



JOHNS HOPKINS
M E D I C I N E

Department of Orthopaedic
Surgery

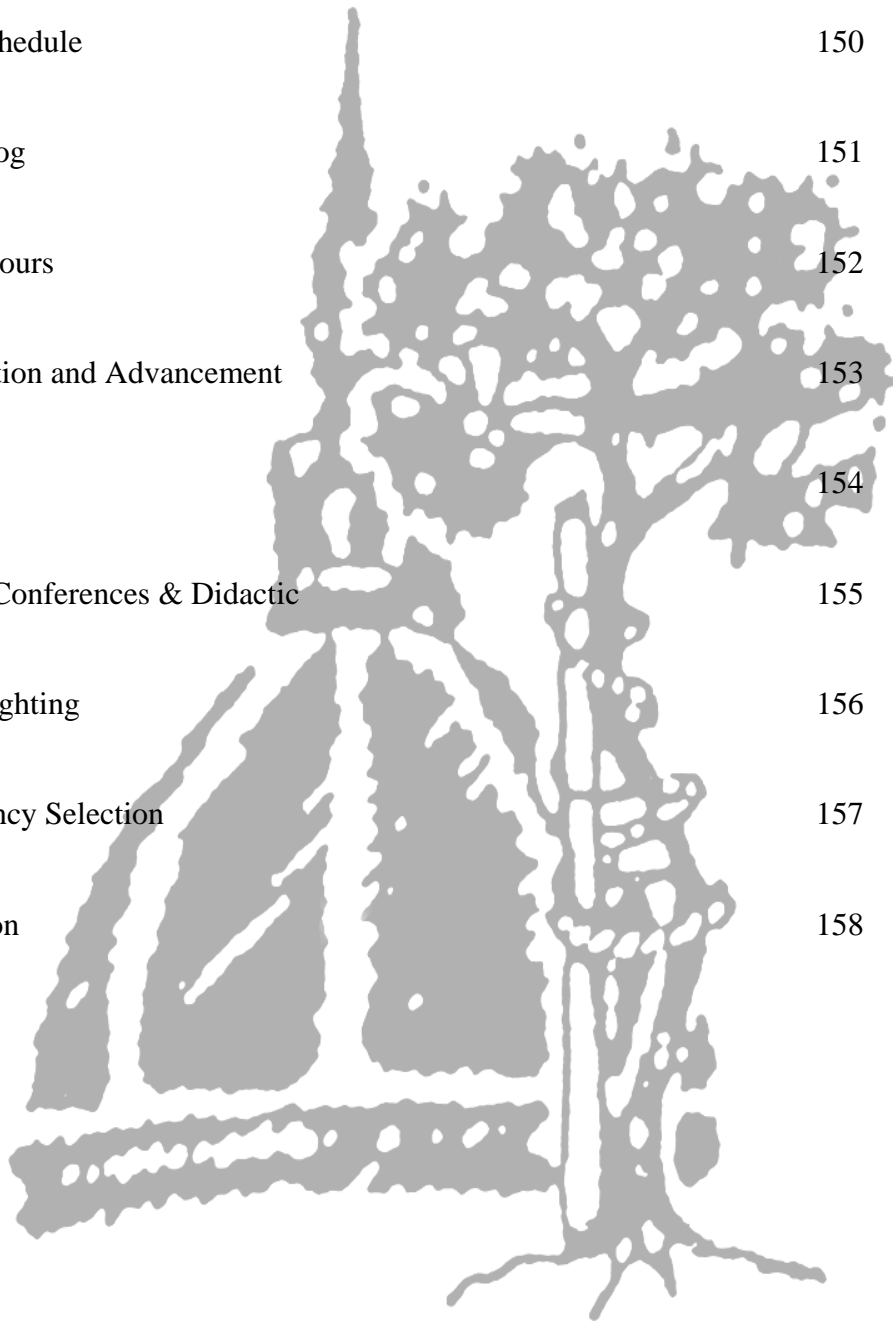
Resident Manual

Department of Orthopaedic Surgery Resident Manual

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Mission Statement

The mission of the Johns Hopkins Orthopaedic is:

To improve the quality of life for people with disorders of the musculoskeletal system by providing compassionate, contemporary medical care and by achieving academic excellence in research and education – in accord with the vision of our founder, Johns Hopkins.

Johns Hopkins Orthopaedic Surgery Resident Program Goals and Objectives

The program is designed to provide a broad foundation in the subspecialties of orthopaedic surgery. During the five years of the residency program the resident will develop clinical and surgical skills by working closely with faculty members in providing patient care and conducting research. Residents are given increased responsibility for assessing musculoskeletal problems and developing appropriate care plans. Clinical practice will be supplemented with a comprehensive academic program, clinical conferences, and self-directed resident study. The learning environment is organized to encourage inquiry and develop knowledge. Participation in research activities is required throughout the five-year program and specific research project goals are assigned to residents.

The Department of Orthopaedic Surgery adheres to the ethical standards and practice guidelines as set forth by the American Academy of Orthopaedic Surgeons. One of the major goals of the program is to instill in the residents, by example and study, this code of ethics.

Educational Goals and Objectives

The Orthopaedic Surgery Service adheres to the ethical standards and practice guidelines as set forth by the American Academy of Orthopaedic Surgeons. One of the major goals of the program is to instill in the residents, by example and study, this code of ethics.

Objectives of the Residency Program

Prepare physicians for the practice of clinical and academic Orthopaedic Surgery
Focus on clinical skills and compassionate patient care
Achievement of Professional competencies
Acquisition of Medical Knowledge
Achievement of scholarly activity through Research

Goals of the Residency Program

Provide an organized program of education in Orthopaedic Surgery through:

Providing the resources and leadership needed to achieve educational preeminence;
Providing an environment which will facilitate the professional, ethical, and scholarly achievement of each individual while providing outstanding patient care and service excellence;

Providing an environment which will perpetuate the curricular requirements for scholarly activity and general competencies
Conduct regular assessments of the quality of the curriculum and the educational activities to assure that general competencies are being met and the monitoring of those competencies achieves the purpose of advancing the education of the resident physician
Foster an environment for the faculty to achieve and excel in research, clinical care and education
Assume the responsibility to develop, cultivate and maintain the reputation of excellence in order to continue to attract the highest caliber residents and faculty

The following educational goals and objectives are predicated on the six core competencies, as directed by the ACGME:

1. PATIENT CARE

Perform clinical evaluations and appropriate documentation
Surgical/Non surgical decision making
Evaluation and interpretation of laboratory tests and imaging studies
Become skilled at surgical techniques including those specific to each sub specialty
Recognize and institute initial therapies for emergency and life threatening situations
Understand the principles of treating pain and decreasing suffering of patients

2. MEDICAL KNOWLEDGE

Assimilate core subspecialty information
Be familiar with classic journal articles
Read appropriate text books / text book chapters
Attend Conferences
Learn the pathogenesis of disease
Practice the principles of health maintenance and disease prevention
Understand relevant pharmacology and therapeutics
Understand the basic concepts of risk management in medical practice
Use the scientific method in establishing the causation of diseases and the efficacy of traditional or nontraditional therapies

3. PROFESSIONALISM

Practice ethical conduct at all times
Accept responsibility for patient care
Learn to be an advocate at all times for the interest of patients
Display behaviors that foster and reward patient's trust

Demonstrate a commitment to service of patients in need

4. SYSTEMS BASED PRACTICE

Utilize available methods of evaluation for improvement in patient care.

Make appropriate use of psychosocial and other resources to maximize patient care

Work with different members of the health care delivery team

Understand Worker's Compensation and other liability issues

Provide cost effective care with an awareness of third party payer involvement

Discharge patients in a timely and appropriate manner

5. PRACTICE BASED LEARNING AND IMPROVEMENT

Comprehend the mechanics of office notes, surgical dictation, hospital records and their role in patient care, reimbursement and medical legal affairs

Use information technology to access and manage clinical information

Evaluate and critically assess scientific evidence appropriate to the care of individual patients

Identify errors in medicine and basic strategies to reduce medical errors

Appreciate the need for patient confidentiality and exhibits behavior consistent with this

6. INTERPERSONAL AND COMMUNICATION SKILLS

Use effective communication skills including explanations, questioning and writing skills

Elicit and record a complete history

Use appropriate skills and strategies for communicating during difficult situations

Respect the rights of all patients to make informed decisions

Understand how family, cultural and religious beliefs can influence health care decisions

Use appropriate techniques for collaborating with and teaching fellow residents and other health care professionals

Acknowledge and seek assistance and counsel when needed

At the conclusion of the residency program, graduates will be proficient in the fundamentals of orthopaedic surgery and competent to practice orthopaedic surgery. Graduating residents who wish to pursue a career in any orthopaedic subspecialty will have a sufficient knowledge base to compete successfully for a fellowship in their chosen subspecialty.

Bayview Orthopaedic Service

1. Rotation Goals and Objectives by Core Competency

General Goals & Objectives PGY- 2 Year

A. Patient Care

- 1) Learn the essentials of performing a history and physical examination
- 2) Learn the principles of ordering and interpreting plain radiograph
- 3) Recognize orthopaedic emergencies related to trauma, sepsis, and neurologic compromise
- 4) Know the evaluation strategy for patients with traumatic injuries
- 5) Demonstrate proficiency in common non-operative skills:
 - a. Splint and cast application
 - b. Joint aspiration/injection
 - c. Fracture manipulation
 - d. Joint reduction
 - e. Skeletal traction pin placement
- 6) Demonstrate basic operating room skills:
 - a. Positioning, preparation, and draping
 - b. Layered incision closure
 - c. Basic orthopaedic exposures and approaches of the spine and extremities
 - d. Basic arthroscopic techniques of the shoulder and knee
 - e. Basic techniques of fracture fixation including plate and screw fixation
- 7) Demonstrate the ability to care for orthopaedic patients postoperatively:
 - a. Pain management
 - b. Wound care
 - c. Antibiotic prophylaxis
 - d. Anticoagulation management
- 8) Consistently mark patients with initials prior to surgery and drape the initials into the surgical field.
- 9) Consistently perform the surgical time-out prior to incision.
- 10) Report medical errors to the attending surgeon when recognized
- 11) Develop patient management plan and discharge plan for patients admitted to the hospital

B. Interpersonal and Communication Skills

- 1) Able to listen to patients' concerns and express sensitivity and empathy for their medical problems
- 2) Explain the risks and goals of surgery to patients and their families and alternatives to surgery (perform informed consent)
- 3) Establish an effective doctor-patient relationship – attire, grooming, demeanor, concern, and commitment
- 4) Establish an appropriate level of communication and relationship with ancillary staff:
 - a. Refrain from abusive behavior
 - b. Be courteous
 - c. Report staff who are disrespectful and perform their duties in an unsatisfactory manner
- 5) Write legibly and print name under all signatures
- 6) Date and time all notes
- 7) Dictate discharge summaries in a timely manner
- 8) Answer patient telephone calls on the same day they are received

C. Professionalism

- 1) Sensitive and responsive to differences in culture, gender, age, and impairments of both patients and staff
- 2) Sensitive to the needs of patients and families
- 3) Reliable in the performance of responsibilities
- 4) Respectful of the opinions of other healthcare professionals
- 5) Ability to express opinions in a manner that is sensitive to others

D. Medical Knowledge

- 1) Knowledge of basic anatomy of spine and extremities
- 2) Working knowledge of common orthopaedic emergencies:
 - a. Compartment syndrome
 - b. Open fractures
 - c. Dislocations and subluxations
 - d. Musculoskeletal infections, including cellulitis, septic arthritis, and osteomyelitis
 - e. Deep venous thrombosis, pulmonary embolism, and fat embolism syndrome
- 3) Working knowledge of common fractures
 - a. Distal radius
 - b. Ankle
 - c. Hip

- d. Tibial shaft
 - e. Femoral shaft
- 4) Working knowledge of classification and treatment of open fractures
 - 5) Working knowledge of degenerative and inflammatory arthritis
 - 6) Classification of shoulder instability and acromioclavicular injuries
 - 7) Working knowledge of common forefoot deformities, including lesser toe deformities, interdigital neuritis, and hallux rigidus
 - 8) Basic knowledge of implant biomaterials
 - 9) Basic geriatric principles including differences in the aging patient

E. Practice-Based Learning and Improvement

- 1) Ability to analyze effectiveness of his or her own interpretive, problem-solving, and surgical skills
- 2) Ability to use available information technology to obtain and manage information
- 3) Receptive to constructive criticism

F. Systems-Based Practice

- 1) Demonstrates ability to provide cost-effective care:
 - a. Utilization of appropriate diagnostic tests
 - b. Appropriate use of antibiotics
- 2) Utilization of the health care system to provide optimal patient care outside the hospital
- 3) Ability to fully utilize the chain of command in both the supervision of interns and medical students, and interaction with senior residents and attending staff
- 4) Ability to recognize emergencies and communicate the problem to appropriate personnel

General Goals & Objectives PGY- 3 Year

A. Patient Care

- 1) Sharpen skills of performing a history and physical examination
- 2) Learn the principles of ordering and interpreting plain radiographs, CT and MR imaging, radionuclide scanning
- 3) Recognize orthopaedic emergencies related to trauma, sepsis, and neurologic compromise.
- 4) Know the evaluation strategy and initial management of patients with complex traumatic injuries, including spine trauma and periarticular fractures.
- 5) Demonstrate proficiency in common non-operative skills:

Splint and cast application

Joint aspiration/injection

Fracture manipulation

Joint reduction

Skeletal traction pin placement

- 6) Demonstrate basic operating room skills:

Positioning, preparation, and draping

Layered incision closure

Standard orthopaedic exposures and approaches of the extremities

Arthroscopic techniques of meniscal debridement and shoulder decompression

Basic steps of primary hip and knee arthroplasty

Basic techniques of fracture care including reduction techniques, plate and screw fixation, intramedullary fixation, long bone external fixation, hip screw, and bipolar hemiarthroplasty

Basic techniques of forefoot reconstruction

- 7) Demonstrate the ability to care for orthopaedic patients postoperatively:

Pain management

Wound care

Antibiotic prophylaxis

Anticoagulation management

- 8) Consistently mark patients with initials prior to surgery and drape the initials into the surgical field

- 9) Consistently perform the surgical time-out prior to incision

- 10) Report medical errors to the attending surgeon when recognized

- 11) Develop patient management plan and discharge plan for patients admitted to the hospital

B. Interpersonal and Communication Skills

- 1) Able to listen to patients' concerns and express sensitivity and empathy for their medical problems

- 2) Explain the risks and goals of surgery to patients and their families and alternatives to surgery (perform informed consent)

