July 2011

**ROTATION: PEDIATRIC SURGERY**

**ROTATION DIRECTOR:** Stephen Shew, M.D.

**CHIEF OF PEDIATRIC SURGERY:** James Atkinson, M.D.

**FACULTY:**
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Steven Lee, M.D. (office: 310-206-2429)
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**SITE:** Ronald Reagan - UCLA Medical Center, Mattel Children’s Hospital

**GOALS AND OBJECTIVES:**

To provide surgical trainees an opportunity to participate in the pre-operative, peri-operative and post-operative aspects of pediatric surgery.

**DESCRIPTION OF THE ROTATION:**

The Pediatric Surgery rotation will consist of 1 month for an R1, 1 month for an R2, and 2 months for an R4.

1. Residents will provide in-patient care including routine admissions and critical care of the pediatric surgery patients under direct supervision by the faculty.
2. Residents will participate in the preoperative and postoperative evaluation of outpatients seen in the pediatric surgery clinic under direct supervision by the faculty.
3. Residents will participate in inpatient and ambulatory operations under direct supervision by the faculty.
4. Residents will participate in all Department of Surgery educational conferences and didactic presentations.
5. Residents will participate and present at the weekly Pediatric Surgery Conference and other division specific educational conferences.

**ASSESSMENT:**

Monitoring of the accomplishment of the stated objectives will be performed using the following methods:

1. Global Rating: end of rotation evaluation of resident performance to assess the resident’s demonstration of Core Competencies with respect to the stated objectives by faculty, other team resident members, students, and nursing staff.
2. Case Logs: auditing of operative cases pertinent to the specialty in the Surgical Operative Log.
3. Written Examination: performance on the annual ABSITE examination, Gastrointestinal and Body as a whole (clinical management) systems section.
4. Patient Survey: performance will be assessed by patient surveys administered though the rotation.
5. For additional information please refer to the Resident Milestones document on the UCLA Surgical Education website:  [http://www.surgery.medsch.ucla.edu/resident/Documents/ResidentMilestones.pdf](http://www.surgery.medsch.ucla.edu/resident/Documents/ResidentMilestones.pdf)
<table>
<thead>
<tr>
<th>ACGME Competency</th>
<th>Developmental Milestones Informing ACGME Competencies</th>
<th>Time Frame</th>
<th>Assessment Methods/Tools</th>
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</table>
| **Patient Care** | 1. Perform a complete and thorough history and physical examination, with emphasis in elements unique to pediatric surgery patients including those in the neonatal and pediatric intensive care units.  
2. Initiate the laboratory evaluation and any other initial diagnostic studies with an understanding of the tests to be ordered with the guidance of senior residents and faculty.  
3. Make informed decisions about diagnostic and therapeutic interventions on pediatric surgery patients with the guidance of senior residents and faculty.  
4. Be proficient in the preoperative preparation of the patients for surgery and routine postoperative care.  
5. Understand basic pathophysiology of pediatric illnesses and begin to master the skills necessary to care for the patient under the guidance of the senior residents and faculty members.  
6. Understand basic pathophysiology of pediatric disease under the guidance of the senior residents and faculty.  
7. Understand the basic indications for common radiological and interventional studies used in the care of pediatric surgery patients.  
8. Demonstrate the ability to effectively set priorities and coordinate the care of ill and injured pediatric patients. | 4-8 weeks | Global Rating  
Case Logs  
Written Examinations  
Patient Survey  
Feedback from faculty/attending physicians at rounds and OR |
| **Medical Knowledge** | 1. Demonstrate an understanding of the development of the newborn throughout childhood in terms of the following:  
a. weight and proportional body size differences compared to adults  
b. nutritional, fluid and electrolyte requirements compared to adults  
c. physiologic parameters of stress compared to adults  
2. Discuss the embryological, gestational and developmental issues associated with each of the following anomalies:  
a. congenital diaphragmatic hernia  
b. congenital high airway obstruction syndrome (CHAOS)  
c. tracheo-esophageal fistula and esophageal atresia  
d. congenital cystic adenomatoid malformation  
e. congenital pulmonary sequestration  
f. biliary atresia  
g. congenital duodenal obstruction  
h. malrotation  
i. gastroschisis and omphalocele  
j. intestinal atresia  
k. Hirschsprung’s disease  
l. VACTERL association  
m. imperforate anus  
n. Meckels diverticulum and other vitelline duct anomalies  
3. Demonstrate an understanding of the recognition, diagnostic workup and appropriate | 4-8 weeks | Global Rating  
Written Examinations  
Completion of rotation specific SCORE assignments  
Feedback from faculty/attending physicians at rounds and OR |
management of the following urgent or emergent pediatric surgical problems:

