

PEDIATRIC SURGERY GOALS AND OBJECTIVES

GOALS

Through rotation on the pediatric surgery service, residents shall attain the following goals:

I. Patient Care

A. **Preoperative Care Setting:** outpatient clinic and inpatient service (primary and consultation)

Residents will evaluate and develop a plan of care for preoperative and post operative pediatric surgery patients. They will collaborate with advanced practice providers (APPs). The plan shall include any intervention(s) that will successfully prepare a pediatric patient for surgery as well as facilitate their recovery from surgery.

i) The resident will perform complete and detailed history and physical examinations of patients being considered for elective as well as urgent/emergent surgery. (PGY 1-5)

ii) The resident will learn to obtain and interpret laboratory and radiologic tests that are appropriate for the condition being treated and/or the procedure being planned. The resident will learn to pay special attention to pediatric - radiologic protocols limiting ionizing radiation. (PGY 1-5)

iii) The resident will demonstrate an understanding of the principles of preoperative patient selection and optimization (ie size, weight, and age of patient; nutritional status; special considerations such as associated congenital anomalies and their impact on the planned procedure). (PGY 1-5)

iv) The resident will participate in the informed consent process for patients being scheduled for elective and urgent/emergent procedures or surgeries. The informed consent process includes communication with legal guardians identifying and reviewing the risks, benefits, and alternatives of the planned intervention. (PGY 1-5)

v) All residents will respond to pediatric traumas. The PGY 4 resident will cover level 1 pediatric trauma call. PGY 1 and 2 may cover level 2 and 3 pediatric trauma calls without the senior resident. Resident will follow ATLS guidelines of pediatric trauma care in conjunction with the attending on call.

B. **Operative Care Setting:** Operating rooms at Children's and 5N

The following are a list of essential common operations that all rotating residents can be expected to have exposure to by the completion of their pediatric surgery

rotation:

- Inguinal hernia repair (PGY 2-4)
- Umbilical hernia repair (PGY 2-4)
- Epigastric hernia repair (PGY 2-4)
- Venous access – broviac catheters and mediports (PGY 1,2)
- Appendectomy (PGY 2-4)
- Cholecystectomy (PGY 2-4)
- Pilonidal sinus operation (PGY 1,2)
- Feeding access (PGY 1,2)
- Pyloromyotomy (PGY 2-4)

The following is a list of advanced and less frequent operations that the resident(s) may have exposure to by the completion of their pediatric surgery rotation:

- Exploratory laparotomy, neonatal and pediatric (PGY 2-5)
- Diaphragmatic Hernia – Repair (PGY 2-5)
- Esophageal Atresia/Tracheo-esophageal Fistula – Repair (PGY 4,5)
- Hirschsprung’s disease – operation (PGY 2-5)
- Imperforate Anus – operation (PGY 2-5)
- Intestinal Atresia/Stenosis – operation (PGY 2-5)
- Necrotizing enterocolitis – operation (PGY 2-5)
- Omphalocele/Gastroschisis (PGY 2-5)
- Solid tumor (ie Wilms or neuroblastoma) – excision (PGY 2-5)

C. Postoperative Care Setting: inpatient floor, outpatient clinic

Residents shall develop and follow through with a plan of care for the post-operative pediatric surgery patient. This plan generally focuses on but is not limited to pain control, identification and treatment of common post-operative complications like bleeding, infection, sepsis, identification of discharge criteria and coordination of care as they transition back to home following their surgery/procedure.

1. Outpatient surgery

- A) The resident will complete necessary documentation like brief operative note and discharge summary for every patient undergoing a procedure.
- B) The resident will follow up on all pertinent post-operative tests, imaging studies prior to discharging a pediatric surgery patient who has undergone an outpatient procedure.
- C) The resident will successfully choose an oral analgesic home regimen

that will adequately manage a pediatric surgery patient's pain and explain its application to the caregivers.

D) The resident will complete and review with the patient and caregivers the discharge instructions. Key points include but are not limited to activity restrictions, wound care/drain instructions, analgesia, and reconciliation of the patient's medication list.

