

## Entrustable Professional Activity

1. EPA Title: Perform medical procedures related to gastrointestinal and liver disease for screening, diagnosis, and intervention
2. Description of Activity

Endoscopy is a significant aspect of gastroenterology practice. It is critical that trainees and future gastroenterologists are able to determine which patients are appropriate to undergo an endoscopic procedure, be able to perform a quality examination safely, and integrate the clinical presentation with the endoscopic findings in order to plan further management. Trainees should be aware of clinical situations that demand advanced endoscopic techniques (hemostasis, polypectomy, tube placement, dilation, injection, foreign body removal) and should know when to ask for additional procedural support from a more seasoned endoscopist. The trainee must also be able to communicate endoscopic and pathological findings to the patient, family, and the referring physician in a timely fashion.

The functions required of this activity include:

1. Be familiar with indications and contraindications, risks and benefits, diagnostic results and therapeutic outcomes for endoscopy
  2. Obtain a basic anesthesia history and counsel pediatric patient and family on pre-procedure requirements for endoscopy
  3. Be familiar with sedation modalities available for endoscopy and select appropriate anesthesia plan for given patient situation consulting with anesthesia for complex cases
  4. Select relevant endoscopy equipment (age, size, condition) for procedures and be able to set up and use equipment without aid from endoscopy staff/supervisors
  5. Perform essential informed consent elements prior to endoscopy, covering indications, risks and benefits and answering questions from pediatric patient and family
  6. Perform endoscopy safely, independently, expeditiously, navigating the gastrointestinal tract, including intubation of the esophagus and pylorus, direct visualization of the stomach and the duodenum to the third portion, and intubation of the cecum and terminal ileum, using proper technique
  7. Recognize endoscopic landmarks and differentiate normal from abnormal findings on gross endoscopy
  8. Document endoscopic procedure (including consent, anesthesia, findings and interventions) in an accurate and timely fashion
  9. Recognize complications related to endoscopy and how to manage them
  10. Communicate with the patient, family and healthcare team members regarding endoscopic findings
  11. Integrate endoscopic findings or therapy into the patient's clinical management plan
  12. Know how to clean, maintain and store endoscopy equipment
  13. Be familiar with (Joint Commission and institutional?) standards for infection control, monitoring, quality improvement
  14. Understand how an endoscopy unit is run and how it interfaces with inpatient/outpatient practices and other services
3. Domains of Competence (Judicious Mapping)
    - Patient Care
    - Medical Knowledge and Diagnostic Skills Required
    - Practice Based Learning
    - Interpersonal Skills
    - Professionalism
    - System-based Practice
    - Personal and Professional Development

4. Competencies within each domain critical to entrustment decision (From Pediatric Milestones Document)

PC 3, 8  
MK 1  
PBLI 1, 4  
ICS 6  
P 1  
SBP 5  
PPD 1, 7

5. Knowledge, skills and attitudes needed to execute EPA

**Knowledge:**

The fellow must be familiar with indications and contraindications, risks and benefits, diagnostic results and therapeutic outcomes for endoscopy. Recognize endoscopic landmarks and differentiate normal from abnormal findings on gross endoscopy. The fellow must also be familiar with endoscopy equipment and its utilization for procedures and be able to appropriately integrate endoscopic results into the patient's therapeutic clinical management plan

**Skills:**

Conduct a thorough examination of the upper and lower gastrointestinal tract, performing endoscopy safely, independently, and expeditiously. Set up and use endoscopy equipment and documentation system effectively  
Recognize clinical situations that demand advanced endoscopic techniques and safely perform advanced procedures when appropriate. Recognize complications related to endoscopy and initiate appropriate management

**Attitudes:**

Understands limits of technical skills and knows when to ask for additional procedural support from a more experienced endoscopist  
Displays appropriate stewardship of endoscopy equipment, transporting, cleaning and storing endoscopes with care and following cues from staff about care of monitors and other endoscopy equipment  
Seeks to understand flow and hierarchy of procedural units and puts forth effort with patients and staff to ensure safe, efficient patient care  
Carefully obtains informed consent from pediatric patients and parents and ensures an adequate understanding of risks and benefits prior to procedure

**Medical Knowledge**

1. Be familiar with indications and contraindications, risks and benefits, diagnostic and therapeutic outcomes for endoscopy
2. Understand the proper use of antibiotics related to endoscopic procedures
3. Correctly identify key endoscopic landmarks throughout the upper and lower gastrointestinal tract
4. Recognize both normal as well as abnormal mucosal, anatomic findings and determine the clinical relevance of these findings

