

NAME OF ROTATION: Orthopedics Elective

COURSE DIRECTOR: E. William Schmitt, MD

LOCATION: Pediatrics Orthopedics Associates
1605 Chantilly Drive, Suite 310
Atlanta, GA 30324
404- 321-9900

575 Professional Drive #550
Lawrenceville, GA 30045
770-237-9055

TRAINING LEVEL: PGY-2 or PGY-3

LENGTH OF ROTATION: 1 month

COURSE DESCRIPTION:

A comprehensive understanding of the orthopedic conditions typically found in a general pediatric practice is a necessary component in the development of a competent physician. Children frequently present with such common conditions as Osgood Schlatter, Pes Planus, and simple joint strains which can be routinely managed in the primary care taker's office. In addition to the above, conditions such as Compartment Syndrome, Slipped Capital Femoral Epiphysis, and cervical spine injuries may also present to the primary care taker and require rapid recognition and referral to the Orthopedist. The Pediatric Orthopedic Elective is designed to teach residents how to diagnose and treat common pediatric orthopedic conditions and recognize when referral is appropriate. The trainee will also develop an appreciation and understanding of successful methods of providing patient education pertaining to injury prevention. Upon completion of the rotation, the resident will have acquired a comprehensive experience in the diagnosis, management, and natural history of pediatric orthopedic problems including areas of trauma, common congenital conditions, pediatric sports injuries, spinal anomalies, neuromuscular disorders, and other entities which confront the pediatrician on a daily basis.

GOALS, OBJECTIVES, AND CORE COMPETENCIES:

GOAL 1: To understand how to diagnose and manage children's orthopedic problems which generally do not require referral.

Objective 1.1: The resident will learn how to recognize, manage, and provide patient education for the following conditions:

1. Calcaneal apophysis
2. Clavicular fracture
3. Dislocated radial head
4. Femoral anteversion and retroversion
5. Pes planus
6. Internal and external tibial torsion
7. Low back strain
8. Metatarsus adductus
9. Muscle strain
10. Non-displaced finger and toe fractures
11. Osgood-Schlatter
12. Overuse syndrome
13. Patellofemoral syndrome
14. Simple joint sprains

GOAL 2: To understand how to recognize, manage, and refer children's orthopedic problems which generally require referral.

Objective 2.1: The resident will learn how to recognize, provide initial management of, patient education and appropriately refer the following conditions:

1. Avascular necrosis of the femoral head
2. Cervical spine injury
3. Compartment syndromes
4. Congenital club foot
5. Fractures and dislocations
6. Knee ligament and meniscal tears
7. Osteochondritis dissecans
8. Scoliosis with greater than a 20 degree curve
9. Septic joint
10. Slipped capital femoral epiphysis
11. Spondylolysis
12. Spondylolisthesis

GOAL 3: To understand how to provide coordinated care for common chronic conditions requiring coordination and case management with orthopedics.

Objective 3.1: The resident will be able to describe a comprehensive coordinated care plan including orthopedics and physical therapy for the patient with the following conditions:

1. Cerebral palsy
2. Spina bifida
3. Amputation

GOAL 4: To understand the pediatrician's role in the evaluation and treatment of sports-related issues in children and adolescents.

Objective 4.1: The resident will be able to perform an appropriate preparticipation sports physical exam and counsel patients regarding appropriate athletic events, first aid treatment of injuries, and preventive strategies.

Objective 4.2: The resident will be able to demonstrate a comprehensive knowledge of the basics of pediatric exercise physiology, and aerobic, anaerobic, strength, and flexibility training and provide appropriate patient education pertaining to the importance of such training.

Objective 4.3: The resident will be able to define sideline and office criteria for return to play after injuries.

Objective 4.4: The resident will demonstrate the ability to provide evaluation, stabilization, and patient education of sports injuries at the scene.

Objective 4.5: The resident will demonstrate a comprehensive knowledge and appreciation for the effects of anabolic steroids and counsel patients about the abuse of steroids and other performance enhancing drugs.

Objective 4.6: The resident will learn how to recognize, appropriately treat, and educate patients on heat related illnesses and dehydration associated with sports participation.

GOAL 5: To understand the pediatrician's role in preventing orthopedic disorders.

Objective 5.1: The resident will demonstrate the ability to screen for developmental dysplasia of the hip and provide appropriate patient education.

Objective 5.2: The resident will be able to discuss the strategies and limitations related to scoliosis screening in the school versus the office setting.

COMPETENCIES:

Pediatric Competencies in Brief (Subspecialty Rotation). Demonstrate high standards of professional competence while working with patients under the care of a subspecialist. (For details see Pediatric Competencies.)

Competency 1: Patient Care. Provide family-centered patient care that is development- and age-appropriate, compassionate, and effective for the treatment of health problems and the promotion of health.

1.1: Use a logical and appropriate clinical approach to the care of patients presenting for specialty care, applying principles of evidence-based decision-making and problem-solving.

1.2: Describe general indications for subspecialty procedures and interpret results for families.

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.

2.1: Acquire, interpret and apply the knowledge appropriate for the generalist regarding the core content of this subspecialty area.

