Educational Goals & Objectives

Musculoskeletal complaints are extremely common in the practice of primary care. They may reflect overuse or trauma, or be a manifestation of a broad range of musculoskeletal disorders or other systemic diseases. The Office Orthopedics rotation is a longitudinal rotation over 3 years designed to expose the resident to common musculoskeletal concerns in primary care, particularly in the geriatric population. The rotation will provide the resident with exposure to patients with musculoskeletal disorders of autoimmune, degenerative, or traumatic etiology. The goal of the rotation is to train the resident to become competent in the diagnosis and management of common musculoskeletal conditions. Focus will be on learning normal and abnormal anatomy, the natural history of musculoskeletal disease (untreated, treated medically, and treated surgically), basic office procedural skills, and the prevention, treatment and rehabilitation of musculoskeletal disease.

Faculty will facilitate learning in the 6 core competencies as follows:

Patient Care and Procedural Skills

I. All residents must be able to provide compassionate, culturally-sensitive, and appropriate care for patients with musculoskeletal disorders.
   - R2s should seek directed and appropriate medical consultation when necessary to further patient care.
   - R3s should facilitate communication seamless transitions of care between the patient’s primary care physician and the consultant.

II. Residents will demonstrate the ability to take a focused history and perform a systematic physical exam, with emphasis on the musculoskeletal and neurologic exams. R1s should be able to elicit the timing, intensity, and impact on functional status of a patient’s symptoms. R1s should be able to obtain the following historical details:
   - Joint, muscular, and neuropathic symptoms
   - Systemic symptoms, such as fatigue, fever, poor sleep, sweats, or weight loss
   - Occupational history, and history of repetitive use
   - History of antecedent events, such as trauma or injury
   - Family or personal history of autoimmune disease

R2s should be able to differentiate inflammatory from mechanical joint pain and recognize the contribution of comorbidities and medication compliance to a patient’s symptoms.

R3s should be able to independently obtain the above details for patients with a complex medical history.

III. Residents should be able to characterize the following physical findings:
   - R1s
     - Abnormal posture or gait
     - Baker’s cyst
Dislocation
Foot drop
Fracture
Joint abnormalities, including Bouchard and Heberden’s nodes, crepitus, instability, effusion, range of motion, subluxation, and ulnar deviation
Kyphosis
Muscle atrophy
Nail pitting
Tendon abnormalities
Tophi

- R2s should also be familiar with muscle action and innervation as reflected on physical exam, as well as physical maneuvers to evaluate for
  - Hip muscle flexibility and gluteus medius weakness
  - Ligamentous and meniscal injuries
  - Limitations in joint range of motion and flexibility
  - Patellofemoral problems
  - Leg length discrepancy, sciatica, SI joint pathology, and spondylosis
  - AC joint pathology, biceps tendinitis, labral tear, shoulder joint instability, and subacromial impingement

- R3s should be able to independently perform a complete exam and understand the sensitivity and specificity of physical findings

IV. Residents will understand the indications, contraindications, complications, limitations, and interpretation of following procedures, and become competent in their safe and effective use:

- R1s: Knee and shoulder injections, common injections for bursitis and tendinopathy, appropriate application of splints
- R2s: other joint arthrocentesis and injection (optional)
- R3s: indications and consent for operative interventions in the setting of failed medical therapy

Medical Knowledge

I. R1s will develop an approach to the evaluation and treatment of the following presenting conditions:

- Back or neck pain, acute and chronic
- Joint erythema, pain, swelling, or stiffness
- Muscle weakness, pain or swelling
- Musculoskeletal trauma, fractures and dislocations
- Overuse syndromes

R1s will explore the basic pathophysiology, clinical presentation, and treatment of more common conditions, such as back pain, Baker’s cyst, bursitis, carpal tunnel
syndrome, ganglion cyst, hallux valgus, labral and meniscal tears, plantar fasciitis, Morton’s neuroma, osteoarthritis, osteoporosis and vertebral compression fracture, rotator cuff tear, scoliosis, tendonitis, and trigger finger.

R2s will also develop a more complete understanding of the pathophysiology, clinical presentation, and therapy for the following conditions:

- Adhesive capsulitis
- Avascular necrosis
- Greater trochanteric pain syndrome
- Myofascial strain
- Nerve injuries
- Radiculopathy
- Sacroiliac dysfunction
- Spinal stenosis
- Spondyloarthropathies
- Tendinosis, and tendon rupture

R3s will also:

- Recognize musculoskeletal manifestations of systemic diseases, such as diabetes (Charcot joint), gout, hemochromatosis, psoriatic arthritis, and rheumatoid arthritis
- Be familiar with the prevention of and attention to common injuries in geriatric patients and “weekend warriors.”

