

University of South Florida

Pediatric Orthopaedics – PGY 4

Competency Based Goals & Objectives

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.

The expectation of the senior resident is that they meet all of the criteria of the junior resident as well as independently develop and implement a surgical and perioperative plan for the management of these patients. At the completion of training, the senior resident should be adept enough to supervise more junior level trainees in the appropriate management of pediatric patients.

1. Hone skills in identifying key history and exam needed to evaluate children presenting with conditions involving the musculoskeletal systems.
2. Understand the scope and use of diagnostic studies typically used by pediatric orthopedists.
3. Discuss and identify how the pediatric orthopedist and his/her care team involves the patient and family in decision making about complex diagnoses and highly sophisticated medical care issues.
4. Screen for developmental dysplasia for the hip in the newborn nursery and at appropriate health maintenance visits:
 - a. Use competent physical examination techniques.
 - b. Use radiographs and ultrasonography appropriately.
 - c. Educate parents about the rationale for screening and referral.
 - d. Refer when indicated.
 - e. Introduce parents to the management options that the orthopedist may offer.
5. Screen for scoliosis on routine examinations (by exam and scoliometer) and refer as needed.
6. Screen for occult dysraphism.
7. Counsel families regarding risks and prevention of orthopedic injuries sustained from play near motor vehicles, lawn mowers, snow blowers, farm equipment, bicycles, snowmobiles, motorbikes and all-terrain vehicles.
8. Advise family about optimal weight and style of backpacks in order to prevent back injury.
9. Order and interpret (with the assistance of the radiologist) common diagnostic imaging procedures when evaluating and managing patients with orthopaedic conditions: plain radiographs, body MRI, CT scan, radionuclide bone scans.
10. Acute Pediatric Orthopaedic Conditions
 - a. Residents will be proficient in evaluating the limping child. This includes the ability to discuss the etiology, pathoanatomy, treatment options, and surgical indications, as well as show proficiency in non-complex surgical techniques, of the following conditions:
 - i. Osteomyelitis
 - ii. Septic arthritis
 - iii. Transient synovitis
 - iv. Leukemia
 - v. Chronic recurrent multi-focal osteomyelitis
 - vi. Discitis
 - vii. Juvenile inflammatory arthritis
 - b. The polytraumatized child — Residents will be able to evaluate and prioritize treatment involved in polytrauma including general resuscitation as well as temporary and definitive treatment of fractures of the pelvis, spine and long bones.
 - c. Isolated trauma — Residents will be proficient in the evaluation and management of:
 - i. Elbow fractures

1. Supracondylar humerus
 2. Lateral condyle fractures
 3. Radial head fractures
 4. Nurse maid's elbow
 - ii. Isolated fractures of the long bones
 - iii. Physeal fractures: Residents will be familiar with the classification of physeal injuries as well as the treatment and potential complications of fractures involving the physis, with particular attention to:
 1. Salter-Harris classification
 2. Fractures of the distal radial physis
 3. Fractures of the distal femoral physis
 4. Fractures of the distal tibial physis
 5. Fractures involving the proximal femoral physis
 - d. Slipped capital femoral epiphysis — Residents will be proficient in the evaluation, classification and management of slipped capital femoral epiphysis. This includes acute management with an emphasis on avoidance of complications, as well as management of complications and their late sequale.
11. Non-Acute Pediatric Orthopaedics:
- a. A. Benign rotational abnormalities — Residents will be proficient in differentiating the following:
 - i. Intoeing, including the diagnosis of:
 1. Metatarsus abductus
 2. Internal tibia torsion
 3. Femoral anteversion
 - ii. Out toeing, including the diagnosis of:
 1. External tibial torsion
 2. Femoral retro version
 - b. Hip — Residents should be proficient in discussing the natural history, etiology, pathoanatomy, non-surgical and surgical treatment options, and surgical indications as well as show proficiency in non-complex surgical techniques for the following conditions:
 - i. Developmental dysplasia of the hip
 1. Idiopathic
 2. Teratologic, including neuromuscular and "syndrome related"
 - ii. Legg-Calve Perthes disease
 - iii. Idiopathic Coxa Vara
 - iv. Idiopathic chondrolysis
 - v. Potrussio acetabulum
 - c. C. Knee — Residents should be proficient in discussing the natural history, etiology, pathoanatomy, non-surgical and surgical treatment options, and surgical indications as well as show proficiency in non-complex surgical techniques for the following conditions:
 - i. Osgood-Schlatter's
 - ii. Osteochondritis dessicans
 - iii. Discoid meniscus
 - iv. Physiologic genu valgum
 - v. Physiologic genu varum
 - vi. Infantile and adolescent Blount's
 - d. Foot — Residents should be proficient in discussing the natural history, etiology, pathoanatomy, non-surgical and surgical treatment options, and surgical indications as well as show proficiency in non-complex surgical techniques for the following conditions:
 - i. Club feet
 - ii. Metatarsus adductus
 - iii. Calcaneal valgus
 - iv. Vertical talus
 - v. Flexible flat feet
 - vi. Tarsal coalition

