



Orthopedics Curriculum

NGMC- Family Medicine Residency Program- Gainesville, Ga

PGY-2

Description of Rotation:

This is a four-week block Orthopedics experience with the orthopedic surgeon attendings. The rotation includes four one-week blocks in podiatry, total joint, general orthopedics and upper extremity.

Goals:

PATIENT CARE OBJECTIVES AND COMPETENCIES

During this rotation the resident will:

- Recognize orthopedic problems and their potential complications. (PC-1; L2)
- Identify the anatomy of the musculoskeletal system and explain the physiology of tissue and bone healing mechanisms (PC-1)
- Take a history which covers all areas pertinent to the presenting orthopedic problem and conduct a physical examination which leads to a correct diagnosis of the orthopedic problem. (PC-1; L1)
- Describe the treatment and management of common stress fractures (PC-1; L3)
- Diagnose and treat arteriopathies, such as gout and arthritis; recognize the differences between rheumatoid arthritis and osteoarthritis (PC-2; L3)
- Identify cellulitis and closed-space infections and plan treatment (PC-1; L3)
- Describe the various modalities of physical therapy and the indications for their utilization, including cervical, lumbosacral and shoulder treatments (PC-3; L3)
- Use correct taping and strapping techniques where indicated (PC-3; L3)

MEDICAL KNOWLEDGE OBJECTIVES AND COMPETENCIES

The resident should demonstrate the ability to apply knowledge of (MK-2; L3):

Fractures, Dislocations, and Subluxations: Students should be able to define, describe and discuss:

- Discuss open and closed fractures, dislocations, and subluxations.
- Discuss the clinical and radiological features of fractures.
- Discuss management priorities in treating fractures, dislocations and subluxations.

Fractures

Type - Open/Closed, Stress fracture, Pathologic fracture

Location

- Proximal Distal Epiphysis Diaphysis
- Pattern
- Transverse, Spiral or Oblique, Comminuted, Impacted, Compression, Greenstick
- Displacement



- Apposition, Angulation, Rotation, Length
 - Growth Plate Fractures
 - Salter-Harris type I-V
 - Dislocation and Subluxation
 - Clinical and radiologic features of dislocations and subluxations
 - Management
 - Rehabilitation of Function
 - Complications
 - Local- infection, delayed union, nonunion, malunion, avascular necrosis.
 - Systemic-shock, sepsis, tetanus (open injuries), gas gangrene, venous thrombosis, pulmonary embolism, fat embolism
 - Evaluation of Patients with Musculoskeletal Trauma
 - Symptoms
 - Vascular integrity
 - Radiology
 - Fracture Management- Discuss indications and complications
 - Reduction
 - Maintenance of Reduction
 - Cast
 - Internal Fixation
 - External Fixation
 - Traction
 - Compartment Syndrome
 - “4 Ps”
 - Common Fractures, Dislocations, and Ligament Injuries
 - Carpal Scaphoid Fracture
 - Colles Fracture
 - Olecranon Fracture
 - Supracondylar Humerus Fracture
 - Shoulder Dislocation
 - Hip Fracture
 - Femoral Shaft Fracture
 - Hip Dislocation
 - Tibia/Fibular Shaft Fracture
 - Ankle Injuries
 - Spinal Fractures
 - Pelvic Fractures
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- Discuss common fractures and joint injuries; identify specific problems with their diagnosis and management.
 - Traumatic Amputations and Replantation
 - Discuss the indications and contraindications for replantation of an amputated appendage.
 - Discuss the proper method of transporting the amputated part.



SPORTS MEDICINE - Students should be able to define, describe and discuss:

More Common Injuries such as:

- Stress Fractures
- Lateral Epicondylitis (Tennis Elbow)
- Rotator Cuff Tendinitis (Shoulder Bursitis)
- Plantar Fasciitis (Heel Spur)
- Patellar Overload Syndrome (Chondromalacia Patella)
- Exercise Compartment Syndrome (Shin Splints)
- Sprains
- Ankle Sprains
- Knee Ligament Sprains
- Meniscal Injury
- Acromioclavicular (Shoulder) Separation
- Gamekeeper's Thumb
- Mallet (Baseball) Finger
- Boxer's Fracture
- Achilles Tendon Rupture
- Turf Toe
- Myositis Ossificans
- Describe the pathophysiology of attritional sports-related injuries as they affect bone, muscle, and tendon.
- Define the term sprain and its three gradations. Discuss the methods of diagnosing the common sprains at the knee and ankle.

