Gastroenterology Procedure Unit

Boston Children’s Hospital’s Gastroenterology Procedure Unit (GPU) is a full-service unit providing an array of diagnostic and therapeutic endoscopy procedures, motility procedures, and other testing related to liver disease, nutrition and digestion. Our expert team offers a safe, comfortable environment for children and their families and works closely with other departments and divisions in the hospital to accommodate both routine and urgent care in a timely fashion. Patients are referred to the GPU through Boston Children’s Division of Gastroenterology, Hepatology and Nutrition, which was ranked no. 2 in the nation among pediatric hospitals in 2012-2013 by *U.S. News & World Report*.

**Scheduling**

Patients generally come to the GPU through referrals by Boston Children’s Gastroenterology, Hepatology and Nutrition Programs. Referrals for breath testing, malabsorption of lactose or other sugars and *Helicobacter pylori* infection testing may come directly from the primary care provider.

**Referrals:** 617-355-6058 | bostonchildrens.org/gastro

**Questions:** 617-355-6172

Victor Fox, MD  
Medical Director, Gastrointestinal Procedure Unit  
Email: victor.fox@childrens.harvard.edu  
Phone: 617-355-6064

Samuel Nurko, MD, MPH  
Medical Director, Center for Motility and Functional Gastrointestinal Disorders  
Email: samuel.nurko@childrens.harvard.edu  
Phone: 617-355-6055

**Research**

The GPU supports a variety of clinical research protocols directed by physicians in the Boston Children’s Division of Gastroenterology, Hepatology and Nutrition. Active areas of research include:

- Anal sphincter dysfunction
- Celiac disease
- Chronic liver disease
- Eosinophilic esophagitis
- Gastroesophageal reflux disease
- Inflammatory bowel disease
- Malnutrition
- Motility disorders
- Polyposis

**International**

For families residing outside of the United States, please contact Boston Children’s International Health Services.  
+1-617-355-5209 | bostonchildrens.org/international  
international.center@childrens.harvard.edu

**Highlights**

- 37 physicians, 12 nurses, five technicians and five administrative staff support the day-to-day practice of the unit. All nurses and physicians are certified in pediatric advanced life support.
- Our team also assists in the care of children with life-threatening cases in other areas of the hospital—such as the intensive care and surgical units—using our portable equipment.
- Our state-of-the-art facility includes a reception and family waiting area; a patient intake and post-procedure recovery area with separate isolation rooms; four large procedure rooms equipped for all forms of sedation, including general anesthesia; portable digital fluoroscopy; high-definition video monitors; motility testing; and connections for live video conferences.

**Areas of expertise**

- Allergic and eosinophilic disorders
- Celiac disease
- Chronic diarrhea
- Constipation
- Esophageal disorders
- Gastroesophageal reflux
- Gastrointestinal bleeding
- Gastrointestinal polyposis
- Gastroparesis
- Hepatobiliary disease
- Hoarseness, chronic cough and chronic lung disease
- Inflammatory bowel disease
  - Crohn’s disease
  - Ulcerative colitis
- Malabsorption disorders
- Pancreatic disease
- Postoperative problems (fundoplication, Hirschsprung’s and esophageal atresia)
- Pseudobstruction
- Recurrent respiratory disorders
Clinical programs
Offering more than the typical gastroenterology endoscopy center, our specialists provide world-renowned care to children with gastrointestinal, pancreatic and hepatobiliary disorders. In addition, we collaborate with Boston Children's respiratory disease specialists in the care of aerodigestive disorders.

Procedures performed include, but are not limited to:

Diagnostic
- Breath testing
  - Helicobacter pylori infection
  - Lactose and other carbohydrate malabsorption
- Endoscopic retrograde cholangiopancreatography
  - Hepatobiliary disease
  - Pancreatic disease
- Endoscopy
  - Capsule endoscopy (esophageal and small bowel)
  - Colonoscopy
  - Enteroscopy (single-balloon)
  - Sigmoidoscopy
  - Ultrasound endoscopy
  - Upper gastrointestinal endoscopy
- Gastroesophageal reflux testing
  - Bravo capsule pH monitoring
  - pH/impedance probe monitoring
  - SmartPill
- Indirect calorimetry
- Liver elastography
- Motility testing (perfused and high-resolution solid state catheter manometry)
  - Anorectal (high-definition)
  - Colonic
  - Esophageal
  - Gastric
  - Small bowel

Therapeutic endoscopy
- BOTOX® injection
- Esophageal and other intestinal stricture dilation
- Foreign body removal
- Gastrostomy tube placement
- Hemostasis
  - Electrocautery
  - Injection therapy
  - Mechanical clipping
  - Variceal band ligation
- Polypectomy

Therapeutic endoscopic retrograde cholangiopancreatography
- Pseudocyst drainage
- Sphincterotomy
- Stent placement
- Stone removal
- Stricture dilation
- Treatment of post-operative or traumatic biliary and pancreatic duct leaks

Sedation services
Infants, children, adolescents and young adults all receive expert care and, when required, carefully customized sedation in the Boston Children's GPU. The type of sedation depends on a number of factors, including:
- Type and duration of the procedure
- Preference of the specialist performing the procedure
- Patient and family requests
- Age and anxiety level of the patient
- Underlying medical conditions

Mild to moderate sedation is performed by our experienced gastroenterologists, all of whom are pediatric advanced life support-certified. Deep sedation and general anesthesia are administered by anesthesiologists. Every child requiring any kind of sedation undergoes a careful evaluation before the procedure. All of our rooms are equipped for every form of sedation and anesthesia. After each procedure, physicians and nurses monitor the patient in a designated post-anesthesia recovery area.