Primary Care Sports Medicine Rotation Syllabus

University of North Texas Health Science Center
Texas College of Osteopathic Medicine
Department of Orthopaedic Surgery
Division of Sports Medicine

Elective Clinical Clerkship:
Course MEDE 9420
I. INTRODUCTION

The elective clinical rotation in primary care sports medicine is a four week course of study in the medical school curriculum under the direct supervision of a physician certified by either the AOA or ACGME in the specialty of Primary Care Sports Medicine. Students will be introduced to the concepts of the sports medicine approach and the methods by which patients are expeditiously diagnosed, managed, rehabilitated, and returned to play/work with little or no risk of reinjury.

Note: This syllabus shall serve as the instructional guide to faculty at all participating teaching affiliates of the university and should be utilized to accomplish the educational objectives that follow.

II. PREREQUISITES

In order for the student as well as the attending physician to maximize the rotation experience, the following prerequisites are recommended of the student before starting this rotation:

A. The student must possess competence in their ability to independently perform:

1. A complete history and physical exam
2. Musculoskeletal exam
3. Orthopedic exam
4. Neurological exam
5. Osteopathic structural exam

B. Have a genuine interest in sports medicine

III. EDUCATIONAL OBJECTIVES

A. Fundamental skills

The student shall be expected to acquire and demonstrate the following fundamental skills during the course of the rotation:

1. Obtain a complete, problem oriented history emphasizing the exact mechanism of injury and documenting this in the patient’s medical record.

2. Perform a thorough physical exam of the musculoskeletal system including the complete evaluation of the joints using accepted orthopedic, neurologic, and osteopathic methods and techniques.
3. Perform the initial evaluation, proper medical treatment, and follow-up of athletic and/or job related injuries, including first aid, immobilization techniques, and definitive care.

4. Be able to discuss the principles, indications and contraindications of Physical Therapy modalities and treatment methods as well as the role of the Physical Therapist/ Occupational Therapist/ Athletic Trainer in the team approach to the treatment of the injured musculoskeletal patient.

5. Learn how to write and implement an exercise prescription (ExRx) and physical therapy prescription.

6. Demonstrate strength and flexibility assessment using manual muscle testing, perform appropriate OMM techniques, as well as performance of biomechanical evaluations.

7. Application and proper fitting of braces, supports, padding and other protective gear (including shoes and orthotics) as well as discussion of indications.

8. Demonstrate and be able to teach proper crutch and cane walking techniques.

9. Understand the concepts of Progressive Rehabilitation of the ill and injured athlete (Logical and safe progression of activity toward a functional level).

10. Discussion of the pros & cons of the various diagnostic tests commonly used in sports medicine and the decision-making process prior to ordering/performing:

1. X-ray
2. MSK-US (both diagnostic and therapeutic)
3. CT Scan (with and without contrast)
4. MRI (with and without contrast)
5. Tc99 Bone scan, SPECT scan
6. EMG, nerve conduction studies
7. Myelography
8. Isokinetic testing e.g.: Cybex, Biodex, etc.

11. Discussion of the indications and contraindications of corticosteroid injections, prolotherapy, and platelet rich plasma therapy, as well as exposure to the procedures and specific techniques of:
   1. Intra-articular injections
   2. Tenosynovitis injections
   3. Trigger point injections

12. Understand and discuss the concepts of injury prevention (most sports injuries are preventable if proper steps are taken):
   1. Strength/flexibility issues
   2. Equipment selection and fit
3. Coaching techniques
4. Environment/playing conditions

13. Medical management of the athlete including sports-specific injuries:
   1. Fractures, dislocations, sprains, strains
   2. Tenosynovitis, bursitis, capsulitis, fasciitis, and arthritis
   3. Acute trauma vs. overuse injuries-mechanisms of injury
   4. Concussion evaluation & management (including utilizing ImPACT & SCAT-3)

14. Perform pre-participation evaluations (PPE) of athletes and an understanding of
   the importance of these exams in preventing sudden death and/or serious injury.

15. Determine guidelines for return to play/work

16. OMM Principles in Sports Medicine:
   1. Diagnosis of common conditions amenable to OMT
   2. Indications and contraindications for OMT
   3. Demonstrate basic OMT techniques

17. Discussion of surgical techniques common in sports medicine as well as pre- and
   post-operative rehabilitation issues

B. General Competencies

1. Discussion of ethical, social, economical and medical-legal issues in sports
   medicine as well as a discussion of the decision-making process on when to seek
   consultation.