E) The resident will coordinate appropriate surgical follow-up

2. Inpatient floor

A) The resident team is expected to make morning rounds on the inpatient pediatric surgery patient list (including the consult service) prior to the start of the day's activities (OR cases, clinic). (PGY 1-4)

B) After rounds, the residents are expected to contact the attending physician of record to review the plan of the day for each individual patient and set a time for rounds with the attending. HIPAA compliant text messages are appropriate for basic communication if no further discussion is needed. Any patient with acute concerns needs to be discussed via phone call.). (PGY 1-4)

Common issues to be discussed should include vital signs (including pain control), Is/Os, physical exam findings, daily labs, medication review, consultant recommendations. The daily plan will generally consist (among others) of identifying possible discharge appropriate patients, advancement of diet, repletion of electrolyte abnormalities, adjustment of medications, drain and tube management, need for diagnostic tests to be ordered or new consults to be called.

C) The resident will perform the day's work in a manner that is as efficient as possible in collaboration with advanced practice (APP) providers. They are expected to respectfully partner with the assigned inpatient APP who may provide guidance and recommendations regarding pediatric surgical care. Priority should be given to obtaining and following up on important studies expeditiously as well as discharges. The goal for all discharges is out the day by noon.

3. Out-patient clinic

A) Residents will have the opportunity to see patients during the outpatient post-operative follow up visit. This will provide for continuity of care that will allow the resident to gain an understanding of the anticipated normal recovery from the various essential common and complex operations as well as gain experience in identifying instances in which deviation from the norm is occurring as how such instances are approached/managed.). (PGY 1-4)

B) Residents will see pediatric surgery patients who are in longitudinal surveillance of their disease following their surgical intervention. This experience will provide the resident with an initial exposure to the

ongoing care of pediatric surgery patients even after their operation is performed.). (PGY 1-4)

D. Non-Operative care setting

Residents will participate in the outpatient pediatric surgery clinic, including specialty clinics (trauma, chest wall deformity, bowel management). They will learn operative and non-operative management of congenital and acquired conditions in the age spectrum from birth to adolescence. (PGY 1-4)

II. Medical Knowledge

Resident fund of knowledge as it relates to pediatric surgery will be expanded through a variety means, some of which are structured and others of which require independent initiative from the residents who are rotating on the service. These include: 1) Conferences, 2) Journal club 3) Assigned readings 4) TWIS quizzes

- A. Conferences: Residents are expected to attend weekly Wednesday morning morbidity and mortality conference. Complications from the pediatric surgery service are to be presented by the resident who was involved in the case in front of a group of their peers as well as the surgical faculty at large. This conference will give residents an opportunity to think critically about specific steps in the preoperative workup, operative conduct and/or post-operative care of patients who have experienced a complication and identify opportunities for alternative decisions in similar, future cases that may lead to improved outcomes. Evidenced based practice patterns should be emphasized when applicable. Presentations should be reviewed in advance with the responsible faculty.
- B. Hand off, pediatric case review meeting – weekly Monday at 8AM. Discuss active patients, review recent operative interventions, discuss interesting cases. Senior resident is expected to present each active patient in concise manner including past interventions and plan.
- C. Journal Club: Residents are expected to present 1 to 2 papers selected by the attending on service during monthly journal clubs on Wednesday afternoon.
- D. Assigned Readings: Residents will cover various pediatric topics, among others, as part of their assigned weekly reading curriculum through the program at large. The SCORE curriculum is the chosen curriculum for the general surgery residency. Pediatric surgery faculty will participate in leading didactic discussion at Wednesday morning education conference at different points in the year when pediatric surgery topics are the assigned topic for the week. Additionally, residents are encouraged to educate themselves upon the scientific information relating to pediatric surgery and are expected to prepare for surgical procedures.

III. Practice-based Learning

Residents are expected to engage in critical self-review as it relates to the cases in which they participate, whether it be in the operating room, on the wards or in the outpatient setting.