II. Residents will understand the following principles of management and therapy for musculoskeletal disease:

- Natural history of acute and chronic musculoskeletal problems and the expected course with and without therapy
- Use of braces, casts, splints, orthotics, and elasticized bandage and taping
- Use of prosthetics, assist devices, and durable medical equipment for temporary or chronic disability
- Risks and benefits of medical/conservative therapies as well as alternative and complementary therapies

III. All residents will be able to understand the indications for ordering and the interpretation of the following laboratory values and procedures:

- Analysis of synovial fluids
- Imaging with plain films, CT, and MRI
- Sedimentation rate and c-reactive protein
- Uric acid

R3s will independently, appropriately order studies and be able to interpret results within the context of patient comorbidities, pretest probability of disease, and patient values.

IV. Residents should understand and be able to counsel patients on
• Fall risk
• activity and exercise in the setting of musculoskeletal limitations
• prevention of musculoskeletal injury and re-injury

Residents should also be able to appropriately use physical and occupational therapy and refer for rehabilitation.

Practice-Based Learning and Improvement
I. All residents should be able to access current national guidelines (e.g. American Academy of Orthopaedic Surgeons – Research & Quality, Clinical Practice Guidelines http://www.aaos.org/) to apply evidence-based strategies to patient care.
II. R2s should develop skills in evaluating new studies in published literature, through Journal Club and independent study.
III. All residents should participate in case-based decision-making and treatment planning, involving the orthopaedic surgeon, primary care provider, rheumatologist if appropriate; and physical and occupational therapists, and R3s should take a leadership role.
IV. All residents should respond with positive changes to feedback from members of the health care team.
V. Residents should understand when to refer to orthopaedic surgery clinic from their own practice and what to order prior to referral.

Interpersonal and Communication Skills
I. R1s must demonstrate organized and articulate electronic and verbal communication skills that build rapport with patients and families, convey information to other health care professionals, and provide timely documentation in the chart.
II. R2s must also develop interpersonal skills that facilitate collaboration with patients, their families, and other health professionals.
III. R3s should demonstrate leadership skills to build consensus and coordinate a multidisciplinary approach to patient care.

Professionalism
I. All residents must demonstrate a commitment to carrying out professional responsibilities.
II. R1s should be able to educate patients in a manner respectful of gender, cultural, religious, economic, and educational differences on choices regarding their care.
III. R2s should be able to use time efficiently in the clinic to see patients and chart information.
IV. R3s should be able to counsel patients and families both on diagnostic and treatment decisions.
Systems-Based Practice

I. R1s must have a basic understanding that their diagnostic and treatment decisions involve cost and risk and affect quality of care.

II. R2s must also demonstrate an awareness of alternative therapies and their costs, risks, and benefits.

III. R3s must be able to identify current quality issues in orthopedic surgery where the primary care physician may be involved in patient counseling and/or subsequent care, such as pursuit of surgical treatment, use of vertebroplasty, and use of supplements for osteoarthritis.

Teaching Methods

I. Supervised patient care in clinic.
   - Residents will initially be directly observed with patients to facilitate the acquisition of excellent history taking and physical exam skills.
   - As residents become more proficient, they will interact independently with patients and present cases to faculty.
     - Initial emphasis will be on diagnosis and basic management.
     - When residents have mastered these skills, focus will be on medical decision-making and office procedural skills, and residents will work with supervising physicians to finalize a care plan.

II. Conferences
   - Daily noon conference

III. Independent study
   - Journal and Textbook reading TBD by attending
   - Online educational resources
     - American Academy of Orthopedic Surgeons
       - http://www.aaos.org/
     - Agency for Healthcare Research and Quality www.guideline.gov
     - Lieberman’s Learning Lab – Musculoskeletal System
       - http://eradiology.bidmc.harvard.edu/
     - Up to Date
     - Clinical Key

Evaluation

I. Verbal mid-rotation individual feedback

II. 360 Evaluation

III. Attending written evaluation of resident at the end of the month based on rotation observations and chart review.

Rotation Structure
I. Residents will be scheduled in the resident clinic for a full day each week when on elective or on radiology.
   • Residents will be involved in discussion of patient presentation, differential diagnosis, decision for or against surgical intervention, and patient follow up.
   • When possible, residents should follow the same patients in clinic during the rotation.
   • Case-based learning is most effective. Nightly reading/study should be based on patients seen during the day.
   • Residents may be asked to do focused literature searches or presentations
   • When doing outpatient consults, the resident should understand the question asked and provide a concise answer.

II. Hours worked must be consistent with ACGME requirements and are subject to approval by the Program Director.

III. Residents have noon conferences and should be excused in a timely fashion to attend.