### **Patient Care**

1. Acquire all of the relevant medical and social history prior to the procedure, including a basic anesthesia history and results of prior procedures
2. Perform successful navigation of the gastrointestinal tract, including intubation of the esophagus and pylorus, direct visualization of the stomach and the duodenum to the third portion, and intubation of the cecum and terminal ileum, using proper technique
3. Determine preparation quality for a colonoscopic evaluation and be able to assess whether the procedure should be attempted or terminated
4. Determine the best post-endoscopy management and disposition of each patient
5. Recognize and manage any complications expeditiously
6. Determine whether upper or lower endoscopy (or both) is required in the setting of an active GI bleed and prepare hemostasis options prior to the procedure
7. Demonstrate appropriate facility with endoscopic procedures, including advanced therapeutic procedures (polypectomy, injections (epinephrine, botox, etc), foreign body retrieval, banding, tube placement) which the fellow may lead or assist based on the level or acuity
8. Advocate for the patient including appropriately identifying the patient who would not benefit from an endoscopic procedure
9. Complete timely and thorough documentation of all endoscopic procedures
10. Integrate endoscopic findings with clinical presentation to formulate a diagnosis and plan of care
11. Recognize when a procedure or intervention should be aborted for the safety of the patient and/or when to ask a more senior endoscopist for assistance

### **Practice Based Learning**

1. Understand quality measures as they have been applied to endoscopy
2. Apply quality measures to improve endoscopy performance and management of children undergoing endoscopy

3. Review standards for procedural competency as put forward by NASPGHAN and ensure plan to meet requirements by the end of training period
4. Presents and reviews in a case conference setting, procedures with atypical findings, endoscopic complications, difficult procedural aspects or medical errors

### **Interpersonal and Communication Skills**

1. Be able to counsel pediatric patient and family on pre-procedure preparation and requirements
2. Effectively communicate with other medical professionals involved in the care of patients undergoing endoscopy
3. Coordinate review of pathology results and ensure recommendations based on these findings are communicated to patient, family and other involved medical providers
4. Carefully obtain informed consent from pediatric patients and parents and ensure an adequate understanding of risks and benefits prior to procedure
5. Ensure that all pre-procedure questions and concerns are appropriately discussed and addressd with the patient, family and medical team

### **Professionalism**

1. Realize and value the cultural and religious differences that patients may have as it pertains to endoscopy and the specific interventions associated with the procedure
2. Respect gender issues that may exist with regard to the comfort/discomfort of the patient with the endoscopist
3. Show good judgement in knowing one's own limits with regard to endoscopy skills and ask for help when necessary, keeping patient safety always in the forefront
4. Plan medical care with the values of the patient and family as a priority in clinical decision-making
5. Protect patient privacy

### **System-based Practice**

1. Coordinate care of children preparing for and undergoing endoscopy including PCPs and other relevant medical professionals
2. Be familiar with standards for infection control, monitoring, and quality improvement
3. Seek to understand flow and hierarchy of procedural unit and put forth effort with patients and staff to ensure safe, efficient patient care
4. Work effectively in the procedural setting with all other members of the health care team
5. Awareness of procedural costs and reimbursement schemes across various insurance carriers
6. Participate in a root cause analysis error review and subsequent systematic practice change