1. Morbidity & Mortality Conference – Discussion should center on an evidence-based discussion of quality improvement (All PGY)
2. Residents shall keep logs of their cases and track their operative proficiency as gauged by whether they assisted or were the surgeon junior or senior or teaching assistant (All PGY)
3. Residents shall distribute operative cards to attendings with whom they have performed cases so that they can be filled out and placed into said resident's Clinical Competency Committee (CCC) folder (PGY 1, 2, 4)
4. Residents shall familiarize themselves with evidence based guidelines related to disease/injury prevention, patient safety and quality (SCIP measures) as well as hospital specific matters related to safety and quality (NSQIP data, QITI data, pharmacy formularies for hospital acquired infections, isolation precaution measures) (All PGY)

IV. Interpersonal and Communication Skills

The pediatric surgery service provides unique opportunities for residents to develop their interpersonal and communication skills, both in the context of physician to patient interactions as well as in interactions as part of the health care delivery team.

- A. Residents will be given the opportunity to observe (PGY1) and eventually participate in the process of delivering bad news to patients and their families (PGY4). These opportunities exist in the outpatient as well as the inpatient setting and arise in the context of discussing pathology reports, diagnostic findings, and prognosis.
- B. Residents will also be called upon to communicate the daily plan and progress of patients admitted to the hospital to patients, their family and the entire healthcare team involved in the care of that particular patient. The healthcare team will include nurses, therapists, care managers, APPs and other physicians serving as consultants (All PGY)
- C. Residents shall learn to document their practice activities in such a manner that is clear, concise and in accordance with the standards of medico-legal documentation (All PGY)
- D. Residents shall participate in the informed consent process for patients being scheduled for elective and emergent/urgent procedures or surgery (All PGY)
- E. Residents shall learn to give and receive detailed sign-out to facilitate continuity of care during handoffs (All PGY)

V. Professionalism

The pediatric surgery rotation offers many opportunities for residents to hone their skills as they relate to professionalism.

- A. Residents are expected to be honest and sincere with patients and their caregivers. Examples include breaking bad news and explaining surgical complications (All PGY)
- B. Residents shall demonstrate a commitment to the continuity of care of a patient within the confines of the 80-hour duty restrictions (All PGY)
- C. Residents will maintain patient confidentiality (All PGY)
- D. Residents will learn the importance of accurate medical documentation (All PGY)
- E. Residents will be expected to adhere to the hospital's code of professional conduct as it relates to appearance and dress (All PGY)
- F. Residents will be expected to be punctual and prepared for all cases, clinics and conferences that they are participating in on any given day (All PGY)
- G. Resident are expected to keep a professional and respectful conduct to all members of the care team including nurses and APPs. (All PGY)

VI. Systems-based practice

The pediatric surgery rotation provides residents with inpatient and outpatient opportunities to grow within the systems-based practice core competency.

- E. Residents will learn to practice high quality cost effective, evidence-based patient care. This knowledge will be gained through participation in the conferences listed above in the medical knowledge competency and include the M&M, case conferences and journal clubs (see discussion about each of these above) (All PGY)
- F. Residents will be educated about and held accountable for compliance with the surgical care improvement project (SCIP) standards as they relate to the perioperative care of pediatric surgery patients and include but are not limited to reducing surgical site infection(s) through the appropriate use and choice of perioperative antibiotics; eliminating or reducing catheter associated urinary infections by early removal of indwelling catheters from post-operative patients; learning best practice guidelines for reducing catheter associated infections upon central venous catheter (CVC) insertion (All PGY)
- G. Residents will be exposed to protocol driven practices as they relate to management of patients with different pathologies, selection of antibiotics for hospital acquired infections based on institution specific resistance patterns, blood transfusion criteria,

and observation of contact precautions for patients with multidrug resistant infections (among others) (All PGY)

- H. Residents will be educated about the National Surgical Quality Improvement Project (NSQIP) measures and outcomes and how they relate to the changing landscape of reimbursement patterns for individual providers and hospital systems at large (All PGY)