This rotation is a sampling of the pediatric surgical specialties and anesthesia. The ultimate goal of this rotation is to appreciate the interactions between the surgical subspecialists and the pediatrician and how both disciplines contribute to improving the health of children. Appreciate how each surgical specialty works with the pediatrician to augment the care being provided by the pediatrician and improves the life and care of the children involved.

**COMPETENCY 1. Patient Care.** Provide family centered patient care that is developmentally and age appropriate, compassionate, and effective for the treatment of health problems and the promotion of health.

ANESTHESIA:
1. Participate in the care and management of pediatric patients requiring general and local anesthesia.
2. Assist in airway assessment as it relates to the anticipated anesthetic.
3. Demonstrate understanding of the following principles of intraoperative anesthetic management:
   - IV access and fluid management during anesthesia
   - Non-invasive monitoring of blood pressure, heart rate, oximetry, and capnography
   - Temperature control in the peri-anesthetic period
   - Anesthetic equipment
   - Bag mask ventilation devices (self-inflating bag, anesthesia bag)
   - Airway devices (oral/nasal airways, endotracheal tubes, laryngeal mask airways)
4. Participate in managing children in the outpatient setting who require sedation for diagnostic and/or therapeutic procedures performed outside of the operating room.

OPHTHALMOLOGY:
5. Explain to parents the normal development of visual acuity and visual tracking in children.
6. Distinguish normal or clinically insignificant eye findings from potentially serious ones.
7. Demonstrate ability to do a good funduscopic examination on children, using mydriatics if needed.
8. Request or perform and interpret the following clinical studies useful in evaluating eye conditions: conjunctival swab for culture and chlamydia FA, fluorescein eye exam, radiologic studies of head and orbit, including plain film, CT and MRI.
9. Evaluate and appropriately treat or refer commonly presenting ophthalmologic signs and symptoms.
10. Diagnose and manage patients with common ophthalmologic conditions that generally do not require referral.
11. Recognize, provide initial management, and refer appropriately conditions that usually require ophthalmologic referral.
12. Recognize various signs of ophthalmologic pathology that may be manifestations of systemic disorders.
13. Perform diagnostic and screening procedures associated with pediatric ophthalmology.

ORTHOPEDICS:
15. Distinguish normal variations in gait and posture.
16. Order and interpret (with the assistance of the radiologist) common diagnostic imaging procedures when evaluating and managing patients with orthopedic conditions: plain radiographs, body MRI, CT scan, radionuclide bone scans.

17. Evaluate and appropriately treat or refer presenting orthopedic signs and symptoms.

18. Diagnose and manage common orthopedic conditions which generally do not require referral to an orthopedist.

19. Recognize, provide initial management, and refer appropriately conditions that usually require orthopedic referral.

20. Develop the expected level of proficiency in the following procedures:
   ♦ Immobilization techniques for common fractures and sprains
   ♦ Reduction of nursemaid’s elbow
   ♦ Cervical spine immobilization
   ♦ Reduction of phalangeal dislocation

**OTOLARYNGOLOGY:**

21. Determine whether a child’s otolaryngological dysfunction (e.g., hoarse voice, nasal discharge) is a temporary state caused by a minor problem or represents a potentially serious pathological process.

22. Demonstrate ability to perform and/or interpret the following clinical studies or procedures:
   ♦ Cerumen removal from ear canal
   ♦ Simple foreign body removal from nose and ear
   ♦ Pneumatic otoscopy
   ♦ Suctioning of nares, oropharynx, tracheostomy
   ♦ Tracheostomy tube replacement
   ♦ Tracheal aspirates, including via tracheostomy (collection, culture, interpretation)
   ♦ Nasopharyngeal wash specimens (collection and interpretation)
   ♦ Head CT
   ♦ Sinus, airway radiographs

23. Evaluate and appropriately treat or refer presenting otolaryngological signs and symptoms.

24. Diagnose and manage common otolaryngological conditions that generally do not require referral.

25. Recognize, provide initial management and refer appropriately conditions that usually require otolaryngologic referral.

