

THE MUSCULOSKELETAL CLERKSHIP: A PART OF THE COMPREHENSIVE SURGICAL CLERKSHIP

OBJECTIVE: To convey to the student appropriate knowledge, skills and attitudes for the recognition, diagnosis, investigation, and treatment of conditions affecting the musculoskeletal system

PHILOSOPHY: Most medical students at Washington University School of Medicine are not entering specialties that devote themselves to the treatment of diseases of the musculoskeletal system. It is noteworthy, though, that as many as one third of complaints directed towards primary caregivers and general internists are related to the musculoskeletal system: the actual volume of these complaints presented to primary care physicians, general internists and pediatricians is second only to complaints related to the cardiovascular system (and for pediatricians, presentations related to infectious diseases). Cardiovascular physiology, pathology and medicine are covered widely in the Washington University undergraduate medical curriculum, and pediatric infectious diseases (including microbiology, therapeutics, pathology and general pediatrics) are covered only slightly less.

Musculoskeletal signs and symptoms are encountered commonly in emergency medicine, trauma surgery, internal medicine, oncology, neurology, pediatrics, endocrinology as well as many other surgical and medical specialties. Since our students who enter post-graduate training in these subspecialties as well as in general primary care will be required to evaluate, diagnose and treat these conditions, it is important for our undergraduate curriculum to have these topics addressed in an organized and consistent way. It is for this reason that we developed a comprehensive integrated exposure to musculoskeletal medicine during the students' time as a WUMS3 Surgical Clerk. The third-year musculoskeletal one-month teaching and learning block, to be contained within the comprehensive surgical clerkship under the direction and support of Dr. Doug Brown will be a key component of the integrated third-year curriculum. However, students who do not wish to participate in this musculoskeletal program may select from one of the clerkship's standard 4-week specialty rotations in either Plastic Surgery or Neurosurgery.

The content to be covered in the musculoskeletal curriculum, both from a general point of view as well as specific topics and sub-topics to be covered, has been addressed in a manuscript titled: Objectives of Undergraduate Medical Education in Musculoskeletal Surgery and Medicine (Boyer MI, J Bone Joint Surg (Am) 2005; 87(3), 684 -7), that summarized the results of a consensus conference held in the fall of 2003 to determine the objectives of musculoskeletal learning at the undergraduate level. These were then summarized further by the AAMC in an Objectives Project report released in the fall of 2005.

In order to accomplish these goals, there will be a balance between clinical, operative, emergency room and didactic (lecture and small group) experiences. Didactic sessions will be in several formats: lectures, physical examination demonstrations and small group discussions. Only full time Washington University School of Medicine Department of Orthopedic Surgery attending staff will deliver formal lectures to the students. Lecturers will be from drawn from Orthopaedic Surgery and Sports Medicine for both balance and content expertise.

EVALUATION: As a criterion for passing, all students will be required to complete the educational portfolios specific to their two assigned MSK rotations. These rotation-specific portfolios will outline the required patient complaints to be encountered, as well as the required clinical tasks that must be accomplished during the MSK rotations.

In addition to the portfolio requirements, there will be two clinical evaluation components which will each contribute one half of the final MSK grade. These will be obtained through standard subjective evaluation completed by the attending mentor from each 2-week block rotation. (Note: a documented LACK OF PROFESSIONALISM can be grounds for failure. Opinions from others with whom the students have worked can be sought by the attending (such as in a 360 degree assessment) and can influence the outcome of the subjective evaluation).

You are all adults. I want to make it perfectly clear that a grade of HONORS is special, and is a great accomplishment. Anything other than demonstration of exemplary and superior knowledge, performance, character and work ethic will not earn an honors grade. Effort alone is not going to be rewarded with an honors grade.

LECTURES:

(scheduled monthly)

- 1) Spinal Disorders: Jacob Buchowski
- 2) Musculoskeletal Emergencies: Martin Boyer
- 3) Common Fractures: Martin Boyer
- 4) Adult Conditions of the Foot & Ankle: Sandra Klein
- 5) Common Shoulder Problems: Aaron Chamberlain
- 6) Adult Conditions of the Hip & Knee: Cara Cipriano
- 7) Sports Medicine: Mark Halstead
- 8) Cancer: Doug McDonald

(scheduled as part of the 12-week surgery clerkship core series)

Lectures 1 to 8 will be held monthly. These lectures are held in the Department of Orthopaedic Surgery, Suite 5505 Institute of Health Building. Scheduling of lectures 1-8 will be dependent on the individual instructor's schedule and the students' core tutorial sessions; these lectures may fall at different times during the rotation as well as from rotation-to-rotation.

CLINICAL ROTATION: The clinical experience will be one month in duration, during the comprehensive surgical clerkship for all Washington University Medical Students during either the first, second or third months of the 12-week clerkship. The one month block is divided into two two-week sessions wherein the students would spend time with staff from the following specialties: orthopaedic surgery, rheumatology, physical medicine and rehabilitation, trauma, oncology, spinal disorders, sports medicine and bone and mineral physiology.

