

Pediatric Surgery Curriculum, Goals and Objectives

Education in Surgery is designed to develop cognitive knowledge, judgment, technical ability and teaching skills. The practice of Surgery requires the application of clinical data and technical skills. Surgical judgment is that combination of knowledge, confidence, ability, and compassion that leads to a successful practice. During your rotations on the pediatric surgical service you are expected to gain an understanding of the basics of pediatric surgical concepts. In addition to the routine issues surrounding the operative management of pediatric surgery patients that the resident will be exposed to on a day-to-day basis, there are specific areas that deserve special focus. For this reason a curriculum has been created to emphasize these areas in pediatric surgery that might otherwise not receive the attention they warrant. This curriculum is based upon hands on training, didactic lectures and independent reading and self-education. The goals and objectives are outlined in attachment 1.

Pediatric Surgery

The care of the pediatric surgical patient begins with the appropriate work-up and preoperative testing. The resident is expected to gain a progressive understanding of this during their rotations. Interns will be expected to work up straightforward pediatric surgical cases such as inguinal hernias and appendicitis. The complexity of the cases will increase as the surgical resident does more rotations. By the time the resident is a fourth year resident they should have a solid understanding of more complicated pediatric surgical issues such as congenital anomalies, malrotation and oncology. Likewise the intern will be expected to understand the basic fluid and electrolyte resuscitation necessary for pre and post surgical care. As the resident become more senior, we expect they will gain a solid understanding of critical care of newborns and pediatric surgical patients. These objectives will be tested on a per rotation basis via a written test. The resident will be expected to pass this test by the time they finish their final rotation on the pediatric surgical service. In prior rotations the resident can use this test to identify areas that require more attention and study.

Lectures

A core set of lectures based on the curriculum requirements set out by the association of pediatric surgery directors has been established to ensure a broad exposure to pediatric surgical. By utilizing experts in their fields, these lectures will provide learning above the textbook level in various pediatric subspecialty subjects. These core lectures will be interspersed with routine interdepartmental conferences such as pathology and radiology conference and morbidity and mortality conference as well as a citywide GI/Pediatric Surgery combined conference. Topics of these lectures are listed in attachment 2. Furthermore, there is a weekly a lecture dedicated specifically to the general surgical resident. The topics are consist of basic concepts necessary to understanding pediatric surgical issues that a general surgeon may encounter.

Attachment 1:

Goals and Objectives

PEDIATRIC SURGERY
ACGME PATIENT CARE COMPETENCY

Patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

Content and Procedures	Educational Strategies	Evaluation Methods	Outcome Measures
<p>Core Skills Gather essential and accurate information about the patient Medical interviewing Physical examination Diagnostic studies Make informed diagnostic and therapeutic decisions based on patient information, current scientific evidence, and clinical judgment by: Effective, appropriate clinical problem-solving Understanding limits of one's knowledge & expertise Appropriate use of consultants Develop and carry out patient care management plans Counsel patients and families and provide care that is sensitive to each patient's cultural, economic, and social circumstances (see Communication & Professionalism Competencies) Use information technology to optimize patient care</p>	<p>Minimum #s required operations-20 OR experience, both main OR and outpatient surgery Inpatient care of patients</p>	<p>Operative Logs Faculty feedback after OR cases. Written evaluation provided for major cases (see OR evaluation) Faculty evaluations (see global evaluation)</p>	<p>Written Exam Attending Feedback</p>
<p>Procedures/Cases ANTIREFLUX PROCEDURE-LAPAROSCOPIC ANTIREFLUX PROCEDURE-OPEN DEFIN OP FOR HIRSCHSPRUNGS/IMPERF ANUS EXC WILMS TUMOR/NEUROBLASTOMA HERNIORRHAPHY, INGUINAL/UMBILICAL OPERATION FOR MALROTATION/INTUSSUSCEPT ORCHIOPEXY EXCISION OF CYSTIC HYGROMA PORTOENTEROSTOMY PROC FOR MECONIUM ILEUS/NEC ENTEROCOLIT REP BRANCHIAL CLEFT ANOM/THYRO DUCT CYST REP ESOPH ATRESIA/TRACHEO-ESOPH FIST REP INTESTINAL ATRESIA/STENOSIS REP OMPHALOCELE/GASTROSCHISIS REPAIR DEFORMITY CHEST WALL REPAIR DIAPHRAGMATIC HERNIA REPAIR EPI- AND HYPO-SPADIAS REPAIR OF EXSTROPHY REPAIR PYLORIC STENOSIS</p>	<p>Maximize residents operative experience in the core pediatric surgical cases</p>	<p>Continual tracking of cases via the resident's ACGME surgical log</p>	<p>Periodic review of case logs by resident and program director</p>

ACGME MEDICAL KNOWLEDGE COMPETENCY

Medical Knowledge about established and evolving biomedical, clinical, and cognate (e.g., epidemiological and social-behavioral) sciences and the application of this knowledge to patient care.