2.2: Critically evaluate current medical information and scientific evidence related to this subspecialty area and modify your knowledge base accordingly.

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

3.1: Provide effective patient education, including reassurance, for a condition(s) common to this subspecialty area.

3.2: Communicate effectively with primary care and other physicians, other health professionals, and health-related agencies to create and sustain information exchange and teamwork for patient care.

3.3: Maintain accurate, legible, timely and legally appropriate medical records, including referral forms and letters, for subspecialty patients in the outpatient and inpatient setting.

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.

4.1: Identify standardized guidelines for diagnosis and treatment of conditions common to this subspecialty area and adapt them to the individual needs of specific patients.

4.2: Identify personal learning needs related to this subspecialty; systematically organize relevant information resources for future reference; and plan for continuing acquisition of knowledge and skills.

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

5.1: Demonstrate personal accountability to the well-being of patients (e.g., following up on lab results, writing comprehensive notes, and seeking answers to patient care questions).

5.2: Demonstrate a commitment to carrying out professional responsibilities.

5.3: Adhere to ethical and legal principles, and be sensitive to diversity.

Competency 6: Systems-based Practice. Understand how to practice high-quality health care and advocate for patients within the context of the health care system.

6.1: Identify key aspects of health care systems as they apply to specialty care, including the referral process, and differentiate between consultation and referral.

6.2: Demonstrate sensitivity to the costs of clinical care in this subspecialty setting, and take steps to minimize costs without compromising quality

6.3: Recognize and advocate for families who need assistance to deal with systems complexities, such as the referral process, lack of insurance, multiple medication refills, multiple appointments with long transport times, or inconvenient hours of service.

6.4: Recognize one's limits and those of the system; take steps to avoid medical errors.

PROCEDURES:

Technical and therapeutic procedures. Describe the following procedures, including how they work and when they should be used; competently perform those commonly used by the pediatrician in practice.

- Arthrocentesis
- Immobilization techniques for common fractures and sprains
- Reduction of nursemaid elbow
- Reduction/splinting of simple dislocation

Diagnostic and screening procedures. Describe the following tests or procedures, including how they work and when they should be used; competently perform those commonly used by the pediatrician in practice.

- Radiologic interpretation: cervical spine X-ray, extremity X-ray, skeletal X-ray (incl. abuse)
- Scoliosis, scoliometer

Source. Kittredge, D., Baldwin, C. D., Bar-on, M. E., Beach, P. S., Trimm, R. F. (Eds.). (2004). APA Educational Guidelines for Pediatric Residency. Ambulatory Pediatric Association Website. Available online: www.ambpeds.org/egweb. [Accessed 07/22/2009]. Project to develop this website was funded by the Josiah Macy, Jr. Foundation 2002-2005.

SCHEDULE:

Residents will attend weekly assigned continuity clinic. Residents are required to attend all Grand Rounds, weekly didactic lectures, resident meetings, and participate in the regularly scheduled calls. Residents are scheduled to take one-week vacation during this rotation.

	MON	TUES	WED	THUR	FRI
0700— 0800	Ortho Conference HEH		Ortho HEH		Ortho HEH Cc clinic
0730— 0900				Grand rounds/Journa l club	
AM	Cc clinic Schmitt	Cc clinic Martin	Cc clinic Schmitt	Cc clinic Martin	Schmitt or Martin
PM	Didactic lectures	Clinic	Clinic	Clinic	Lawrencevill e clinic Schmitt

DIDACTIC SESSIONS:

Residents will be exposed to a number of didactic lectures during the orthopedic elective including but not limited to:

1. Pediatric Orthopedic Exam Procedures
2. Gait Disturbances
3. Developmental Dysplasia of the Hip
4. Septic Arthritis
5. Osteomyelitis
6. Transient Monoarticular Synovitis
7. Legg-Claves Perthes Disease
8. Slipped Capital Epiphysis
9. Angular Variations
10. Torsional Variations
11. Pathologic Genu Varum
12. Leg Length Discrepancies
13. Discoid Lateral Meniscus
14. Popliteal Cyst
15. Osteochondritis Dissecans
16. Osgood-Schlatter Disease
17. Patellofemoral Disorders
18. Metatarsus Adductus
19. Calcaneovalgus Feet
20. Talipes Equinovarus
21. Hypermobility Pes Planus
22. Peroneal Spastic Flatfoot
23. Cavus Feet
24. Osteochondroses
25. Adolescent Bunions
26. Toe Deformities
27. Puncture Wounds
28. Scoliosis
29. Kyphosis
30. Postural Roundback
31. Spondylolysis and Spondylolisthesis
32. Torticollis
33. Back pain in children
34. Sprengel Deformity
35. Overuse Syndromes
36. Nursemaid's Elbow
37. Pediatric Fracture Patterns

EVALUATIONS:

Residents and preceptors will be evaluated on the six core competencies by electronic evaluation form.

REFERENCES:

- Nelson's Textbook of Pediatrics, Behrman. W. B. Saunders, Philadelphia 2000
- Atlas of Pediatric Diagnosis, Zitelli. Mosby-Wolfe, St. Louis 1997
- Selected Articles