The experience can be combined inpatient and outpatient, clinic and operating room, emergent and non-emergent care as well as both surgical and non-surgical. However, to ensure an appropriately balanced experience, students will be limited to specific rotation combinations from which to choose:

- Hand
- Joint
- Shoulder & Elbow
- Orthopedic Oncology
- Physical Medicine & Rehabilitation
- Spine
- Rheumatology & Bone
- Pediatrics
- VA Orthopaedics
- Sports Medicine
- Sports Surgery
- Trauma
- Foot & Ankle

Note: Students who do not wish to participate in the combined MSK rotations will have the option to forego the MSK program altogether and select from one of the standard 4-week specialty rotations in either Plastic Surgery or Neurosurgery.

The following Washington University School of Medicine full-time attending staff mentors are eligible to have students rotate with them during the rotation:

- 1) Martin Boyer (Hand)
- 2) Ryan Calfee (Hand)
- 2) Charles Goldfarb (Hand)
- 3) Matthew Matava (Sports Surgery)
- 4) Mark Halstead (Sports Medicine)
- 5) Robert Brophy (Sports Surgery)
- 6) Matthew Smith (Sports Surgery)
- 7) Heidi Prather and Devanyi Hunt (Physical Medicine & Rehabilitation)
- 8) John Metzler, Adam LaBore and Bersdale Colorado (Physical Medicine & Rehabilitation)
- 9) Eric Gordon (Pediatric Orthopedic Surgery)
- 10) Scott Luhmann (Pediatric Orthopedic Surgery)
- 11) Mark Miller (Pediatric Orthopedic Surgery)
- 12) Jeff Nepple (Pediatric Orthopedic Surgery)
- 13) Gary Miller (VA Orthopedic Surgery Service)
- 14) Dennis Nam (Joint Reconstruction)
- 15) Ryan Nunley (Joint Reconstruction)
- 16) Richard Brasington (Rheumatology and Bone & Mineral)
- 17) Kathryn Diemer (Rheumatology and Bone & Mineral)
- 18) Jacob Buchowski (Spine)
- 19) Lukas Zebala (Spine)
- 20) Paul Santiago (Neurosurgery Spine)
- 21) Zachary Ray (Neurosurgery Spine)
- 22) Douglas McDonald (Orthopedic Oncology)
- 23) Cara Cipriano (Orthopedic Oncology)
- 24) Jay Keener (Shoulder & Elbow)
- 25) William Ricci (Trauma)
- 26) Michael Gardner (Trauma)
- 27) Christopher McAndrew (Trauma).
- 28) Sandra Klein (Foot & Ankle)
- 29) Jeremy McCormick (Foot & Ankle)

Ideally, there should only be one student per attending staff in order to promote one-on-one teaching; however, exceptions can be made in the event of vacations, illness, conference travel etc. on the part of the attending staff.

There will be central topics that will be required coverage for all: physical examination, diagnosis and treatment of emergencies, interpretation of x-ray films, as well as medical and non-surgical treatment modalities of commonly encountered orthopedic conditions. There will also be topics that are rotation-specific, such as cerebral palsy and myelomeningocele (for the pediatric rotations at Children's or Shriner's Hospitals) or acute knee ligament injuries (on the sports surgery or sports medicine services.) Mentors will, as part of their teaching responsibilities, be required to participate in regular discussions/instruction with their students. The culture that we will try to foster is one of mentorship and students' responsibility, rather than one of endless didactic lecturing and rote learning.

At the beginning of each one month block, Dr. Boyer and his Orthopedic secretary Kathy Jones (to whom the day-to-day rotation administration is entrusted) will meet with the group of students, and discuss the rotation specifics, transportation issues, on-call schedule and our expectations. NOTE: Attendings' subjective expectations of, and judgments regarding, the students in terms of presence and work-ethic in the clinic and the operating room, attitude, and professionalism will be taken into account when completing evaluations. The opinions of nurses, therapists, medical assistants, social workers and others directly involved in patient care will be sought actively, and will be taken into account when evaluations and grades are given.

STUDENTS THAT HAVE DISPLAYED A LACK OF PROFESSIONALISM WILL NOT BE ELIGIBLE FOR A PASSING GRADE IN THIS COURSE.

The final arbiter in these matters will be Dr. Boyer.

The learning of physical examination skills by the students is a critical part of the musculoskeletal block. Drs. Nam, Osei, Kelly and Chamberlain will meet weekly with the students to demonstrate physical examination of the: neck and spine, shoulder and elbow, hip and knee, and the hand and foot. The normal examination will be covered, and relevant common conditions and provocative tests will be covered as well.

ON-CALL: To facilitate a comprehensive experience in musculoskeletal evaluation and treatment, students will be expected to take call during the one-month rotation regardless of rotation assignments. The call assignments will be made by Kathy Jones and students will be scheduled approximately 1 night per week, which would include 1 weekend call. However, it is understood that the frequency of call may vary according to other specific rotation obligations. All ACGME requirements governing on-call duties in post-graduate trainees and the 80-hour work week will apply to WUMS3 students on the Musculoskeletal block. Therefore, if a student is on-call on Tuesday or Wednesday night, they will need to leave promptly at 7am if there are surgery core lectures in the afternoon or at noon if there are no mandatory educational programs in the afternoon. Weekday call is from 6 p.m. to 7 a.m. Weekend call is twelve hours in duration (either from 7am to 7 pm, or, from 7 pm to 7 am).