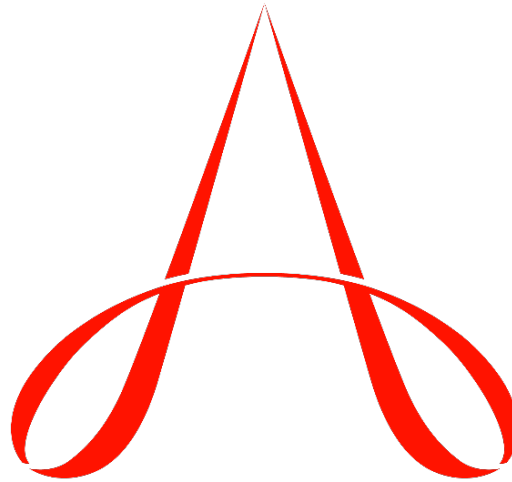




Supplemental Guide: Pediatric Gastroenterology



A C G M E

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Milestones Supplemental Guide

This document provides additional guidance and examples for the Pediatric Gastroenterology Milestones. This is not designed to indicate any specific requirements for each level, but to provide insight into the thinking of the Milestone Work Group.

Included in this document is the intent of each Milestone and examples of what a Clinical Competency Committee (CCC) might expect to be observed/assessed at each level. Also included are suggested assessment models and tools for each subcompetency, references, and other useful information.

Review this guide with the CCC and faculty members. As the program develops a shared mental model of the Milestones, consider creating an individualized guide (Supplemental Guide Template available) with institution/program-specific examples, assessment tools used by the program, and curricular components.

Additional tools and references, including the Milestones Guidebook, Clinical Competency Committee Guidebook, and Milestones Guidebook for Residents and Fellows, are available at the end of this document as well as on the [Resources](#) page of the Milestones section of the ACGME website.

Patient Care 1: Pediatric Gastroenterology History Overall Intent: To gather patient history with the level of detail and focus required for the individual patient	
Milestones	Examples
Level 1 <i>Acquires a comprehensive and developmentally appropriate pediatric medical history</i>	• In taking the history of a patient presenting to the clinic with fever, vomiting, and diarrhea, relies on a standard template to ask questions that are not gastroenterology/liver specialist focused • Reviews available medical records
Level 2 <i>Acquires a pediatric gastroenterology history, including pertinent positives and negatives</i>	• Using elements of the chief complaint and review of systems, appropriately focuses information gathering to characterize severity for a patient with chronic constipation symptoms • Follows a template to ask about dysphagia, constipation, and vomiting without nuance (always the same) • Identifies relevant findings in the medical record
Level 3 <i>Acquires a focused pediatric gastroenterology history with historical subtleties and psychosocial and physical functioning for a patient with a simple complaint</i>	• Uses an organized and descriptive approach to discuss a patient with common chief complaints such as abdominal pain, vomiting, and diarrhea; takes a focused history to distinguish between likely diagnoses • Incorporates social determinants of health or other social screening questions when performing history • Through targeted history, differentiates between a healthy patient with chronic constipation and a patient who may be high risk for complications • Independently requests additional information to supplement available medical records, including calling pediatrician for records
Level 4 <i>Acquires the complete patient history, interprets subtleties, and determines tailored assessment of disease activity for a patient with a complex complaint</i>	• Recognizes during history taking the nuanced risk factors of complex disease processes and gathers the necessary information to further inform the diagnosis • Obtains a targeted history of a patient with Crohn's disease hospitalized after bowel resection
Level 5 <i>Serves as a role model in acquiring the complete patient history, interpreting subtleties, recognizing ambiguities, and determining tailored assessment of disease activity for a patient with a complex complaint</i>	• Teaches nuanced history taking for a patient with intestinal failure on parenteral nutrition, such as number of central line-associated blood stream infections/line replacements and future transplant risk
Assessment Models or Tools	• Case-based discussion • Direct observation • Medical record (chart) review • Oral patient presentations review
Curriculum Mapping	•

Notes or Resources

- Please see **Pediatric Gastroenterology General Resources** section on page 38

Patient Care 2: Pediatric Gastroenterology Exam	
Overall Intent: To gather objective information, recognizing normal and abnormal physical findings while engaging the patient/family using appropriate behavioral and developmental techniques, and considering information gleaned from patient history	
Milestones	Examples
Level 1 <i>Performs complete physical examination adapted for age and development</i>	• Performs a complete physical examination without deviation from the template, regardless of the chief complaint • Performs a complete head-to-toe examination for a two-year-old with constipation
Level 2 <i>Performs a focused physical examination on patients with common gastroenterology complaints, based on history, and identifies abnormal findings</i>	• Identifies a large stool mass during a routine abdominal exam
Level 3 <i>Performs a focused physical examination on patients with complex gastroenterology complaints using strategies to maximize patient cooperation and comfort</i>	• Identifies a liver edge on a patient with cholestasis • Appropriately performs rectal exam and uses various techniques to distract the patient during the maneuvers • Identifies oral ulcers in a patient with weight loss and possible inflammatory bowel disease (IBD)
Level 4 <i>Performs a physical examination that identifies subtle, nuanced findings</i>	• Identifies hair thinning or skin changes in a patient with possible nutritional deficiencies • Identifies splenomegaly in a patient with portal hypertension
Level 5 <i>Serves as a role model for performing a physical examination that identifies subtle, nuanced findings</i>	• Teaches the nuances of examining a patient with a history of IBD presenting with a rash on the physical examination, and consults pertinent literature to distinguish among causes of rashes from common to rare
Assessment Models or Tools	• Case-based discussion • Direct observation • Medical record (chart) review • Multisource feedback
Curriculum Mapping	•
Notes or Resources	• DiLeo Thomas, Liza, and Megan C. Henn. 2021. "Perfecting the Gastrointestinal Physical Exam: Findings and Their Utility and Examination Pearls." <i>Emergency Medicine Clinics of North America</i> 39(4): 689-702. doi: 10.1016/j.emc.2021.07.004. • Silen, William. 2010. <i>Cope's Early Diagnosis of the Acute Abdomen</i>. 22nd ed. New York: Oxford Press.

Patient Care 3: Decision Making	
Overall Intent: To order diagnostic tests and subspecialty consultations (if appropriate), tailoring the evaluation to patient complexity, severity of illness, and the most likely diagnosis(es); to interpret results accurately within the context of the clinical picture	
Milestones	Examples
Level 1 <i>Reports clinical facts (e.g., history, exam, tests, consultations), with prompting</i>	• Recites all information elicited from patient/family/data without filtering pertinent details • Reports stool frequency and consistency in a child presenting with constipation but requires prompting to ask about timing of meconium passage
Level 2 <i>Generates a differential diagnosis based on the clinical facts and develops plan to obtain tests, as needed</i>	• Plans the evaluation of a child with abdominal pain that includes appropriate diagnostic testing • Considers functional gastrointestinal disorders as part of the differential diagnosis, but does not specify a type of disorder
Level 3 <i>Generates a prioritized differential diagnosis and orders and interprets focused testing for diagnoses</i>	• Discusses the diagnostic assessments that are indicated for an infant in the neonatal intensive care unit (NICU) with cholestasis • Includes infectious and inflammatory etiologies in the differential diagnosis of a patient with known IBD and acute bloody diarrhea, and orders and interprets blood and stool testing accordingly
Level 4 <i>Reappraises diagnosis in real time to avoid diagnostic error and adjusts management accordingly</i>	• Comfortably compares several diagnoses and uses supporting evidence to determine which is the most likely in each patient • Generates a differential diagnosis for a child with suspected very early onset IBD, including monogenic and immune ion conditions
Level 5 <i>Serves as a role model for complex diagnostic decision making</i>	• Leads a multidisciplinary team in the evaluation of a child with chronic intestinal dysmotility versus a suspected factitious disorder
Assessment Models or Tools	• Case-based discussion • Direct observation • Medical record (chart) reviews
Curriculum Mapping	•
Notes or Resources	• Please see Pediatric Gastroenterology General Resources section on page 40

