

Supplemental Guide: Pediatric Gastroenterology



April 2023

TABLE OF CONTENTS

INTRODUCTION	3
PATIENT CARE	
Pediatric Gastroenterology History Pediatric Gastroenterology Exam Decision Making Organization and Prioritization of Inpatient Care Patient Management in Pediatric Gastrointestinal and Liver Disease Endoscopic Procedures - Cognitive Endoscopic Procedures - Technical.	
MEDICAL KNOWLEDGE	1
Diagnostic Evaluation of Gastrointestinal Tests	15 16
SYSTEMS-BASED PRACTICE	17
Patient Safety Quality Improvement System Navigation for Patient-Centered Care – Coordination of Care System Navigation for Patient-Centered Care – Transitions in Care Community/Population Health Physician Role in Health Care Systems	
PRACTICE-BASED LEARNING AND IMPROVEMENT	24
Evidence-Based and Informed Practice	
PROFESSIONALISM	27
Professional Behavior Ethical Principles Accountability/Conscientiousness Well-Being	29 30
INTERPERSONAL AND COMMUNICATION SKILLS	32
Patient- and Family-Centered Communication Interprofessional and Team Communication Communication within Health Care Systems	34
PEDIATRIC GASTROENTEROLOGY GENERAL RESOURCES	38
AVAILABLE MILESTONES RESOURCES	40
MAPPING OF MILESTONES 1.0 TO 2.0	42

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 Acquires a comprehensive and developmentally appropriate pediatric medical history	 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 Acquires a pediatric gastroenterology history, including pertinent positives and negatives	 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 Acquires a focused pediatric gastroenterology history with historical subtleties and psychosocial and physical functioning for a patient with a simple complaint	 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 Acquires the complete patient history, interprets subtleties, and determines tailored assessment of disease activity for a patient with a complex complaint	 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 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	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 Performs complete physical examination adapted for age and development	 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 Performs a focused physical examination on patients with common gastroenterology complaints, based on history, and identifies abnormal findings	Identifies a large stool mass during a routine abdominal exam
Level 3 Performs a focused physical examination on patients with complex gastroenterology complaints using strategies to maximize patient cooperation and comfort	 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 Performs a physical examination that identifies subtle, nuanced findings	 Identifies hair thinning or skin changes in a patient with possible nutritional deficiencies Identifies splenomegaly in a patient with portal hypertension
Level 5 Serves as a role model for performing a physical examination that identifies subtle, nuanced findings	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 Reports clinical facts (e.g., history, exam, tests, consultations), with prompting	 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 Generates a differential diagnosis based on the clinical facts and develops plan to obtain tests, as needed	 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 Generates a prioritized differential diagnosis and orders and interprets focused testing for diagnoses	 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 Reappraises diagnosis in real time to avoid diagnostic error and adjusts management accordingly	 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 Serves as a role model for complex diagnostic decision making	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 Organizes patient care tasks, with assistance	 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 Organizes patient care tasks and needs assistance for patients with complex disease; recognizes urgent issues	 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 Prioritizes patient care tasks with efficiency; anticipates and triages urgent issues	 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 Prioritizes patient care tasks and manages service independently	 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 Serves as a role model for organizing, prioritizing, and managing patient care tasks	 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 Reports management plans developed • Considers antibiotics and chest x-ray based on previous day's comments from senior by others 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 • Develops plan for a patient's chief complaint but neglects other active issues; when an Level 2 Participates in the creation of infant presenting for newborn follow-up has not regained birth weight, suggests referral to management plans with assistance 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 • Leads inpatient rounds on patient with IBD flare, involving the bedside nurse for input on Level 3 Develops and implements an current plan, and reminds residents of improving Pediatric Ulcerative Colitis Activity Index interdisciplinary management plan for common and typical diagnoses (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 • Leads inpatient rounds on patient with IBD flare, now on infliximab, and includes team **Level 4** Develops and implements informed management plans for complicated and atypical decision making for discharge home, while also initiating a post-discharge plan for patient diagnoses, with the ability to modify plans as such as steroid-taper and follow-up on health-maintenance items for a patient considered immunosuppressed (e.g., vaccines, sunscreen use, eye exams) necessary • 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 Serves as a role model for development	Promptly recognizes/identifies team members' misunderstanding and redirects discussion
and implementation of management plans for	to consider the most important aspects of a case
complicated and atypical diagnoses	• 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.

