

**PEDIATRIC ORTHOPAEDIC ROTATION**  
**PGY 2/3, 4/5**  
**ROTATION SPECIFIC OBJECTIVE (RSO)**  
**DEPARTMENT OF ORTHOPAEDICS AND REHABILITATION**  
**UNIVERSITY CAMPUS**

The purpose of this RSO is to outline and clarify the objectives of the Pediatric Orthopedic Surgery rotation and to delineate the expectations and responsibilities of the Resident and the Attending Faculty. It is imperative that these educational experiences comply with the concepts of the core competencies outlined by the ACGME and mandated by the Residency Review Committee (RRC).

**1. MEDICAL KNOWLEDGE**

- a. The resident is expected to demonstrate an analytic approach to clinical problems and apply basic and clinical science to solving problems.

**2. PATIENT CARE**

- a. The resident is expected to provide care that is compassionate, appropriate, effective and family-centered. This care is to be based on the most current scientific information and to incorporate the knowledge of the other health professionals as appropriate.

**3. PRACTICE-BASED LEARNING IMPROVEMENT**

- a. The resident is expected to analyze clinical results and use methodologies for on going improvement. Appropriate use of information technology, the literature, and statistical analysis are tools to be employed in the endeavor.

**4. INTERPERSONAL COMMUNICATION**

- a. The resident is expected to function effectively as a member of the health care team and demonstrate skillful information exchange with patients, fellow residents and faculty.

**5. PROFESSIONALISM**

- a. The resident is expected to act at all times in an ethical manner. The resident will demonstrate a commitment to excellence and treat all patients with respect, compassion and the right to privacy.

**6. SYSTEM-BASED PRACTICE**

- a. The resident is expected to advocate for quality medical care. In this context, the resident must practice cost effective care without compromising quality.

These basis competencies are to be taught by staff role modeling and by staff serving as preceptors in surgery, clinics, and office settings. Other effective tools to be employed are conferences, case presentations, and day-to-day interaction with the attending staff. The resident will meet with faculty members mid rotation to assess his/her progress toward the RSO and address any deficiencies. Faculty observation and an end of rotation evaluation form will monitor progress. Milestone competencies will be assessed throughout the residency training.

# **PEDIATRIC ORTHOPAEDIC ROTATION**

## **EDUCATION OBJECTIVES**

### **PGY 2/3**

The educational objective for the PGY 2 or 3 resident is to introduce pediatric orthopaedics and to put into practice concepts taught in the Core Curriculum. The goal is for the resident to develop knowledge and skills to assess and treat pediatric orthopedic problems. The resident will learn to assess and manage the pre-operative and immediate post-operative concerns for a variety of orthopedic conditions. The resident will learn the surgical skills and have hands on experience in managing moderately complex orthopaedic surgical cases.

**The knowledge to be mastered in order to achieve these objectives include:**

- a. Focused orthopaedic history and specific diagnostic test on the orthopaedic physical exam.
- b. Interpretation of skeletal x-ray, CT MRI and bone scan. Be familiar with ossification centers and closure of the physes
- c. Closed reduction techniques for all fractures and dislocations in pediatric patients
- d. Traction techniques, including traction for hip dysplasia or fracture
- e. Trauma care including open reduction internal fixation, percutaneous fixation and external fixation of long bones.
- f. Pain management
- g. Post-operative infection
- h. Wound problems of dehiscence, hematoma and seroma
- i. Diagnosis and treatment of developmental hip dysplasia including proper fitting of the Pavlik harness
  - a. Use of ultrasound and x-ray in the evaluation of hip dysplasia
  - b. Closed reduction and Hip spica application
- j. Diagnosis and treatment of septic joint and osteomyelitis.
- k. Diagnosis and treatment of Legg-Calves-Perthes disease
- l. Diagnosis and treatment of SCFE
- m. Recognize normal and pathologic angular and rotatory deformities of the lower extremity and be familiar with treatment options for pathologic deformities.
- n. Assessment of limb length inequalities and planning of equalization procedures.
- o. Diagnosis and treatment of knee pain in children and adolescents.
- p. Diagnosis of foot deformities in the neonate. Apply corrective casts under supervision.
- q. Diagnosis of spinal deformities including scoliosis, kyphosis and spondylolisthesis. Familiar with treatment options.
- r. Diagnosis and evaluation of back pain the pediatric patient.
- s. Familiar with common orthopedic problems associated with cerebral palsy, myelomeningocele and muscular dystrophy.
  - a. Heel cord lengthening techniques
  - b. Muscle biopsy
  - c. Hip muscle releases

**The expectations to be met by PGY 2/3 resident on the Pediatric Orthopedic Rotation are:**

- a. The resident will be assigned to the pediatric orthopedic service that will include elective and trauma patients.  
The resident will make morning and afternoon rounds on these patients.