- 3) Establish an effective doctor-patient relationship – attire, grooming, demeanor, concern, and commitment
- 4) Establish an appropriate level of communication and relationship with ancillary staff:
 - Refrain from abusive behavior
 - Be courteous
 - Report staff who are disrespectful and perform their duties in an unsatisfactory manner
- 5) Write legibly and print name under all signatures
- 6) Date and time all notes
- 7) Dictate discharge summaries in a timely manner
- 8) Answer patient telephone calls on the same day they are received

C. Professionalism

- 1) Sensitive and responsive to differences in culture, gender, age, and impairments of both patients and staff
- 2) Sensitive to the needs of patients and families
- 3) Reliable in the performance of responsibilities
- 4) Respectful of the opinions of other healthcare professionals
- 5) Ability to express opinions in a manner that is sensitive to others

D. Medical Knowledge

- 1) Firm knowledge of topographical, functional, and surgical anatomy of spine and extremities
- 2) Working knowledge of common orthopaedic emergencies:
 - Compartment syndrome
 - Open fractures
 - Dislocations and subluxations
 - Musculoskeletal infections, including cellulitis, septic arthritis, and osteomyelitis
 - Deep venous thrombosis, pulmonary embolism, and fat embolism syndrome

3) Working knowledge of common fractures

Distal radius

Ankle

Hip

Tibial shaft

Femoral shaft

4) Working knowledge of classification and treatment of open fractures

5) Working knowledge of indications for total joint arthroplasty, advantages/disadvantages of common implant types, and principles of ligament balancing

6) Working knowledge of spectrum of rotator cuff disease (impingement, tendinosis, rupture), meniscal pathology, and treatment options for ACL injuries

7) Working knowledge of evaluation and surgical treatment options of hallux valgus, hallux rigidus, and forefoot deformities

E. Practice-Based Learning and Improvement

1) Ability to analyze effectiveness of his or her own interpretive, problem-solving, and surgical skills

2) Ability to use available information technology to obtain and manage information

3) Receptive to constructive criticism

F. Systems-Based Practice

1) Demonstrates ability to provide cost-effective care:

Utilization of appropriate diagnostic tests

Appropriate use of antibiotics

2) Utilization of the health care system to provide optimal patient care outside the hospital

3) Ability to fully utilize the chain of command in both the supervision of junior residents and medical students, and interaction with senior residents and attending staff

4) Ability to recognize emergencies and communicate the problem to appropriate personnel

General Goals & Objectives PGY- 4 Year

A. Patient Care

- 1) Sharpen skills of performing a history and physical examination
- 2) Proficiency in interpreting plain radiographs, CT and MR images, and radionuclide scans
- 3) Know the evaluation strategy and initial management of patients with complex traumatic injuries, including spine trauma and periarticular fractures
- 4) Demonstrate advanced operating room skills:
 - Room set-up, equipment requisition
 - Arthroscopic techniques of meniscal repair, ACL reconstruction, and shoulder stabilization
 - Proficient at primary hip and knee arthroplasty, basic knowledge of revision hip and knee arthroplasty techniques
 - Techniques of fracture care including reduction techniques, plate and screw fixation, intramedullary fixation, periarticular plate and external fixation, hip screw, and bipolar hemiarthroplasty
- 5) Demonstrate the ability to care for orthopaedic patients postoperatively:
 - Pain management
 - Wound care
 - Antibiotic prophylaxis
 - Anticoagulation management
- 6) Consistently mark patients with initials prior to surgery and drape the initials into the surgical field
- 7) Consistently perform the surgical time-out prior to incision
- 8) Report medical errors to the attending surgeon when recognized
- 9) Develop patient management plan and discharge plan for patients admitted to the hospital

B. Interpersonal and Communication Skill

- 1) Able to listen to patients' concerns and express sensitivity and empathy for their medical problems

- 2) Explain the risks and goals of surgery to patients and their families and alternatives to surgery (perform informed consent)
- 3) Establish an effective doctor-patient relationship – attire, grooming, demeanor, concern, and commitment
- 4) Establish an appropriate level of communication and relationship with ancillary staff:
 - Refrain from abusive behavior
 - Be courteous
 - Report staff who are disrespectful and perform their duties in an unsatisfactory manner
- 5) Write legibly and print name under all signatures
- 6) Date and time all notes
- 7) Dictate discharge summaries in a timely manner
- 8) Answer patient telephone calls on the same day they are received

C. Professionalism

- 1) Sensitive and responsive to differences in culture, gender, age, and impairments of both patients and staff
- 2) Sensitive to the needs of patients and families
- 3) Reliable in the performance of responsibilities
- 4) Respectful of the opinions of other healthcare professionals
- 5) Ability to express opinions in a manner that is sensitive to others

D. Medical Knowledge

- 1) Advanced knowledge of surgical anatomy of extremities
- 2) Proficient at surgical techniques of reduction and fixation of common fractures, including distal radius, hip, femoral shaft, tibial shaft, ankle
- 3) Working knowledge of complex fractures, including classification, treatment options, and techniques of reduction and fixation

Proximal humerus

Distal humerus

Scaphoid

Distal femur

Tibial plateau

Pilon

Calcaneus

- 4) Proficient at primary total joint arthroplasty
- 5) Working knowledge of evaluation and treatment options for infected total joint arthroplasty
- 6) Working knowledge of indications for revision total joint arthroplasty, revision exposure techniques, and revision implant advantages/disadvantages
- 7) Working knowledge of shoulder instability, revision ACL surgery, complications of ACL surgery, and principles of injury in the throwing athlete
- 8) Working knowledge of inflammatory and degenerative arthritis of the foot and ankle; posterior tibialis tendon dysfunction, pes planus, and pes cavus deformities

E. Practice-Based Learning and Improvement

- 1) Ability to analyze effectiveness of his or her own interpretive, problem-solving, and surgical skills
- 2) Ability to use available information technology to obtain and manage information
- 3) Receptive to constructive criticism

F. Systems-Based Practice

- 1) Demonstrates ability to provide cost-effective care:
 - Utilization of appropriate diagnostic tests
 - Appropriate use of antibiotics
- 2) Utilization of the health care system to provide optimal patient care outside the hospital
- 3) Ability to fully utilize the chain of command in both the supervision of junior residents and medical students, and interaction with senior residents and attending staff
- 4) Ability to recognize emergencies and communicate the problem to appropriate personnel

General Goals & Objectives PGY- 5 Year

A. Patient Care

- 1) Sharpen skills of performing a history and physical examination

- 2) Proficiency in interpreting plain radiographs, CT and MR images, and radionuclide scans
- 3) Know the evaluation strategy and initial management of patients with complex traumatic injuries, including spine trauma and periarticular fractures
- 4) Demonstrate advanced operating room skills:
 - Room set-up, equipment requisition
 - Standard and revision orthopaedic exposures and approaches of the spine and extremities
 - Arthroscopic techniques of revision ACL reconstruction, PCL reconstruction, and shoulder stabilization
 - Basic small joint arthroscopic techniques of elbow, wrist, and ankle
 - Proficient at primary and revision hip and knee arthroplasty techniques
 - Techniques of fracture care including intramedullary fixation, periarticular plate and external fixation, hip screw, and bipolar hemiarthroplasty, bone grafting techniques
 - Proficient at osteotomy, arthroplasty, and arthrodesis techniques for reconstruction of the foot and ankle
- 5) Demonstrate the ability to care for orthopaedic patients postoperatively:
 - Pain management
 - Wound care
 - Antibiotic prophylaxis
 - Anticoagulation management
- 6) Consistently mark patients with initials prior to surgery and drape the initials into the surgical field
- 7) Consistently perform the surgical time-out prior to incision
- 8) Report medical errors to the attending surgeon when recognized
- 9) Develop patient management plan and discharge plan for patients admitted to the hospital

B. Interpersonal and Communication Skills

- 1) Able to listen to patients' concerns and express sensitivity and empathy for their medical problems
- 2) Explain the risks and goals of surgery to patients and their families and alternatives to surgery (perform informed consent)
- 3) Establish an effective doctor-patient relationship – attire, grooming, demeanor, concern, and commitment
- 4) Establish an appropriate level of communication and relationship with ancillary staff:

Refrain from abusive behavior

Be courteous

Report staff who are disrespectful and perform their duties in an unsatisfactory manner
- 5) Write legibly and print name under all signatures
- 6) Date and time all notes
- 7) Dictate discharge summaries and operative notes in a timely manner
- 8) Answer patient telephone calls on the same day they are received

C. Professionalism

- 1) Sensitive and responsive to differences in culture, gender, age, and impairments of both patients and staff
- 2) Sensitive to the needs of patients and families
- 3) Reliable in the performance of responsibilities
- 4) Respectful of the opinions of other healthcare professionals
- 5) Ability to express opinions in a manner that is sensitive to others

D. Medical Knowledge

- 1) Advanced knowledge of surgical anatomy of extremities
- 2) Proficient at surgical techniques of reduction and fixation of common and complex fractures, including periarticular and long bone fractures
- 3) Working knowledge of complex fractures, including classification, treatment options, and techniques of reduction and fixation
Proximal humerus

Distal humerus

Scaphoid

Distal femur

Tibial plateau

Pilon

Calcaneus

- 4) Working knowledge of evaluation and treatment options for infected total joint arthroplasty, osteomyelitis, and infected nonunions
- 5) Working knowledge of long-term outcomes of total joint arthroplasty, including variations with common implants
- 6) Working knowledge of on-field sports medicine, management of the elite athlete
- 7) Working knowledge of treatment options for deformities, arthritis, and complications of the foot and ankle, including malunions, nonunions, and revision surgery

E. Practice-Based Learning and Improvement

- 1) Ability to analyze effectiveness of his or her own interpretive, problem-solving, and surgical skills
- 2) Ability to use available information technology to obtain and manage information
- 3) Receptive to constructive criticism

F. Systems-Based Practice

- 1) Demonstrates ability to provide cost-effective care:
Utilization of appropriate diagnostic tests

Appropriate use of antibiotics
- 2) Utilization of the health care system to provide optimal patient care outside the hospital
- 3) Ability to function as team leader, supervise junior residents and medical students, and interact with attending staff
- 4) Ability to recognize emergencies and communicate the problem to appropriate personnel
- 5) Resident Supervision (Bayview Medical Center)

The residents assigned to the Orthopaedic Surgery Department at the Johns Hopkins Bayview Medical Center are a valued resource in providing care of patients in the clinic, hospital and in the operating room.

- A.** It is understood that the residents act under the direct supervision of the attending orthopaedic surgery staff.
- B.** Residents' daily activities are to be supervised by the chief residents.
- C.** All patients and consults will be reviewed by an attending physician at least once every 24-hour period. Junior residents are welcome to initiate care with proper input from the chief residents. A treatment plan needs to be reviewed with an attending physician within the 24-hour period.
- D.** In the operating room, residents perform under the direct supervision of the attending physician at all times, including nights, weekends and holidays. Surgical attending will be present for the initialing of the surgical site and for the time out. It is the attendings responsibility to be present for all critical portions of the operative procedure. Residents will be granted surgical independence as their abilities dictate. Attending physicians are directly responsible for their surgical care.
- E.** Junior resident on-call reports directly to the chief resident on-call. The chief resident on-call is directly responsible to the attending physician on-call. In-house resident should have quick and easy access to senior residents concerning after-hour orthopaedic issues. The chief resident should be within 30 minutes of the hospital to respond to evaluations in the hospital. Attending physician should be within 45 minutes of the hospital to attend to any orthopaedic emergencies. The residents on-call are encouraged to keep the attending physician on-call apprised of all issues, recognizing that some issues can wait until the morning, but everything should be discussed at the latest the next morning at the board.
- F.** All consults on the floor should be seen within 24-hours by a resident and reviewed with an attending physician. In all cases of consults and emergencies, the back-up support for the chief resident is the attending physician on-call. If the chief resident cannot find timely attending support to help resolve the orthopaedic issue, they have direct and immediate access to the Chairman of the Department, Dr. Simon Mears.

Total hip arthroplasty for primary osteoarthritis in patients fifty-five years of age or older.
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Chapter 101 Primary Hip Arthroplasty

2) Hip replacement: polyethelene wear

The biology of aseptic osteolysis.

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Randomized Controlled Trial

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J. Bone Joint Surg. Am., Dec 2007; 89: 2779 - 2786.

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Chapter 100 Biomechanics and wear in joint arthroplasty

3) Hip replacement: metal on metal

Metal-on-metal hip resurfacing arthroplasty.

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J Bone Joint Surg Am. 2008 Mar;90(3):637-54.

Metal-on-metal Bearing Surfaces

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Position of Hip Resurfacing Component Affects Strain and Resistance to Fracture in the Femoral Neck
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J. Bone Joint Surg. Am., Sep 2008; 90: 1951 - 1960.

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Chapter 101 Primary Hip Arthroplasty

4) Hip replacement: Femoroacetabular impingement

Femoroacetabular Impingement
Javad Parvizi, Michael Leunig, and Reinhold Ganz
J. Am. Acad. Ortho. Surg., September 2007; 15: 561 - 570.

The Young Adult with Hip Impingement: Deciding on the Optimal Intervention
Paul E. Beaulé, David J. Allen, John C. Clohisy, Perry Schoenecker, and Michael Leunig.

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J Bone Joint Surg Am. 2009 Feb;91 Suppl 1:138-43.

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J Bone Joint Surg Am. 2009 Feb;91(2):305-13.

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Chapter 98 Non arthroplasty surgical treatment of the hip

5) Hip and knee replacement: vte prophylaxis

Prevention of Symptomatic Pulmonary Embolism in Patients Undergoing Total Hip or Knee Arthroplasty

Norman A. Johanson, Paul F. Lachiewicz, Jay R. Lieberman, Paul A. Lotke, Javad Parvizi, Vincent Pellegrini, Theodore A. Stringer, Paul Tornetta, III, Robert H. Haralson, III, and William C. Watters, III

J. Am. Acad. Ortho. Surg., March 2009; 17: 183 - 196.

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J. Bone Joint Surg. Am., Aug 2009; 91: 29 - 32.

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Chapter 18 Coagulation and thromboembolism

6) Hip and knee replacement: infection prevention

Prophylactic Antibiotics in Orthopaedic Surgery

Laura Prokuski

J. Am. Acad. Ortho. Surg., May 2008; 16: 283 - 293.

Ultraviolet Lighting During Orthopaedic Surgery and the Rate of Infection

Merrill A. Ritter, Emily M. Olberding, and Robert A. Malinzak

J. Bone Joint Surg. Am., Sep 2007; 89: 1935 - 1940.

Prevention of Perioperative Infection

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Obremskey

J. Bone Joint Surg. Am., Jul 2007; 89: 1605 - 1618.

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Chapter 105 Periprosthetic joint infections

7) Knee replacement: fixation

Evolution of tibial fixation in total knee arthroplasty.