Patient Care 4: Organization and Prioritization of Inpatient Care Overall Intent: To organize and appropriately prioritize inpatient care	
Milestones	Examples
Level 1 <i>Organizes patient care tasks, with assistance</i>	• Sees patient with bilious emesis and recommends imaging, with guidance from attending • Calls the attending after the consult to determine when to re-evaluate patient
Level 2 <i>Organizes patient care tasks and needs assistance for patients with complex disease; recognizes urgent issues</i>	• Recommends, with attending's advice, imaging, antibiotics, and possible paracentesis for a patient with biliary atresia with ascites in the emergency department with fever • Recognizes need to determine type of ingested foreign body (e.g., coin versus button battery) • Evaluates a patient with tachycardia and melena and confirms with attending the need for urgent endoscopic management
Level 3 <i>Prioritizes patient care tasks with efficiency; anticipates and triages urgent issues</i>	• While admitting a patient with constipation, gets notified of a button battery ingestion and prioritizes the second patient to discuss endoscopy with attending • Notifies the surgery fellow and requests emergent consult for a patient with toxic megacolon and unstable vitals, simultaneously notifying the attending of status change
Level 4 <i>Prioritizes patient care tasks and manages service independently</i>	• After rounds, arranges transfusion, calls schedulers, and gets consent for needed procedures the next day, and discusses risks and benefits of biologics with new IBD patient and the patient's family
Level 5 <i>Serves as a role model for organizing, prioritizing, and managing patient care tasks</i>	• Organizes a multidisciplinary meeting to discuss the needs of a patient with complex disease and brainstorms best practices moving forward • Addresses psychosocial needs of staff members after caring for patients with complex disease
Assessment Models or Tools	• Case-based discussion • Direct observation • Multisource feedback
Curriculum Mapping	•
Notes or Resources	• Katkin, Julie P., Susan J. Kressly, Anne R. Edwards, James M. Perrin, Colleen A. Kraft, Julia E. Richerson, Joel S. Tieder, Liz Wall, and Task Force on Pediatric Practice Change. 2017. "Guiding Principles for Team-Based Pediatric Care." <i>Pediatrics</i> 140(2): e20171489. doi: 10.1542/peds.2017-1489. PMID: 28739656.

Patient Care 5: Patient Management in Pediatric Gastrointestinal and Liver Disease Overall Intent: To develop a comprehensive care plan for gastrointestinal and liver disease based on disease presentation and urgency	
Milestones	Examples
Level 1 <i>Reports management plans developed by others</i>	• Considers antibiotics and chest x-ray based on previous day's comments from senior residents or attending physician • Repeats consultant's written recommendations verbatim • Requires direct supervision to prioritize and deliver patient care • After examining a patient presenting to the emergency department with a gastrointestinal bleed, speaks with attending about next steps
Level 2 <i>Participates in the creation of management plans with assistance</i>	• Develops plan for a patient's chief complaint but neglects other active issues; when an infant presenting for newborn follow-up has not regained birth weight, suggests referral to a lactation specialist, but needs prompting to establish follow-up for weight check • Suggests referral to a dietitian for an infant with moderate malnutrition but needs assistance with creating a plan for labs, imaging, and follow-up • Manages patient with chronic abdominal pain and diarrhea; proposes medications and asks attending if endoscopy is indicated
Level 3 <i>Develops and implements an interdisciplinary management plan for common and typical diagnoses</i>	• Leads inpatient rounds on patient with IBD flare, involving the bedside nurse for input on current plan, and reminds residents of improving Pediatric Ulcerative Colitis Activity Index (PUCAI) score and improved labs over past three days • Considers details about insurance coverage and cost of medications upon discharge of IBD patient who has now started infliximab treatments • Independently manages patient with concern for upper gastrointestinal bleeding and arranges urgent endoscopy as next step of inpatient care
Level 4 <i>Develops and implements informed management plans for complicated and atypical diagnoses, with the ability to modify plans as necessary</i>	• Leads inpatient rounds on patient with IBD flare, now on infliximab, and includes team decision making for discharge home, while also initiating a post-discharge plan for patient such as steroid-taper and follow-up on health-maintenance items for a patient considered immunosuppressed (e.g., vaccines, sunscreen use, eye exams) • Creates an alternative plan for iron infusion for patient whose family who is Jehovah's Witness and declines a blood transfusion • Realizing a patient's mother is unable to read, labels the patient's prescriptions in a way the mother understands so she can administer medications correctly, eliciting teach-back to gauge understanding • Selects injectable therapy versus infusion therapy for a patient with IBD, based on patient preference

	Independently manages patients with autoimmune hepatitis with lack of response to steroid therapy, suggesting overlap syndrome
Level 5 <i>Serves as a role model for development and implementation of management plans for complicated and atypical diagnoses</i>	- Promptly recognizes/identifies team members' misunderstanding and redirects discussion to consider the most important aspects of a case - Engages the team in discussing a management plan by considering the major therapeutic interventions and the evidence for and against each modality - Diagnoses and treats patient with gastrointestinal bleeding due to innumerable angioectasias of the small bowel
Assessment Models or Tools	- Case-based discussion - Direct observation - Medical record (chart) review - Multisource feedback
Curriculum Mapping	
	- North American Society for Pediatric Gastroenterology, Hepatology and Nutrition (NASPGHAN). "Clinical Guidelines and Position Statements." https://naspghan.org/professional-resources/clinical-guidelines/. Accessed 2022. - NASPGHAN. "Curricular Resources." https://naspghan.org/training-career-development/for-fellowship-directors/curricular-resources/. Accessed 2022.

Patient Care 6: Endoscopic Procedures – Cognitive	
Overall Intent: To develop knowledge and skills for appropriate indication of endoscopy, interpretation of normal and abnormal findings, therapeutic options, and management of complications and follow-up	
Milestones	Examples
Level 1 <i>Identifies indications for endoscopic procedures</i>	- Identifies the indications for endoscopic removal of a coin from the esophagus - Understands the indications for colonoscopy in the evaluation and management of rectal bleeding
Level 2 <i>Explains diagnostic endoscopic procedures and possible complications, and obtains informed consent</i>	- Explains the indications, risks, benefits, and alternatives of upper endoscopy for the evaluation of suspected celiac disease and obtains informed consent - Obtains informed consent for endoscopic assessment of disease activity in a child with IBD
Level 3 <i>Interprets findings during endoscopic procedures, recognizes complications, and chooses appropriate interventions</i>	- Recognizes furrows in a patient with suspected eosinophilic esophagitis and obtains biopsies from multiple levels of the esophagus - Recognizes a pedunculated polyp and chooses the appropriate technique and equipment for removal - Observes that patient is desaturating and appropriately pauses procedure
Level 4 <i>Anticipates and manages patient-specific comorbidities (e.g., bleeding disorder) and complications of therapeutic procedures</i>	- Understands and addresses the risk of duodenal biopsies and potential hematoma formation in a patient who has undergone a bone marrow transplant - Collaborates with a multidisciplinary team to determine the timing and location for endoscopy feeding tube placement in a child with recent aspiration pneumonia - Notices excessive bleeding from polypectomy site and chooses appropriate method of bleeding control
Level 5 <i>Serves as a role model for managing patients with comorbidities and complications of therapeutic procedures</i>	- Leads a multidisciplinary team to determine the timing, location, and method of removal of an esophageal button battery - Leads a multidisciplinary team to coordinate endoscopic and surgical management of a patient with sickle cell disease and choledocholithiasis in crisis
Assessment Models or Tools	- Case-based discussion - Direct observation - Endoscopic assessment tool - Medical record (chart) review - Self-assessment
Curriculum Mapping	

Notes or Resources	● NASPGHAN. "Procedures Curriculum." https://naspghan.org/training-career-development/for-fellowship-directors/curricular-resources/procedures-curriculum/. Accessed 2022. ● Walsh, Catharine M., Simon C. Ling, Petar Mamula, Jenifer R. Lightdale, Thomas D. Walters, Jeffrey J. Yu, and Heather Carnahan. 2015. "The Gastrointestinal Endoscopy Competency Assessment Tool for Pediatric Colonoscopy." <i>Journal of Pediatric Gastroenterology and Nutrition</i> 60(4): 474-480. doi: 10.1097/MPG.0000000000000686. https://naspghan.org/files/documents/pdfs/training/curriculum-resources/procedures-curriculum/Walsh-et_al_2015_The_gastrointestinal_endoscopy_competency_assessme.pdf. ● Walsh, Catharine M., Simon C. Ling, Petar Mamula, Jenifer R. Lightdale, Thomas D. Walters, Jeffrey J. Yu, and Heather Carnahan. 2015. "The Gastrointestinal Endoscopy Competency Assessment Tool for Pediatric Colonoscopy: Appendix 1: Gastrointestinal Endoscopy Assessment Tool for Pediatric Colonoscopy." <i>Journal of Pediatric Gastroenterology and Nutrition</i> 60(4). https://cdn-links.lww.com/permalink/mpg/a/mpg_2015_03_04_walsh_jpgn-14-401_sdc2.pdf.
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Patient Care 7: Endoscopic Procedures – Technical Overall Intent: To demonstrate progressive acquisition of skills required to perform endoscopic procedures effectively and safely	
Milestones	Examples
Level 1 <i>Participates in endoscopic procedures and performs scope functions correctly (e.g., dial maneuvers, button use, appropriate ergonomics)</i>	• Demonstrates familiarity with endoscopic equipment
Level 2 <i>Performs endoscopic procedures with assistance</i>	• Performs esophagogastroduodenoscopy (EGD) through pylorus but needs hands-on assistance to reach third portion of duodenum • Intubates the anus and navigates through sigmoid with verbal assistance
Level 3 <i>Independently performs EGD; completes colonoscopy and performs therapeutic endoscopic procedures with assistance</i>	• Performs colonoscopy through the cecum independently but needs hands-on assistance to intubate ileocecal valve (ICV) • Applies hemostatic clip to bleeding polypectomy site with assistance
Level 4 <i>Independently performs EGD and ileocolonoscopy, including therapeutic endoscopic techniques (e.g., polyps, bleeding, foreign bodies) and manages complications</i>	• Independently uses multiple methods of hemostasis to manage a bleeding ulcer • Independently performs esophageal dilations
Level 5 <i>Independently performs advanced or specialized endoscopic procedures (e.g., single balloon enteroscopy, refractory gastrointestinal bleeding, endo-FLIP) and manages complications</i>	• Independently performs endoscopic ultrasound • Independently performs esophageal dilations and recognizes and manages perforation
Assessment Models or Tools	• Direct observation • Endoscopic assessment tool (gastrointestinal endoscopy competency assessment tool for pediatric colonoscopy (GiECAT-KIDS)) • Multisource feedback • Procedure logs • Self-assessment • Simulation
Curriculum Mapping	•