- tracheo-esophageal fistula and esophageal atresia
- necrotizing enterocolitis
- meconium plug syndrome
- meconium ileus
- Hirschsprung’s disease
- midgut volvulus
- gastroschisis and omphalocele
- congenital diaphragmatic hernia
- liver and spleen injury
- pyloric stenosis
- intussusception
- anterior mediastinal mass

4. Demonstrate an understanding of the diagnosis, appropriate management and surgical technique of the following conditions in infants and children:

- umbilical hernia
- inguinal hernia
- undescended testis
- testicular torsion
- acute appendicitis
- cystic hygroma
- branchial cleft cyst
- pectus excavatum and pectus carinatum

5. Explain the differences in principles and diagnosis of gastrointestinal hemorrhage in the child compared to the adult.

6. Outline the pathophysiology, evaluation and management of congenital biliary atresia.

7. Discuss the pathophysiology, diagnosis, and management options in the treatment of short-gut syndrome.

8. Discuss the special issues regarding pediatric patients and trauma.

9. Discuss the common clinical presentations, diagnostic evaluation, and treatment of the following pediatric malignancies:

- neuroblastoma
- Wilm’s tumor
- hepatoblastoma
- rhabdomyosarcoma
- sacrococcygeal teratoma

10. Understand the recognition and appropriate management of non-accidental trauma in a child.

11. Complete all relevant modules of the SCORE curriculum: [https://portal.surgicalcore.org/home](https://portal.surgicalcore.org/home)

| Practice Based Learning | 1. Develop a personal program of self-study and professional growth with guidance from the teaching staff and senior residents. An understanding of the etiology, pathogenesis, pathophysiology, diagnosis and management of pediatric disease will allow for sound surgical judgment, which relies on knowledge, rational thinking and the surgical literature. | 4-8 weeks | Global Rating | Written Examinations | Patient Survey | Feedback from |
2. Utilize current literature resources to obtain up-to-date information in the care of pediatric surgery patients and practice evidence-based medicine.
3. Participate in teaching and organization of the educational weekly pediatric surgery conference care conference.
4. Participate in activities of the Department of Surgery (including all teaching conferences) and assume responsibility for teaching and supervision of subordinate surgical house staff, and medical students.
5. Participate in the Department Morbidity & Mortality conference and utilize information to further improve patient care.
6. o Participate in daily rounds and be able to present patients in an organized and complete fashion

### Professionalism

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<tr>
<td>1.</td>
<td>Practice compassionate patient care maintaining the highest moral and ethical values with a professional attitude.</td>
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<td>2.</td>
<td>Demonstrate understanding of the needs and feelings of others, including the patient's family members, allied health care personnel (nurses, clerical staff, etc.), fellow residents, and medical students.</td>
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<td>3.</td>
<td>Communicate and collaborate effectively in a team of health care providers.</td>
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<td>4.</td>
<td>Demonstrate respect, compassion and integrity in the pediatric surgical patients on a daily basis.</td>
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<td>5.</td>
<td>Demonstrate mature and educated approach to ethical issues commonly encountered in a pediatric care setting.</td>
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<td>6.</td>
<td>Show sensitivity to patients culture, age, gender and disabilities</td>
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<td>7.</td>
<td>Recognize and appropriately handle sensitive cases of abuse</td>
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<td>8.</td>
<td>Be self-aware and have knowledge of professional limits by practicing on-going medical education and self-improvement.</td>
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<td>9.</td>
<td>Be accountable to the profession in your actions and decisions.</td>
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<td>10.</td>
<td>Understand issues of consent in the pediatric surgery population.</td>
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<th>4-8 weeks</th>
<th>Global Rating</th>
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<td>Feedback from faculty/attending physicians /hospital staff /patients</td>
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### Interpersonal Relationships And Communication