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Survival and clinical function of cemented and uncemented prostheses in total knee replacement A META-ANALYSIS

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J Bone Joint Surg [Br] 2009;91-B:889-95.

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Chapter 100 Primary total knee arthroplasty

8) Knee replacement: wear

Wear and Osteolysis Around Total Knee Arthroplasty

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All-polyethylene compared with metal-backed tibial components in total knee arthroplasty at ten years. A prospective, randomized controlled trial.

Bettinson KA, Pinder IM, Moran CG, Weir DJ, Lingard EA.

J Bone Joint Surg Am. 2009 Jul;91(7):1587-94.

Modular fixed-bearing total knee arthroplasty with retention of the posterior cruciate ligament. A study of patients followed for a minimum of fifteen years.

Dixon MC, Brown RR, Parsch D, Scott RD.

J Bone Joint Surg Am. 2005 Mar;87(3):598-603.

AAOS Comprehensive Orthopaedic Review Pages 1017-1024

Chapter 100 Biomechanics and wear in joint arthroplasty

9) Knee replacement: kinematics

2009 Marshall Urist Young Investigator Award: how often do patients with high-flex total knee arthroplasty use high flexion?

Huddleston JI, Scarborough DM, Goldvasser D, Freiberg AA, Malchau H.

Clin Orthop Relat Res. 2009 Jul;467(7):1898-906. Epub 2009 May 7.

Three-dimensional tibiofemoral articular contact kinematics of a cruciate-retaining total knee arthroplasty.

Li G, Suggs J, Hanson G, Durbhakula S, Johnson T, Freiberg A.

J Bone Joint Surg Am. 2006 Feb;88(2):395-402.

Retention versus sacrifice of the posterior cruciate ligament in total knee replacement for treatment of osteoarthritis and rheumatoid arthritis (Review)

Jacobs W, Clement DJ, Wymenga AAB,
The Cochrane Library 2009, Issue 4, pp 1-38

10) Knee replacement: balancing

Alignment in total knee replacement.

Sikorski JM.

J Bone Joint Surg Br. 2008 Sep;90(9):1121-7. Review.

Constraint in primary total knee arthroplasty.

Morgan H, Battista V, Leopold SS.

J Am Acad Orthop Surg. 2005 Dec;13(8):515-24. Review.

The intra-operative joint gap in cruciate-retaining compared with posterior-stabilized total knee replacement.

Matsumoto T, Kuroda R, Kubo S, Muratsu H, Mizuno K, Kurosaka M.

J Bone Joint Surg Br. 2009 Apr;91(4):475-80.

AAOS Comprehensive Orthopaedic Review Pages 1043-1056

Chapter 100 Primary total knee arthroplasty

B. Reading for Friday trauma conference by week

1) Olecranon fractures

Olecranon Fractures: Treatment Options

Hak DJ, Golladay GJ, *J Am Acad Orthop Surg* 2000;8:266-275

AAOS Comprehensive Orthopaedic Review Pages 888-891

Chapter 83 Fractures of the elbow

2) Pilon fractures

Complications After Treatment of Tibial Pilon Fractures: Prevention and Management Strategies

Thorardson D, *J Am Acad Orthop Surg* 2000;8:253-265

Outcomes After Treatment of High-Energy Tibial Plafond Fractures. Pollak AN, McCarthy ML, Shay Bess R, Agel J and Swiontkowski MF. *J Bone Joint Surg Am.* 2003;85:1893-1900.

AAOS Comprehensive Orthopaedic Review Pages 669-675

Chapter 60 Fractures of the ankle and tibial plafond

3) Periprosthetic fractures

Periprosthetic Femoral Fractures,

Kelley S,

J Am Acad Orthop Surg 1994;2:164-172

AAOS Comprehensive Orthopaedic Review Pages 1075-1088
Chapter 106 Periprosthetic fractures associated with total hip and knee arthroplasty

4) Pelvic fractures

Acute Pelvic Fractures: I. Causation and Classification

Tile M

J Am Acad Orthop Surg 1996;4:143-151

Acute Pelvic Fractures: II. Principles of Management

Tile M,

J Am Acad Orthop Surg 1996;4:152-161

AAOS Comprehensive Orthopaedic Review Pages 577-582

Chapter 53 Pelvic, acetabular and sacral fractures

5) Acetabular fractures

Displaced Acetabular Fractures Managed Operatively: Indicators of Outcome

Mears DC, Velyvis JH, and Chang C-P, CORR 2003; 407, 173–186.

Fractures of the Acetabulum: Accuracy of Reduction and Clinical Results in Patients
Managed Operatively within Three Weeks after the injury

Matta JM

J Bone Joint Surg Am. 1996;78:1632-45.

AAOS Comprehensive Orthopaedic Review Pages 582-590

Chapter 53 Pelvic, acetabular and sacral fractures

6) Distal radius fractures

Intra-Articular Fractures of the Distal Aspect of the Radius

Trumble TE, Culp R, Hanel DP, Geissler WB and Berger RA

J Bone Joint Surg Am. 1998;80:582-600.

AAOS Comprehensive Orthopaedic Review Pages 560-562

Chapter 51 Hand and wrist fractures and dislocations

7) Proximal humerus fractures

Displaced Three- and Four-Part Proximal

Humerus Fractures: Evaluation and Management

Naranja RJ and Iannotti JP,

J Am Acad Orthop Surg 2000;8:373-382

Displaced Proximal Humeral Fractures: PART I. and PART II.

Neer CS

J Bone Joint Surg Am. 1970;52:1077-1103.

AAOS Comprehensive Orthopaedic Review Pages 843-848
Chapter 78 Traumatic conditions of the shoulder

8) Tibial plateau fractures

High-Energy Tibial Plateau Fractures
Eric M. Berkson EM and Virkus WW,
J Am Acad Orthop Surg 2006;14:20-31

9) Open fractures

Open Fractures: Evaluation and Management
Zalavras CG and Patzakis MJ,
J Am Acad Orthop Surg 2003;11:212-219
AAOS Comprehensive Orthopaedic Review Pages 533-538
Chapter 49 Gunshot wounds and open fractures

10) Compartment syndrome

Diagnostic techniques in acute compartment syndrome of the leg.
Shadgan B, Menon M, O'Brien PJ, Reid WD.
J Orthop Trauma. 2008 Sep;22(8):581-7. Review.

Acute compartment syndrome in lower extremity musculoskeletal trauma.

Olson SA, Glasgow RR.
J Am Acad Orthop Surg. 2005 Nov;13(7):436-44. Review.

AAOS Comprehensive Orthopaedic Review Pages 239, 616,654-655

11) Intertrochanteric hip fractures

Unstable Intertrochanteric Hip Fractures in the Elderly.
Lindskog DM and Baumgaertner MR
J Am Acad Orthop Surg 2004;12:179-190

The value of the tip-apex distance in predicting failure of fixation of peritrochanteric fractures of the hip.
Baumgaertner MR, Curtin SL, Lindskog DM and Keggi JM.
J Bone Joint Surg Am. 1995;77:1058-1064.

AAOS Comprehensive Orthopaedic Review Pages 597-610
Chapter 55 Fractures of the hip

5. Didactic Activities

A. Adult reconstruction conference

Each Tuesday at 7:20 am a reconstruction conference is held. This conference reviews a topic related to hip or knee reconstruction on a rotating 10 week schedule changing with the resident rotations. Each week a different topic is covered. Residents are expected to review 2 to 3 relevant preselected research and review articles as well as pages in the AAOS Comprehensive Orthopaedic Review book and selected OITE review questions. Articles are selected in attempt to provide evidence based answers to clinically applicable problems. The goal of each session is to familiarize the residents with each topic and provide a working knowledge of the issues related to the topic as well as to prepare them for OITE examination. Each resident owns the AAOS Comprehensive Orthopaedic Review book and the articles are posted on our SharePoint site for easy access.

B. Geriatric Orthopaedics

On Wednesday morning a two-part didactic session is held. At 7:20 am Dr. Perry Colvin, a geriatrician and head of the hip Fracture Service leads a discussion of geriatric topic. This is organized around a ten week schedule and is meant to cover geriatric issues that are commonly seen on the rotation. Following the didactic session, Dr. Colvin and Dr. Mears lead a team round with the resident and mid level providers. We see one or two patients being co-followed by the geriatric service. The geriatric issues are explored and the patient examined. This serves to reinforce the teaching in didactic conference and to apply principles and exam techniques to practice.

The didactic sessions have a corresponding PowerPoint presentation that is available on the SharePoint site for review prior to the session. Work on this curriculum is on-going as part of a grant from the American Geriatric Society with Dr. Stephen Kates at the University of Rochester.

Lecture topics include

- Delirium in the postoperative elderly patient

- Postoperative medical care of the geriatric fracture patient

- Physiology of aging

- Presurgical evaluation of the hip fracture patient

- Cardiac disease in the hip fracture patient

- Diabetes management in the hip fracture patient

- DVT prophylaxis in the hip fracture patient

Pressure sores and prevention

Nutrition in the hip fracture patient

Palliative care and hospice

C. Trauma conference

On Friday morning from 7:15-7:45 AM we conduct a trauma conference is conducted with all of the residents. During this session the residents present on a trauma topic that is preselected. A different fracture or topic with a key review article is presented by the resident. This is accompanied by readings from the AAOS Comprehensive Orthopaedic Review book and selected OITE review questions. The articles are kept on our SharePoint site for easy access.

D. Sports Medicine

Didactic session is held weekly for the PGY-5 Sports Rotation with Dr. Bashir Zikria and Dr. John Wilckens who are the rotation mentors. The AAOS OKU Sports Medicine 4 is the resource. The rotation is structured as a 10-week rotation.

During the 10-week rotation, residents are asked to read two chapters a week as outlined below for discussion with the assigned mentor. Dr. Zikria will review the chapter on Tuesday morning before the operating room and Dr. Wilckens on Wednesday before Navy training room. It is also expected that, chapters covering common sports injuries will need to read to prepare for scheduled surgeries and clinics.

Week 1	Chapter 24	Concussions	Wilckens
	Chapter 25	Cervical Spine	Zikria
Week 2	Chapter 16	Foot Disorders	Wilckens
	Chapter 17	Ankle Injuries	Zikria
Week 3	Chapter 15	Overuse Injuries Lower Extremity	Wilckens
	Chapter 11	Patellofemoral Joint	Zikria
Week 4	Chapter 26	Tendon Overuse Pathology	Wilckens
	Chapter 28	Nonsurgical Treatment Tendinopathy	Zikria
Week 5	Chapter 29	Surgical Treatment Tendinopathy	Zikria
	Chapter 34	Infectious Disease in the Athlete	Wilckens
Week 6	Chapter 7	Groin and Pelvic Injuries	Wilckens
	Chapter 8	Hip Joint Injuries	Zikria
Week 7	Chapter 3	Acute Elbow Injuries	Zikria
	Chapter 6	Hand/Wrist Injuries	Wilckens

Week 8	Chapter 36	Osteochondroses in the Young Athlete	Zikria
	Chapter 38	Spondylolysis	Wilckens
Week 9	Chapter 33	Cardial Issues	Wilckens
	Chapter 35	Heat/Hydration	Zikria
Week 10	Chapter 41	Youth Throwing Injuries	Zikria
	Chapter 22	Core Stabilization	Wilckens

6. Schedule

The schedule is printed weekly and organized by the fourth year resident. Each resident is assigned to activities each day and the schedule is distributed the Friday before so that residents can pre-read about cases. Each resident is assigned to at least two clinic sessions per week.

**JHBMC Department of Orthopaedic Surgery
 Provider Schedule and Location Matrix
 Effective January 1, 2010**

DAY	GOR	GOR # - TIME	BAYVIEW OFFICE PRACTICE	GS = Greenspring WM = White Marsh	ADMIN DAY
MONDAY	Mears	1 (7:30-7:00)	FX Clinic (AM) Lebowitz Trice (5 th)	Nayfeh – WM	
	Johnson	2 (7:30-7:00)		Wilckens - OD Trice – GS (1 st , 3 rd) CL (2 nd , 4 th)	
TUESDAY	Mears	1 (7:30-7:00)	Lebowitz (1 st & 3 rd AM) Burton	Johnson –GS (2 nd & 4 th)	
	Nayfeh (24 Hr)	2 (7:30-5:30)	Vitello	WM (1 st , 3 rd , 5 th)	
	Lebowitz	7 (8:00-12:00) (3 rd wk only)		Byank – WM Wilckens - WM	
	Trice	9 (7:30-3:30)			
WEDNESDAY	Nayfeh (24 Hr)	1 (7:30-7:00)	Vitello (AM) Lebowitz(AM)	Johnson – WM ASC	Vitello (PM)
	Trice	2 (7:30-5:30)	Byank Davis (AM)	Wilckens (2 nd & 4 th PM) WMASC Mears – GS (1 st & 2nd) Mears – WM (3rd)	Wilckens (AM)
THURSDAY	Wilckens	2 (9:00-5:30) ~ 1 st ,3 rd , 5 th	Lebowitz (AM)	Nayfeh Odenton	
	Zikria	WMASC (7:30-3:30) ~2 nd & 4 th	Vitello Johnson – (1 st , 3 rd 5th) Nayfeh (1st)	(2 nd ,3 rd ,4 th & 5 th)	
		2 (9:00-5:30) (2 nd & 4 th)	Byank (PM) – PF Residents (PM) Mears/Smith (2 nd ,3 rd ,4 th ,& 5 th) Hip FX (PM) 1 st –Nayfeh 2 nd -5 th – Mears	Trice – (WM)	
FRIDAY	Johnson	1 (7:30-3:30) (1 st ,3 rd , 5 th)	Wilckens Residents (AM) Lebowitz Vitello Smith Lemma (2 nd) Khanna (4 th)		Mears
	Byank (24 Hr)	2 (7:30-5:30)			Trice

KEY = Amber (Zikria) – 410-847-3643

Jerry (Nayfeh, Hip FX) x0-4190

April (Byank - x0-6613, Chief Residents - x0-1504)

Louisa (Vitello - x0-0455, Lebowitz, FX

Clinic x0-4556, Spine x0-5391)

Connie (Johnson) - 443-442-2084

Miriam (Wilckens) - x0-0456

Charlene (Trice) - x0-0452

Wendy / Tammy (Mears, Smith, Hip FX) - x0-0101, x0-9253

Dr. Johnson (2nd & 4th Friday's OFF)Dr. Byank if OFF on Monday's

Foot and Ankle Service

Good Samaritan Hospital

1. Rotation Goals and Objectives by Core Competency

General Goals & Objectives PGY-4 Year

A. Patient Care

1. Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
2. Gather essential and accurate information about the patient.
3. Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
4. Develop and carry out patient management plans, counsel and educate patients and their families.
5. Use information technology to support patient care decisions and patient education.
6. Perform competently all invasive procedures considered essential in foot and ankle practice.
7. Provide health care services aimed at preventing health problems or maintaining health work with health care professionals, including those from other disciplines, to provide patient-focused care.