Content and Procedures	Educational Strategies	Evaluation Methods	Outcome Measures
<p>General Skills Investigatory and analytic thinking Knowledge & application of basic sciences in decision making</p>	<p>Resident will present at educational conference, M&M and weekly teaching rounds Teach students and more junior residents in the clinical setting as well as didactic lectures</p>	<p>Discussion-based assessment with case presentations & written feedback by attending Demonstrated competency in conducting a literature search for their presentations</p>	<p>Resident participation in conferences</p>

Content and Procedures	Educational Strategies	Evaluation Methods	Outcome Measures
<p>Primary Trauma - initial assessment & priorities of the injured child Airway Breathing Circulation Neurological Organ Systems Child Abuse Tumors Renal Adrenal Neuroblastoma Hepatic Soft Tissue Teratoma Lymphoma, Leukemia Bone Gonadal Abdomen GI Hepatobiliary Pancreas Adrenal Thoracic/Airway Chest Wall Deformities Lobar Emphysema Cystic Adenomatoid Malformation Pulmonary Sequestration Tracheal & Bronchial Abnormalities Mediastinal Cysts & Tumors Laryngoscopy & Bronchoscopy Empyema & Pulmonary Abscess Chylothorax Breast Abdominal Wall, Diaphragmatic Hernia, Eventration Abdominal Wall Defects Genitourinary Inguinal Hernia & Hydrocele Undescended Testes Torsion's Ambiguous Genitalia Ovary Vaginal Atresia, Hydrometrocolpos Circumcision Head & Neck Congenital Lesions Salivary Glands</p>		<p>Evaluations of presentations by residents and faculty</p> <p>Evaluation of clinical teaching by other residents</p> <p>Faculty evaluations (see global evaluation)</p>	

PEDIATRIC SURGERY

ACGME INTERPERSONAL/COMMUNICATION SKILLS COMPETENCY

Interpersonal and communication skills that result in effective information exchange and teaching with patients, their families, and other health professionals.

Content	Educational Strategies	Evaluation Methods	Outcome Measures
<p>Communicate effectively with patients and families to create and sustain a professional and therapeutic relationship</p> <p>Listening skills</p> <p>Explaining skills</p> <p>Interaction skills</p> <p>Communicate effectively with physicians, other health professionals, and health-related agencies</p> <p>Work effectively as a member or leader of a health care team (including both interdisciplinary and inter-professional collaboration) or organization</p> <p>Be able to act in a consultative role to other physicians and health professionals</p> <p>Maintain comprehensive, timely, and legible medical records</p> <p>Counsel patients and families</p> <p>Take measures needed to enhance or maintain health and function and prevent disease and injury</p> <p>Encourage active participation in their care</p> <p>Provide information that will foster increased independence and compliance</p> <p>Provide information necessary to enable patients and families to understand the illness and treatment, share decisions, and give informed consent</p> <p>Provide “bad news” in a compassionate manner, allowing families time to grieve and adjust</p> <p>Identify and effectively utilize other resources, e.g., case managers, pastoral care</p> <p>Provide care that is sensitive to each patient’s cultural, economic, and social circumstances</p> <p>Sensitivity to age, gender, culture, and ethnicity</p> <p>Appreciation of the economic factors that influence decision making and impact of such factors on families</p> <p>Demonstrate competency in meeting the unique needs of pediatric patients and their families</p> <p>Psychological needs</p> <p>Multiple family structures</p> <p>Special needs of children with complex congenital abnormalities</p>	<p>Surgery Clinic</p> <p>Pre- and Post-Op patient care</p> <p>ED and Trauma Room</p>	<p>Observation with focused evaluation of resident describing complex surgical procedure and obtaining informed consent</p> <p>Faculty evaluations</p>	<p>Tracking of sentinel events, or other adverse outcomes</p> <p>Tracking of patient satisfaction results</p>

**PEDIATRIC SURGERY
ACGME PROFESSIONALISM COMPETENCY**

Professionalism, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse population.