therapeutic options, and management of compl Milestones	Examples
Level 1 Identifies indications for endoscopic procedures	 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 Explains diagnostic endoscopic procedures and possible complications, and obtains informed consent	 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 Interprets findings during endoscopic procedures, recognizes complications, and chooses appropriate interventions	 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 Anticipates and manages patient- specific comorbidities (e.g., bleeding disorder) and complications of therapeutic procedures	 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 Serves as a role model for managing patients with comorbidities and complications of therapeutic procedures	 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." Journal of Pediatric
	Gastroenterology and Nutrition 60(4): 474-480. doi: 10.1097/MPG.000000000000686.
	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." Journal of Pediatric
	Gastroenterology and Nutrition 60(4). https://cdn-
	links.lww.com/permalink/mpg/a/mpg 2015 03 04 walsh jpgn-14-401 sdc2.pdf.

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 Participates in endoscopic procedures and performs scope functions correctly (e.g., dial maneuvers, button use, appropriate ergonomics)	Demonstrates familiarity with endoscopic equipment
Level 2 Performs endoscopic procedures with assistance	 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 Independently performs EGD; completes colonoscopy and performs therapeutic endoscopic procedures with assistance	 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 Independently performs EGD and ileocolonoscopy, including therapeutic endoscopic techniques (e.g., polyps, bleeding, foreign bodies) and manages complications	Independently uses multiple methods of hemostasis to manage a bleeding ulcer Independently performs esophageal dilations
Level 5 Independently performs advanced or specialized endoscopic procedures (e.g., single balloon enteroscopy, refractory gastrointestinal bleeding, endo-FLIP) and manages complications	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	

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." Journal of Pediatric Gastroenterology and Nutrition 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." Journal of Pediatric Gastroenterology and Nutrition 60(4): 474-480. doi: 10.1097/MPG.0000000000000686. https://naspghan.org/files/documents/pdfs/training/curriculum-resources/procedures-	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." Journal of Pediatric Gastroenterology and Nutrition 74(S1 Suppl 1): S30-S43. doi: 10.1097/MPG.00000000000003264. 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." Journal of Pediatric Gastroenterology and Nutrition 60(4): 474-480. doi: 10.1097/MPG.0000000000000686.
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	curriculum/Walsh- et al 2015 The gastrointestinal endoscopy competency assessme.pdf. • Walsh, Catharine M., Simon C. Ling, Petar Mamula, Jenifer R. Lightdale, Thomas D.