B. Interpersonal and Communication Skills

1. Listen to patient's concerns and express sensitivity and empathy for the medical problems.
2. Understand risks and goals of surgery.
3. Establish an effective patient/doctor relationship: attire, grooming, manner of speech, concern, commitment.
4. Establish appropriate level of communication and relationship with ancillary staff:
 - Refrain from abusive behavior.
 - Be courteous.
 - Report staff who are disrespectful and do their duties in a less than satisfactory manner.
5. Demonstrate legible handwriting, and print name under all signatures.
6. Date and mark time on all notes.

7. Dictate discharge summaries on day of discharge.
8. Dictate operative reports on day of surgery.
9. Answer patient telephone calls on same day they are received.
10. Effectively communicate with and manage consultations with other specialists in complex and complicated cases.
11. Communicate with patient's family concerning follow-up care or complications of surgical procedures.
12. Institute or order appropriate diagnostic test or consultations in post- op patients.

C. Professionalism

1. Demonstrate sensitivity and responsiveness to differences in culture, gender, age, and impairments of both patients and staff.
2. Demonstrate sensitivity to the needs of older patients in terms of support for their specific and multiple needs.
3. Demonstrate reliability in performance of responsibilities.
4. Demonstrate respect toward opinions of other healthcare professionals.
5. Demonstrate ability to express opinions in a manner sensitive to others.

D. Medical Knowledge

1. Learn the surgical approaches to various regions of the foot, ankle, hind foot, midfoot and forefoot with their anatomic significance.
2. Manage lacerations (learn to identify what structures have been cut and identify methods of repair).
3. Learn how to hold and operate common tools in foot and ankle surgery including the microsagittal saw, K-wire drivers, mini C-arm, drill, taps, chisels, osteotomes, laminar spreaders and gouges.
4. Understand different features of different hardware sets in OR, screw sets, rod sets and external fixator sets.
5. Learn significance of positioning patients for operative cases, including use of a beanbag and table manipulation.
6. Learn concepts of basic techniques for osteotomies, fusions, tendon transfers, ligament reconstructions.
7. Learn proper closure of foot and ankle incisions, including what layers need to be closed and suture selection.

8. Learn how to put on postoperative dressings or splints and how to position the foot within dressing or splint depending on pathology or procedure.

E. Practice Based Learning and Improvement

1. Analyze the effectiveness of own interpretative, problem-solving and surgical skills.
2. Use available information technology to obtain and manage information.
3. Be receptive to constructive criticism.

F. Systems-Based Practice

1. Demonstrate ability to provide cost-effective care.
 - Utilize appropriate diagnostic tests.
 - Utilize appropriate antibiotics.
 - Utilize appropriate timing and indications for discharge to home and step down units (rehabilitation and nursing home).
 2. Utilize health care system to provide optimal patient care outside hospital system.
 3. Able to fully utilize chain of command in both supervision of subordinates and interaction with seniors.
 4. Recognize emergencies and communicate problem to appropriate personnel.
2. Resident Supervision (Foot and Ankle Service)
 - A. Resident will be supervised in outpatient clinic by Dr. Steve Kulik on each case, and assisted in medical note preparation.
 - B. Resident will be supervised in OR by Dr. Steve Kulik on each surgical case, and assisted with operative note preparation.
 - C. Resident will be supervised on all office injections by Dr. Steve Kulik.
 - D. Resident will be supervised on Emergency Department and hospital consults by Dr. Steve Kulik, and assisted in consultation preparation.

Contact Information:

Steve Kulik, M.D. 410-283-0852 (pager)
Denise Stroup, Surgical Coordinator 443-444-4230 (office)

3. Clinical Activities
 - A. Demonstrate a basic understanding of the science of the foot and ankle including anatomy, biomechanics, and kinesiology.
 - B. Perform a detailed history and physical exam as the basis of the foot and ankle treatment assessment.

- C. Learn to read and interpret routine radiographic images including MRIs, CAT scans, and Bone scans for foot and ankle problems; recognize pathology and note anatomic location.
- D. Develop ability to determine what supplemental testing should be obtained based on findings on the history, physical and radiographic testing [e.g., need for diagnostic injection, EMG nerve conduction studies, compartment test, f-scan (pedobarograph)].
- E. Demonstrate an understanding of non-operative treatments for common foot and ankle conditions including medication, braces and orthotics.
- F. Learn inpatient management of foot and ankle cases.
- G. Observe and learn basic technique of nerve blocks.
- H. Develop ability to do manual stress test to elicit pathology, such as the positive anterior drawer test to test for ankle instability, squeeze test for syndesmotom instability, Thompson test for Achilles tendon rupture.
- I. Learn medication management foot ankle problems/diseases.

4. Required Reading

- OKU Foot and Ankle 4

5. Didactic Activities - OKU Foot and Ankle 4

- Week 1- Chapters 1-3
- Week 2- Chapters 4-6
- Week 3- Chapter 7-10
- Week 4- Chapter 11-13
- Week 5- Chapter 14-16
- Week 6- Chapter 17-19
- Week 7- Chapter 20-22
- Week 8- Chapter 23-25
- Week 9- Chapter 26-28
- Week 10- Chapter 29

6. Schedule – Foot and Ankle Service

Monday	White Marsh Surgery Center/ Teaching session with Dr. Steve Kulik
Tuesday	Good Samaritan Foot/ Ankle Clinic with Dr. Steve Kulik
Wednesday	White Marsh Foot/Ankle Clinic with Dr. Steve Kulik
Thursday	Surgery at Good Samaritan with Dr. Steve Kulik
Friday	Surgery at Good Samaritan with Dr. Steve Kulik

Foot and Ankle Service

Union Memorial Hospital

1. Rotation Goals and Objectives by Core Competency

General Goals & Objectives PGY 3 Year

A. Patient Care

Residents must be able to provide care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

Residents are expected to:

- 1) Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families
- 2) Gather essential and accurate information about the patient
- 3) Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
- 4) Develop and carry out patient management plans, counsel and educate patients and their families.
- 5) Use information technology to support patient care decisions and patient education.
- 6) Perform competently all invasive procedures considered essential in foot and ankle practice.
- 7) Provide health care services aimed at preventing health problems or maintaining health work with health care professionals, including those from other disciplines, to provide patient-focused care.

B. Interpersonal and Communication Skills

Residents will, at all times, demonstrate behavior that is beyond reproach.

Residents must be able to demonstrate interpersonal and communications skills that result in effective information exchange and teaming with patients, patient's families, and professional associates. Residents are expected to:

- 1) Demonstrate honest, open, civil, and effective communication with patients, staff, and colleagues (medical students, residents & attendings).
- 2) Create and sustain a therapeutic and ethically sound relationship with patients.
- 3) Use effective listening skills Elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
- 4) Work effectively with others as a member or leader of a health care team or other professional group.

C. Professionalism:

Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:

- 1) Demonstrate respect, compassion, and integrity
- 2) A responsiveness to the needs of patients and society that supersedes self-interest
- 3) Accountability to patients, society, and the profession
- 4) Commitment to excellence and on-going professional development
- 5) Demonstrate a commitment to ethical principles pertaining to: Provision or withholding of clinical care

Confidentiality of patient information

Informed consent

Business practices

- 6) Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities

D. Medical Knowledge:

Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological) sciences and the application of this knowledge to patient care. Residents are expected to:

- 1) Demonstrate an investigatory and analytic thinking approach to clinical situations
- 2) Know and apply the basic and clinically supportive sciences which are appropriate to foot and ankle surgery

E. Practice Based Learning and Improvement:

Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:

- 1) Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
- 2) Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems.
- 3) Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
- 4) Use information technology to manage information, access on-line medical information, and support their education.
- 5) Facilitate the learning of students and other healthcare professionals.

F. Systems-Based Practice:

Residents must demonstrate an awareness of and responsiveness to the larger context and system of healthcare and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:

Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice

Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources

- 1) Practice cost-effective health care and resource allocation that does not compromise quality of care
- 2) Advocate for quality patient care and assist patients in dealing with system complexities
- 3) Know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance

G. Detailed Objectives:

- 1) Workup and present a patient with a foot/ankle problem specifying the working diagnosis, additional studies to confirm or change the diagnosis, the treatment alternatives and expected outcome. This includes demonstrating the ability to take a detailed history and perform an accurate foot and ankle exam.
- 2) Recognize and take into account the lower extremity angular and rotational alignment, foot type, footwear, relevant biomechanics, and lifestyle.
- 3) Prescribe appropriate orthotics/prosthetics and shoe wear modifications.
- 4) Describe the natural history of the patient's problem if untreated, treated non-operatively and treated operatively.
- 5) Correctly assist and apply dressings, splints, and casts for protecting injuries and postoperative conditions.
- 6) Perform local anesthesia to include: ankle, metatarsal and digital blocks; field local infiltration; joint injection for pain localization.
- 7) Demonstrate pre-op readiness by specifying the following for each case:
 - Surgical indications and goals
 - Incision, approach relevant anatomy and step-by-step procedure
 - Three-dimensional considerations
 - Expected difficulties and potential pitfalls
 - Contingency plans
 - Criteria of acceptable result
- 8) Perform and assist surgical procedures for common foot and ankle problems:
 - hammertoe, bunions, tendon transfers, ankle subtalar and single joint fusions, excision of OCD's, osteotomies, ankle ligament reconstruction, removal of hardware.
- 9) List the equipment needed for all the basic procedures and demonstrate the ability to correctly review the completeness of this equipment before starting a procedure.
- 10) Demonstrate attention to detail in follow-up for postoperative patients.

- 11) Recognize the postop foot/ankle in trouble.
- 12) Demonstrate the ability to recognize and initiate treatment of complications.
- 13) Critique foot and ankle literature at the department and foot/ankle journal clubs.

2. Resident Supervision (Foot and Ankle Division)

The three full-time attendings that comprise the Union Memorial Foot & Ankle Service (Lew Schon , Greg Guyton, Stuart Miller MDs) expose the residents to a full spectrum of adult and adolescent pathologies in 6 weeks in the PGY-3 year in a one on one learning experience. Both surgical and nonsurgical management strategies are learned for handling this wide range of injuries and disorders. The resident is exposed to lower extremity injuries (e.g. metatarsal calcaneus, talar and plafond fractures) as well as partial foot and leg amputations. Management of systemic diseases that manifest in the foot and ankle are covered as well. Clinical, biologic and biomechanical research opportunities are available to those with a particular interest under the direction of Dr Schon, Janet Yu Jahiro or Mr Brent Parks. A weekly integrated foot and ankle conference is conducted with a mixture of case-based learning, didactic components and literature review. Throughout the year a monthly journal club run by Dr Schon allows residents of all years to participate in on-going learning.

The foot and ankle section works within the Department of Orthopaedics at Union Memorial hospital, a group of 24 orthopaedic surgeons who are nationally recognized as leaders in their respective specialties. The group includes the Curtis National Hand Center, also located at Union Memorial Hospital. This is an academic/private practice opportunity with access to several outstanding labs. In addition to the foot and ankle residents there is a foot and ankle fellowship program that is considered one of the top programs in the country. Our parent hospital organization, MedStar Health, provides an Institutional Review Board research infrastructure and funding for projects. A full state of the art Physical Therapy center is located one floor below the department.

There is a monthly departmental research committee meeting to provide an open forum for discussion, critical analysis, and creative input. A weekly multimedia foot and ankle conference combines case studies and didactics to supplement the educational experience. A foot and ankle hands-on learning center course is also organized for the residents and fellows in past years to consolidate their surgical skills. Advanced computer skills are taught throughout the year depending on resident interest including data management, slide show presentations, digital photographic editing, video production and editing, and creation of technical animations.

Contact Information:

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3. Clinical Activities

The residents are supervised in clinic and the operating room with near constant and continuous one on one feedback by our clinical or research faculty. Each resident has approximately 40-50 hrs per week supervised in this fashion. In addition, the foot and ankle program director is available to meet with the residents every Friday following the foot and ankle conference and before and after the foot and ankle journal clubs. Additional meetings can be scheduled as requested by the resident, attendings or program director as needed. The residents work with several well established attendings engaged in private practices at the Union Memorial Hospital. Approximately 1,500 foot and ankle surgical procedures are performed annually, providing the resident the full gamut of foot and ankle reconstruction. UMH Residents, medical students and JHU Biomedical Engineering students rotate through the foot and ankle service. The residents have an active exchange with the attendings while they are on service, while on call, and when rounding. Physician assistants assist in hospital care of the patients. Fellows attend resident lectures and are part of the team that is responsible to teach the residents basic and advanced foot and ankle skills.

The fellows, residents, and allied health professionals work together in patient care in the office, clinics, hospital, and in the operating room. This outstanding experience, coupled with clinical and basic foot and ankle science research, will prepare the resident for both academic and private practice.

4. Required Readings

Foot and Ankle International (select volumes)

Surgery of the Foot and Ankle (Mann, Coughlin, Saltzman)

5. Didactic Activities

The program conference schedule is as follows:

Weekly Foot and Ankle conference

Participation in weekly resident's conference

Monthly Foot and Ankle Journal Club

Quarterly research meeting

Didactic lecture schedule in accordance with the Union Memorial Hospital residency academic schedule.

6. Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
<u>Schon</u> Clinic starts at 8 AM OR starts at 7:30 AM	UMH OR	Every other week UMH Clinic or ½ day clinic, ½ day OR	UMH Clinic	UMH OR	Foot & Ankle Conference (7 AM) UMH OR (8:30 start)
<u>Guyton</u> Clinic starts at 8 AM OR starts at 8 AM	AM Lutherville Clinic PM UMH Clinic	GCOA Surgery Center all day	All day UMH clinic or AM UMH Clinic/PM Belair Clinic	AM UMH clinic/PM Belair clinic or all day UMH OR	Foot & Ankle Conference (7 AM) UMH OR (8:30 start)
<u>Miller</u> Clinic starts at 8 AM OR starts at 8 AM	AM UMH Clinic PM UMH OR	All day clinic at UMH or Westminster	UMH OR	AM UMH Surgery Center PM UMH Clinic	Foot & Ankle Conference (7 AM) UMH Clinic 8 AM – 2 PM

Good Samaritan Hospital Rotation

1. Rotation Goals and Objectives by Core Competency

General Goals & Objectives PGY – 2 Year

A. Patient Care

- 1) Learn essentials of problem-focused History & Physical Examination.
- 2) Learn principles of interpreting plain radiographs of spine and lower extremities.
- 3) Recognize differential diagnosis of lower extremity pain: spine vs. hip and knee origin
- 4) Demonstrate non-operative skills:
 - a. Splint and brace prescription
 - b. Cast application
 - c. Joint aspiration / injection
 - d. Dislocated total hip reduction
- 5) Demonstrate basic operating skills:
 - a. Patient positioning for total joint replacement
 - b. Preparation & draping of patient
 - c. Assisting with retractors, lights, and maintaining blood-free field
 - d. Layered closure
 - e. Placement of suction drains
 - f. Placement of arthroscopic portals
 - g. Surgical technique for core decompression
 - h. Exposure techniques of primary total joint replacement
- 6) Demonstrate post-operative care:
 - a. Wound care
 - b. Antibiotic prophylaxis
 - c. Anticoagulation management
 - d. Pain management
 - e. Discharge planning
- 7) Consistently mark patients with initials prior to surgery and drape initials into the surgical field.
- 8) Consistently perform surgical time-out prior to incision.

- 9) Report medical errors to attending surgeon when recognized.
- 10) Notify attending in a timely way of all deviations from standard expected post-operative course.
- 11) Organize and supervise medical students and paramedical staff in daily care of service patients.
- 12) Effectively triage patients seen in emergency department.

B. Interpersonal and Communication Skills

- 1) Listen to patients' concerns and express sensitivity and empathy for their medical problems.
- 2) Understand risks and goals of surgery.
- 3) Establish an effective patient/doctor relationship: attire, grooming, manner of speech, concern, commitment.
- 4) Establish appropriate level of communication and relationship with ancillary staff:

Refrain from abusive behavior.

Be courteous.

Report staff who are disrespectful and do their duties in a less than satisfactory manner.
- 5) Demonstrate legible handwriting, and print name under all signatures.
- 6) Date and mark time on all notes.
- 7) Dictate discharge summaries on day of discharge.
- 8) Dictate operative reports on day of surgery.
- 9) Answer patient telephone calls on same day they are received.

C. Professionalism

- 1) Demonstrate sensitivity and responsiveness to differences in culture, gender, age, and impairments of both patients and staff.
- 2) Demonstrate sensitivity to the needs of older patients in terms of support for their specific and multiple needs.

- 3) Demonstrate reliability in performance of responsibilities.
- 4) Demonstrate respect toward opinions of other healthcare professionals.
- 5) Demonstrate ability to express opinions in a manner sensitive to others.

D. Medical Knowledge

- 1) Working knowledge of anatomy of hip, knee, shoulder, and spine.
- 2) Working knowledge of biomechanics & kinematics of hip, knee, shoulder, and spine.
- 3) Introduction to factors associated with treatment of osteonecrosis.
- 4) Differential diagnosis for painful lower extremity joint.
- 5) Recognize emergencies and communicate problem to appropriate personnel:
Compartment Syndrome

Post-Op Hip Dislocation

Post-Op Bleeding, Hematoma

Post-Op Nerve Palsy

Post-Op DVT

Post-Op Respiratory Depression

Acute Infections

Chronic Infections

E. Practice-Based Learning and Improvement

- 1) Analyze the effectiveness of own interpretative, problem-solving and surgical skills.
- 2) Use available information technology to obtain and manage information.
- 3) Be receptive to constructive criticism.

F. Systems-Based Practice

- 1) Demonstrate ability to provide cost-effective care:
Utilize appropriate diagnostic tests.

Appropriate use of antibiotics.

- 2) Utilize health care system to provide optimal patient care outside hospital system.
- 3) Able to fully utilize chain of command in both supervision of subordinates and interaction with seniors.
- 4) Recognize emergencies and communicate problem to appropriate personnel.

General Goals & Objectives PGY – 3 Year

A. Patient Care

- 1) All skill sets for PGY 2, plus:
- 2) Be able to:

Complete History & Physical Examination Form.

Interpret Imaging Studies.

Formulate Differential Diagnosis of any patient with a spine or lower extremity complaint including, but not limited to:

Osteoarthritis

Rheumatoid Arthritis

Osteonecrosis

Sequelae of Perthes Disease

Hip Dysplasia

SCFE

Late Sequelae of Trauma

RSD

- 3) Demonstrate technical competence in operating skills:

Perform arthroscopic debridement/meniscectomy with supervision

Perform bipolar hemi-arthroplasty independently with supervision

Perform primary total knee replacement with supervision

Perform femoral head resurfacing for osteonecrosis with supervision

Perform diagnostic arthroscopy of the shoulder with supervision.

4) Demonstrate post-operative care:

Wound Care

Antibiotic Prophylaxis

Anticoagulation Management

Pain Management

Discharge Planning

- 5) Consistently mark patients with initials prior to surgery and drape initials into the surgical field.
- 6) Consistently perform surgical time-out prior to incision.
- 7) Report Medical Errors to attending surgeon when recognized.
- 8) Organize and supervise PG-2, medical students and paramedical staff in daily care of service patients.
- 9) Organize and run patient service as the chief resident in the absence of the PG-4 resident.

B. Interpersonal and Communication Skills

- 1) All skill sets for PGY 2, plus:
- 2) Effectively communicate with and manage consultations with other specialists in complex or complicated cases.
- 3) Communicate with patient's family concerning follow-up care or complications of surgical procedures.
- 4) Institute or order appropriate diagnostic tests or consultations in post-op patients.

C. Professionalism

- 1) All skill sets for PGY – 2.

D. Medical Knowledge

- 1) All skill sets for PGY 2, plus:
- 2) Surgical approaches for revision total joint replacement.
- 3) Complete technical knowledge of all prosthetic systems used by the different surgeons in the division.
- 4) Complete understanding of pathophysiology and treatment of osteonecrosis.
- 5) Complete understanding of consequences of malalignment in total knee replacement.
- 6) Understanding of differential diagnosis for painful total joint replacement.
- 7) Understanding of treatment of common fractures and orthopaedic injuries.

E. Practice-Based Learning and Improvement

- 1) All skill sets for PGY – 2.

F. Systems-Based Practice

- 1) All skill sets for PGY – 2.

General Goals & Objectives PGY – 4 Year

A. Patient Care

- 1) All skill sets for PGY 2, and 3, plus:
- 2) Organize pre-op, intra-op, and post-op care for all patients on the service.
- 3) Assure patient care coverage for all attendings in division.
- 4) Demonstrate technical competence in operating skills:

Perform complex primary and revision total joint replacements with supervision.

Supervise junior resident in performance of uncomplicated trauma surgery

inter-trochanteric fracture ankle fracture.
- 5) Consistently mark patients with initials prior to surgery and drape initials into the surgical field.

- 6) Consistently perform surgical time-out prior to incision.
- 7) Report medical errors to attending surgeon when recognized.
- 8) Prepare and template operative cases for following week in absence of the fellow.
- 9) Verify equipment needs for following week's surgeries in absence of the fellow.
- 10) Organize and supervise pg-2, 3 residents, sub-interns, medical students and paramedical staff in daily care of service patients.

B. Interpersonal and Communication Skills

- 1) All skill sets for PGY 2, and 3, plus:
- 2) Communicate effectively with attending staff, nursing, pa staff and OR staff to assure continuity of patient care and operative service.

C. Professionalism

- 1) All skill sets for PGY 2 and 3

D. Medical Knowledge

- 1) All skill sets for PGY 2, and 3, plus:
- 2) Working knowledge of electronic medical record.
- 3) Working knowledge of advanced exposure techniques for complex joint replacements including:

Ilioinguinal approach to pelvis

Extended trochanteric slide

Intercalary femoral osteotomy

Extended direct lateral approach

Exposure of acetabulum for anterior and/or posterior column plating

Quadriceps turn-down

Quad snip

Tibial tubercle osteotomy

E. Practice-Based Learning and Improvement

- 1) All skill sets for PGY 2 and 3

F. Systems-Based Practice

- 1) All skill sets for PGY 2 and 3

General Goals & Objectives – Sports Rotation

A. Patient Care

- 1) Perform a competent knee , shoulder, and elbow arthroscopy with the ability to understand all portals and having the ability to navigate effectively to visualize pathology.
- 2) Understand open techniques and when applicable. Understand the difference of several techniques for treatment.
- 3) Perform a capable diagnosis and treatment.
- 4) Perform a thorough and comprehensive sports patient evaluation including patient interview, physical examination, radiographic interpretation and development of a treatment plan.
- 5) Understand the principles and know the key steps in performing an partial menisectomy, an ACL reconstruction surgery, and performing a diagnostic and therapeutic arthroscopy. Also, learn about multiligamentous injuries and dislocations of the knee.
- 6) Understand the principles and know the key steps in performing a rotator cuff repair and labral pathology by using both arthroscopic and open methods. These include:

B. Interpersonal and Communication Skills

- 1) Listen to patients' concerns and express sensitivity and empathy for their medical problems.
- 2) Understand risks and goals of surgery.
- 3) Establish an effective patient/doctor relationship: attire, grooming, manner of speech, concern, commitment
- 4) Establish appropriate level of communication and relationship with ancillary staff:

Refrain from abusive behavior.

Be courteous.

Report staff who are disrespectful and do their duties in a less than satisfactory manner.

- 5) Demonstrate legible handwriting, and print name under all signatures.
- 6) Date and mark time on all notes.
- 7) Dictate discharge summaries on day of discharge.
- 8) Dictate operative reports on day of surgery.
- 9) Answer patient telephone calls on same day they are received.

C. Professionalism

- 1) Demonstrate sensitivity and responsiveness to differences in culture, gender, age, and impairments of both patients and staff.
- 2) Demonstrate sensitivity to the needs of older patients in terms of support for their specific and multiple needs.
- 3) Demonstrate reliability in performance of responsibilities.
- 4) Demonstrate respect toward opinions of other healthcare professionals.
- 5) Demonstrate ability to express opinions in a manner sensitive to others.

D. Medical Knowledge

- 1) Working knowledge of anatomy of hip, knee, shoulder, and spine.
- 2) Working knowledge of biomechanics & kinematics of hip, knee, shoulder, and spine.
- 3) Introduction to factors associated with treatment of osteonecrosis.
- 4) Differential diagnosis for painful lower extremity joint.
- 5) Recognize emergencies and communicate problem to appropriate personnel:

Compartment Syndrome

Post-Op Hip Dislocation

Post-Op Bleeding, Hematoma

Post-Op Nerve Palsy

Post-Op DVT

Post-Op Respiratory Depression

Acute Infections

Chronic Infections

E. Practice-Based Learning and Improvement

- 1) Analyze the effectiveness of own interpretative, problem-solving and surgical skills.
- 2) Use available information technology to obtain and manage information.
- 3) Be receptive to constructive criticism.

F. Systems-Based Practice

- 1) Demonstrate ability to provide cost-effective care:
- 2) Utilize appropriate diagnostic tests.
- 3) Appropriate use of antibiotics.
- 4) Utilize health care system to provide optimal patient care outside hospital system.
- 5) Able to fully utilize chain of command in both supervision of subordinates and interaction with seniors.
- 6) Recognize emergencies and communicate problem to appropriate personnel.

2. Resident Supervision (Good Samaritan Hospital)

The residents on the Good Samaritan Service care for patients in the office, the hospital (Inpatient Ward and Emergency Department), and the operating rooms.

- A. The residents are supervised by the Johns Hopkins Orthopaedics at Good Samaritan Hospital Attending staff: Drs. Hungerford, Khanna, Kulik, Lemma, Peterson, Peroutka, Valaik, and Zikria.
- B. The Senior Resident (PGY-4) is responsible for manpower allocation. This is coordinated with the arthroplasty fellows.
- C. All patients evaluated by the residents will be discussed with and examined by the attending surgeon as well. This provides the opportunity for immediate feedback.
- D. Residents make daily rounds with the floor PA on the orthopaedic inpatient ward.

- E. During the week, the attending of record also sees his/her patients, and the house staff reports any issues to the attending. If an attending is out of town on a weekday, his/her patients are signed out to the attending on call. Consultants, including the pulmonary group and hospitalists, are also resources to use in the care of any patient with medical problems.
- F. All patients and consults will be reviewed by an attending physician at least once every 24-hour period. Junior residents are welcome to initiate care with proper input from the senior most residents. A treatment plan needs to be reviewed with an attending physician within the 24-hour period. Non-urgent consults must be seen by an attending within 24 hours.
- G. Surgical procedures are performed under the direct supervision of an attending physician at all times. The surgical attending determines when a resident should perform appropriate portions of procedures. Residents may also be involved in teaching students.
- H. The resident reports directly to the attending surgeon. The attending surgeon, at a minimum, is immediately available by telephone or pager or, when on call, within 30 minutes by request on site.
- I. For inpatient and emergency department consults, the attending “on call” that day should be contacted and will be responsible for treatment plan, staffing any operative intervention, following the patient during admission and any outpatient follow-up. For questions regarding inpatients or established patients, the attending surgeon for that patient should be contacted. On weekends the attending on call will round on all the patients and can be a resource for all patient questions. If no one is available, contact Mesfin Lemma, M.D. or any other available attending.

3. Clinical Activities

- A. Demonstrate a basic understanding of total joint, spine and sports anatomy, biomechanics and kinesiology.
- B. Perform a related detailed history and physical exam.
- C. Learn to read and interpret routine radiographic images, including MRIs, CAT scans and bone scans. Recognize pathology and note anatomical location.
- D. Develop ability to determine what supplemental testing should be obtained based on findings on the history, physical and radiographic testing.