### **Personal and Professional Development (do we include?)**

1. Thoughtfully analyze practice style, self-confidence and willingness to seek advice for endoscopic skill improvement

2. Develop bedside manner and maturity through interactions with patients and families

6. Assessment Procedure:

**Quick Summary of EPA**

End-of-Training EPA	Step 1 Description and Tasks	Step 2 Domains of Competence and Competencies within each Domain Critical to Entrustment Decisions		Step 3 Assessment Methods/Tools
EPA Title: Perform quality procedures related to gastrointestinal and liver disease for screening, diagnosis, and intervention	Tasks required: <ul style="list-style-type: none"> <li>• Familiarity with indications and contraindications, risks and benefits of endoscopy</li> <li>• Know diagnostic results and therapeutic outcomes for endoscopy</li> <li>• Obtain a basic anesthesia history and counsel pediatric patient and family on pre-procedure requirements needed for endoscopy</li> <li>• Familiar with sedation modalities available for endoscopy, selects appropriate anesthesia plan for given patient situation and appropriately involves anesthesia with complex cases</li> <li>• Selects relevant endoscopy equipment (age, size, condition) for procedures and is able to set up and use equipment without aid from endoscopy staff/supervisors</li> <li>• Performs essential informed consent elements prior to endoscopy, covering indications, risks and benefits and answering questions from pediatric patient and family</li> <li>• Performs endoscopy safely, independently, expeditiously, navigating the gastrointestinal track, including intubation of the esophagus and pylorus, direct visualization of the stomach and the duodenum to the third portion, and intubation of the cecum and terminal ileum, using proper technique</li> <li>• Recognizes endoscopic landmarks and differentiate normal from abnormal findings on gross endoscopy</li> <li>• Documents endoscopic procedure (including consent, anesthesia, findings and interventions) in an accurate and timely fashion</li> <li>• Recognizes complications related to endoscopy and how to manage them</li> <li>• Communicates with the patient, family and healthcare team members regarding endoscopic findings</li> <li>• Integrates endoscopic findings or therapy into the patient's clinical management plan</li> <li>• Knows how to clean, maintain and store endoscopy equipment</li> <li>• Familiar with Joint Commission and institutional standards for infection control, monitoring, QI</li> <li>• Understands how an endoscopy unit is run and how it interfaces with inpatient/outpatient practices (correct all as indicated above)</li> </ul>	Patient Care (PC)	1 – 9	
		Medical Knowledge (MK)	1 - 2	
		Practice-Based Learning & Improvement (PBLI)	1-6, 9, 10	
		Interpersonal & Communication Skills (ICS)	1-6	
		Professionalism (P)	1-5	
		Systems-Based Practice (SBP)	1, 2, 4, 5	
		Personal and Professional Development (PPD)	1, 6-8 (not listed above)	

EPA Title: Perform quality procedures related to gastrointestinal and liver disease for screening, diagnosis, and intervention

Level 1	Level 2	Level 3	Level 4	Level 5
<p>Understand the basic indications for endoscopic evaluation</p>	<p>Obtain informed consent for procedures</p> <p>Understand the indications for pre-procedural antibiotics and use antibiotics appropriately pre and post procedure</p> <p>Understand indications and complications with non-endoscopic procedures including impedance, pH probe, VCE, and ano-rectal manometry studies</p> <p>Understand the indications for advanced motility testing including antro-duodenal and colonic motility testing and refer to motility center</p> <p>Be familiar with endoscopic scoring of IBD</p> <p>Understand the action of hemostasis including heater probe, argon plasma coagulation, and electrocautery(?appropriate location?)</p>	<p>Perform standard EGD procedures independently</p> <p>Perform standard colonoscopy procedures independently</p> <p>Perform foreign body removal</p> <p>Recognize and interpret endoscopic findings</p> <p>Manage complications related to endoscopic procedures</p> <p>Use of a variety of techniques including loop reduction, external pressure, scope manipulation, etc to complete endoscopy</p> <p>Maintain complete visualization of the mucosa throughout a procedure</p> <p>Interpret endoscopy biopsies and recognize pathology during endoscopy</p> <p>Communicate effectively and lead a multidisciplinary endoscopy team including techs, nurses, etc</p>	<p>Perform EGD therapeutic procedures including upper GI bleeding control of non-variceal bleeding (injection, clipping, heater probe)</p> <p>Perform EGD therapeutic procedures including upper GI bleeding control of variceal bleeding (banding, sclerotherapy)</p> <p>Perform colonoscopic therapeutic procedures including polypectomy</p> <p>Interpret impedance/pH probe studies, VCE studies, and standard ARM studies</p> <p>Perform PEG procedures</p> <p>Perform esophageal dilation</p> <p>Perform liver biopsy</p> <p>Work to improve safety and quality of the endoscopy unit</p> <p>Lead a multidisciplinary team within the endoscopy suite including endoscopy techs, nurses, and anesthesia staff</p> <p>Apply QI, Best Practices, and scientific evidence</p>	<p>Participate in scholarly activity related to pediatric endoscopy</p> <p>Interpret advanced motility tracings</p> <p>Present research findings at a national meeting in oral format</p> <p>Be invited to speak at a regional meeting or grand rounds on endoscopy</p> <p>Perform advanced endoscopy including ERCP, EUS and/or Deep Enteroscopy</p>

**Training / Expertise Level**

                                  

**Entrustment Level**

Execution with direct proactive supervision    
 Execution with reactive supervision (on request)    
 Supervision at distance post hoc supervision    
 Entrustment, ready for unsupervised practice    
 Supervision of others junior colleagues