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 Reports results of diagnostic studies	Reports the results of a barium enema without interpretation	
Level 2 Identifies clinically significant results	• Identifies findings of a "double bubble" on imaging after the attending points out an	
of diagnostic studies, with guidance	abnormality in the stomach	
Level 3 Independently interprets or applies	Applies pH probe results and discusses next steps of care with parents or	
results of common diagnostic studies	consultants, such as neonatologist	
	Applies the results of a breath test to patient management	
Level 4 Independently interprets or applies	Recognizes bowel wall thickening on a magnetic resonance enterography (MRE) in a retirent with suggested IRD.	
results of complex diagnostic studies	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 Serves as a peer expert for	Leads a small group talk at a national conference on advanced motility techniques for	
interpreting the clinical significance of results	patients with chronic retentive constipation	
of complex diagnostic studies		
	Case-based discussions	
Assessment Models or Tools	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." Journal of Pediatric Gastroenterology and	
	Nutrition 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 pat	ient care and communicate with other medical professionals
Milestones	Examples
Level 1 Demonstrates foundational medical	Defines short bowel syndrome
knowledge of specialty disorders	Lists causes of pediatric acute and chronic pancreatitis
Level 2 Applies medical knowledge to common	Follows consensus guidelines to guide dietary and pharmacologic therapy to plan the
and typical scenarios to guide patient care	management of a patient with short bowel disease
	Understands admission criteria for a patient that presents with pancreatitis
Level 3 Applies medical knowledge to	Uses understanding of intestinal function in a patient with short bowel syndrome to
complicated and atypical conditions to guide	diagnose and treat small intestinal bacterial overgrowth (SIBO)
patient care	• Understands when to order magnetic resonance cholangiopancreatography (MRCP) for a
	patient with recurrent pancreatitis
Level 4 Seeks out and integrates medical	Considers individual risk factors when developing a prevention plan for a patient with
knowledge of specialty disorders to develop	recurrent central line infections
personalized care plans	Refers chronic pancreatitis patient to endoscopic retrograde cholangiopancreatography
	(ERCP) center for evaluation and treatment of abnormal MRCP findings
Level 5 Serves as a role model at multiple	Serves on a national committee for evaluating indications for intestinal transplant
levels, drawing from a breadth of medical	Utilizes knowledge of chronic pancreatitis and gives grand rounds lecture on evolving
knowledge that spans the continuum of simple	therapeutic modalities
to complex problems	
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</i>
	<i>Liver Disease</i> . 6th ed. Elsevier. https://doi.org/10.1016/B978-1-4377-0774-8.10099-5 .

families, and health care professionals	management of patient safety events, including relevant communication with patients, their
Milestones	Examples
Level 1 Demonstrates knowledge of common patient safety events	Lists common patient safety events such as patient misidentification or medication errors
Demonstrates knowledge of how to report patient safety events	• Recognizes "patient safety reporting system" or "patient safety hotline" as ways to report safety events
Level 2 Identifies system factors that lead to patient safety events	• 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 patient safety events through institutional reporting systems (simulated or actual)	Reports delayed antibiotic administration time using the appropriate reporting mechanism
Level 3 Participates in analysis of patient safety events (simulated or actual)	 Participates in department morbidity and mortality presentations Participates in a quality improvement project aimed at patient safety
Participates in disclosure of patient safety events to patients and families (simulated or actual)	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 Conducts analysis of patient safety events and offers error prevention strategies (simulated or actual)	 Participates in a simulated or actual root cause analysis related to an endoscopy event Recognizes biases among team members as a patient safety issue
Discloses patient safety events to patients and families (simulated or actual)	Following consultation with risk management and other team members, independently discloses a procedural complication to a patient's family
Level 5 Actively engages teams and processes to modify systems to prevent patient safety events	 Leads a multidisciplinary team to prevent medication discharge errors Establishes a program to ensure adequate transportation for patients who must return for additional procedures
Role models or mentors others in the disclosure of patient safety events	 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

	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 Demonstrates knowledge of basic	Describes fishbone diagram
quality improvement methodologies and metrics	Describes components of a "Plan-Do-Study-Act" cycle
Level 2 Describes local quality improvement	Describes clinic initiatives to improve vitamin D supplementation for IBD
initiatives (e.g., community vaccination rate, infection rate, smoking cessation)	Describes an initiative to improve influenza vaccination rates in the children seen in gastroenterology clinic
Level 3 Participates in local quality improvement initiatives	 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 Demonstrates the skills required to identify, develop, implement, and analyze a quality improvement project	 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 Creates, implements, and assesses quality improvement initiatives at the institutional or community level	 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 observationPoster or other presentation evaluation
Curriculum Mapping	
Notes or Resources	Please see Pediatric Gastroenterology General Resources section on page 38