**PEDIATRIC SURGERY:**

26. Distinguish acute abdominal pain related to transient events like constipation, musculoskeletal pain or gastroenteritis from pain that is likely to come from a serious surgical condition.

27. Interpret clinical and laboratory tests to identify conditions that require surgical intervention. Tests include blood studies (CBC, ESR, Electrolytes, BUN, Creatinine, LFTs, amylase, lipase); occult blood in gastric fluid and stool; cultures (blood, stool, wound, urine, fluid from body cavities and abscesses); radiographic studies (KUB and upright abdominal films, barium enema, UGI and small bowel follow through).

28. Evaluate and appropriately treat or refer signs and symptoms that may require surgery.

29. Diagnose and manage common conditions which generally do not require surgical referral.

30. Diagnose, provide initial stabilization, and refer appropriately conditions that usually require surgical evaluation.

**PLASTIC SURGERY:**
31. Diagnose, provide initial management with the plastic surgery team children with the following signs and symptoms:
   - Cleft lip/palate
   - Unusual head shape (plagiocephaly, craniosynostosis)
   - Burns (especially second and third degree burn)
   - Trauma resulting in deformity (e.g., dog bites)
   - Lacerations (especially to face and hands)
   - Vascular malformations
   - Ear anomalies
   - Abnormalities of the digits (syndactyly, polydactyly)

32. Diagnose, manage and follow-up the following conditions:
   - Supernumerary nipples (accessory, ectopic)
   - Supernumerary digits
   - Simple brachial plexus injury
   - Ear pits/tags
   - Posterior plagiocephaly due to positioning
   - Small congenital nevi
   - Simple “strawberry” hemangioma

33. Collaborate as a team member in the management of patients with cleft lip and palate.

UROLOGY:
34. Differentiate normal from abnormal male and/or female genital structures.
35. Distinguish normal from abnormal pubertal development.
36. Distinguish between normal sacral findings and abnormal conditions.
37. Educate patients and families regarding the natural history of nocturnal enuresis.
38. Request or perform and interpret the following procedures and studies related to urology:
   - bladder catheterization, suprapubic aspiration, paraphimosis reduction, circumcision with and without anesthesia, and genital wart treatment.
39. Explain the indications for and request and interpret (with a specialist) the results of common diagnostic imaging procedures in the evaluation of patients with urologic conditions: complete renal ultrasound (kidneys, collecting system, bladder), voiding cystourethrogram (radiographic and radionuclide), intravenous pyelography (excretory urography), nuclear medicine tests (e.g. MAG3 and DMSA scan, diuretic renography), doppler ultrasonography, MRI, MRI urography.
40. Evaluate and appropriately treat or refer presenting urologic signs and symptoms.
41. Diagnose and manage common urologic conditions that generally do not require referral.
42. Recognize, provide initial management and refer appropriately conditions which usually require urologic referral.

COMPETENCY 2. Medical Knowledge. Understand the scope of established and evolving biomedical, clinical, epidemiological and social-behavioral knowledge needed by a pediatrician; demonstrate the ability to acquire, critically interpret and apply this knowledge in patient care.

ANESTHESIA:
1. Recognize the importance of and describe in general terms the complication of malignant hyperthermia.
2. Know the basic pharmacology of commonly used agents for local anesthesia and their side effects.
3. Describe the principles of pediatric sedation and apply them in the appropriate setting.
4. Know the basic pharmacology of commonly used agents for sedation and their side effects.
5. Identify safe procedures for administering and monitoring sedatives and analgesics when general anesthesia is not used.

OPHTHALMOLOGY:
6. Understand the pediatrician’s role in preventing ophthalmic disease, injury and dysfunction through counseling, screening and early intervention.
7. Differentiate normal from pathologic eye conditions.