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<tr>
<td>1.</td>
<td>Create and sustain a therapeutic and ethically sound relationship with patients and patient families.</td>
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<tr>
<td>2.</td>
<td>Work effectively with other members of the medical team including allied health care personnel (nurses, clerical staff, etc.), fellow residents, and medical students.</td>
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<td>3.</td>
<td>Maintain professional interactions with other health care providers and hospital staff.</td>
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### Systems Based Practice

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<tr>
<td>1.</td>
<td>Understand how the health care organization affects surgical practice of pediatric patient.</td>
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<tr>
<td>2.</td>
<td>Understand issues of health care access for the pediatric patient.</td>
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<td>3.</td>
<td>Demonstrate cost effective health care.</td>
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<td>4.</td>
<td>Be able to coordinate care practice including discharge planning, social service, rehabilitation, and long term care</td>
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<td>5.</td>
<td>Follow established practices, procedures, and policies of the Department of Surgery and integrated and affiliated hospitals.</td>
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<td>6.</td>
<td>Maintain complete and legible medical records, patient database cards and other patient care related documentation in a timely, accurate and succinct manner under the auspices of protecting patient information as determined by HIPAA regulations.</td>
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<td>Case Logs</td>
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<td>Hour logs</td>
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<td>Completion of required evaluations</td>
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<td></td>
<td>Completion of medical records</td>
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<td></td>
<td>Written Examinations</td>
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**PROCEDURAL AND OPERATIVE SKILLS**

The RRC requires 20 pediatric specific operative cases in order to successfully complete a general surgical residency. Based upon past resident experiences, each general surgery resident rotating through the Pediatric Surgery rotation as a R1, R2, and R4 resident will be able to easily obtain this minimum number of cases. The types of operative cases that qualify for Pediatric Defined Category Credit by the General Surgery RRC of the ACGME include:

1. Excision of congenital neck malformations (cystic hygroma, branchial cleft remnants, thyroglossal duct remnants
2. Repair of esophageal atresia, tracheo-esophageal fistula
3. Repair of pectus excavatum or carinatum deformities
4. Repair of patent ductus arteriosus
5. Repair of congenital diaphragmatic hernia
6. Repair of paraesophageal hernia in the pediatric patient
7. Fundoplication in the pediatric patient
8. Pyloromyotomy for pyloric stenosis
9. Reduction of intestinal volvulus, intussusception, or internal hernia
10. Correction of malrotation (Ladd’s procedure)
11. Small bowel or large bowel resection, anastomosis, or ostomy in the pediatric patient
12. Pullthrough procedure for Hirschsprung’s disease
13. Repair of imperforate anus
14. Exploration for congenital biliary atresia
15. Kasai procedure for repair of congenital biliary atresia
16. Repair of omphalocele or gastroschisis with a silo
17. Repair of omphalocele of gastroschisis with final reduction and closure
18. Nephrectomy for Wilm’s tumor or cyst
19. Adrenalectomy or retroperitoneal resection for neuroblastoma or other tumor
20. Repair of undescended testes – orchiopexy
21. Reduction of torse testes
22. Contralateral orchiopexy for torse testes

The **R2 resident** should be able to perform the following operations or procedures under the supervision of a faculty:

1. excision of small soft tissue tumors and benign lesions
2. inguinal hernia repair
3. pyloromyotomy
4. appendectomy, laparoscopic and open
5. basic laparoscopic procedures
6. orchiopexy
7. lymph node and muscle biopsy
8. removal of foreign body and surgical hardware
9. vascular access and removal in the pediatric patient
TEACHING CONFERENCES & EDUCATIONAL MATERIALS:

Weekly Pediatric Surgical Conference
All residents and medical students on the Pediatric Surgical service are required to attend and the R4 residents will be responsible for presenting cases at the weekly Pediatric Surgical Conference on 4 –5 pm, Carmack Holmes Conference Room RRMC 8234

Monthly Neonatal-Surgery Conference
All residents and medical students on the Pediatric Surgical service are required to attend the Neonatal - Surgery Conference held on the 3rd Tues of the month, 5 –6 pm, Carmack Holmes Conference Room RRMC 8234

Monthly Pediatric Gastro-intestinal Surgery Conference
All residents and medical students on the Pediatric Surgical service are required to attend the Pediatric Gastro-intestinal Surgery held on the 4th Tues of the month, 5 –6 pm, Carmack Holmes Conference Room RRMC 8234

Biweekly Fetal Care Center Conference
All residents and medical students on the Pediatric Surgical service are required to attend the multidisciplinary Fetal Care Center Conference held on the 2nd and 4th Thurs of the month, 8:30-9:30 am, RRMC 3201 Conference Room

Weekly Pediatric Surgery Lecture
A Pediatric Surgery faculty will lecture on the one of the topics of the above listed topics from the Learning Objectives once a week

Weekly Attending Rounds
The on-call Pediatric Surgery faculty will conduct surgical walk rounds with the residents for educational purposes at least once a week.

