Surgery

Boston Children’s Hospital’s Department of Surgery provides both general and specialized surgical services to infants, children, and adolescents living with a wide range of congenital and acquired conditions. Over the last decade, the use of minimally invasive surgery has redefined pediatric operations, combining safety, reduced post-operative pain and faster recovery. From tumors to transplants, hernias to hydroceles, we specialize in the timely evaluation and resolution of all pediatric surgical concerns.

Areas of Expertise

- Abdominal masses
- Appendicitis
- Branchial cleft cyst
- Bariatric (adolescent)
- Weight loss surgery
- Chest wall masses
- Choledochal cyst
- Circumcision
- Congenital cystic adenomatoid malformation
- Crohn’s disease
- Esophageal atresia
- Ewing sarcoma
- Familial adenomatous polyposis
- Foreign bodies
- Gallstones
- Gastroesophageal reflux disease
- Gynecomastia
- Herna (inguinal, umbilical and epigastric)
- Hirschsprung’s disease
- Hydrocele
- Hypospadias
- Imperforate anus
- Inguinal hernia
- Liver injuries
- Lumps, bumps and lumps
- Mid-aortic syndrome
- Morbid obesity
- Morbidity disorders
- Pectus carinatum
- Pectus excavatum
- Phimosis
- Primalcyst
- Renal artery stenosis
- Short bowel syndrome
- Soft tissue lesions
- Splenic injuries
- Splenectomy and splenopexy
- Thoracic outlet syndrome
- Thyroglossal duct cyst
- Thyroid nodules
- Ulcerative colitis
- Undescended testes
- Vascular anomalies
- Wilms’ tumor

Surgical Care Firsts:

- Successful infant lung transplant in New England
- Use of the combination of a percutaneous urachal instillation treatment procedure and extracorporeal membrane oxygenation to treat an infant with critical airway obstruction
- Organized training program for trainees in pediatric surgery

Published textbook in pediatric surgery in the Western world: Ladd and Gross’s Abdominal Surgery of Childhood

Definition of the research field of angiogenesis

Successful application of angiogenesis inhibitors to treat a childhood tumor

Description of tracheal occlusion to facilitate development of the “hypoplastic” lung

Development and use of the serial transverse enteroplasty procedure as a treatment for short bowel syndrome

Programs and services

Adolescent Bariatric Surgery Program

For teens whose weight exceeds the 98th percentile, surgery may be part of the long-term (indeed, lifelong) treatment plan. Our program provides education, nutritional planning and psychosocial support as necessary components to medically invasive weight loss surgery.

617-355-2540 | bostonchildrens.org/bariatric

Advanced Fetal Care Center

This program is a collaborative effort between Boston Children’s Hospital, its Harvard-affiliated hospital neighbors and their respective departments of Obstetrics, Maternal-Fetal Medicine and Diagnostic Imaging. The program provides evaluation, genetic and obstetrical counseling, imaging, invasive diagnostics and in utero or peripartum therapy to mothers carrying children with an illness diagnosed in pregnancy.

1-888-FETALCARE | 1-888-338-2522 | bostonchildrens.org/afcc

Center for Advanced Intestinal Rehabilitation

Specialists in gastrointestinal, nutrition and surgery—together with nurses, nurse practitioners, dietitians, a social worker and a psychologist—collaborate to provide a range of treatment options for short bowel syndrome. Care may involve nutritional management, medical services and/or surgical treatment, such as the serial transverse enteroplasty procedure for bowel lengthening.

617-355-5275 | bostonchildrens.org/air

Congenital Diaphragmatic Hernia (CDH) Program

Provides multidisciplinary treatment of CDH and long-term follow-up care for children born with this complex health concern.

617-355-6019 | bostonchildrens.org/cdh

Esophageal Advanced Treatment Program

Performs the Foker technique for esophageal atresia, wherein traction sutures are used to stimulate growth of truncated esophageal segments prior to anastomosis. Our program also cares for children with lye strictures and harelip.

617-355-3038 | bostonchildrens.org/et

Pediatric Transplant Center

Transplantation at Boston Children’s Hospital is an interdisciplinary effort between medical and surgical programs. Programs for heart, lung, kidney, liver, intestine and multivisceral, and stem cell transplant actively share knowledge and best practices to optimize outcomes for patients and their families.

1-877-TX4-PEDS | 1-877-884-7337 | bostonchildrens.org/ptc

Trauma Center

Care for more infants, children and adolescents seriously injured in accidents than any other hospital in New England. Beginning at the accident scene, a multidisciplinary team of pediatric experts coordinates the trauma patient’s care from emergency room care through the inpatient stay and rehabilitation (when indicated). In addition, the team supports a child advocacy program for injury prevention in order to reduce the number of childhood traumatic injuries.

617-355-5400 | 1-888-711-5437 | bostonchildrens.org/trauma

Vascular Anomalies Center

Known internationally as the preeminent site for the care of individuals with vascular anomalies, which include hemangiomatous, vascular malformations and other, less common vascular tumors.

617-355-6226 | bostonchildrens.org/vac

Research

The Department of Surgery is committed to advancing the understanding and practice of pediatric surgery through research. We are one of the largest research departments at Boston Children’s. We are host to world-renowned laboratories involved in angiogenesis research and tissue engineering. Our extensive research initiatives are both laboratory- and clinic-based, providing research training opportunities to a large number of students and fellows.

Current research areas include:

- Angiogenesis
- Biology of cancer
- Cancer and bowel surgery
- Cell mechanics and structure
- Fetal gut development
- Fetal tissue engineering
- Lung growth
- Maternal-fetal treatment
- Neonatal surgery
- Prostate cancer
- Repair of congenital defects
- Transplantation and tissue engineering
- Trauma care
- Vascular anomalies and malformations

Training

Boston Children’s Department of Surgery offers several training programs, including:

Pediatric Surgery Fellowship

The department has a proud tradition of training tomorrow’s leaders in pediatric surgery. This two-year fellowship offers exposure to a large volume of complex cases with liberal use of minimally invasive techniques. Our outpatient clinic is an integral component of the program, providing preoperative evaluation and postoperative care for many patients.

Surgical Critical Care Fellowship

The fellowship is designed for individuals who are interested in obtaining formal training in pediatric surgical critical care medicine and who wish to augment this experience with a one-to-two year clinical research experience.

Two-year positions in surgical research

Trainees will learn the latest scientific methods while working with established investigators in areas such as vascular biology, transplant tolerance, organ regeneration, fetal therapy, tissue engineering, vascular anomalies, surgical nutrition and the treatment of short bowel syndrome.
The Department of Pediatric Surgery strives to provide premier clinical care to children in both outpatient and inpatient settings. Caring for an average of 8,600 outpatient annually and performing more than 4,000 operative procedures each year, Boston Children’s is one of the largest pediatric surgery programs in the world. Our team listens to you and your child. We work collaboratively with you to design a plan of treatment appropriate to your child’s condition and unique circumstances. We’re constantly engaged in clinical research designed to come up with new strategies for diagnosis and treatment.

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