Pediatric Surgery Competency Based Goals & Objectives

This applies to clinical PGY 4 residents rotating on this service

PATIENT CARE, MEDICAL KNOWLEDGE, & TECHNICAL SKILLS:

Background Knowledge

1. Understand general principles of care of children with surgical conditions
2. Understand fluid and 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, foreign body of esophagus and airway

Neonatal Surgery Knowledge

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 respiratory distress, gastroesophageal reflux, jaundice, bilious emesis, bloody diarrhea, abdominal distention
8. Understand how new techniques such as fetal surgery may offer alternatives for treatment of certain neonatal diseases
9. Diagnose common neonatal problems and describe surgical procedures for their correction

Pediatric Surgery Knowledge:

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. Understand the anatomic and physiologic principles which guide successful operative repair of pediatric diseases
4. 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
5. Demonstrate knowledge of anatomic variations of anal atresia and malrotation
6. Differentiate between pediatric and adult resuscitation
7. 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
8. Understand pathophysiology of surgical conditions in children including esophageal arrests, congenital diaphragmatic hernia
9. Differentiate characteristics of Hirschprung’s disease, intestinal atresia, intussusception, Wilms tumor, neuroblastoma
10. Explain the approach to surgical management of more complex surgical procedures such as: large skin grafts and musculocutaneous flaps; thoracotomy for pulmonary resection and vascular cardiac repair; flexible endoscopy; antireflux procedure; bowel resection; repair of hepatic, biliary, and pancreatic injury
11. Analyze the pathophysiology, diagnosis, and management options in the treatment of short-gut syndrome
12. Understand the principles of early and late follow-up for complex surgical problems of childhood
13. Understand the differences between omphalocele and gastroschisis

Skills Objectives:

Neonatal Surgery Skills

1. Perform a comprehensive evaluation of a neonate with suspected surgically correctable conditions
2. Establish percutaneous venous and arterial access in neonates over 2 kg
3. Assist or perform under supervision: peripheral venous and arterial cutdown access, placement of umbilical catheters, placement of central venous access, tube thoracostomy, incision and drainage of cysts and abscesses, hernia reduction
4. Participate in peripoertative care of the neonate by recording appropriate assessments and treatment plans in daily progress notes
5. Manage illnesses including airway obstruction, necrotizing enterocolitis, congenital anomalies of the abdominal wall, GI tract, chest and diaphragm, solid tumors
6. Demonstrate management of gastrostomy tubes and advancement of feeds
7. Assist or perform surgical repairs of congenital diseases
8. Perform or assist in all major surgical procedures performed on the pediatric surgical service
9. Conduct comprehensive preoperative evaluation and postoperative management for all critically ill neonates
**Pediatric Surgery Skills:**

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. Organize assessment protocols for patients with abdominal pain, abdominal mass, respiratory distress, gastrointestinal bleeding
4. Manage the stable neonate
5. Manage critically ill children
6. Stabilize and assess pediatric trauma patient airway management in older children
7. Provide venous access in younger children
8. Interpret specialized radiologic studies including upper GI series, barium enema, CT scan, MRI, radionuclide scans
9. Assist in surgery for pyloric stenosis and inguinal hernia in infants
10. Demonstrate appropriate examination for appendicitis
11. Perform complicated appendectomy and vascular access in infants; intestinal obstruction in older children
12. Participate in preoperative, operative, and postoperative care of more complex problems in pediatric surgery such as: pedicle graft, large skin grafts for burns, subcutaneous mastectomy; branchial cleft and thyroglossal duct cysts, cystic hygroma; laryngoscopy, bronchoscopy, esophagoscopy; tracheostomy; thoracotomy for biopsy, lung resection; diaphragm repair
13. 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
14. Develop a working relationship with members of the pediatric intensive care unit in managing postoperative pediatric patients
15. Develop a system to provide cost-efficient surgical care for children

**INTERPERSONAL & COMMUNICATION SKILLS:**

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

**PROFESSIONALISM:**

1. Demonstrate respect and compassion for all patients.
2. Exhibit competency in working with patients regarding advanced directives, DNR status, futility, and withholding/withdrawing therapy.
3. Understand and compassionately respond to issues of culture, age, sex, sexual orientation, and disability for all patients and their families.
4. Identify patient’s and parent’s fear associated with the diagnosis of childhood cancers
5. 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.

PRACTICE-BASED LEARNING:
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:
Serve as an effective consultant to the nursery, providing expertise in evaluation and definitive treatment of selective surgical conditions.