Notes or Resources	• Lightdale, Jenifer R., Catharine M. Walsh, Salvatore Oliva, Kevan Jacobson, Hien Q. Huynh, Matjaž Homan, Iva Hojsak, et al. 2022. "Pediatric Endoscopy Quality Improvement Network Quality Standards and Indicators for Pediatric Endoscopic Procedures: A Joint NASPGHAN/ESPGHAN Guideline." <i>Journal of Pediatric Gastroenterology and Nutrition</i> 74(S1 Suppl 1): S30-S43. doi: 10.1097/MPG.0000000000003264. PMID: 34402486. • NASPGHAN. "Procedures Curriculum." https://naspghan.org/training-career-development/for-fellowship-directors/curricular-resources/procedures-curriculum/. Accessed 2022. • Walsh, Catharine M., Simon C. Ling, Petar Mamula, Jenifer R. Lightdale, Thomas D. Walters, Jeffrey J. Yu, and Heather Carnahan. 2015. "The Gastrointestinal Endoscopy Competency Assessment Tool for Pediatric Colonoscopy." <i>Journal of Pediatric Gastroenterology and Nutrition</i> 60(4): 474-480. doi: 10.1097/MPG.0000000000000686. https://naspghan.org/files/documents/pdfs/training/curriculum-resources/procedures-curriculum/Walsh-et al 2015 The gastrointestinal endoscopy competency assessme.pdf. • Walsh, Catharine M., Simon C. Ling, Petar Mamula, Jenifer R. Lightdale, Thomas D. Walters, Jeffrey J. Yu, and Heather Carnahan. 2015. "The Gastrointestinal Endoscopy Competency Assessment Tool for Pediatric Colonoscopy: Appendix 1: Gastrointestinal Endoscopy Assessment Tool for Pediatric Colonoscopy." <i>Journal of Pediatric Gastroenterology and Nutrition</i> 60(4). https://cdn-links.lww.com/permalink/mpg/a/mpg_2015_03_04_walsh jpgn-14-401_sdc2.pdf.
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Medical Knowledge 1: Diagnostic Evaluation of Gastrointestinal Tests (e.g., breath test, pH probes, imaging, motility testing, genetics) Overall Intent: To order diagnostic tests, tailoring the evaluation to patient complexity, severity of illness, and the most likely diagnosis(es); to interpret results accurately within the context of the clinical picture	
Milestones	Examples
Level 1 <i>Reports results of diagnostic studies</i>	• Reports the results of a barium enema without interpretation
Level 2 <i>Identifies clinically significant results of diagnostic studies, with guidance</i>	• Identifies findings of a “double bubble” on imaging after the attending points out an abnormality in the stomach
Level 3 <i>Independently interprets or applies results of common diagnostic studies</i>	• Applies pH probe results and discusses next steps of care with parents or consultants, such as neonatologist • Applies the results of a breath test to patient management
Level 4 <i>Independently interprets or applies results of complex diagnostic studies</i>	• Recognizes bowel wall thickening on a magnetic resonance enterography (MRE) in a patient with suspected IBD • Discusses results of anorectal manometry with parents of a toddler with dyschezia • Recognizes when to refer a patient for more complex testing, such as EndoFLIP or motility testing
Level 5 <i>Serves as a peer expert for interpreting the clinical significance of results of complex diagnostic studies</i>	• Leads a small group talk at a national conference on advanced motility techniques for patients with chronic retentive constipation
Assessment Models or Tools	• Case-based discussions • Direct observation • Medical record (chart) audit • Multisource feedback
Curriculum Mapping	•
Notes or Resources	• Leichtner, Alan M., Lynette A. Gillis, Sandeep Gupta, James Heubi, Marsha Kay, Michael R. Narkewicz, Elizabeth A. Rider, et al. 2013. “NASPGHAN Guidelines for Training in Pediatric Gastroenterology.” <i>Journal of Pediatric Gastroenterology and Nutrition</i> 56 Suppl 1: S1-8. doi: 10.1097/MPG.0b013e31827a78d6. PMID: 23263531.

Medical Knowledge 2: Clinical Knowledge of Pediatric Gastrointestinal and Liver Diseases Overall Intent: To acquire, possess, and demonstrate the facts, concepts, and ideas related to the field of pediatric gastroenterology, hepatology, and nutrition in order to provide patient care and communicate with other medical professionals	
Milestones	Examples
Level 1 <i>Demonstrates foundational medical knowledge of specialty disorders</i>	• Defines short bowel syndrome • Lists causes of pediatric acute and chronic pancreatitis
Level 2 <i>Applies medical knowledge to common and typical scenarios to guide patient care</i>	• Follows consensus guidelines to guide dietary and pharmacologic therapy to plan the management of a patient with short bowel disease • Understands admission criteria for a patient that presents with pancreatitis
Level 3 <i>Applies medical knowledge to complicated and atypical conditions to guide patient care</i>	• Uses understanding of intestinal function in a patient with short bowel syndrome to diagnose and treat small intestinal bacterial overgrowth (SIBO) • Understands when to order magnetic resonance cholangiopancreatography (MRCP) for a patient with recurrent pancreatitis
Level 4 <i>Seeks out and integrates medical knowledge of specialty disorders to develop personalized care plans</i>	• Considers individual risk factors when developing a prevention plan for a patient with recurrent central line infections • Refers chronic pancreatitis patient to endoscopic retrograde cholangiopancreatography (ERCP) center for evaluation and treatment of abnormal MRCP findings
Level 5 <i>Serves as a role model at multiple levels, drawing from a breadth of medical knowledge that spans the continuum of simple to complex problems</i>	• Serves on a national committee for evaluating indications for intestinal transplant • Utilizes knowledge of chronic pancreatitis and gives grand rounds lecture on evolving therapeutic modalities
Assessment Models or Tools	• Case-based presentations • Chart-stimulated recall • Direct observation • In-training examination
Curriculum Mapping	•
Notes or Resources	• Wyllie, Robert, Jeffrey S. Hyams, and Marsha Kay. 2020. <i>Pediatric Gastrointestinal and Liver Disease</i>. 6th ed. Elsevier. https://doi.org/10.1016/B978-1-4377-0774-8.10099-5.