4. Required Reading

Sub-Specialty	Required Reading	Suggested Reading
<i>Basic Science</i>	Einhorn T., O'Keefe R., Buckwalter J. <u>Orthopaedic Basic Science Foundations of Clinical Practice 3rd Edition</u> , Selected Chapters Basic Science Chapter, <u>Miller Review of Orthopaedics</u> Tutorials/handouts/review CD and questions	
<i>Foot & Ankle</i>	Richardson E. <u>OKU: Foot and Ankle 3</u>	
<i>Hand</i>	Trumble T. <u>Principles of Hand Surgery and Therapy</u> , Selected Chapters Galatz L. <u>OKU: Shoulder and Elbow 3</u>	
<i>Joint Arthroplasty</i>	Barrack R, Booth R. <u>OKU: Hip and Knee Reconstruction 3</u>	
<i>Oncology</i>	McCarthy E, Frassica F., <u>The Pathology of Bone and Joint Disorders</u> Tutorials/handouts/review CD and questions	
<i>Pediatrics</i>	Morrissy R., Weinstein S. <u>Lovell & Winter's Pediatric Orthopaedics</u> , Selected Chapters Abel M. <u>OKU: Pediatrics3</u>	
<i>Spine</i>	Bono C, Garfin S. <u>Spine: Orthopaedic Surgery Essentials</u> .	Spivak J, Connolly P. <u>OKU: Spine 3</u> (Required for those going into Spine)
<i>Sports</i>	Garrick J. <u>OKU: Sports Medicine 3</u> Online Sports Curriculum: http://www.netorthodoc.org/html/sports.html (Password Protected...please request from GRN)	Miller, Cole, Cosgarea & Sekiya: <u>Operative Techniques: Sports Knee Surgery</u> . Jesse DeLee , David Drez , Mark D. Miller , Mark D. Miller . <u>DeLee & Drez's Orthopaedic Sports Medicine: Principles and Practice</u> , 2-Volume Set.
<i>Trauma</i>	Baumgaertner M, Tornetta P. <u>OKU: Trauma 3</u> Wiss D. <u>Master Techniques in Orthopaedic Surgery: Fractures</u> (read before each trauma case)	Orthopaedic Trauma Association Basic Fracture Course. (http://www.hwbf.org/ota/bfc/)

5. Didactic Activities

Weekly conferences are held every other Tuesday morning, 6:30 – 7:30 AM, alternating with every other Friday morning 7:30 – 8:30 AM. The syllabus used is based on readings from OKU 9.

Hip

Week One

Chapter 30: Surgical approaches

Chapter 31: Biomechanics of the hip

Week Two

Chapter 32: Bearing surfaces

Chapter 33: Hip designs

Week Three

Chapter 34: Difficult primary THA

Chapter 35: Posttraumatic management of the hip

Week Four

Chapter 37: Resurfacing

Chapter 42: THA complication

Week Five

Chapter 41: Hip revision

Knee

Week Six

Chapter 1: Surgical exposure in TKA

Chapter 3: Total knee implant design

Week Seven

Chapter 4: Osteotomy

Chapter 5: Alternative to TKA

Chapter 6: Unicompartmental knee arthroplasty

Week Eight

Chapter 9: Primary TKA outcome

Chapter 10: TKA in outliers

Week Nine

Chapter 11: Revision TKA

Chapter 15: The infected TKA

Week Ten

Chapter 13: Osteonecrosis of the knee

Chapter 44: Osteonecrosis of the hip

Sports

Wednesday evenings are the time for the Didactic sessions. Weekly lecture on sports topics from OKU Sports 4th edition.

6. Schedule

Residents are matched with attending and will work with them, per their schedule on the following page.

	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>
<i>MESFIN LEMMA, MD</i>	Surgery @ Good Samaritan Bayview (1 Monday/Month)	Office Hours White Marsh	Office Hours Clinical Assoc./GSH	Surgery @ Good Samaritan	Office Hours Good Samaritan Every other Friday Bayview (1 Friday/Month)
<i>STEVE HARRIS, PA-C for Mesfin Lemma, MD</i>				Office Hours White Marsh p.m.	Office Hours Good Samaritan Every other Friday
<i>A. JAY KHANNA, MD</i>	Office Hours Good Samaritan	Surgery @ Good Samaritan	Surgery @ Good Samaritan	Office Hours White Marsh	Patient Research Bayview (1 Friday/Month)
<i>JOHN WOODS, PA-C for A. Jay Khanna, MD</i>					Office Hours Alternating White Marsh or Good Samaritan
<i>ROBERT PEROUTKA, MD</i>	Surgery @ Good Samaritan	Office Hours York Road	Surgery @ GBMC or Good Samaritan Office Hours @ Good Sam p.m.	Office Hours York Road	Surgery @ Good Sam Office Hours @ American Radiology
<i>KRISTA FREEMAN, PA-C for Robert Peroutka, MD</i>					Office Hours York Road
<i>STEVE PETERSEN, MD Amy White, PA-C</i>	Office Hours Alternating White Marsh or Green Spring Station	Surgery @ Good Samaritan	Patient Research	Surgery @ Good Samaritan	Office Hours Green Spring Station
<i>DANIEL VALAIK, MD</i>	Office Hours Good Samaritan	Surgery @ Good Samaritan	Office Hours Good Samaritan	Surgery @ Good Samaritan	Office Hours Green Spring Station am.
<i>BASHIR ZIKRIA, MD</i>	Office Hours White Marsh	Surgery @ JHOC	Office Hours White Marsh a.m.	Office Hours Green Spring Station a.m. Good Samaritan p.m.	Surgery @ Good Samaritan
<i>KRISTIAN KUNICKY, PA-C for Bashir Zikria, MD</i>			Office Hours White Marsh p.m.	Office Hours Green Spring Station p.m.	
<i>STEVEN KULIK, MD</i>	ASC??	Office Hours Good Samaritan	Office Hours White Marsh	Surgery @ Good Samaritan	Office Hours/Surgery??

Hand and Upper Extremity Division

Shoulder Rotation

1. Rotation Goals and Objectives by Core Competency

General Goals & Objectives PGY 3 Year

A. Patient Care

- 1.) Demonstrate the ability to establish a differential diagnosis and initiate an appropriate treatment plan based on a patient's presenting shoulder complaints and physical findings.
- 2) Order and interpret the appropriate diagnostic tests and imaging studies
- 3) Demonstrate appropriate preoperative, perioperative, and postoperative patient management.
- 4) Become proficient in preoperative planning.
- 5) Develop a non-operative and post-operative shoulder rehabilitation program.

B. Interpersonal and Communication Skills

- 1.) Demonstrate appropriate interactions with office, nursing, OR staff, peers, consulting physicians and administrative staff.
- 2.) Demonstrate a professional and effective relationship with patients and their families.
- 3.) Record accurate medical records in the in- and out-patient settings.

C. Professionalism

- 1) Remain respectful to patients, ancillary personnel, administrative, resident and physician staff.
- 2) Maintain an appropriate appearance.
- 3) Act in a responsible and ethical manner.
- 4) Do no harm.

D. Medical Knowledge

- 1) Demonstrate an understanding of the pathophysiology, clinical presentation, and treatment options of common shoulder disorders to include:

Rotator cuff disease

Shoulder Instability

Arthritic Conditions of the Shoulder

Adhesive Capsulitis

Proximal humeral and clavicular fractures

- 2) Understand the surgical and functional anatomy of the shoulder

Practice Based Learning and Improvement

- 1) The resident should demonstrate a proficiency in performing each of the following:

- Diagnostic shoulder arthroscopy and portal placement
- Arthroscopic anterior acromioplasty
- Arthroscopic debridement, synovectomy and capsular release
- Surgical exposures and surgical techniques for open surgery in the shoulder to include:

rotator cuff repair

shoulder stabilization procedure

hemiarthroplasty, total shoulder and reverse total shoulder arthroplasty

transosseous tendon-bone repair

suture anchor placement

E. Systems-Based Practice

- 1.) Demonstrate ability to adequately communicate with referring physicians.
- 2.) Demonstrate a basic knowledge of the requirements for E&M coding for different levels of care.
- 3.) Understand the postoperative global period for billing purposes.
- 4.) Provide cost effective care.

2. Resident Supervision

- A. The resident acts under the direct supervision of the rotation's attending physician Steve Petersen, M.D., with assistance from Amy White, PAC, and the Johns Hopkins Shoulder fellow when on service.
- B. The resident's daily activities provide the opportunity for close supervision and immediate feedback. The attending is always present and immediately available in the office, and operating room. All patients and in-patient consults evaluated by the resident are discussed with and examined by the attending. Surgical procedures performed by the resident is under the direct supervision of the attending faculty at all times. The attending determines the resident's level of competence and allows for the appropriate degree of responsibility.
- C. For inpatient care, the attending is immediately available by pager. For inpatient consults, the attending can be contacted by cell phone or pager.

Contact Information:

Steve Petersen, M.D.	Office:	410-847-3517
	Fax:	410-583-2963

3. Clinical Activities/Weekly Schedule

Monday

Full-Day Office, 8:30- 6:00

Outpatient office at White Marsh Orthopaedic Clinic the first, third, and fifth Mondays.

Outpatient office at Green Spring Station (GSS) the second and fourth Mondays.

The clinical responsibilities of the R3 in the office setting includes interviewing and examining new and established patients. The resident presents the patient to the attending physician and formulates a differential diagnosis, interprets imaging and diagnostic studies and a treatment plan, returning to the room with the attending for confirmation of the examination and treatment plan. Necessary dictation for medical records is performed and critiqued, with the appropriate corrections and required attending addendums added.

Tuesday

Full-day OR block time @ Good Samaritan Hospital (GSH), 7:00- 6:00

On surgical days the resident is responsible for preoperative planning and thorough review of the patient's medical records. In the operating room the resident functions as first assistant on most occasions. They will always perform portions of the surgical procedure, under the direct supervision of the attending surgeon. Postoperatively they are responsible for writing orders, performing appropriate post-operative patient care, and facilitating the discharge home or transfer to the floor. Each inpatient is seen by the resident in the hospital at least once a day, with the exception of all Sundays when they are relieved of all clinical responsibilities.

Wednesday

Hospital Rounds at GSH 6:00- 6:30 am

Shoulder Conference 7-8 at GSS

Out-patient overflow @ GSS, and/or additional surgical cases @ GSH.

On most occasions Wednesday is a clinical research, or reading day for the R3 who is expected to be present @ GSS until 5 pm.

Thursday

Hospital Rounds at GSH, 6:30- 7:00

Full-day OR block time at GSH, 7:00- 6:00

Friday

Full-day office at GSS, 8:30- 6:00

Saturday

Hospital Rounds at 7:00- 8:00 am

*Saturday Rounds are uncommon

4. Required Readings

Week 1

Hawkins RH, Bokor DJ: Clinical Evaluation of the Shoulder. In: Matsen FA III and Rockwood CA, ed: The Shoulder, 2nd ed. Philadelphia: W.B. Saunders Co, 164-198, 1998.

Weeks 1-4

Hoppenfield S: Surgical exposures in orthopaedics: The anatomic approach.

Preoperative reading is required for the surgical exposures of all scheduled surgical cases.

All PGY 3 residents will be given prepared CDs containing contemporary power point presentations with an extensive bibliography containing a PDF of all articles referenced in the presentations. The presentations are comprehensive and include thorough reviews of shoulder topics and disorders. The R3 is responsible for the independent study of all presentations with preferential attention to those presentations that relate to the patient's shoulder disorders seen in the office and OR.

4. Didactic Activities

The organization of this rotation allows for the constant dialogue between the R3 and the attending physician regarding the patients' shoulder disorders seen in the office and operating room.

A formal shoulder conference occurs every Wednesday morning consisting of a topic presented by the shoulder fellow with discussion and contributions by the Shoulder Service attendings, Drs. Petersen and McFarland.

The power point presentations contained in the CD to be reviewed by the residents are a compilation of didactic lectures. There is allotted generous study time for the study of these lectures on Wednesdays.

5. Weekly Schedule

Identical to the resident's clinical activities.

Hand and Upper Extremity Division – Hand Rotation

1. Rotation Goals and Objectives by Core Competency

General Goals & Objectives PGY 3 Year

A. Patient Care

- 1) Learn the essentials concerning performing a history and physical examination focused on the hand and upper extremity.
- 2) Learn how to interpret plain radiographs of the hand and upper extremity
- 3) Develop the skills for recognizing, evaluating, and treating common hand problems in adults and children.
- 4) Demonstrate common non-operative skills
 - a. Splint and cast application
 - b. Aspirations/injections of joints, cysts, and sites of common tendonitis
 - c. Closed reductions for fractures and joint dislocations
- 5) Demonstrate appropriate surgical etiquette, skills, and technical competencies
 - a. Participate in marking correct surgical site and identifying correct procedure
 - b. Patient positioning, preparation, and draping of the patient
 - c. Being able to function as a first assistant to the surgeon
 - d. Being able to perform in the capacity of surgeon when deemed capable
- 6) Demonstrate the ability to care for patients postoperatively
 - a. Wound care
 - b. Pain management
 - c. Antibiotic regimen
 - d. Principles of Hand therapy post-operatively
 - e. Reporting medical concerns to the attending surgeon when recognized.
- 7) Work effectively with other members of the treating team (nurses, attending physicians, other residents)

B. Interpersonal and Communication Skills

- 1) Be able to listen to patients' concerns and express sensitivity and empathy for their medical problems
- 2) Explain the risks and goals of surgery to patients and their families and alternatives to surgery (perform informed consent for simple procedures)
- 3) Establish an effective patient-doctor relationship.
- 4) Establish an appropriate level of communication and relationship with ancillary staff:
 - a. Refrain from abusive behavior
 - b. Be courteous
 - c. Report staff who are disrespectful and do their duties in a less than satisfactory manner
- 5) Write legible notes with legible signatures and accurate times and dates.

C. Professionalism

- 1) Be sensitive and responsive to differences in culture, gender, age, and impairments in patients and staff.
- 2) Be reliable
- 3) Be respectful of the opinions of other healthcare professions
- 4) Be able to express opinions in a manner that is sensitive to others

D. Medical Knowledge

- 1) Working knowledge of common adult and pediatric hand and upper extremity diagnoses:
 - a. Compressive neuropathies
 - b. Arthritis of the hand and upper extremity
 - c. Wrist ligament disorders
 - d. Hand and upper extremity tendonitis
 - e. Hand and upper extremity infections
 - f. Hand and upper extremity fractures
- 2) Recognize, understand, and treat common pediatric hand anomalies.
- 3) Accurately diagnose and treat common traumatic hand injuries involving the bony and soft tissues.

- 4) Learn the general principles of wound healing and treatment of soft tissue deficits in the hand and upper extremities

E. Practice Based Learning and Improvement

- 1) Ability to analyze the effectiveness of his or her own interpretative problem skills and surgical skills
- 2) Agility to use available information technology to obtain and manage information
- 3) Be receptive to constructive criticism

F. Systems-Based Practice

- 1) Demonstrate ability to provide cost-effective care with appropriate use of diagnostic tests and appropriate use of pharmacological agents.
- 2) Utilization of the health care system to provide optimal patient care outside the hospital system.
- 3) Ability to fully utilize the chain of command in both the supervision of subordinates and the interaction with seniors
- 4) Ability to recognize emergencies and communicate the problems to the appropriate personnel
- 5) Be able to be efficient in time management in issues pertaining to patient care both in and out of the operating room.