**b. The residents are assigned to a Pediatric Orthopedic attending according to the Mentorship model. Clinic and Operating Room duties are based on the assigned attending's schedule**

- c. The resident will see orthopaedic consults as assigned by the chief resident or attending.
- d. The resident will take in house night call on a rotating basis. The resident will seek advice from the senior resident or attending as deemed necessary. The resident will notify the responsible attending of all admissions.
- e. The resident will attend all University teaching conferences including Grand Rounds and Core Curriculum. Surgical cases that begin during the conference will be started by the attending physician.
- f. The resident will assist in the teaching of medical students during their rotation.
- g. Compliance with Massachusetts State Health Department Code Regulations regarding resident work hours is mandatory. The resident should arrange appropriate transfer of patient care when he/she must leave hospital.

# **PEDIATRIC ORTHOPAEDIC ROTATION**

## **EDUCATION OBJECTIVES**

### **PGY 4/5**

The educational objective for the PGY 4/5 resident is to further build upon the orthopaedic and basic science knowledge gained during the PGY 3 year and to develop the resident's surgical skills in common pediatric orthopedic conditions to a level appropriate for a general orthopedist. The goal is for the resident to become proficient in the diagnosis and surgical and non-surgical management of all of the common pediatric orthopaedic conditions seen in a general orthopaedic practice and appropriate referral of more complex problems.

#### **The knowledge to be mastered to achieve these objectives include:**

- a. Focused orthopedic history and use of specific diagnostic tests on orthopedic physical exam.
- b. Advanced interpretation of skeletal x-ray, CT, MRI and bone scan.
- c. Knowledge of the surgical approaches to long bone and joints for fracture fixation.
- d. Knowledge of the surgical approaches and possible complications
  - a. Antero-lateral approach to the hip
  - b. Medial approach to the hip
  - c. Lateral approach to the elbow
- e. Surgical techniques for limb equalization
- f. Foot procedures including tendon releases/transfers, tarsal fusions, resection of tarsal coalition
- g. Techniques for spinal fusion
- h. Osteotomies of the femur and tibia
- i. Closed reduction techniques for all long bone fractures and dislocations.
- j. Indications for open reduction and internal fixation of common long bone fractures.
- k. Knowledge of the types of orthopaedic equipment and the cost effective use of the equipment.
- l. Diagnosis and management of post-operative complications including joint infections, wound problems, DVT, Pulmonary embolism and compartment syndrome and physeal closure
- m. Management of perioperative blood loss
- n. Collaboration with consultant physicians and allied health personnel

#### **The expectations to be met by the PGY 4/5 resident are:**

- a. a. The resident will be assigned to the pediatric service that will include elective and trauma patients. **The residents are assigned to a Pediatric Orthopedic attending according to the Mentorship model. Clinic and Operating Room duties are based on the assigned attending's schedule**
- b. The resident will be responsible for running the service. He/she will assign residents to surgical cases and floor consults.
- c. The resident will participate in planning with the attending for complex cases.
- d. The PGY 4/5 resident will oversee all activities of the junior residents. He/she will serve as a consultant and resource for the junior residents.
- e. The resident will attend all University teaching conferences including Grand Rounds and Core Curriculum. Surgical cases that begin during the conference will be started by the attending.

- f. The resident will be expected to cite the relevant literature in support of treatment recommendations.
- g. The resident will take Chief call at the University as assigned by the University.
- j. Compliance with Massachusetts State Health Department Code Regulations regarding resident work hours is mandatory. The resident should arrange appropriate transfer of patient care when he/she must leave hospital. The PGY 4/5 resident will be responsible for assuring that all Memorial residents adhere to the work hour's regulations.