Systems-Based Practice 1: Patient Safety	
Overall Intent: To engage in the analysis and management of patient safety events, including relevant communication with patients, their families, and health care professionals	
Milestones	Examples
Level 1 <i>Demonstrates knowledge of common patient safety events</i> <i>Demonstrates knowledge of how to report patient safety events</i>	• Lists common patient safety events such as patient misidentification or medication errors • Recognizes “patient safety reporting system” or “patient safety hotline” as ways to report safety events
Level 2 <i>Identifies system factors that lead to patient safety events</i> <i>Reports patient safety events through institutional reporting systems (simulated or actual)</i>	• Identifies that electronic health record (EHR) default timing of orders as “routine” (without changing to “stat”) may lead to delays in medication administration time • Reports delayed antibiotic administration time using the appropriate reporting mechanism
Level 3 <i>Participates in analysis of patient safety events (simulated or actual)</i> <i>Participates in disclosure of patient safety events to patients and families (simulated or actual)</i>	• Participates in department morbidity and mortality presentations • Participates in a quality improvement project aimed at patient safety • With the support of an attending or risk management team member, participates in the disclosure of a procedural complication to a patient’s family
Level 4 <i>Conducts analysis of patient safety events and offers error prevention strategies (simulated or actual)</i> <i>Discloses patient safety events to patients and families (simulated or actual)</i>	• Participates in a simulated or actual root cause analysis related to an endoscopy event • Recognizes biases among team members as a patient safety issue • Following consultation with risk management and other team members, independently discloses a procedural complication to a patient’s family
Level 5 <i>Actively engages teams and processes to modify systems to prevent patient safety events</i> <i>Role models or mentors others in the disclosure of patient safety events</i>	• Leads a multidisciplinary team to prevent medication discharge errors • Establishes a program to ensure adequate transportation for patients who must return for additional procedures • Conducts a simulation demonstrating techniques and approaches for disclosing patient safety events • Mentors a resident and interdisciplinary team through the disclosure of patient safety events
Assessment Models or Tools	• Case-based discussion • Direct observation

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	• Medical record (chart) review
Curriculum Mapping	•
Notes or Resources	• Please see Pediatric Gastroenterology General Resources section on page 38

Systems-Based Practice 2: Quality Improvement Overall Intent: To understand and implement quality improvement methodologies to improve patient care	
Milestones	Examples
Level 1 <i>Demonstrates knowledge of basic quality improvement methodologies and metrics</i>	• Describes fishbone diagram • Describes components of a “Plan-Do-Study-Act” cycle
Level 2 <i>Describes local quality improvement initiatives (e.g., community vaccination rate, infection rate, smoking cessation)</i>	• Describes clinic initiatives to improve vitamin D supplementation for IBD • Describes an initiative to improve influenza vaccination rates in the children seen in gastroenterology clinic
Level 3 <i>Participates in local quality improvement initiatives</i>	• Participates in an ongoing interdisciplinary project to improve medication reconciliation • Collaborates on a project to improve inpatient discharge instructions for central line-associated bloodstream infection prevention with the infectious disease group
Level 4 <i>Demonstrates the skills required to identify, develop, implement, and analyze a quality improvement project</i>	• Develops and implements a quality improvement project to improve influenza vaccination rates in intestinal failure patients within a practice site • In developing a quality improvement project, considers team bias and social determinants of health in patient population
Level 5 <i>Creates, implements, and assesses quality improvement initiatives at the institutional or community level</i>	• Leads a national multicenter quality improvement initiative on vaccinations for liver transplant recipients and shares results through a formal presentation or meeting with national subspecialty leaders • Looks for opportunities to improve clinic vaccination rates across a health care system
Assessment Models or Tools	• Direct observation • Poster or other presentation evaluation
Curriculum Mapping	•
Notes or Resources	• Please see Pediatric Gastroenterology General Resources section on page 38

Systems-Based Practice 3: System Navigation for Patient-Centered Care – Coordination of Care Overall Intent: To effectively navigate the health care system, including the interdisciplinary team and other care practitioners; to adapt care to a specific patient population to ensure high-quality patient outcomes	
Milestones	Examples
Level 1 <i>Lists the various interprofessional individuals involved in the patient's care coordination</i>	• Identifies the team members necessary for a pediatric patient with liver disease, including pediatric hepatologist, dietician, transplant nurses, and social workers • Recognizes implicit bias as a contributor to health care disparities • Identifies access to care and insurance coverage as social determinants of health
Level 2 <i>Coordinates care of patients in routine clinical situations, incorporating interprofessional teams with consideration of patient and family needs</i>	• Coordinates home health and subspecialty care for a child with a gastrostomy tube being seen in the continuity clinic • Coordinates with outpatient dietician for a child recently diagnosed with celiac disease
Level 3 <i>Coordinates care of patients in complex clinical situations, effectively utilizing the roles of interprofessional teams, and incorporating patient and family needs and goals</i>	• Coordinates care for a pediatric liver transplant recipient by liaising with the transplant surgery clinic at the time of discharge • Works with clinic staff to refer patients to a local pharmacy that offers a sliding fee scale and provides pharmacy coupons for patients in need • Recognizes that marginalized communities may have additional barriers to access and the need to involve a social worker or case manager in finding community resources
Level 4 <i>Coordinates interprofessional, patient-centered care among different disciplines and specialties, actively assisting families in navigating the health care system</i>	• During inpatient rotations, leads team members in approaching consultants to review cases/recommendations and arranges radiology rounds for the team • Advocates for and coordinates rescheduling a patient who missed several subspecialty appointments due to underlying socioeconomic issues
Level 5 <i>Coaches others in interprofessional, patient-centered care coordination</i>	• Leads an initiative to educate residents about home health services or medical home model for medically complex children, including discussion of health care disparities • Coaches and mentors other learners in how to run a multidisciplinary team meeting for a child with complex health care needs
Assessment Models or Tools	• Direct observation • Medical record (chart) audit • Multisource feedback/clinical observations • Review of discharge planning documentation
Curriculum Mapping	•
Notes or Resources	• Please see Pediatric Gastroenterology General Resources section on page 38

Systems-Based Practice 4: System Navigation for Patient-Centered Care – Transitions in Care Overall Intent: To effectively navigate the health care delivery system during transitions of care to ensure high-quality patient outcomes	
Milestones	Examples
Level 1 <i>Uses a standard template for transitions of care/hand-offs</i>	• When handing off to colleagues for a weekend, reads verbatim from a templated hand-off but lacks context, is not appropriately specific in next steps, and does not provide contingency plans
Level 2 <i>Adapts a standard template, recognizing key elements for safe and effective transitions of care/hand-offs in routine clinical situations</i>	• Routinely uses a standardized hand-off for a stable patient, verbalizes a basic understanding of active problems, and provides basic contingency plans • Discusses a discharge of an infant with a nasogastric tube from the neonatal intensive care unit (NICU) with the attending neonatologist and provides a problem list, clinical course, and action items to be followed up as an outpatient
Level 3 <i>Performs safe and effective transitions of care/hand-offs in complex clinical situations, and ensures closed-loop communication</i>	• Routinely uses a standardized hand-off when transferring a patient to the intensive care unit, with direct communication of clinical reasoning, problems warranting a higher level of care, and status of completed/planned interventions; solicits read-back • Performs the hand-off for a patient with a short bowel syndrome on parenteral nutrition from the NICU with a succinct summary by problem or system, a timeline for outpatient follow-up, with clearly delineated and triaged responsibilities
Level 4 <i>Performs and advocates for safe and effective transitions of care/hand-offs within and across health care delivery systems, including transitions to adult care</i>	• Prior to going on vacation, proactively seeks out colleagues to follow-up test results that are still pending with specific instructions and contingency plans for the follow-up visit with the patient/family • Seeks out appropriate adult general and subspecialty practitioners to facilitate the transition of a 20-year-old patient with complex health care needs to adult care; ensures a thorough hand-off, including the patient's cultural preferences and social needs, to the identified new adult practitioners
Level 5 <i>Coaches others in improving transitions of care within and across health care delivery systems to optimize patient outcomes</i>	• Develops and implements a process for fellows to transition their adult IBD patients to adult medicine with a checklist for the patient to perform prior to transition date
Assessment Models or Tools	• Direct observation • Clinical evaluations • Review of sign-out tools, use and review of checklists • Standardized hand-off checklist
Curriculum Mapping	•
Notes or Resources	• Starmer, Amy J., Nancy D. Spector, Rajendu Srivastava, April D. Allen, Christopher P. Landrigan, Theodore C. Sectish, and I-PASS Study Group. 2012. "I-Pass, A Mnemonic to Standardize Verbal Handoffs." <i>Pediatrics</i> 129(2), 201–204. https://doi.org/10.1542/peds.2011-2966