2. Resident Supervision

The resident is a part of the hand service, providing care to the patients in the office, the clinic, in the hospital, and in the operating rooms. The resident will perform his or duties under the direct supervision of the hand surgery staff. All patients evaluated by the resident will be discussed with and examined by the attending surgeon as well. The resident's daily activities are managed by the primary faculty of this particular rotation for the junior resident by Dr. Gene Deune and well as the other members of the Hand Surgery faculty: Dr. Thomas Brushart, Dr. Dawn Laporte, and Dr. Heather Lochner. This will provide the opportunity for immediate feedback.

Surgical procedures are performed under the direct supervision the attending physician at all times, including nights, weekends, and holidays. The surgical attending determines when the resident has achieved sufficient abilities to perform independently and in the supervision of other residents and students.

The resident reports directly to the attending surgeon. The attending surgeon, at a minimum is immediately available by telephone or pager or, when on call, within 30 minutes by request on site.

For inpatient and emergency department consults, the attending-on-call should be contacted and will be responsible for the treatment, the staffing of any operative intervention, seeing the patient during the hospitalization, and any outpatient follow-up. For questions regarding inpatients or patients in the PACU, the attending surgeon for that patient should be contacted. For any hand emergencies for an established patient, the attending of record should be called to formulate the treatment plan.

Contact information:

E. Gene Deune, MD
410-283-5328 (pager)

Deb Wagner (Deune Office)
410-955-3885

3. Clinical Activities

Monday

Mondays are generally academic days for Dr. Deune. Occasionally, there are add on cases or multi-service cases with other orthopedic surgeons, particularly Dr. Attar, Dr. McFarland, or Dr. Frassica. Should there be no cases, the resident should help Dr. Brushart or scrub on other orthopedic cases.

Tuesday

Tuesdays is a full clinic day for Dr. Deune on the 5th floor of JHOC. Dr. Brushart sees patients on Tuesday mornings. The resident is expected to be with Dr. Deune during the day. The resident is given the opportunity to perform the initial evaluation of the patient followed by discussions of the history physical findings and proposed treatment plan. They are to see both return and new patient to round out their exposure to the complete care of the patient with hand concerns. The resident is also encouraged to see interesting cases and patients as they present in Dr. Brushart's clinic.

Wednesday

Wednesdays are spent with Dr. Deune in the operating room. Most of the cases done on Wednesdays are in the Johns Hopkins Outpatient center, although occasionally there are cases done in Weinberg. At 4:30 PM, the Hand Division meets to review cases for the coming week and any anticipated challenges or problems. From 5 to 6 pm, the Hand attendings meet with the Hand resident. The resident will have completed assigned reading on specific topics and the hour will be devoted to reviewing question from the OITE and self-assessment exams relevant to these topics.

Thursday

The entire Thursday morning is devoted to the didactics program for the residents. After the didactics are done, the resident should spend the time with Dr. Deune in the operating room.

Friday

Dr. Deune has morning clinic on the 8th floor of JHOC in the Plastic Surgery clinical area. The resident should attend the clinic. The patients on Friday Clinics are a mixture of hand patients and non-hand reconstructive patients. Occasionally, there are cases in the afternoon. Should there be no cases, the resident can use the time for non-clinically related academic pursuits.

4. Required Readings

- Week 1 – Old Trumble “Anatomy” – Chapter 1

- Week 2 – Hand Fractures, Carpal Fractures (Chapters 1,2, 14, 16)

- Week 3 - DRUJ, TFCC, Distal Radius (Chapters 6, 8, 9, 12)

- Week 4 - Fingertip Amputations, Infections (Chapters 32, 35)

- Week 5 - Peripheral Nerves, Brachial Plexus (Chapters 23, 26)

- Week 6 - Flexor and Extensor Tendons (Chapter 20, 21)

- Week 7 - Nerve Compression, Tendon Transfers (Chapter 24, 25, 28)

- Week 8 - Arthritis, Kienbock’s (Chapters 40, 41, 43, +/- 18)

- Week 9 - Thumb, Flaps (Chapters 4, 5, 38)
- Week 10 - Tendonitis, Dupuytren's, Congenital (Chapters 22, 31, 49)

Hand Surgery Recommended readings:

- Selections from article database arranged by topics
- Review of anatomy using Primal Pictures Interactive Anatomy DVD

5. Didactic Activities

This particular rotation will be 5 weeks long out of a 10-week block, split between Dr. Deune and Dr. Peterson. The didactic sessions are conducted on Wednesday afternoons at 5 pm with the resident presenting the questions of the OITE. The discussions are conducted with the attendings present.

Periodically, throughout the year, there are motor skills sessions during the Thursday morning didactic presentations. These are performed at the motor skills laboratory at Johns Hopkins Bayview Medical Center. Recent topics have included upper extremity nerve compression, finger and flexor tendon injuries, and distal radius fractures. A characteristic session will consist of a one-hour grand rounds on the topic provided by the attending. This will be followed by two to three hours dissection with guidance from multiple Hand attendings. The residents will have been provided with a DVD made by the primary attending previous to this session, and will be held responsible for reviewing this material so that the dissections and operative procedures are focused and effective.

6. Weekly Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
AM	Check for add on cases	Deune Clinic – 5 th flr JHOC	Deune OR	Grand Rounds, Didactics	Deune Clinic – 8 th flr JHOC
PM		Deune Clinic – 5 th flr JHOC	Deune OR	Deune OR	Check for add on cases
			430PM Hand Mtg		
			500PM Didactics Conf		

Hand and Upper Extremity Division

1. Rotation Goals and Objectives by Core Competency

General Goals & Objectives PGY 4 Year

B. Patient Care

- 1) Learn the essentials concerning performing a history and physical examination focused on the hand and upper extremity
- 2) Learn the principles of interpreting a plain radiograph of the hand and upper extremity
- 3) Recognize the historical symptoms of compression neuropathy and upper extremity arthritis
- 4) Know the appropriate evaluation for compression neuropathy, wrist ligament injury
- 5) Demonstrate common non-operative skills
 - a. Splint application
 - b. Cast application
 - c. Joint aspiration/injection
 - d. Fracture manipulation
 - e. Joint reduction
 - f. Carpal tunnel and trigger digit injection
- 6) Demonstrate appropriate operating room skills/technical competency:
 - a. Patient positioning and preparation and draping of the patient
 - b. Assisting with retractors and lights
 - c. Carpal tunnel release and ulnar nerve transposition
 - d. Thumb CMC arthroplasty
 - e. Irrigation and debridement of infections in the hand and upper extremity
- 7) Demonstrate the ability to care for patients postoperatively:
 - a. Wound care
 - b. Antibiotic prophylaxis
 - c. Pain management
- 8) Consistently mark patients with initials prior to surgery and drape the initials into the surgical field.
- 9) Consistently perform the surgical time out prior to incision
- 10) Report medical errors to the attending surgeon when recognized
- 11) Organize and supervise the interns, junior and senior residents, and paramedical staff in the daily care of the service patients

- 12) Develop patient management plan for patients admitted directly to the hospital

C. Interpersonal and Communication Skills

- 1) Able to listen to patients' concerns and express sensitivity and empathy for their medical problems
- 2) Explain the risks and goals of surgery to patients and their families and alternatives to surgery (perform informed consent for simple procedures)
- 3) Establish an effective patient doctor relationship – attire, grooming, manner of speech, concern, and commitment
- 4) Establish an appropriate level of communication and relationship with ancillary staff:
 - a) Refrain from abusive behavior
 - b) Be courteous
 - c) Report staff who are disrespectful and do their duties in a less than satisfactory manner
- 5) Be able to use legible handwriting and print one's name under all signatures
- 6) Date and time all note

D. Professionalism:

- 1) Sensitive and responsive to differences in culture, gender, age, and impairments of both patients and staff
- 2) Reliable in the performance of responsibilities
- 3) Respectful of the opinions of other healthcare professionals
- 4) Ability to express opinions in a manner that is sensitive to others

E. Medical Knowledge

- 1) Working knowledge of common hand and upper extremity pathology
 - a) Compression neuropathy
 - b) Arthritis of hand and upper extremity
 - c) Wrist ligament disorders
 - d) Hand and upper extremity tendinitis
 - e) Hand and upper extremity infections
 - f) Hand and upper extremity fractures
- 2) Working knowledge of common fractures
 - a) Boxer's
 - b) Bennett's
 - c) Metacarpal
 - d) Distal radius

F. Practice Based Learning and Improvement

- 1) Ability to analyze the effectiveness of his or her own interpretative, problem solving, and surgical skills
- 2) Ability to use available information technology to obtain and manage information
- 3) Receptive to constructive criticism

G. Systems-Based Practice

- 1) Demonstrate ability to provide cost-effective care:
 - a. Utilization of appropriate diagnostic tests
 - b. Appropriate use of antibiotics
- 2) Utilization of the healthcare system to provide optimal patient care outside the hospital system
- 3) Ability to fully utilize the chain of command in both the supervision of subordinates and the interaction with seniors
- 4) Ability to recognize emergencies and communicate the problem to appropriate personnel

2. Resident Supervision (Hand Service)

The resident is part of the hand surgery team, providing care of patients in the clinic, the hospital, and the operating room. The resident acts under the direct supervision of the hand surgery staff. All patients evaluated by the resident will be discussed with and examined by the attending surgeon as well. The resident's daily activities are managed by the faculty – Drs. Thomas Brushart, Dawn LaPorte, E. Gene Deune, and Heather Lochner. This provides the opportunity for immediate feedback.

Surgical procedures are performed under the direct supervision of an attending physician at all times, including nights, weekends, and holidays. The surgical attending determines when a resident should and has achieved independence in procedures, and in supervising other residents and students.

The resident reports directly to the attending surgeon. The attending surgeon, at a minimum, is immediately available by telephone or pager or, when on call, within 30 minutes by request on site.

For inpatient and emergency department consults, the attending “on call” that week should be contacted and will be responsible for treatment plan, staffing any operative intervention, following the patient during admission and any outpatient follow-up. For questions regarding inpatients or patients in PACU, the attending surgeon for that patient should be contacted. For any hand emergencies on a non-hand call week (for example, orthopaedic inpatient, trauma patient), contact the hand faculty member who is in the clinic or operating room that day or, if no one available, contact Dawn LaPorte, M.D.

Contact information:

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Dawn LaPorte, M.D.

Thomas Brushart, M.D.

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410-434-0728 (pager)

410-434-3981 (pager)

410-235-0921 (home)

410-602-5263 (home)

3. Clinical Activities

Monday

Mondays are devoted largely to Dr. Brushart's surgeries. These include two days per month of outpatient surgery, one full day of inpatient surgery and one day of pediatric surgery. Additionally, on the first Monday of the month the afternoon is devoted to the multidisciplinary Brachial Plexus Clinic held at the Kennedy Krieger Institute.

Tuesday

Resident spends Tuesday with Drs. Brushart and Deune in the multidisciplinary Hand Clinic. Residents are provided with the opportunity to perform the initial evaluation of patients followed by discussion of the history, physical findings and proposed treatment plan. They are also afforded the opportunity to obtain follow-up on patients that they have seen previously in the operating room. With both a Plastic and Orthopaedic hand surgeon working together this provides a wide variety of clinical material.

Wednesday

Wednesday is spent with Dr. LaPorte. Morning is devoted to outpatient surgeries and the afternoon to a busy Hand Clinic. At 4:30 the entire Hand Division meets to review cases for the coming week and any anticipated challenges or problems. From 5 to 6 p.m. the Hand attendings meet with the Hand resident. The resident will have completed assigned readings on specific topics and the hour will be devoted to reviewing questions from the OITE and self-assessment exams relevant to these topics.

Thursday

The entirety of Thursday morning is devoted to the didactic program for the entire resident body. Thursday afternoon is then spent in the operating room with Dr. LaPorte.

Friday

Friday is devoted to operating with Dr. Lochner. Dr. Lochner has a special interest in pediatric and congenital hand problems and this time provides a unique exposure to this aspect of hand surgery.

4. Required Readings – Hand Surgery Update

Week 1 -	Old Trumble “Anatomy” – Chapter 1
Week 2 -	Hand Fractures, Carpal Fractures Chapters 1, 2 Chapters 14, 16
Week 3 -	DRUJ, TFCC, Distal Radius Chapters 6, 8, 9 and 12
Week 4 -	Fingertip Amputations, Infections Chapters 32, 35
Week 5 -	Peripheral Nerves, Brachial Plexus Chapters 23, 26
Week 6 -	Flexor and Extensor Tendons Chapters 20, 21
Week 7 -	Nerve Compression, Tendon Transfers Chapters 24, 25, 28
Week 8 -	Arthritis, Kienbock’s Chapters 40, 41, 43 (+/- 18)
Week 9 -	Thumb, Flaps Chapters 4, 5, 38

Week 10 - Tendinitis, Dupuytren's, Congenital
Chapters 22, 31, 49

“Hand Surgery recommended readings – selections from database of articles arranged by topic and available electronically”

Review of anatomy using Primal Pictures Interactive Anatomy DVD”

5. Didactic Activities

The Hand Rotation is 10 weeks long. The Hand Surgery Update IV text is divided into ten topical subsets. Each one of these represents required reading for a given week. On Wednesday afternoon the Hand resident meets with all of the Hand attendings at 5 p.m. for the didactic conference. This consists of discussion of the required reading with review of all the relevant in-training and self-assessment exam questions for the past several years. This discussion is often supplemented with required reading from the selected reading lists provided by Dr. Tom Trumble and by Dr. Peter Stern.

At the beginning of the rotation, residents are provided with a copy of the Primal Pictures DVD on the hand. This provides them with a complete review of hand anatomy and surgical approaches in an interesting format which allows them to perform digital dissections and operative procedures. This is a very effective review of hand anatomy.

Periodically throughout the year there are motor skills sessions during the Thursday morning didactic presentations. These are performed at the motor skills laboratory at Johns Hopkins Bayview Medical Center. Recent topics have included upper extremity nerve compression, finger and flexor tendon injuries, and distal radius fractures. A characteristic session will consist of a one hour grand rounds on the topic provided by the attending. This will be followed by two to three hours dissection with guidance from multiple Hand attendings. The residents will have been provided with a DVD made by the primary attending previous to this session, and will be held responsible for reviewing this material so that the dissections and operative procedures are focused and effective.