2. Discussion of medication selection in sport injuries and drug use/abuse in sports.

3. Discussion of the benefits of exercise.

4. Possible observation of athletic events with the elements of a comprehensive
   sports medicine program in place as well as a discussion of how to establish a
   sports medicine system (network).

5. Assessment and care of the acutely injured athlete including transportation issues.

6. Discuss issues involving special athlete groups:
   a. Prepubescent
      1) Epiphyseal /apophyseal injuries
      2) Exercise limitations
   b. Female
      1) Amenorrhea and its effect on bone health
      2) Factors that predispose to injury
3) Thermoregulation
4) Psychologic e.g. bulimia, anorexia

c. Geriatric
d. Impaired (diabetic, epileptic, hypertensive, amputees, etc.)
e. Recreational
f. Professional

C. Physical Therapy Objectives

1. Students will observe how the physical therapists do their initial evaluation.
2. Students will be able to describe the mechanism of action, methods, indications, contraindications and complications of treatment modalities such as:
   • Cryotherapy, heat therapy, laser therapy, phonophoresis, iontophoresis, TENS unit, electrical stimulation, aquatic therapy
3. Students will be exposed to the various taping and bracing techniques performed in physical therapy.
   • The student will attain/achieve the above goals by meeting the following objectives:
     i. Explain the indications and efficacy of knee braces used to prevent injury.
     ii. Compare canvas braces, stirrup braces, and taping when used to prevent ankle injuries.
     iii. Describe the indications for prophylactic ankle bracing/taping.
     iv. Describe the indications for the following tape techniques:
        o finger buddy taping, thumb check rein, elbow hyperextension taping, medial knee taping, patellofemoral taping, turf toe taping, thumb figure of eight, wrist taping, medial elbow taping, ankle taping, plantar fascia taping
     v. Explain the efficacy and indications for the use of:
        o prophylactic knee braces, derotational knee braces, hinged knee braces, neoprene knee braces, patellar tracking knee braces, Kinney-Howard shoulder harnesses, elastic ankle braces, canvas ankle braces, stirrup ankle braces, back braces
4. Students will be able to explain the indications and appropriately prescribe orthoses and braces in the rehabilitation of injuries.
   • The student will attain/achieve the above goals by meeting the following objectives:
     i. Describe the indications for:
        o Viscoelastic shoe inserts, spring-steel shoe inserts, heel cups, custom molded orthoses, counter force elbow braces, longitudinal arch supports, metatarsal pads, cork and leather arch supports
Differentiate flexible, semi-rigid, and rigid foot orthoses.

Demonstrate the methods for determining forefoot and hindfoot deformities and relate them to a custom foot orthoses prescription.

5. Students will be able to explain the principles of core strengthening and understand the therapeutic procedures to achieve this.

6. Students will learn the appropriate manner in which to prescribe physical therapy.

7. The student will understand and integrate Osteopathic Principles and Philosophy into all clinical and patient care activities.

IV. STUDENT RESPONSIBILITIES

General Guidelines
At the orientation session on the first day of the rotation, the student will be given a schedule of clerkship activities. The student is required to wear his/her health science center identification badge at all time on service. Students are expected to display the appearance and behavior appropriate to the health care setting.

Dress code should include the student wearing a clean white clinical coat. Inappropriate attire includes: unclean or unpressed clothing, blue jeans, sweats, shorts, tee shirts, open toe shoes, or other casual attire.

Students are expected to be punctual and prepared for scheduled events (office hours, lectures, etc.). One hundred percent attendance is expected with absences allowed only at the discretion of the supervising physician, Chairman of the Department of Orthopaedic Surgery, and Clerkship Director. Coverage of local games/events is mandatory unless excused by the above mentioned physicians. Absence from more than 30% of scheduled activities will result in an automatic failing grade for the clerkship. Policies regarding excessive absence are specified in the Uniform Policies and Procedures section of this manual.

A log of patient encounters in the clinics and procedures participated in shall be maintained. The original log must be turned in to the department no more than thirty days after the end of the rotation.