	System Navigation for Patient-Centered Care – Coordination of Care h care system, including the interdisciplinary team and other care practitioners; to adapt care uality patient outcomes
Milestones	Examples
Level 1 Lists the various interprofessional individuals involved in the patient's care coordination	 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 Coordinates care of patients in routine clinical situations, incorporating interprofessional teams with consideration of patient and family needs	 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 Coordinates care of patients in complex clinical situations, effectively utilizing the roles of interprofessional teams, and incorporating patient and family needs and goals	 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 Coordinates interprofessional, patient- centered care among different disciplines and specialties, actively assisting families in navigating the health care system	 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 Coaches others in interprofessional, patient-centered care coordination	 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 Uses a standard template for transitions • 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 of care/hand-offs contingency plans Level 2 Adapts a standard template, Routinely uses a standardized hand-off for a stable patient, verbalizes a basic recognizing key elements for safe and effective understanding of active problems, and provides basic contingency plans transitions of care/hand-offs in routine clinical • 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 situations course, and action items to be followed up as an outpatient Level 3 Performs safe and effective transitions • Routinely uses a standardized hand-off when transferring a patient to the intensive care of care/hand-offs in complex clinical situations. unit, with direct communication of clinical reasoning, problems warranting a higher level of and ensures closed-loop communication 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 • Prior to going on vacation, proactively seeks out colleagues to follow-up test results that Level 4 Performs and advocates for safe and are still pending with specific instructions and contingency plans for the follow-up visit with effective transitions of care/hand-offs within and across health care delivery systems, including the patient/family transitions to adult care 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 Coaches others in improving transitions • Develops and implements a process for fellows to transition their adult IBD patients to of care within and across health care delivery adult medicine with a checklist for the patient to perform prior to transition date systems to optimize patient outcomes Assessment Models or Tools Direct observation Clinical evaluations • Review of sign-out tools, use and review of checklists Standardized hand-off checklist **Curriculum Mapping** • Starmer, Amy J., Nancy D. Spector, Rajendu Srivastava, April D. Allen, Christopher P. Notes or Resources Landrigan, Theodore C. Sectish, and I-PASS Study Group. 2012. "I-Pass, A Mnemonic to Standardize Verbal Handoffs." Pediatrics 129(2), 201–204.

https://doi.org/10.1542/peds.2011-2966

	Based Practice 5: Population and Community Health across communities and populations through patient care and advocacy, including public
Milestones	Examples
Level 1 Demonstrates awareness of population and community health needs and disparities	 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 Identifies specific population and community health needs and disparities; identifies local resources	 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 Uses local resources effectively to meet the needs and reduce health disparities of a patient population and community	 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 Adapts practice to provide for the needs of and reduce health disparities of a specific population	 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 Advocates at the local, regional, or national level for populations and communities with health care disparities	 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** Engages with patients and other • Considers the differences in cost burden for a patient in the hospital versus being closely providers in discussions about cost-conscious followed as an outpatient care and key components of the health care • Considers that insurance coverage, or lack of coverage, can affect prescription drug delivery system availability/cost for individual patients Level 2 Identifies the relationships between the • Considers the patient's out of pocket costs when choosing a swallowed steroid to treat delivery system and cost-conscious care and eosinophilic esophagitis (EOE) the impact on the patient care • Ensures that a patient hospitalized with a new IBD diagnosis has a scheduled outpatient follow-up appointment to ensure medication adherence Level 3 Discusses the need for changes in • Considers forgoing endoscopic biopsies for a patient with highly positive celiac serology clinical approaches based on evidence. • Uses shared decision making to consider when surgery is needed for a patient with outcomes, and cost-effectiveness to improve familial adenomatous polyposis care for patients and families Adapts plan to minimize costs and provides appropriate care for an uninsured patient Level 4 Advocates for the promotion of safe, • Identifies the value of outpatient constipation action plan upon discharge to minimize hospital readmissions and implements a project to address this issue quality, and high-value care • Creates a checklist for parents of children being discharged with a central line Level 5 Coaches others to promote safe, • Raises awareness to promote cost-conscious care by implementing Choosing Wisely quality, and high-value care across health care recommendations within the gastroenterology division • Educates colleagues on local or regional food deserts and coordinates activity to address systems 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 Develops an answerable clinical question and demonstrates how to access available evidence, with guidance	 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 Independently articulates clinical question and accesses available evidence	 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 Locates and applies the evidence, integrated with patient preference, to the care of patients	Uses the most current literature in deciding when to initiate feeds in a patient with acute pancreatitis
Level 4 Critically appraises and applies evidence, even in the face of uncertainty and conflicting evidence to guide care tailored to the individual patient	 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 Coaches others to critically appraise and apply evidence for complex patients	 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	 Djulbegovic, 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.