Content	Educational Strategies	Evaluation Methods	Outcome Measures
Respectful of all patients and families as well as colleagues who are different with respect to age, culture, disabilities, ethnicity, gender, and/or sexual orientation Acceptance of responsibility for patient care, including continuity of care Ethics knowledge and consistent demonstrate of ethically sound practice Professional behaviors Integrity Honesty Compassion Empathy Dependability Commitment	Discussion of ethical issues at case conferences Role modeling by faculty within program and within institution	Ethics case vignettes 360° feedback evaluation Global evaluation by faculty Patient satisfaction surveys	Tracking of patient complaints and adverse events

**PEDIATRIC SURGERY
ACGME SYSTEMS-BASED PRACTICE COMPETENCY**

Systems-based practice, as manifested by actions that demonstrate an awareness of, and responsiveness to, the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

Content	Educational Strategies	Evaluation Methods	Outcome Measures
Advocacy for patients Effective participation in health care teams and alternative health care settings Advocacy for quality patient care and optimal patient care systems Health promotion and prevention of disease and injury	Trauma Conference Bedside rounds M&M conference Discharge rounds Clinic	Global evaluation by faculty Nursing Evaluation	Patient and Hospital personnel satisfaction Annual resident interviews with program director Annual report which identifies changes in the program

Attachment 2:

**TOPICS FOR PEDIATRIC SUBSPECIALTY
CONFERENCES**

ANESTHESIA

General Anesthetic Principles and Pitfalls
Anesthetic Administration in Children

CRITICAL CARE MEDICINE

Sedation and Analgesia
ECMO
Pediatric Airway Abnormalities
Pediatric Shock-Pathophysiology and Management
ARDS and Advanced Respiratory Failure Management
Principles of Mechanical Ventilation
Traumatic Brain Injury
Multiple Organ Dysfunction Syndrome

DENTISTRY/OMFS

Management of Common Dental and Oral Trauma Problems in Children

ENDOCRINOLOGY

Congenital Adrenal Hyperplasia
Thyroid Disorder – Hypo and Hyperthyroidism
Parathyroid Disorders
Hyperinsulin Disorders of the Newborn
Adrenocortical Tumors
Pheochromocytomas

GASTROENTEROLOGY

Abdominal Pain
Hepatitis/Liver Disease
Physiology of the GI Tract
Short Bowel Syndrome
Intestinal and Colonic Polyps
Infant Formulas
Intestinal Pseudo-Obstruction
Inflammatory Bowel Disease
Constipation and Diarrhea
Gastrointestinal Bleeding
Pancreatitis
Gastroesophageal Reflux

HEMATOLOGY/ONCOLOGY

Sickle Cell Disease
Brain Tumors
Leukemia
Bleeding Disorders
Bone Marrow Transplantation
Neuroblastoma
Wilm's Tumor
Rhabdomyosarcoma
Hodgkin's and Non Hodgkin's Lymphoma

NEONATOLOGY

Seizures
Short / Long Term Sequelae of Prematurity
Neonatal Sepsis
Hematology of the Neonate
Bleeding Disorders of the Neonate
Jaundice

NEPHROLOGY

Nephrology in the NICU
Dialysis and Transplantation
Childhood Renal Disorders

NEUROSURGERY

Head Trauma and Monitoring Techniques
Hydrocephalus and Myelomeningocele

ORTHOPAEDICS

Common Congenital and Acquired Orthopedic Conditions in Children
Pediatric Orthopedic Oncology
Management of Thoracolumbar and Pelvic Traumas

PULMONARY MEDICINE

Cystic Fibrosis
Asthma
Upper Airway Obstruction
Pulmonary Function Testing
Gastroesophageal Reflux and Lung Disease

PLASTIC SURGERY

Congenital Anomalies, Including Cleft Lip
Principles of Wound Healing

TRANSPLANTATION IN CHILDREN

UROLOGY

Renal, Bladder & Urethral Trauma
Acute Urologic Emergencies
Management of Hypospadias & Epispadias
Vesicoureteral Reflux
Techniques for Urinary Continence