Pediatric Surgery
Competency Based Goals & Objectives

This applies to clinical R 1 and 4 residents rotating on this service

PATIENT CARE, MEDICAL KNOWLEDGE, & TECHNICAL SKILLS:

Baseline Fund of Knowledge

1. Understand general principles of care of children with surgical conditions
2. Understand fluid, electrolyte and nutritional management in children
3. Demonstrate an understanding of pain control for children
4. Demonstrate understanding of pathophysiology of common surgical conditions in children including pyloric stenosis, intestinal obstruction, appendicitis, trauma, congenital anomalies

Neonatal Surgery Knowledge – The R4 resident will focus on the neonate and critical care aspects of care.

1. Understand the unique anatomic, pathophysiologic, and genetic conditions that affect the fetus and neonate
2. Classify congenital malformations of the newborn by type
3. Learn principles of stabilization, appropriate preoperative diagnosis, and preparation of the sick neonate
4. Understand the anatomic and physiologic principles which guide successful operative repair of neonatal diseases
5. Learn principles of routine postoperative care and postoperative critical care management
6. Describe capabilities and limitations of various diagnostic modalities used in neonatal care
7. Formulate a care plan for neonates with problems such as gastroesophageal reflux, jaundice, bilious emesis, bloody diarrhea, and abdominal distention
8. Diagnose common neonatal problems and describe surgical procedures for their correction

Pediatric Surgery Knowledge – The R1 resident will focus on general pediatric care including objectives 1-8 whereas the R4 will develop a deeper understanding of all these objectives.

1. Understand the unique anatomic, pathophysiologic, and genetic conditions that affect children
2. Learn the principles of stabilization, appropriate preoperative diagnosis, and preparation of the sick child
3. Differentiate between pediatric and adult resuscitation
4. Understand the anatomic and physiologic principles which guide successful operative repair of pediatric diseases
5. Describe the development of children in terms of: weight, length, head size; nutritional requirements; renal function; hormonal influences on development; response to stress and infection

6. Summarize the basic approach to the diagnosis and management of more common surgical problems of infancy and childhood such as: pyloric stenosis, perforated appendix, intussusception

7. Understand pathophysiology and treatment of surgical conditions in children including congenital diaphragmatic hernia, Hirschprung’s disease, intestinal atresia, intussusception, Wilms tumor, neuroblastoma, short-gut syndrome

8. Understand the differences between omphalocele and gastroschisis

9. Explain the approach to surgical management of more complex surgical procedures such as: thoracotomy for pulmonary resection and vascular cardiac repair; flexible endoscopy; antireflux procedure; bowel resection; repair of hepatic, biliary, and pancreatic injury

10. Understand the principles of early and late follow-up for complex surgical problems of childhood

Skills Objectives:

Neonatal Surgery Skills - The R4 resident will focus on neonatal and infant surgical skills.

1. Perform a comprehensive evaluation of a neonate with suspected surgically correctable conditions
2. Assist or perform under supervision: placement of central venous access, tube thoracostomy, incision and drainage of cysts and abscesses, hernia reduction
3. Participate in perioperative care of the neonate by recording appropriate assessments and treatment plans in daily progress notes
4. Manage illnesses including necrotizing enterocolitis, congenital anomalies of the abdominal wall, GI tract, chest and diaphragm, solid tumors
5. Demonstrate management of gastrostomy tubes and advancement of feeds
6. Assist or perform surgical repairs of congenital diseases
7. Perform or assist in all major surgical procedures performed on the pediatric surgical service
8. Conduct comprehensive preoperative evaluation and postoperative management for all critically ill neonates
Pediatric Surgery Skills - The R1 resident will focus on objectives 1-5 whereas the R4 will develop a deeper understanding of all these objectives:

1. Participate in preoperative assessment involving regular attendance of the outpatient clinic, provision if inpatient and emergency room consultation
2. Provide preoperative assessment of all pediatric surgical patients, both inpatient and outpatient
3. Demonstrate appropriate examination for appendicitis
4. Interpret specialized radiologic studies including upper GI series, barium enema, CT scan, MRI, radionuclide scans
5. Assure continuity of care including active participation in preoperative assessment and diagnostic workup, postoperative care, and long-term follow-up in outpatient clinics and emergency room for more severe and urgent surgical problems
6. Manage the stable neonate
7. Manage critically ill children
8. Stabilize and assess pediatric trauma patient management
9. Assist in surgery for pyloric stenosis and inguinal hernia in infants
10. Perform complicated appendectomy and vascular access in infants; intestinal obstruction in older children
11. Develop a system to provide cost-efficient surgical care for children

INTERPERSONAL & COMMUNICATION SKILLS:
The R1 resident will focus on objectives 1-3 whereas the R4 will develop a deeper understanding of all these objectives:

1. Establish rapport with patients and their families.
2. Perform a patient-centered medical interview.
3. Effectively and considerately communicate with team staff in a manner that promotes care coordination.
4. Engage patients in shared decision-making, when appropriate, and participate in family discussions.
5. Develop a working relationship with all members of the pediatric care team in managing pediatric patients
6. Discuss patient and parent fears regarding outcome of surgery.
7. Discuss patient’s fear of deformity and its impact on self-image.

PROFESSIONALISM:
The R1 resident will focus on objectives 1-2 whereas the R4 will develop a deeper understanding of all these objectives:

1. Demonstrate respect and compassion for all patients and family members.
2. Treat all care providers with respect in a collegial relationship to collaboratively provide optimal care to the patients and their families.

3. Exhibit competency in working with patients regarding advanced directives, DNR status, futility, and withholding/withdrawing therapy.

4. Understand and compassionately respond to issues of culture, age, sex, sexual orientation, and disability for all patients and their families.

5. Identify patient’s and parent’s fear associated with the diagnosis of childhood cancers.

6. Identify and assist with the psychological stress of patients and their families with chronic disease as it affects their personal life, their family life, and their socioeconomic environment.

7. Dress professionally and maintain daily hygiene.

**PRACTICE-BASED LEARNING – Equally applicable to all residents:**

1. Exhibit self-directed learning.

2. Demonstrate improvement in clinical management of patients by continually improving pediatric surgery knowledge and skills during the rotation.

**SYSTEMS BASED PRACTICE – Equally applicable to all residents:**

1. Serve as an effective consultant to our pediatric colleagues, providing expertise in evaluation and definitive treatment of selective surgical conditions.