	mprovement 2: Reflective Practice and Commitment to Personal Growth t care based on self-evaluation and lifelong learning
Milestones	Examples
Level 1 Participates in feedback sessions	Attends scheduled feedback sessions with prompting
Develops personal and professional goals, with assistance	Sets a goal to improve endoscopic skills Recognizes biases
Level 2 Demonstrates openness to feedback and performance data	Acknowledges concerns about timely note completion and works with clinic preceptor to develop goals for improvement
Designs a learning plan based on established	Develops a plan with a faculty member to improve endoscopic skills
goals, feedback, and performance data, with assistance	Devises a plan to explore implicit biases and how they impact patient care
Level 3 Seeks and incorporates feedback and performance data episodically	Occasionally seeks feedback on performance in endoscopy
Designs and implements a learning plan by analyzing and reflecting on the factors which contribute to gap(s) between performance expectations and actual performance	 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 Seeks and incorporates feedback and performance data consistently	Actively seeks feedback from the endoscopy director and requests to perform more polypectomies
Adapts a learning plan using long-term professional goals, self-reflection, and	Adapts learning plan to improve care of patients undergoing endoscopy based on personal reflection, feedback, and patient data
performance data to measure its effectiveness	Actively seeks out conferences to learn about anti-racism and bystander culture
Level 5 Role models and coaches others in seeking and incorporating feedback and performance data	Creates a template for other fellows to track and improve their endoscopic skills
Demonstrates continuous self-reflection and coaching of others on reflective practice	 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." Academic
	Medicine 88(10): 1558-1563. DOI: 10.1097/ACM.0b013e3182a352e6.

	Professionalism 1: Professional Behavior
Overall Intent: To demonstrate ethical and pro manage professional dilemmas	fessional behaviors, promote these behaviors in others, and use appropriate resources to
Milestones	Examples
Level 1 Identifies expected professional behaviors and potential triggers for lapses	Identifies fatigue as a trigger for lapses in professionalism
Identifies the value and role of pediatric gastroenterology as a vocation/career	Acknowledges the importance of the pediatric gastroenterologist in providing accurate, timely information to services requesting consultation
Level 2 Demonstrates professional behavior with occasional lapses	After appearing late for own presentation at morning conference, identifies this lapse, and immediately apologizes to peers and attendings upon arrival
Demonstrates accountability for patient care as a pediatric gastroenterologist, with guidance	Asks attending for help in telling patient and patient's family about delayed report of a biopsy result
Level 3 Maintains professional behavior in increasingly complex or stressful situations	 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
Fully engages in patient care and holds oneself accountable	Ensure timely follow-up on biopsy results without prompting on an intensive care unit patient
Level 4 Recognizes situations that may trigger professionalism lapses and intervenes to prevent lapses in self and others	Provides feedback to residents who are speaking inappropriately about a patient scenario
Exhibits a sense of duty to patient care and professional responsibilities	 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 Models professional behavior and coaches others when their behavior fails to meet professional expectations	 Mentors co-fellows on how to deal with difficult patient scenarios Coaches junior fellows who are having difficulty balancing patient care and educational responsibilities
Extends the role of the pediatric gastroenterologist beyond the care of patients by engaging with the community, specialty, and medical profession as a whole	 Advocates for insurance coverage of medically necessary foods through national pediatrics society in front of Congress Co-leads a session on diversity, equity, and inclusion at a national meeting
Assessment Models or Tools	Direct observationMultisource 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." Clinical Teacher 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." Academic Medicine 95(6): 938-946. doi:
	10.1097/ACM.00000000002987. PMID: 31517687.