Recommended Pediatric Surgery Reference Materials
All residents rotating on the Pediatric Surgical service will obtain and are expected to read through the UCLA Pediatric Surgery Resident Manual, which contains service specific information helpful in the care of pediatric surgical patients. The recommended Pediatric Surgical reference materials for each resident are dependent upon the level of experience. All level residents are expected to read through to completion the equivalent of the Pediatric Surgery chapter from a major general surgery textbook (e.g., Sabiston - Textbook of Surgery) by the end of the rotation. Furthermore, the R2 and R4 level residents should supplement their reading with case specific information obtained from a more detailed source such as Principles of Pediatric Surgery by Oneil, Grosfeld, Fonkalsrud, & Coran, Operative Pediatric Surgery by Ziegler, Azizkhan, and Weber, Pediatric Surgery by Ashcraft, Murphy, Snyder, and Holcomb, and Principles and Practice of Pediatric Surgery by Oldham, Colombani, Foglia, and Skinner, as well as current articles in peer-reviewed journals (e.g., Journal of Pediatric Surgery) available through the UCLA server's PubMed access. For details on operative technique of pediatric surgical procedures, Operative Pediatric Surgery by Ziegler, Azizkhan, and Weber and specific chapters from Mastery of Surgery are both recommended for reference. Some of these textbooks are available in the resident call room on the 7th floor, and all are available at the UCLA Biomedical Library. The Pediatric Surgery faculty has purchased a limited supply of Concise Atlas of Pediatric Surgery by Yeh and Chang for disbursement to the general surgery categorical residents rotating on the pediatric surgical service.
ROTATION DAILY SCHEDULE:

Each resident will be required to attend 1 faculty outpatient clinic per week. A resident will be required to participate in each operative case scheduled on the service. The assignment to the clinic and specific operative cases will be determined by the R4 resident. Residents will be excused from clinical duties to attend all departmental resident conferences and for compliance of duty-hours regulations set by the ACGME, WITHOUT EXCEPTION. The typical daily schedule on the Pediatric Surgical service is tabulated below:

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<tr>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thur</th>
<th>Fri</th>
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<tbody>
<tr>
<td>MOR = main operating room RRMC-UCLA, 2nd Floor, OR room 23</td>
<td>Clinic-SS</td>
<td>Surg Cnf</td>
<td>MOR Fetal Cnf</td>
<td>Clinic-A</td>
</tr>
<tr>
<td>ASC = ambulatory surgery center UCLA, Med Plaza 200, 6th floor</td>
<td>Clinic-DD</td>
<td>Clinic-D</td>
<td>ASC</td>
<td>Clinic-SL</td>
</tr>
<tr>
<td>All pediatric surgery clinics are located at Med Plaza 200, Suite 526</td>
<td>ASC</td>
<td>Clinic-D</td>
<td>MOR</td>
<td>ASC</td>
</tr>
<tr>
<td>Clinic-A = Dr. Atkinson’s office</td>
<td>Clinic-D</td>
<td>Clinic-D</td>
<td>ASC</td>
<td>Clinic-SL</td>
</tr>
<tr>
<td>Clinic-DD = Dr. Deugarte’s office</td>
<td>Clinic-D</td>
<td>Clinic-D</td>
<td>ASC</td>
<td>Clinic-SL</td>
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<tr>
<td>Clinic-JD = Dr. Dunn’s office</td>
<td>ASC</td>
<td>Clinic-D</td>
<td>ASC</td>
<td>Clinic-SL</td>
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<tr>
<td>Clinic-SS = Dr. Shew’s office</td>
<td>ASC</td>
<td>Clinic-D</td>
<td>ASC</td>
<td>Clinic-SL</td>
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Clinic-SL = Dr. Lee’s office