ORTHOPEDICS:
8. Understand the pediatrician’s role in preventing and screening for orthopedic injury, disease and dysfunction.
9. Differentiate normal variants from pathologic orthopedic conditions.

OTOLARYNGOLOGY:
10. Understand the pediatrician’s role in preventing otolaryngologic disease and dysfunction through screening and counseling.
11. Differentiate normal otolaryngologic conditions from abnormal ones.
12. Know normal development of the ear, sinuses, nose, pharynx, and of hearing, speech, and language from birth to adolescence.

PEDIATRIC SURGERY:
13. Understand the pediatrician’s role and role of other health professionals in preventing injury, disease and dysfunction that require surgical intervention.
14. Differentiate normal conditions from pathologic ones requiring surgical intervention.

PLASTIC SURGERY:
15. Recognize the embryologic origins and normal development of the facial structures, particularly the lips and palate
16. Differentiate between syndromic and non-syndromic craniofacial anomalies
17. Explain to families the impact of amniotic bands on fetal development, particularly of the extremities.
18. Distinguish between incomplete and complete clefts of the lip (bilateral and unilateral) and hard palate (bilateral and unilateral).

UROLOGY:
19. Understand the pediatrician’s role in preventing urologic injury, disease and dysfunction through screening, counseling and early intervention.
20. Differentiate normal urologic conditions from pathologic ones and perform appropriate pediatric office screening.

COMPETENCY 3. Communication Skills. Demonstrate interpersonal and communication skills that result in information exchange and partnering with patients, their families and professional associates.

1. Talk to family members about sensitive issues that relate to a patient’s illness, e.g., coping with the child’s altered needs in his/her home setting.
2. Communicate effectively with physicians, other health professionals, and health related agencies to create and sustain information exchange and team work for patient care.
3. Work effectively as a member or a leader of a health care team, and collaborate productively with professional organizations.
4. Maintain comprehensive, timely and legible medical records.

**COMPETENCY 4. Practice-based Learning and Improvement.** Demonstrate knowledge, skills and attitudes needed for continuous self-assessment, using scientific methods and evidence to investigate, evaluate, and improve one’s patient care practice.

1. Describe the epidemiology of common pediatric injuries and evidence-based strategies to prevent injury and improve outcome.
2. Identify standardized guidelines for diagnosis and treatment of complex diseases and learn the rationale for adaptations that optimize treatment.
3. Identify personal learning needs, systematically organize relevant information resources for future reference, and plan for continuing data acquisition if appropriate.
4. Throughout a specialty rotation, take the initiative to evaluate your performance from the perspective of patients, staff, and colleagues; ask for input as needed to complete your self-audit.

**COMPETENCY 5. Professionalism.** Demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to diversity.

1. Function as a pediatric consultant to surgical colleagues in the diagnosis and management of pediatric patients.
2. Be honest and use integrity in your professional duties.
3. Reflect on your own biases toward particular illnesses or patient groups, and take steps to assure that these biases don’t interfere with the care you deliver.
4. Be sensitive to the ethical and legal dilemmas faced by providers working with surgical subspecialty patients. Strive to understand how surgical specialists and the care team deals with these dilemmas and use such experiences to enhance your own understanding.

**COMPETENCY 6. Systems-Based Practice.** Understand how to practice quality health care and advocate for patients within the context of the health care system.

1. Describe the role of emergency response teams, emergency rooms, and medical professionals in reducing the extent of injury and counseling families about future injury prevention.
2. Describe the role of case management in the care of children with complex surgical conditions and evidence that this can improve outcome.
3. Describe the role of pediatricians as advocates for legislation of proven benefit for reducing injury (e.g., graduated driver’s license).
4. Clarify how documentation and billing/charges differ for consultations vs. referrals vs. ongoing management of children treated by surgical subspecialists.
5. Demonstrate sensitivity to the costs of clinical care in the surgical subspecialty setting, and take steps to minimize costs without compromising quality.