	Professionalism 2: Ethical Principles
Overall Intent: To recognize and address or res	solve common and complex ethical dilemmas or situations
Milestones	Examples
Level 1 Demonstrates knowledge of the ethical principles underlying informed consent, surrogate decision making, advance directives, confidentiality, error disclosure, stewardship of limited resources, and related topics Level 2 Applies ethical principles in common situations	 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 Reviews hospital guidelines on transfusing children of Jehovah's Witnesses after admitting a patient with ulcerative colitis and severe anemia
Level 3 Analyzes complex situations using ethical principles to address conflict/controversy; seeks help when needed to manage and resolve complex ethical situations	 Discusses with attending next steps in disclosure of a positive pregnancy test in an adolescent in the endoscopy suite 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 Manages and seeks to resolve ethical dilemmas using appropriate resources (e.g., ethics consultations, literature review, risk management/legal consultation) Level 5 Called upon by others to consult in	 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 Provides ethics consultation for a patient with dysphagia whose parents have declined
cases of complex ethical dilemmas; identifies and seeks to address system-level factors that induce or exacerbate Assessment Models or Tools	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 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

Milestones	Examples
Level 1 Performs tasks and responsibilities, with prompting	 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 Performs tasks and responsibilities in a timely manner in routine situations	 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 Performs tasks and responsibilities in a thorough and timely manner in complex or stressful situations	 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 Coaches others to ensure tasks and responsibilities are completed in a thorough and timely manner in complex or stressful situations	 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 Creates strategies to enhance others' ability to efficiently complete tasks and responsibilities	 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 Recognizes the importance of addressing personal and professional well-being	 Discusses possible ways to improve stress with a faculty mentor Recognizes that personal stress may require a change in schedule
Level 2 Describes institutional resources that are meant to promote well-being	 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 Recognizes institutional and personal factors that impact well-being	 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 fulfilment and emphasizes these activities in times of need
Level 4 Describes interactions between institutional and personal factors that impact well-being	 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 Coaches and supports colleagues to optimize well-being at the team, program, or institutional level	 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 Demonstrates respect and attempts to establish rapport	 Introduces self and faculty member, identifies patient and others in the room, and engages all parties in health care discussion Uses patient's preferred pronouns when addressing patient
Attempts to adjust communication strategies based upon patient/family expectations	Identifies need for trained interpreter for patients with limited English proficiency or hearing impairment, with prompting
Level 2 Establishes a therapeutic relationship in straightforward encounters	 Listens to concerns of patient's parents at the beginning of a health supervision visit with a child with an acute on chronic medical problem Uses nonjudgmental language to discuss sensitive topics
Adjusts communication strategies as needed to mitigate barriers and meet patient/family expectations	When seeing a distraught teenager with Crohn's disease, adjusts communication strategies to meet patient/family needs
Level 3 Establishes a culturally competent and therapeutic relationship in most encounters	 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
Communicates with sensitivity and compassion, elicits patient/family values, and acknowledges uncertainty and conflict	 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 Establishes a therapeutic relationship in straightforward and complex encounters, including those with ambiguity and/or conflict	 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
Uses shared decision making with patient/family to make a personalized care plan	Elicits family values during goals of care discussion for a child with medical complexity transitioning to the pediatric intensive care unit

Level 5 Mentors others to develop positive therapeutic relationships	Acts as a mentor for resident disclosing bad news to a patient and the patient's family
Models and coaches others in patient- and	Develops a curriculum on patient- and family-centered communication, including
family-centered communication	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 Respectfully requests a consultation, with guidance	Respectfully requests an otolaryngology consultation for a patient with dysphagia and feeding problems and formulates question with attending guidance
Identifies the members of the interprofessional team	Acknowledges the contribution of each member of the multidisciplinary team
Level 2 Clearly and concisely requests consultation by communicating patient information	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
Participates within the interprofessional team	Contacts the dietician to comanage an encephalopathic patient to discuss decreasing the protein in the parenteral nutrition
Level 3 Formulates a specific question for consultation and tailors communication strategy	After a consultation has been completed, communicates with the primary care team to verify they have received and understand the recommendations
Uses bi-directional communication within the interprofessional team	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 Coordinates consultant recommendations to optimize patient care	 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
Facilitates interprofessional team communication	Plans and leads a multidisciplinary team meeting for a patient with advanced liver disease, hepatorenal syndrome, and pulmonary hypertension
Level 5 Maintains a collaborative relationship with referring providers that maximizes adherence to practice recommendations	Develops a collaborative team for management of button battery ingestion including representatives from pharmacy, anesthesia, gastroenterology, surgery, and otolaryngology
Coaches others in effective communication within the interprofessional team	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." BMJ. 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." Medical Teacher. 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." Medical Teacher 41(7): 1-4. https://doi.org/10.1080/0142159X.2018.1481499.