Reading Assignments/Facilitated Learning
A reading/facilitated learning schedule will be provided to all students on the Sports Medicine rotation at the beginning of the rotation. Please refer to the schedule for specific assignments, requirements, and topics.

Case Report
One case report will be required for all 3rd year students during the rotation. Choose the most interesting or unusual case encountered on the rotation, or an interesting approach to a common condition.

Three articles of evidence-based medicine on the management of the case reported will be required. References must be in correct scientific format. Online references are acceptable if
properly formatted (e.g. Gourlay T, Olivencia-Yurvati AH, Gunaydin S. STS Blood Conservation Guidelines: The Role of Leukocyte Filtration. Retrieved August 8, 2008, from http://ats.ctsnetjournals.org/cgi/content/extract/85/3/1138?ck=nck). Case reports must be written in concise, organized manner, no typos, errors of grammar, etc. The rubric for grading for the papers will be as follows: Content 50%; Writing 35%; and References/Reference Format 15%.

The body of the case report should be 4-6 double-spaced pages. This does not include the cover sheet or the reference page. This should be submitted no later than two weeks after the rotation ends.

**Patient Education Handout**
As part of the NBOME core competency of Osteopathic Patient Care: Patient Education the 4th year student and rotating residents will complete a 1-2 page patient education handout. The topic and format for this handout will be discussed with the student’s rotating preceptor. This should be submitted no later than the last week of the rotation.

V. **EVALUATION AND GRADING**

For all students on Sports Medicine rotation, the following components will contribute to the student’s final grade for the clerkship:

- Clinical Competence and Professional Conduct 80%
- Case Report 20% (3rd year)
- Patient Education Handout 20% (4th year, resident)

**Mid-Rotation Evaluation**
At the mid-point of the rotation the student will meet with the attending physician for both self-evaluation and preceptor evaluation. The student should have completed their “Rotator Self-Eval Form” prior to this meeting. It will be the student’s responsibility to work on correcting their weaknesses/deficiencies while further building upon their strengths in the latter part of the rotation.

**Failure and Remediation**
Students shall be required to meet the minimum passing standards established by the university and set forth in the Uniform Policies and Procedures section of this manual. Remediation for failure will be arranged through the office of the Vice President for Student Affairs.

**Student Evaluation of Sites/Preceptors**
Each student is required to evaluate the clerkship site and preceptor before receiving a final grade. Evaluation forms are available from the department office. We appreciate students’ specific and constructive assessment and use this input in reviewing clerkship design and implementation.

All requirements must be met before a final grade will be submitted.
VI. DISCLAIMER

The provisions contained herein do not constitute a contract between the student and the College. These provisions may be changed at any time for any reason at the discretion of the Department of Orthopaedic Surgery. When necessary, in the view of the College and the Department, appropriate notice of such change will be given to the student.

This clinical clerkship is operated in accordance with the policies and procedures of the academic programs of the Texas College of Osteopathic Medicine as presented in your class’ Clerkship Manual, Student Handbook, and College Catalogue.

VII. LEARNING RESOURCES

Printed Texts:
5 Minute Sports Medicine Consult, Bracker M, 2nd Ed. Lippincott, Williams, & Wilkins: 2011
Fracture Management for Primary Care, Eiff MP, 3rd Ed. Saunders: 2012
Injection Techniques In Orthopedic and Sports Medicine, Saunders, 3rd Ed. Elsevier: 2006
Osteopathic Clinical Joint Examination, Stockard A., AOASM: 2010
Principles of Manual Sports Medicine, Karageanes, SJ, Lippincott, Williams & Wilkins: 2005

Online Texts/Journals:
American College of Sports Medicine Team Physician Consensus Statements
American Family Physician
British Journal of Sports Medicine
Clinical Journal of Sports Medicine
Journal of Bone & Joint Surgery
Journal of the American Osteopathic Association
The Physician & Sports Medicine
Wheeless’ Textbook of Orthopaedics

Other Resources:
Anatomy TV: Primal Pictures
Sports Medicine Resources and Links

Professional Organizations:
American College of Sports Medicine
American Medical Society for Sports Medicine
American Osteopathic Academy of Sports Medicine

Exercise Prescription:
Exercise is Medicine
Prescribe Exercise