboratory, and imaging studies that indicate disease severity.
- Explain goals for hospital discharge including specific measures of clinical stability for safe care transition.

## SKILLS

*Hospitalists should be able to:*

- Elicit a thorough and relevant history, including a directed medication, family, and social history.
- Perform a physical examination to identify the likely source of bleeding, presence of comorbid conditions (such as liver disease), and signs of clinical instability (such as organ hypoperfusion) or complications (such as intestinal perforation).
- Order and interpret results of appropriate laboratory, imaging, and endoscopic tests.
- Synthesize results of physical examination, laboratory testing, and imaging studies to determine the best management and care plan for the patient.
- Assess patients with GI bleeds for the purpose of risk stratification and determine the corresponding level of care required.
- Initiate preventive measures including avoidance of nonsteroidal anti-inflammatory agents, stress ulcer prophylaxis in critically ill patients, dietary modification, and evidence-based medical therapies.
- Formulate an evidence-based treatment plan, including nutritional recommendations, pharmacologic agents and dosing, and coordination of endoscopic and surgical interventions tailored to the individual patient.
- Determine frequency for laboratory monitoring and transfusion during hospitalization.
- Ensure adequate intravenous access to allow rapid volume and blood product resuscitation.
- Perform rapid hemodynamic resuscitation.
- Recognize and treat signs of clinical decompensation and recurrent bleeding.
- Assess patients with suspected GI bleeds in a timely manner and manage or comanage the patient with the primary requesting service.
- Communicate with patients and families to explain the disease etiology, prognosis, risk reduction strategies, and symptoms of recurrent GI bleed.
- Communicate with patients and families to explain risks, benefits, and alternatives to transfusion therapy.
- Communicate with patients and families to explain the goals of care, discharge instructions, and management after hospital discharge to ensure safe follow-up and transitions of care.

## ATTITUDES

*Hospitalists should be able to:*

- Employ a multidisciplinary approach, which may include nursing, pharmacy and nutrition services, and specialty and referring physicians, in the care of patients with GI bleeds that begins at admission and continues through all care transitions.
- Establish and maintain an open dialogue with patients and/or families regarding goals and limitations of care, including palliative care and end-of-life wishes.

## SYSTEM ORGANIZATION AND IMPROVEMENT

To improve efficiency and quality within their organizations, hospitalists should:

- Lead, coordinate, and/or participate in the development and promotion of evidence-based guidelines and/or pathways for treatment of patients with GI bleeds.
- Lead, coordinate, and/or participate in multidisciplinary teams to develop quality improvement initiatives that promote early identification of GI bleeds and reduce preventable complications.
- Develop systems that provide timely reports of pending study results to outpatient providers.
- Integrate outcomes research, institution-specific laboratory policies, and hospital formulary to create indicated and cost-effective diagnostic and management strategies for patients with GI bleeds.

## References


1. Zhao Y, Encinosa W. Hospitalizations for gastrointestinal bleeding in 1998 and 2006. HCUP Statistical Brief #65. Agency for Healthcare Research and Quality. Rockville, MD; December 2008.
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3. Bordley DR, Mushlin AI, Dolan JG, Richardson WS, Barry M, Polio J, Griner PF. Early clinical signs identify low-risk patients with acute upper gastrointestinal hemorrhage. *JAMA.* 1985;253(22):3282-3285.
4. Corley DA, Stefan AM, Wolf M, Cook EF, Lee TH. Early indicators of prognosis in upper gastrointestinal hemorrhage. *Am J Gastroenterol.* 1998;93(3):336-340.
5. Kollef MH, O'Brien JD, Zuckerman GR, Shannon W. BLEED: a classification tool to predict outcomes in patients with acute upper and lower gastrointestinal hemorrhage. *Crit Care Med.* 1997;25(7):1125-1132.