Interpersonal and Communication Skills 3: Communication within Health Care Systems Overall Intent: To effectively communicate using a variety of tools and methods	
Overall intent. To encouvery communicate using a variety of tools and methods	
Milestones	Examples
Level 1 Records accurate information in the patient record	 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
Identifies the importance of and responds to multiple forms of communication (e.g., inperson, electronic health record (EHR), telephone, email)	Understands that communication with a patient's family should be through a secure patient portal or phone
Level 2 Records accurate and timely information in the patient record	 Provides organized and accurate documentation that supports the treatment plan and limits extraneous information Avoids jargon or stigmatized language in notes
Selects appropriate method of communication, with prompting	Asks resident to call nurse with urgent request for labs after rounds
Level 3 Concisely documents updated, prioritized, diagnostic and therapeutic reasoning in the patient record	Produces documentation that reflects complex clinical thinking and planning and is concise
Aligns type of communication with message to be delivered (e.g., direct and indirect) based on	Securely messages patient's transplant surgeon with non-urgent question rather than paging surgeon on call Hadaretands when to call when to taxt, and when to email.
urgency and complexity Level 4 Documents diagnostic and therapeutic reasoning, including anticipatory guidance	 Understands when to call, when to text, and when to email Documentation is consistently accurate, organized, and concise; reflects complex clinical reasoning and frequently incorporates contingency planning
Demonstrates exemplary written and verbal communication	Communicates effectively and proactively with collaborating physicians and teams, and identifies communication gaps in order to prevent recurrence
Level 5 Models and coaches others in documenting diagnostic and therapeutic	 Leads teams by modeling a range of effective tools and methods of communication that fit the context of a broad variety of clinical encounters
reasoning	Leads an effort to coach others in documenting the outcomes of multidisciplinary team meetings in the medical record
Coaches others in written and verbal communication	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
Curriculum Mapping	• Simulation
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/

 $\underline{https://naspghan.org/training\text{-}career\text{-}development/for\text{-}fellowship\text{-}directors/curricular\text{-}resources/congenital\text{-}disorders\text{-}gi-\underline{infections\text{-}intestinal\text{-}rehabilitation\text{-}sbs/}}$

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

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

Exploring the ACGME Core Competencies (Part 1 of 7)

https://knowledgeplus.nejm.org/blog/exploring-acgme-core-competencies/

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

Clinical Competency Committee Guidebook, updated 2020 -

https://www.acgme.org/Portals/0/ACGMEClinicalCompetencyCommitteeGuidebook.pdf?ver=2020-04-16-121941-380

Clinical Competency Committee Guidebook Executive Summaries, new 2020 - https://www.acgme.org/What-We-Do/Accreditation/Milestones/Resources - Guidebooks - Clinical Competency Committee Guidebook Executive Summaries

Milestones Guidebook, updated 2020 - https://www.acgme.org/Portals/0/MilestonesGuidebook.pdf?ver=2020-06-11-100958-330

Milestones Guidebook for Residents and Fellows, updated 2020 -

https://www.acgme.org/Portals/0/PDFs/Milestones/MilestonesGuidebookforResidentsFellows.pdf?ver=2020-05-08-150234-750

Milestones for Residents and Fellows PowerPoint, new 2020 - https://www.acgme.org/Residents-and-Fellows/The-ACGME-for-Residents-and-Fellows

Milestones for Residents and Fellows Flyer, new 2020 https://www.acgme.org/Portals/0/PDFs/Milestones/ResidentFlyer.pdf