Systems-Based Practice 5: Population and Community Health	
Overall Intent: To promote and improve health across communities and populations through patient care and advocacy, including public education and elimination of structural racism	
Milestones	Examples
Level 1 <i>Demonstrates awareness of population and community health needs and disparities</i>	- Identifies that social issues and trauma can impact gastrointestinal health - Identifies disparities in health care delivery that can lead to worse health outcomes for patients with obesity and liver disease
Level 2 <i>Identifies specific population and community health needs and disparities; identifies local resources</i>	- Identifies adverse childhood experiences that may impact a child's ability to toilet train - Discusses health disparities for patients needing a liver transplant and living in a marginalized community and appropriately refers to a community health worker program
Level 3 <i>Uses local resources effectively to meet the needs and reduce health disparities of a patient population and community</i>	- Consistently refers patients to Women, Infants, and Children (WIC) program for specialized formula - Connects patients who have limited English language proficiency with community health care workers who can guide the patient through the medical system
Level 4 <i>Adapts practice to provide for the needs of and reduce health disparities of a specific population</i>	- Participates in an advocacy project to improve telehealth access for patients who reside in rural areas - Organizes mental health resources for patients in the gastroenterology clinic who screen positive for depression
Level 5 <i>Advocates at the local, regional, or national level for populations and communities with health care disparities</i>	- Partners with a community organization to open a WIC location to provide specialized formulas - Participates in longitudinal discussions with state or national government policy makers to eliminate disparities related to food allergies and improve Medicaid formularies to expand coverage of specialty formulas
Assessment Models or Tools	- Direct observation - Case presentations - Multisource feedback
Curriculum Mapping	
Notes or Resources	Please see Pediatric Gastroenterology General Resources section on page 38

Systems-Based Practice 6: Physician Role in Health Care Systems Overall Intent: To understand the physician's role in health systems science to optimize patient care delivery, including cost-conscious care	
Milestones	Examples
Level 1 <i>Engages with patients and other providers in discussions about cost-conscious care and key components of the health care delivery system</i>	• Considers the differences in cost burden for a patient in the hospital versus being closely followed as an outpatient • Considers that insurance coverage, or lack of coverage, can affect prescription drug availability/cost for individual patients
Level 2 <i>Identifies the relationships between the delivery system and cost-conscious care and the impact on the patient care</i>	• Considers the patient's out of pocket costs when choosing a swallowed steroid to treat eosinophilic esophagitis (EOE) • Ensures that a patient hospitalized with a new IBD diagnosis has a scheduled outpatient follow-up appointment to ensure medication adherence
Level 3 <i>Discusses the need for changes in clinical approaches based on evidence, outcomes, and cost-effectiveness to improve care for patients and families</i>	• Considers forgoing endoscopic biopsies for a patient with highly positive celiac serology • Uses shared decision making to consider when surgery is needed for a patient with familial adenomatous polyposis • Adapts plan to minimize costs and provides appropriate care for an uninsured patient
Level 4 <i>Advocates for the promotion of safe, quality, and high-value care</i>	• Identifies the value of outpatient constipation action plan upon discharge to minimize hospital readmissions and implements a project to address this issue • Creates a checklist for parents of children being discharged with a central line
Level 5 <i>Coaches others to promote safe, quality, and high-value care across health care systems</i>	• Raises awareness to promote cost-conscious care by implementing Choosing Wisely recommendations within the gastroenterology division • Educates colleagues on local or regional food deserts and coordinates activity to address the need (e.g., develops a community garden)
Assessment Models or Tools	• Direct observation • Multisource feedback
Curriculum Mapping	•
Notes and Resources	• Please see Pediatric Gastroenterology General Resources section on page 38

Practice-Based Learning and Improvement 1: Evidence-Based and Informed Practice Overall Intent: To practice evidence-based medicine that is tailored to the specific needs of individual patients and patient populations	
Milestones	Examples
Level 1 <i>Develops an answerable clinical question and demonstrates how to access available evidence, with guidance</i>	- Identifies a question such as, “How do you manage patients with acute pancreatitis?” but needs guidance to focus it into a searchable question - Only uses general medical resources (i.e., background information) such as basic internet search for answers
Level 2 <i>Independently articulates clinical question and accesses available evidence</i>	- Formulates a focused, answerable question (e.g., “Does early enteral nutrition improve outcomes for patients with acute pancreatitis?”) - Appropriately searches the medical literature to answer a clinical question
Level 3 <i>Locates and applies the evidence, integrated with patient preference, to the care of patients</i>	Uses the most current literature in deciding when to initiate feeds in a patient with acute pancreatitis
Level 4 <i>Critically appraises and applies evidence, even in the face of uncertainty and conflicting evidence to guide care tailored to the individual patient</i>	- Maintains and updates a shared folder of guidelines and articles for common gastrointestinal (GI) and liver issues - Develops a standardized inpatient care plan for patients with acute pancreatitis as part of a multidisciplinary team - Discusses the conflicting evidence for diagnosing celiac disease by biopsy or serology
Level 5 <i>Coaches others to critically appraise and apply evidence for complex patients</i>	- Participates in the development of clinical guidelines/pathways on a national committee - Role models and coaches others in creating efficient and effective search strategies to answer clinical questions
Assessment Models or Tools	- Direct observation - Presentation evaluation - Scholarly project
Curriculum Mapping	
Notes or Resources	Djulgovic, Benjamin, Gordon H. Guyatt. 2017. “Progress in Evidence-Based Medicine: A Quarter Century On.” <i>Lancet</i> 390(10092): 415-423. doi: 10.1016/S0140-6736(16)31592-6. Epub 2017 Feb 17. PMID: 28215660.

Practice-Based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth Overall Intent: To continuously improve patient care based on self-evaluation and lifelong learning	
Milestones	Examples
Level 1 <i>Participates in feedback sessions</i> <i>Develops personal and professional goals, with assistance</i>	• Attends scheduled feedback sessions with prompting • Sets a goal to improve endoscopic skills • Recognizes biases
Level 2 <i>Demonstrates openness to feedback and performance data</i> <i>Designs a learning plan based on established goals, feedback, and performance data, with assistance</i>	• Acknowledges concerns about timely note completion and works with clinic preceptor to develop goals for improvement • Develops a plan with a faculty member to improve endoscopic skills • Devises a plan to explore implicit biases and how they impact patient care
Level 3 <i>Seeks and incorporates feedback and performance data episodically</i> <i>Designs and implements a learning plan by analyzing and reflecting on the factors which contribute to gap(s) between performance expectations and actual performance</i>	• Occasionally seeks feedback on performance in endoscopy • Identifies problems performing a colonoscopy and arranges to spend more time with an endoscopy coach • Recognizes own implicit biases that affected care for a transgender male with inflammatory bowel disease and takes steps to mitigate bias
Level 4 <i>Seeks and incorporates feedback and performance data consistently</i> <i>Adapts a learning plan using long-term professional goals, self-reflection, and performance data to measure its effectiveness</i>	• Actively seeks feedback from the endoscopy director and requests to perform more polypectomies • Adapts learning plan to improve care of patients undergoing endoscopy based on personal reflection, feedback, and patient data • Actively seeks out conferences to learn about anti-racism and bystander culture
Level 5 <i>Role models and coaches others in seeking and incorporating feedback and performance data</i> <i>Demonstrates continuous self-reflection and coaching of others on reflective practice</i>	• Creates a template for other fellows to track and improve their endoscopic skills • Provides career mentoring to learners to review clinical practice goals and academic aspirations • Guides other learners in reflecting on their own implicit biases
Assessment Models or Tools	• Direct observation • Review of learning plan • Multisource feedback

Curriculum Mapping	•
Notes or Resources	Lockspeiser, Tai M., Patricia A. Schmitter, J. Lindsey Lane, Janice L. Hanson, Adam A. Rosenberg, and Yoon Soo Park. 2013. "Assessing Residents' Written Learning Goals and Goal Writing Skill: Validity Evidence for the Learning Goal Scoring Rubric." <i>Academic Medicine</i> 88(10): 1558-1563. DOI: 10.1097/ACM.0b013e3182a352e6.

Professionalism 1: Professional Behavior	
Overall Intent: To demonstrate ethical and professional behaviors, promote these behaviors in others, and use appropriate resources to manage professional dilemmas	
Milestones	Examples
Level 1 <i>Identifies expected professional behaviors and potential triggers for lapses</i> <i>Identifies the value and role of pediatric gastroenterology as a vocation/career</i>	- Identifies fatigue as a trigger for lapses in professionalism - Acknowledges the importance of the pediatric gastroenterologist in providing accurate, timely information to services requesting consultation
Level 2 <i>Demonstrates professional behavior with occasional lapses</i> <i>Demonstrates accountability for patient care as a pediatric gastroenterologist, with guidance</i>	- After appearing late for own presentation at morning conference, identifies this lapse, and immediately apologizes to peers and attendings upon arrival - Asks attending for help in telling patient and patient's family about delayed report of a biopsy result
Level 3 <i>Maintains professional behavior in increasingly complex or stressful situations</i> <i>Fully engages in patient care and holds oneself accountable</i>	- Advocates for an individual patient's needs in a humanistic and professional manner regarding home care, medication approval, and need for care by another subspecialist despite aggressive parental demands - Ensure timely follow-up on biopsy results without prompting on an intensive care unit patient
Level 4 <i>Recognizes situations that may trigger professionalism lapses and intervenes to prevent lapses in self and others</i> <i>Exhibits a sense of duty to patient care and professional responsibilities</i>	- Provides feedback to residents who are speaking inappropriately about a patient scenario - Volunteers to assist colleagues with seeing patients when the clinic is busier than normal - Speaks up in the moment when observing racist/sexist behavior within the health care team and uses reporting mechanisms to address it
Level 5 <i>Models professional behavior and coaches others when their behavior fails to meet professional expectations</i> <i>Extends the role of the pediatric gastroenterologist beyond the care of patients by engaging with the community, specialty, and medical profession as a whole</i>	- Mentors co-fellows on how to deal with difficult patient scenarios - Coaches junior fellows who are having difficulty balancing patient care and educational responsibilities - Advocates for insurance coverage of medically necessary foods through national pediatrics society in front of Congress
Assessment Models or Tools	- Direct observation - Multisource feedback