MUSCULOSKELETAL INFECTION - Students should be able to define, describe and discuss:

- Osteomyelitis
- Septic Arthritis
- Infection Hand Flexor Tenosynovitis
- Discuss the symptoms and signs of infectious, processes of bone and joints (osteomyelitis and septic arthritis)
- List and discuss the diagnostic workup used in making a definitive diagnosis of bone and joint infection.

ARTHRITIS - Students should be able to define, describe and discuss: 1. Osteoarthritis 2. Rheumatoid Arthritis 3. Discuss the symptoms and signs of inflammatory (noninfectious) joint disease. 4. List and discuss the laboratory and radiological techniques used in making the diagnosis of rheumatoid arthritis and osteoarthritis. 5. List and discuss the nonsurgical and surgical treatment options of degenerative joint disease of the hip, knee, and spine. Updated May 2016

METABOLIC ENDOCRINE DISORDERS - Students should be able to define, describe and discuss:

- Osteoporosis
- Osteomalacia
- Hyperparathyroidism
- Paget's Disease
- Define osteoporosis and Osteomalacia and list common etiologies of each.
- Discuss the pathophysiology, symptoms, and laboratory and radiographic findings of hyperparathyroidism and Paget's disease.

BONE NECROSIS - Students should be able to define, describe and discuss:



- Discuss the pathophysiology of osteonecrosis.

SPINE - Students should be able to define, describe, and discuss:

- Lumbar Spine
 - Etiology of Low Back Pain
 - Lumbar Strain
 - Spondylolysis
 - Disc Herniation
- Cervical Spine
 - Spinal Stenosis
 - Cervical Spine
 - Cervical Disc Protrusion
 - Cervical Spondylosis
 - Rheumatoid Arthritis of the Cervical Spine
- Rheumatoid Arthritis of the Cervical Spine
- List and discuss common causes of low back pain and cervical pain.
- Discuss the symptoms and signs and outline the diagnostic workup for a patient with lumbar or cervical herniation.

BONE TUMOR - Students should be able to define, describe and discuss:

- Diagnostic workup for a patient with a suspected primary and secondary malignant neoplasm of bone

GAIT- Students should be able to define, describe and discuss:

- Basic components of gait and discuss common gait abnormalities in relation to mechanical or neurological disorders

SYSTEM BASED LEARNING OBJECTIVES AND COMPETENCIES

- Residents are expected to demonstrate an understanding of health care delivery systems, provide effective and qualitative patient care within the system, and practice cost-effective medicine (SBP-1; L2)
- Either manage or refer the patient when appropriate. (SBP-4; L3)

PRACTICE BASED LEARNING OBJECTIVES AND COMPETENCIES

Residents must demonstrate the ability to investigate and evaluate the care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning. Students are expected to develop skills and habits to be able to:

- Identify strengths, deficiencies and limits in one's knowledge and expertise (PBL2; L1);
- Set learning and improvement goals (PBL2; L3)
- Use information technology to optimize learning (PBLI-2; L4)

All students will be expected to be "active learners," asking questions routinely on rounds and demonstrating incorporation of new knowledge into their patient care plans. They will be expected to demonstrate regular use of the medical literature in determining evidence basis for recommended therapies in a variety of orthopedic clinical scenarios. All students will be expected to answer clinical questions through use of available electronic resources

PROFESSIONALISM OBJECTIVES AND COMPETENCIES



Residents should demonstrate:

- Appropriate professional behavior in all clinical and academic settings, aspects of which include: dress, punctuality, honesty, courtesy, responsibility and timeliness of visits and notes. (PROF-1; L1)
- Demonstrates behavior consistent with cultural acceptance to staff and patients. (PROF-3; L2)

INTERPERSONAL AND COMMUNICATION SKILLS OBJECTIVES AND COMPETENCIES

- Communicate effectively with patient and family members. (C-2; L2)
- Demonstrate the ability to communicate effectively with the healthcare team, including consultants in an organized manner. (C-3; L2)
- Demonstrate listening and ability to pick-up verbal and non-verbal clues from patients, families and team members. (C-2; L3)

Evaluations:

The evaluation of the student is based upon, but not limited to the following:

- Knowledge of the orthopedic and sports medicine disorders, pathology, and management for assigned patients.
- Knowledge of the diagnosis and treatment of common orthopedic and sports medicine disorders.
- Knowledge of procedural skills related to assigned patients.
- Presentation of assigned patients on daily rounds.
- Completion of paperwork (history and physicals, progress notes, orders, etc..) on assigned patients.
- Performance of an independent presentation as assigned by the resident or attending physician.
- Professionalism and rapport with patients, residents, attendings, and ancillary staff.
- Attendance at lectures, conferences, and meetings.
- Submission of completed case logs and procedure logs