- vii. Accessory navicular
- viii. Adolescent bunions
- e. Spine — Residents should be proficient in discussing the natural history, etiology, pathoanatomy, non-surgical and surgical treatment options, and surgical indications as well as show proficiency in non-complex surgical techniques for the following conditions:
 - i. Scoliosis
 - 1. Congenital
 - 2. Neuromuscular, including cerebral palsy, spina bifida, muscular dystrophy, and "syndromic"
 - 3. Idiopathic
 - a. Infantile
 - b. Juvenile
 - c. Adolescent
 - ii. Spondylolysis and Spondylolisthesis
- 12. Residents will be proficient in discussing the natural history, etiology, medical and orthopaedic manifestations, including non-surgical and surgical treatment, for the following conditions:
 - a. Cerebral Palsy
 - b. Spina Bifida
 - c. Muscular dystrophy
 - i. Duchenne's muscular dystrophy
 - ii. Becker's muscular dystrophy
 - iii. Congenital myotonic dystrophy
 - d. Down's syndrome
 - e. Arthrogryposis
 - f. Osteogenesis imperfecta
- 13. Pathology — Residents will be able to formulate a differential diagnosis and implement an evaluation plan for the following conditions:
 - a. Unicameral bone cyst
 - b. Aneurysmal bone cyst
 - c. Nonossifying fibroma
 - d. Fibrous dysplasia
 - e. Eosinophilic granuloma
 - f. Giant cell tumor
 - g. Osteomyelitis
 - h. Chondroblastoma
 - i. Enchondromatosis
 - j. Osteochondromatosis
 - k. Ewing's sarcoma
 - l. Osteogenic sarcoma

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 needed by a pediatrician; demonstrate the ability to acquire, critically interpret and apply this knowledge in patient care.

- 1. Demonstrate knowledge of normal variations in foot, knee and leg development.
- 2. Know normal variations in gait and posture.
- 3. Demonstrate if the following presenting signs and symptoms are caused by an orthopaedic condition, and if so, treat appropriately:
 - a. Limp
 - b. Musculoskeletal pain

- c. Refusal to walk or gain disturbance
 - d. Refusal to use a limb
 - e. Swollen or painful joint
 - f. Bowed legs or knock-knees
 - g. In-toeing or out-toeing
4. Identify the role and general scope of practice of pediatric orthopedists; recognize situations where children benefit from the skills of specialists training in care of children; and work effectively with these professionals in the care of children with orthopedic conditions.
 5. Develop an efficient approach to finding information resources related to the musculoskeletal system (e.g. information on the web, in the literature, text books, or PDA's) to obtain rapid information that is relevant to a presenting patient problem.
 6. At the beginning and end of a rotation or clinical experience, clarify your learning needs related to this subspecialty.

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. Write an effective and timely consultation note that summarizes the findings and recommendations of the pediatric orthopedist and clarifies the continued role and responsibility of the consultant.
3. Describe the role of all members of a multi-disciplinary team and show respect for the contributions of each.
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. Identify standardized guidelines for diagnosis and treatment of complex problems of the musculoskeletal system and learn the rationale for adaptations that optimize treatment.
2. Identify personal learning needs, systematically organize relevant information resources for future references, and plan for continuing data acquisition if appropriate.
3. Seek and incorporate feedback and self-assessment into a plan for professional growth and practice improvement (e.g. use evaluations provided by patients, peers, superiors and subordinates to improve patient care).

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

1. Be honest and use integrity in your professional duties.
2. 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.
3. Appreciate the psychosocial impact of diseases commonly seen by the subspecialist (e.g. on the child, family, parents' work, school).
4. Respect your patients'/parents' privacy, autonomy and need to maintain a positive self-concept, irrespective of age, gender or health belief system, and regardless of acuity of diseases.

5. Be sensitive to the ethical and legal dilemmas faced by providers working with patients with orthopedic problems. Strive to understand how the orthopedist and care team deals with these dilemmas and use such experiences to enhance your own understanding.

Competency 6 – System-Based Practice: Understand how to practice quality health care and advocate for patients within the context of the healthcare system.

1. Describe school-based scoliosis screening programs and the benefits and inherent limitations of such strategies.
2. Clarify how documentation and billing charges differ for consultations vs. referrals vs. on-going management of children treated on the pediatric orthopedic service.
3. Explore the difference between fee-for-service referrals and managed care referrals and the office systems needed to support both.
4. Describe patient and system factors that contribute to escalating costs of care in the subspecialty setting, and consider the impact of these costs on families and on the health care system.
5. Recognize and advocate for families who need assistance to deal with systems complexities, such as lack of insurance, multiple medication refills, multiple appointments with long transport times or inconvenient hours of service.
6. Support community prevention efforts related to pediatric orthopaedics by working with a local professional organization or organizing a project to do with colleagues.
7. Consider potential sources of medical error in this subspecialty setting (e.g. drug interactions, complex care plans, provider fatigue).