Implementation Guidebook, new 2020 - https://www.acgme.org/Portals/0/Milestones%20Implementation%202020.pdf?ver=2020-05-20-152402-013

Assessment Guidebook, new 2020 -

https://www.acgme.org/Portals/0/PDFs/Milestones/Guidebooks/AssessmentGuidebook.pdf?ver=2020-11-18-155141-527

Milestones National Report, updated each fall -

https://www.acgme.org/Portals/0/PDFs/Milestones/2019MilestonesNationalReportFinal.pdf?ver=2019-09-30-110837-587 (2019)

Milestones Bibliography, updated twice each year - https://www.acgme.org/Portals/0/PDFs/Milestones/MilestonesBibliography.pdf?ver=2020-08-19-153536-447

Developing Faculty Competencies in Assessment courses - https://www.acgme.org/Meetings-and-Educational-Activities/Other-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: <u>Teamwork Effectiveness Assessment Module</u> (TEAM) - <u>https://dl.acgme.org/pages/assessment</u>

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	PBLI2: Reflective Practice and Commitment to Personal Growth PC4: Organize and Prioritize Inpatient Care
	PC6: Endoscopic Procedures – Cognitive
MK1: Locate, appraise, and assimilate evidence from scientific	PC7: Endoscopic Procedures – Technical MK2: Clinical Knowledge of Pediatric Gastrointestinal and Liver
studies related to their patients' health problems	Diseases PBLI1: 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 Cantered Care – Coordination of Cre 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	SBP1: Patient Safety
safety and improve patient care quality	ICS2: Interprofessional and Team Communication
SBP5: Participate in identifying system errors and implementing	SBP1: Patient Safety
potential systems solutions	SBP2: Quality Improvement
PBLI1: Identifying strengths, deficiencies, and limits to one's	PBLI1: Evidence Based and Informed Practice
knowledge and expertise	PBLI2: Reflective Practice and Commitment to Personal Growth
PBLI2: Systematically analyze practice using quality	SBP2: Quality Improvement
improvement methods, and implement changes with the goal of	PBLI2: Reflective Practice and Commitment to Personal Growth
practice improvement	
PBLI3: Use information technology to optimize learning and	PBLI1: Evidence Based and Informed Practice
care delivery	PBLI2: Reflective Practice and Commitment to Personal Growth
	ICS3: Communication within Health Care Systems
PBLI4: Participate in the education of patients, families,	SBP5: Population and Community Health
students, residents, fellows, and other health professionals	PBLI1: Evidence Based and Informed Practice
	ICS1: Patient- and Family-Centered Communications
PROF1: Professional Conduct: High standards of ethical	PROF1: Professional Behavior
behavior which includes maintaining appropriate professional	PROF2: Ethical Principles
boundaries	
PROF2: Trustworthiness that makes colleagues feel secure	PBLI1: Evidence Based and Informed Practice
when one is responsible for the care of patients	PROF1: Professional Behavior
	PROF3: Accountability/Conscientiousness
	ICS1: Patient- and Family-Centered Communications
PROF3: Provide leadership skills that enhance team	ICS2: Interprofessional and Team Communication
functioning, the learning environment, and/or the health care	ICS3: Communication within Health Care Systems
delivery system/environment with the ultimate intent of	PROF2: Ethical Principles
improving care of patients	PROF3: Accountability/Conscientiousness
PROF4: The capacity to accept that ambiguity is part of clinical	PROF2: Ethical Principles
medicine and to recognize the need for and to utilize	ICS1: Patient- and Family-Centered Communication
appropriate resources in dealing with uncertainty	PBLI1: Evidence Based and Informed Practice
	PROF4: Well-Being
ICS1: Communicate effectively with physicians, other health	ICS2: Interprofessional and Team Communication
professionals, and health-related agencies	ICS3: Communication within Health Care Systems
ICS2: Work effectively as a member or leader of a health care	ICS2: Interprofessional and Team Communication
team or other professional group	PBLI2: Reflective Practice and Commitment to Personal Growth
	PROF3: Accountability/Conscientiousness

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