	• Oral or written self-reflection
Curriculum Mapping	•
Notes or Resources	• Aeder, Lita, Lisa Altshuler, Elizabeth Kachur, and Ingrid Walker-Descartes. 2018. "Empowering Trainees to Promote Professionalism." <i>Clinical Teacher</i> 15(4): 304-308. doi: 10.1111/tct.12680. Epub 2017 Jun 14. PMID: 28612510. • Berger, Arielle S., Elizabeth Niedra, Stephanie G. Brooks, Waleed S. Ahmed, and Shiphra Ginsburg. 2020. "Teaching Professionalism in Postgraduate Medical Education: A Systematic Review." <i>Academic Medicine</i> 95(6): 938-946. doi: 10.1097/ACM.0000000000002987. PMID: 31517687.

Professionalism 2: Ethical Principles	
Overall Intent: To recognize and address or resolve common and complex ethical dilemmas or situations	
Milestones	Examples
Level 1 <i>Demonstrates knowledge of the ethical principles underlying informed consent, surrogate decision making, advance directives, confidentiality, error disclosure, stewardship of limited resources, and related topics</i>	• Articulates how the principle of “do no harm” applies to a patient who may not need a procedure even though the learning opportunity exists • Recognizes need to contact a social worker in anticipation of performing a procedure on a patient who is in state custody • Asks about resources for acknowledging an error on the inpatient service
Level 2 <i>Applies ethical principles in common situations</i>	• Reviews hospital guidelines on transfusing children of Jehovah’s Witnesses after admitting a patient with ulcerative colitis and severe anemia • Discusses with attending next steps in disclosure of a positive pregnancy test in an adolescent in the endoscopy suite
Level 3 <i>Analyzes complex situations using ethical principles to address conflict/controversy; seeks help when needed to manage and resolve complex ethical situations</i>	• Offers treatment options for a terminally ill patient, minimizing personal bias, and honors the patient’s and family’s choice • Provides support to a patient’s parent who has custody of the daughter, while at the same time understanding that a process is underway to potentially remove the child from the home • After posting inappropriate content on social media, reviews policies related to posting of content, and seeks guidance from leadership
Level 4 <i>Manages and seeks to resolve ethical dilemmas using appropriate resources (e.g., ethics consultations, literature review, risk management/legal consultation)</i>	• Appropriately uses ethics resources to discuss end-of-life care of a child in the intensive care unit on the liver transplant waitlist whose clinical status is deteriorating • Asks for an ethics consult when a patient’s parent takes the child home from the hospital against medical advice
Level 5 <i>Called upon by others to consult in cases of complex ethical dilemmas; identifies and seeks to address system-level factors that induce or exacerbate</i>	• Provides ethics consultation for a patient with dysphagia whose parents have declined feeding tube placement • Leads discussion at an ethics consult for a patient with intestinal failure who is not a US citizen and intestinal transplantation may not be offered on this basis
Assessment Models or Tools	• Direct observation • Multisource feedback • Oral or written self-reflection • Simulation
Curriculum Mapping	•
Notes or Resources	• Please see Pediatric Gastroenterology General Resources section on page 38

Professionalism 3: Accountability/Conscientiousness	
Overall Intent: To take responsibility for one's own actions and their impact on patients and other members of the health care team	
Milestones	Examples
Level 1 <i>Performs tasks and responsibilities, with prompting</i>	• Responds to reminders from program administrator to complete work hour logs • Changes habits to meet the minimum attendance requirement after being informed by the program director that too many conferences have been missed • Completes routine patient care (e.g., callbacks, consultations, orders) after prompting from a supervisor
Level 2 <i>Performs tasks and responsibilities in a timely manner in routine situations</i>	• Completes administrative tasks (e.g., licensing requirements) by specified due date • Answers pages and emails promptly with rare need for reminders • Completes basic tasks in anticipation of inability to access computer while traveling
Level 3 <i>Performs tasks and responsibilities in a thorough and timely manner in complex or stressful situations</i>	• Identifies multiple competing demands when caring for patients, appropriately triages tasks, and appropriately seeks help from other team members • Makes consistent and tangible progress along a set timeline, working toward fulfillment of program and larger governing organization requirements for completion of fellowship program
Level 4 <i>Coaches others to ensure tasks and responsibilities are completed in a thorough and timely manner in complex or stressful situations</i>	• Assists a colleague who is too ill to work with identifying coverage and volunteers to cover a shift • Coaches junior fellow on taking responsibility for incomplete communication during sign-out
Level 5 <i>Creates strategies to enhance others' ability to efficiently complete tasks and responsibilities</i>	• Meets with multidisciplinary team (e.g., nurses, social worker, case manager) to develop an improved process for discharging patients with nasogastric tubes • Sets up reminder system for co-fellows related to administrative time-sensitive tasks, and meets with leadership to implement this change
Assessment Models or Tools	• Compliance with deadlines and timelines • Direct observation • Multisource feedback • Self-evaluations and reflective tools • Simulation
Curriculum Mapping	•
Notes or Resources	• Please see Pediatric Gastroenterology General Resources section on page 38

Professionalism 4: Well-Being	
Overall Intent: To identify resources to manage and improve well-being	
Milestones	Examples
Level 1 <i>Recognizes the importance of addressing personal and professional well-being</i>	• Discusses possible ways to improve stress with a faculty mentor • Recognizes that personal stress may require a change in schedule
Level 2 <i>Describes institutional resources that are meant to promote well-being</i>	• Identifies well-being resources such as meditation apps and mental health resources for students and residents available through the program and institution • Acknowledges a set of core activities that bring joy and personal fulfillment
Level 3 <i>Recognizes institutional and personal factors that impact well-being</i>	• Recognizes that being on service, taking call, patient needs, and personal needs all combine to cause stress and impact well-being • Describes the tension between professional and personal responsibilities • Prioritizes a set of activities that bring joy and personal fulfillment and emphasizes these activities in times of need
Level 4 <i>Describes interactions between institutional and personal factors that impact well-being</i>	• Discusses a plan to mitigate the tension between a busy schedule and time with family • Recognizes how microaggressions from coworkers and/or faculty members are impacting performance or engagement in patient care • Develops a plan to mitigate stressors leading to burnout
Level 5 <i>Coaches and supports colleagues to optimize well-being at the team, program, or institutional level</i>	• Leads organizational efforts to address clinician well-being • Develops an affinity group to provide support for self and others to explore impact of microaggressions and biases
Assessment Models or Tools	• Direct observation • Group interview or debrief • Individual interview • Institutional online training modules • Self-assessment and personal learning plan
Curriculum Mapping	•
Notes or Resources	• This subcompetency is not intended to evaluate a fellow's well-being, but to ensure each fellow has the fundamental knowledge of factors that impact well-being, the mechanisms by which those factors impact well-being, and available resources and tools to improve well-being.

Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication Overall Intent: To establish a therapeutic relationship with patients and their families, tailor communication to the needs of patients and their families, and effectively navigate difficult/sensitive conversations	
Milestones	Examples
Level 1 <i>Demonstrates respect and attempts to establish rapport</i> <i>Attempts to adjust communication strategies based upon patient/family expectations</i>	- Introduces self and faculty member, identifies patient and others in the room, and engages all parties in health care discussion - Identifies need for trained interpreter for patients with limited English proficiency or hearing impairment, with prompting
Level 2 <i>Establishes a therapeutic relationship in straightforward encounters</i> <i>Adjusts communication strategies as needed to mitigate barriers and meet patient/family expectations</i>	- Listens to concerns of patient's parents at the beginning of a health supervision visit with a child with an acute or chronic medical problem - Uses nonjudgmental language to discuss sensitive topics - When seeing a distraught teenager with Crohn's disease, adjusts communication strategies to meet patient/family needs
Level 3 <i>Establishes a culturally competent and therapeutic relationship in most encounters</i> <i>Communicates with sensitivity and compassion, elicits patient/family values, and acknowledges uncertainty and conflict</i>	- Addresses patient's family's health beliefs on organic "alternative milks," when caring for a child with chronic malnutrition - Recognizes that mispronouncing a patient's name, especially one of a different ethnicity, might be experienced as a microaggression; apologizes to the patient and seeks to correct the mistake - Discusses resources and options with a teenage patient suffering from chronic liver disease, being supportive of the patient and avoiding bias in presentation of options - In a pediatric patient with chronic pancreatitis who is malnourished and suffering from chronic pain, discusses the pros and cons of medical versus surgical treatment, considering the uncertainty of the outcomes of the therapies
Level 4 <i>Establishes a therapeutic relationship in straightforward and complex encounters, including those with ambiguity and/or conflict</i> <i>Uses shared decision making with patient/family to make a personalized care plan</i>	- Continues to engage patients' parents who refuse biologic therapy for IBD, addressing misinformation and reviewing risks/benefits to assuage these concerns in a manner that engages rather than alienates the family - Facilitates sensitive discussions in ways that validate patient's gender identity and promote an inclusive environment - Elicits family values during goals of care discussion for a child with medical complexity transitioning to the pediatric intensive care unit
Level 5 <i>Mentors others to develop positive therapeutic relationships</i>	Acts as a mentor for resident disclosing bad news to a patient and the patient's family

<i>Models and coaches others in patient- and family-centered communication</i>	• Develops a curriculum on patient- and family-centered communication, including navigating difficult conversations
Assessment Models or Tools	• Direct observation • Standardized patients
Curriculum Mapping	•
Notes or Resources	• Makoul, Gregory. 2001. "Essential Elements of Communication in Medical Encounters: the Kalamazoo Consensus Statement." <i>Academic Medicine</i> 76(4): 390-393. https://journals.lww.com/academicmedicine/Fulltext/2001/04000/Essential_Elements_of_Communication_in_Medical.21.aspx#pdf-link.

Interpersonal and Communication Skills 2: Interprofessional and Team Communication Overall Intent: To communicate effectively with the health care team, including consultants	
Milestones	Examples
Level 1 <i>Respectfully requests a consultation, with guidance</i> <i>Identifies the members of the interprofessional team</i>	• Respectfully requests an otolaryngology consultation for a patient with dysphagia and feeding problems and formulates question with attending guidance • Acknowledges the contribution of each member of the multidisciplinary team
Level 2 <i>Clearly and concisely requests consultation by communicating patient information</i> <i>Participates within the interprofessional team</i>	• When requesting a consult from the infectious disease team, clearly and concisely describes the recent history of a young patient with short bowel syndrome with a central venous catheter on parenteral nutrition, who has a new fever • Contacts the dietician to manage an encephalopathic patient to discuss decreasing the protein in the parenteral nutrition
Level 3 <i>Formulates a specific question for consultation and tailors communication strategy</i> <i>Uses bi-directional communication within the interprofessional team</i>	• After a consultation has been completed, communicates with the primary care team to verify they have received and understand the recommendations • Using closed-loop communication with the liver transplant team social worker, ensures that a patient has received specialized formula that was ordered to home
Level 4 <i>Coordinates consultant recommendations to optimize patient care</i> <i>Facilitates interprofessional team communication</i>	• Initiates a multidisciplinary meeting to develop a shared care plan for a patient with Alagille syndrome • Works with hematologists to determine inpatient protocol for anticoagulation in gastroenterology patients at risk for thrombosis • Plans and leads a multidisciplinary team meeting for a patient with advanced liver disease, hepatorenal syndrome, and pulmonary hypertension
Level 5 <i>Maintains a collaborative relationship with referring providers that maximizes adherence to practice recommendations</i> <i>Coaches others in effective communication within the interprofessional team</i>	• Develops a collaborative team for management of button battery ingestion including representatives from pharmacy, anesthesia, gastroenterology, surgery, and otolaryngology • Mediates a conflict among members of the health care team
Assessment Models or Tools	• Clinical evaluations • Direct observation • Simulation
Curriculum Mapping	•

Notes or Resources	• Green, Matt, Teresa Parrott, and Graham Cook. 2012. "Improving Your Communication Skills." <i>BMJ</i>. 344:e357. https://doi.org/10.1136/bmj.e357. • Henry, Stephen G., Eric S. Holmboe, and Richard M. Frankel. 2013. "Evidence-Based Competencies for Improving Communication Skills in Graduate Medical Education: A Review with Suggestions for Implementation." <i>Medical Teacher</i>. 35(5):395-403. https://doi.org/10.3109/0142159X.2013.769677. • Roth, Christine G., Karen W. Eldin, Vijayalakshmi Padmanabhan, and Ellen M. Freidman. 2019. "Twelve Tips for the Introduction of Emotional Intelligence in Medical Education." <i>Medical Teacher</i> 41(7): 1-4. https://doi.org/10.1080/0142159X.2018.1481499.
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Interpersonal and Communication Skills 3: Communication within Health Care Systems Overall Intent: To effectively communicate using a variety of tools and methods	
Milestones	Examples
Level 1 <i>Records accurate information in the patient record</i> <i>Identifies the importance of and responds to multiple forms of communication (e.g., in-person, electronic health record (EHR), telephone, email)</i>	• Corrects progress note after attending identifies outdated plan • If using copy/paste/forward in the EHR, goes back to make changes to note after doing so • Understands that communication with a patient's family should be through a secure patient portal or phone
Level 2 <i>Records accurate and timely information in the patient record</i> <i>Selects appropriate method of communication, with prompting</i>	• Provides organized and accurate documentation that supports the treatment plan and limits extraneous information • Avoids jargon or stigmatized language in notes • Asks resident to call nurse with urgent request for labs after rounds
Level 3 <i>Concisely documents updated, prioritized, diagnostic and therapeutic reasoning in the patient record</i> <i>Aligns type of communication with message to be delivered (e.g., direct and indirect) based on urgency and complexity</i>	• Produces documentation that reflects complex clinical thinking and planning and is concise • Securely messages patient's transplant surgeon with non-urgent question rather than paging surgeon on call • Understands when to call, when to text, and when to email
Level 4 <i>Documents diagnostic and therapeutic reasoning, including anticipatory guidance</i> <i>Demonstrates exemplary written and verbal communication</i>	• Documentation is consistently accurate, organized, and concise; reflects complex clinical reasoning and frequently incorporates contingency planning • Communicates effectively and proactively with collaborating physicians and teams, and identifies communication gaps in order to prevent recurrence
Level 5 <i>Models and coaches others in documenting diagnostic and therapeutic reasoning</i> <i>Coaches others in written and verbal communication</i>	• Leads teams by modeling a range of effective tools and methods of communication that fit the context of a broad variety of clinical encounters • Leads an effort to coach others in documenting the outcomes of multidisciplinary team meetings in the medical record • Designs and facilitates an EHR order set or disease-specific note template that integrates effective communication among teams, departments, and institutions
Assessment Models or Tools	• Direct observation

	• Evaluations • Simulation
Curriculum Mapping	•
Notes or Resources	• Bierman, Jennifer A., Kathryn Kinner Hufmeyer, David T. Liss, A. Charlotta Weaver, and Heather L. Heiman. 2017. "Promoting Responsible Electronic Documentation: Validity Evidence for a Checklist to Assess Progress Notes in the Electronic Health Record." <i>Teaching and Learning in Medicine</i>. 29(4): 420-432. https://doi.org/10.1080/10401334.2017.1303385. • Haig, Kathleen M., Staci Sutton, and John Whittington. 2006. "SBAR: A Shared Mental Model for Improving Communications Between Clinicians." <i>Joint Commission Journal on Quality and Patient Safety</i>. 32(3):167-75. https://doi.org/10.1016/s1553-7250(06)32022-3. • Robertson, Samantha T., Ingrid C.M. Rosbergen, Andrew Burton-Jones, Rohan S. Grimley, and Sandra G. Brauer. 2022. "The Effect of the Electronic Health Record on Interprofessional Practice: A Systematic Review." <i>Applied Clinical Informatics</i> 13(3): 541-559. doi: 10.1055/s-0042-1748855. Epub 2022 Jun 1. PMID: 35649501. • Starmer, Amy J., Nancy D. Spector, Rajendu Srivastava, April D. Allen, Christopher P. Landrigan, Theodore Sectish, and I-PASS Study Group. 2012. "I-Pass, a Mnemonic to Standardize Verbal Handoffs." <i>Pediatrics</i> 129.2:201-204. https://doi.org/10.1542/peds.2011-2966.

Pediatric Gastroenterology General Resources

Pediatric Gastroenterology Entrustable Professional Activities

<https://www.abp.org/sites/abp/files/pdf/epa-gast-1.pdf>

<https://www.abp.org/sites/abp/files/pdf/epa-gast-2.pdf>

<https://www.abp.org/sites/abp/files/pdf/epa-gast-3.pdf>

<https://www.abp.org/sites/abp/files/pdf/epa-gast-4.pdf>

<https://www.abp.org/sites/abp/files/pdf/epa-gast-5.pdf>

Pediatric Gastroenterology Training Guidelines

https://naspghan.org/files/documents/pdfs/position-papers/NASPGHAN_Guidelines_for_Training_in_Pediatric.pdf

Pediatric Gastroenterology Curricular Resources

<https://naspghan.org/training-career-development/for-fellowship-directors/curricular-resources/common-outpatient-gi-problems/>

<https://naspghan.org/training-career-development/for-fellowship-directors/curricular-resources/inflammatory-bowel-disease/>

<https://naspghan.org/training-career-development/for-fellowship-directors/curricular-resources/mucosal-disorders/>

<https://naspghan.org/training-career-development/for-fellowship-directors/curricular-resources/congenital-disorders-gi-infections-intestinal-rehabilitation-sbs/>

<https://naspghan.org/training-career-development/for-fellowship-directors/curricular-resources/liver-disease/>

<https://naspghan.org/training-career-development/for-fellowship-directors/curricular-resources/biliary-disease/>

<https://naspghan.org/training-career-development/for-fellowship-directors/curricular-resources/pancreatic-disease/>

<https://naspghan.org/training-career-development/for-fellowship-directors/curricular-resources/liver-transplantation/>

<https://naspghan.org/training-career-development/for-fellowship-directors/curricular-resources/procedures-curriculum/>

<https://naspghan.org/training-career-development/for-fellowship-directors/curricular-resources/procedures-curriculum/>

NASPGHAN Fellows Concise Review of Pediatric Gastroenterology, Hepatology and Nutrition Board Review Book

Pediatric Gastroenterology Supplemental Guide

<https://naspghan.org/board-review-book/>

NASPGHAN Physiology Series

<https://naspghan.org/training-career-development/for-fellowship-directors/curricular-resources/physiology-series/>

Pediatric Gastroenterology (NASPGHAN) Clinical Guidelines and Positions Statements

<https://naspghan.org/professional-resources/clinical-guidelines/>

Available Milestones Resources

Milestones 2.0: Assessment, Implementation, and Clinical Competency Committees Supplement, 2021 - <https://meridian.allenpress.com/jgme/issue/13/2s>

Milestones Guidebooks: <https://www.acgme.org/milestones/resources/>

- *Assessment Guidebook*
- *Clinical Competency Committee Guidebook*
- *Clinical Competency Committee Guidebook Executive Summaries*
- *Implementation Guidebook*
- *Milestones Guidebook*

Milestones Guidebook for Residents and Fellows: <https://www.acgme.org/residents-and-fellows/the-acgme-for-residents-and-fellows/>

- *Milestones Guidebook for Residents and Fellows*
- *Milestones Guidebook for Residents and Fellows Presentation*
- *Milestones 2.0 Guide Sheet for Residents and Fellows*

Milestones Research and Reports: <https://www.acgme.org/milestones/research/>

- *Milestones National Report*, updated each fall
- *Milestones Predictive Probability Report*, updated each fall
- *Milestones Bibliography*, updated twice each year

Developing Faculty Competencies in Assessment courses - <https://www.acgme.org/meetings-and-educational-activities/courses-and-workshops/developing-faculty-competencies-in-assessment/>

Assessment Tool: Direct Observation of Clinical Care (DOCC) - <https://dl.acgme.org/pages/assessment>

Assessment Tool: Teamwork Effectiveness Assessment Module (TEAM) - <https://team.acgme.org/>

Improving Assessment Using Direct Observation Toolkit - <https://dl.acgme.org/pages/acgme-faculty-development-toolkit-improving-assessment-using-direct-observation>

Remediation Toolkit - <https://dl.acgme.org/courses/acgme-remediation-toolkit>

Learn at ACGME has several courses on Assessment and Milestones - <https://dl.acgme.org/>

To help programs transition to the new version of the Milestones, the ACGME has mapped the original Milestones 1.0 to the new Milestones 2.0. Indicated below are the subcompetencies that are similar between versions. These are not exact matches, but are areas that include similar elements. Not all subcompetencies map between versions. Inclusion or exclusion of any subcompetency does not change the educational value or impact on curriculum or assessment.

Milestones 1.0	Milestones 2.0
PC1: Provide transfer of care that ensures seamless transitions	SBP4: System Navigation for Patient-Centered Care – Transitions in Care
PC2: Make informed diagnostic and therapeutic decisions that result in optimal clinical judgement	PC1: Pediatric Gastroenterology History PC2: Pediatric Gastroenterology Physical Examination PC3: Decision Making MK1: Diagnostic Evaluation Using Gastrointestinal Tests
PC3: Develop and carry out management plans	PC5: Patient Management in Pediatric Gastrointestinal and Liver Disease ICS1: Patient- and Family-Centered Communication
PC4: Provide appropriate role modeling	PBL12: Reflective Practice and Commitment to Personal Growth
	PC4: Organize and Prioritize Inpatient Care
	PC6: Endoscopic Procedures – Cognitive
	PC7: Endoscopic Procedures – Technical
MK1: Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems	MK2: Clinical Knowledge of Pediatric Gastrointestinal and Liver Diseases PBL11: Evidence Based and Informed Practice
SBP1: Work effectively in various health care delivery settings and systems relevant to their clinical specialty	SBP3: System Navigation for Patient Centered Care – Coordination of Care SBP6: Physician Role in Health Care Systems
SBP2: Coordinate patient care within the health care system relevant to their clinical specialty	SBP3: System Navigation for Patient Centered Care – Coordination of Care SBP4: System Navigation for Patient-Centered Care – Transitions in Care SBP5: Population and Community Health ICS1: Patient- and Family-Centered Communications ICS2: Interprofessional and Team Communication
SBP3: Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate	SBP5: Population and Community Health SBP6: Physician Role in Health Care Systems

SBP4: Work in inter-professional teams to enhance patient safety and improve patient care quality	SBP1: Patient Safety ICS2: Interprofessional and Team Communication
SBP5: Participate in identifying system errors and implementing potential systems solutions	SBP1: Patient Safety SBP2: Quality Improvement
PBL11: Identifying strengths, deficiencies, and limits to one's knowledge and expertise	PBL11: Evidence Based and Informed Practice PBL12: Reflective Practice and Commitment to Personal Growth
PBL12: Systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement	SBP2: Quality Improvement PBL12: Reflective Practice and Commitment to Personal Growth
PBL13: Use information technology to optimize learning and care delivery	PBL11: Evidence Based and Informed Practice PBL12: Reflective Practice and Commitment to Personal Growth ICS3: Communication within Health Care Systems
PBL14: Participate in the education of patients, families, students, residents, fellows, and other health professionals	SBP5: Population and Community Health PBL11: Evidence Based and Informed Practice ICS1: Patient- and Family-Centered Communications
PROF1: Professional Conduct: High standards of ethical behavior which includes maintaining appropriate professional boundaries	PROF1: Professional Behavior PROF2: Ethical Principles
PROF2: Trustworthiness that makes colleagues feel secure when one is responsible for the care of patients	PBL11: Evidence Based and Informed Practice PROF1: Professional Behavior PROF3: Accountability/Conscientiousness ICS1: Patient- and Family-Centered Communications
PROF3: Provide leadership skills that enhance team functioning, the learning environment, and/or the health care delivery system/environment with the ultimate intent of improving care of patients	ICS2: Interprofessional and Team Communication ICS3: Communication within Health Care Systems PROF2: Ethical Principles PROF3: Accountability/Conscientiousness
PROF4: The capacity to accept that ambiguity is part of clinical medicine and to recognize the need for and to utilize appropriate resources in dealing with uncertainty	PROF2: Ethical Principles ICS1: Patient- and Family-Centered Communication PBL11: Evidence Based and Informed Practice
	PROF4: Well-Being
ICS1: Communicate effectively with physicians, other health professionals, and health-related agencies	ICS2: Interprofessional and Team Communication ICS3: Communication within Health Care Systems
ICS2: Work effectively as a member or leader of a health care team or other professional group	ICS2: Interprofessional and Team Communication PBL12: Reflective Practice and Commitment to Personal Growth PROF3: Accountability/Conscientiousness

ICS3: Act in a consultative role to other physicians and health professionals	ICS2: Interprofessional and Team Communication ICS3: Communication within Health Care Systems
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