6. Hand Division Weekly Schedule

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
1st Monday/Month Brushart – KKI PM	Hand Clinic Lochner – KKI LaPorte GSS	LaPorte OR – AM Lochner Clinic - AM	Resident Didactic Lochner – WM Laporte - OR	Lochner –OR Laporte – Union Memorial
Dr. Brushart – OR Lochner – Mt Washington	LaPorte GSS	LaPorte - Clinic	Lochner – WM Laporte - OR	Laporte – OR Laporte – Union Memorial
Dr. Brushart - OR	Dr. Deune LaPorte GSS – PM	Laporte – OR 4:30 - Hand Meeting	Lochner – WM Laporte - OR	Lochner –OR Laporte – Union Memorial
Dr. Brushart - OR		Laporte – OR 5:00 - Didactic Conference		Laporte – Union Memorial

Musculoskeletal Service

Department of Radiology

Radiology residents rotate through the musculoskeletal section for a total of 18 weeks (4 rotations) during the 4-year residency. This includes 12 weeks dedicated to conventional radiography, and six weeks dedicated to advanced MSK imaging modalities including MRI, CT and arthrography. At the conclusion of each 4 week rotation, the resident should be able to demonstrate competence in the areas of patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems based practice according to the criteria outlines for each rotation. The extent to which the resident has met the objectives will be evaluated at the end of each month.

1. Rotation Goals and Objectives by Core Competency

General Goals & Objectives PGY – 4 Year

ROTATION 1

A. Patient Care – at the end of the rotation, the resident should be able to:

1. Screen and supervise routine musculoskeletal and spine radiographic studies.
2. Request and Q/C appropriate additional radiographic views.
3. Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
4. Gather essential and accurate information about patients that is relevant to the interpretation of the radiologic examination.
5. Use information technology to support patient care decisions.

B. Interpersonal and Communication Skills – at the end of the rotation, the resident should be able to:

1. Interact with primary care attending physicians and residents in consultation when common musculoskeletal conditions are in question.
2. Use effective listening and writing skills.
3. Dictate accurate and concise radiology reports for basic musculoskeletal imaging studies.

C. Professionalism – at the end of the rotation, the resident should be able to:

1. Demonstrate respect, compassion, and integrity to patients and other physicians.
2. Demonstrate sensitivity and responsiveness to patient's culture, age, gender and disabilities.

D. Medical Knowledge – at the end of the rotation, the resident should be able to:

1. Identify radiographic injury patterns involving the spine and extremities.
2. Given abnormal radiographic images, recognize basic musculoskeletal pathologies and give a differential diagnosis
3. Know and apply basic and clinically supportive sciences appropriate to the discipline.

E. Practice-Based Learning and Improvements – at the end of the rotation, the resident should be able to:

1. Use information technology to manage information, access on-line medical information, and support their own education.

F. Systems-Based Practice – at the end of the rotation, the resident should be able to:

1. Understand how their patient care affects other healthcare professionals.

ROTATION 2

A. Patient Care – at the end of the rotation, the resident should be able to:

1. Screen and supervise more complex musculoskeletal and spine studies, including CT and MRI.
2. Screen and supervise patient for potential musculoskeletal biopsies.
3. Make informed decisions about diagnostic and therapeutic interventions based upon the results of musculoskeletal imaging studies.

B. Interpersonal and Communication Skills – at the end of the rotation, the resident should be able to:

1. Work effectively with clinicians as a member of the healthcare team.
2. Dictate accurate and concise radiologic reports for more complex musculoskeletal conditions.

C. Professionalism – at the end of the rotation, the resident should be able to:

1. Demonstrate a commitment to the ethical principles pertaining to confidentiality of patient information.
2. Demonstrate responsiveness to the needs of patients that supercede self-interest.

D. Medical Knowledge – at the end of the rotation, the resident should be able to:

1. Demonstrate a basic knowledge of the anatomy of the musculoskeletal system.
2. Given more complex cases of spinal trauma, make an accurate interpretation of the information presented on the images.
3. Discuss the basic principles of CT and MRI physics.
4. Describe basic CT and MR imaging protocols.
5. Demonstrate an analytic thinking approach to the performance of musculoskeletal studies for diverse clinical situations.

E. Practice-Based Learning and Improvements – at the end of the rotation, the resident should be able to:

1. Locate, appraise and assimilate evidence from scientific studies related to their patient's problems.

F. Systems-Based Practice – at the end of the rotation, the resident should be able to:

1. Know how types of musculoskeletal imaging practice and delivery systems differ from one another.
2. Effectively prioritize patients requiring musculoskeletal and spinal CT and MRI studies.

ROTATION 3

A. Patient Care – at the end of the rotation, the resident should be able to:

1. Screen and supervise, with an increasing level of responsibility, most musculoskeletal imaging studies.
2. Understand the indications for image guided musculoskeletal intervention including vertebral biopsy, disc space biopsy, joint aspiration and vertebral augmentation.
3. Understand the indications for emergent or semi-urgent CT and MRI examinations of the spine and musculoskeletal system

B. Interpersonal and Communication Skills – at the end of this rotation, the resident should be able to:

1. Dictate accurate and concise reports for complex musculoskeletal imaging studies including those involving traumatic, neoplastic, infectious and inflammatory spinal pathologies.

C. Professionalism – at the end of this rotation, the resident should be able to:

1. Demonstrate a commitment to excellence and on-going professional development.

D. Medical Knowledge – at the end of the rotation, the resident should be able to:

1. Demonstrate an increasing ability to recognize abnormalities on musculoskeletal imaging studies and discuss a differential diagnosis.
2. Demonstrate the ability to recognize urgent and semi-urgent spinal and musculoskeletal pathologies on MRI and CT studies.

E. Practice-Based Learning and Improvements – at the end of the rotation, the resident should be able to:

1. Facilitate the teaching of medical students and other health care professionals

F. Systems-Based Practice – at the end of the rotation, the resident should be able to:

1. Practice cost-effective evaluation of patients requiring advanced musculoskeletal imaging studies that does not compromise the quality of care.

ROTATION 4

A. Patient Care – at the end of the rotation, the resident should be able to:

1. Understand the indications and technical aspects of arthrography, and bone biopsy.
2. Demonstrate a basic ability to triage and protocol advanced musculoskeletal imaging studies.
3. Demonstrate a basic ability to post-process from musculoskeletal CT studies and MR angiograms.
4. Counsel and educate patients and their families regarding different musculoskeletal imaging studies.

B. Interpersonal and Communication Skills – at the end of the rotation, the resident should be able to:

1. Dictate accurate and concise reports for musculoskeletal imaging studies using advanced CT and MR imaging techniques.
2. Consult effectively with senior level clinical colleagues in all relevant disciplines.

C. Professionalism – at the end of the rotation, the resident should be able to:

1. Demonstrate accountability to patients, society and the profession.
2. Demonstrate a commitment to the ethical principles pertaining to business practices.

D. Medical Knowledge – at the end of the rotation, the resident should be able to:

1. Discuss criteria for a modifying musculoskeletal imaging studies and the need for image guided procedures based upon the patient's clinical problem.
2. Discuss complex principles of CT and MR physics.
3. Recognize subtle and/or complex musculoskeletal and spinal pathologies on MRI and CT and give a differential diagnosis.
4. Demonstrate a basic ability to interpret arthrography, CT arthrography and MR arthrography.

E. Practice-Based Learning and Improvements – at the end of the rotation, the resident should be able to:

1. Apply basic knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.

F. Systems-Based Practice – at the end of the rotation, the resident should be able to:

1. Know how types of musculoskeletal practices differ from one another, including methods of controlling costs and allocating resources.

2. Resident Supervision

Orthopaedic residents will act strictly as observers without clinical responsibility.

Contact Information:

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3. Clinical Activities

A. Radiology Reading Room 7 A.M. – 5 P.M.

B. Arthrograms

C. Biopsies

4. Required Reading

MRI of Orthopaedic Surgeons – A. Jay Khanna

5. Didactic Activities

Conferences:

- Vascular Anomalies
- Multidisciplinary Spine
- Sports Arthroscopy
- Foot & Ankle
- Orthopaedic Grand Rounds
- Sarcoma Conference
- Fellows' Lecture
- Radiology Resident Lectures

6. Schedule

Monday – Friday

7 AM to 5 PM

MSK Reading Room

JHOC 5

Orthopaedic Oncology Division

1. Rotation Goals and Objectives by Core Competency

General Goals & Objectives PGY 1 Year

A. Patient Care

- 1) Learn the essentials concerning performing a history and physical examination
- 2) Learn the principles of interpreting a plain radiograph (be able to recognize a fracture or bone tumor)
- 3) Recognize the historical symptoms of a malignant bone tumor.
- 4) Know the evaluation strategy for the patient with a carcinoma of unknown origin.
- 5) Demonstrate common non-operative skills
 - a. Splint application
 - b. Cast application
 - c. Joint aspiration/injection
 - d. Fracture manipulation
 - e. Joint reduction
- 6) Demonstrate basic operating room skills:
 - a. Patient positioning
 - b. Preparation and draping of the patient
 - c. Assisting with retractors, lights, and maintaining a blood free field
 - d. Learn layered closure
 - e. Placement of suction drains
- 7) Demonstrate the ability to care for patients postoperatively:
 - a. Wound care
 - b. Antibiotic prophylaxis
 - c. Anticoagulation management
 - d. Pain management
- 8) Consistently mark patients with initials prior to surgery and drape the initials into the surgical field.
- 9) Consistently perform the surgical time out prior to incision
- 10) Report medical errors to the attending surgeon when recognized
- 11) Organize and supervise medical students.

12) Develop patient management plan for patients admitted directly to the hospital

B. Interpersonal and Communication Skills

- 1) Listen to patients' concerns and express sensitivity and empathy for their medical problems
- 2) Explain the risks and goals of surgery to patients and their families and alternatives to surgery (perform informed consent for simple procedures)
- 3) Establish an effective patient-doctor relationship – attire, grooming, manner of speech, concern, and commitment
- 4) Establish an appropriate level of communication and relationship with ancillary
- 5) staff:
 - a. Refrain from abusive behavior
 - b. Be courteous
 - c. Report staff who are disrespectful and do their duties in a less than satisfactory manner (Patient Safety Net).
- 6) Use legible handwriting and print one's name under all signatures (or use the stamp).
- 7) Date and time all notes
- 8) Dictate discharge summaries on the day of surgery
- 9) Answer patient telephone calls on the same day that they are received

C. Professionalism

- 1) Be sensitive and responsive to differences in culture, gender, age, and impairments of both patients and staff
- 2) Be sensitive to the needs of trauma and cancer patients in terms of emotional support
- 3) Be reliable in the performance of responsibilities
- 4) Respect the opinions of other healthcare professionals
- 5) Express opinions in a manner that is sensitive to others

D. Medical Knowledge

- 1) Working knowledge of the common orthopaedic emergencies
 - a. Compartment syndrome
 - b. Cauda equina syndrome
 - c. Fat embolism syndrome
 - d. Pulmonary embolism
 - e. Deep venous thrombosis
- 2) Working knowledge of simple common fractures
 - a. Clavicle
 - b. Distal radius
 - c. Ankle
 - d. Hip

E. Practice Based Learning and Improvement

- 1) Analyze the effectiveness of his or her own interpretative, problem solving, and surgical skills
- 2) Use available information technology to obtain and manage information
- 3) Be receptive to constructive criticism

F. Systems-Based Practice

- 1) Demonstrate ability to provide cost effective care:
 - a. Use appropriate diagnostic tests
 - b. Use of antibiotics
 - c. Use of anti-coagulation medication
- 2) Use the health care system to provide optimal patient care outside the hospital system
- 3) Utilize the chain of command in both the supervision of subordinates and the interaction with seniors
- 4) Recognize emergencies and communicate the problem to appropriate personnel.

General Goals & Objectives PGY 5 Year

A. Patient Care

- 1) Complete the history and physical examination form, interpret imaging studies, and formulate a differential diagnosis of a patient with a bone or soft tissue lesion.
- 2) Recognize the historical symptoms of a malignant bone tumor.
- 3) Know the evaluation strategy for the patient with a carcinoma of unknown origin.

- 4) Choose reasonable options for the fixation of metastatic lesions to long bones and know the indications for prophylactic fixation of metastatic lesions.
- 5) Demonstrate technical competence in the operating room:
 - a. Perform intramedullary nailing independently
 - b. Perform bipolar hemi-arthroplasty independently
 - c. Choose the correct route for needle and open biopsy of bone and soft tissue lesions
 - d. Demonstrate basic proficiency in the dissection of nerves and blood vessels
- 6) Demonstrate the ability to care for patients postoperatively:
 - a. Wound care
 - b. Antibiotic prophylaxis
 - c. Anticoagulation management
 - d. Pain management
- 7) Consistently mark patients with initials prior to surgery and drape the initials into the surgical field.
- 8) Consistently perform the surgical time out prior to incision
- 9) Report medical errors to the attending surgeon when recognized
- 10) Organize and supervise the interns, junior and senior residents, and paramedical staff in the daily care of the service patients.
- 11) Develop patient management plan for patients admitted directly to the hospital

B. Interpersonal and Communication Skills

- 1) Able to listen to patients' concerns and express sensitivity and empathy for their medical problems
- 2) Explain the risks and goals of surgery to patients and their families and alternatives to surgery (perform informed consent)
- 3) Establish an effective patient doctor-relationship – attire, grooming, manner of speech, concern, and commitment
- 4) Establish an appropriate level of communication and relationship with ancillary staff:
 - a. Refrain from abusive behavior
 - b. Be courteous
 - c. Report staff who are disrespectful and do their duties in a less than satisfactory manner
 - d. Utilize the Patient Safety Net

- 5) Use legible handwriting and print one's name under all signatures (or use the stamp)
- 6) Date and time all notes
- 7) Dictate operative notes on the day of surgery
- 8) Dictate discharge summaries on the day of surgery
- 9) Answer patient telephone calls on the same day that they are received

C. Professionalism

- 1) Be sensitive and responsive to differences in culture, gender, age, and impairments of both patients and staff
- 2) Be sensitive to the needs of cancer patients in terms of emotional support
- 3) Be reliable in the performance of responsibilities
- 4) Respect the opinions of other healthcare professionals
- 5) Express opinions in a manner that is sensitive to others

D. Medical Knowledge

- 1) Working knowledge of the presentation, radiographic and histological features of common bone and soft tissue lesions
- 2) Answer the sample written tumor questions
- 3) Interpret the images on the sample tumor CD-ROM
- 4) Apply knowledge base in the care of patients

E. Practice Based Learning and Improvement

- 1) Analyze the effectiveness of his or her own interpretative, problem solving, and surgical skills
- 2) Use available information technology to obtain and manage information
- 3) Be receptive to constructive criticism
- 4) Complete the leadership written exercise each year

F. Systems-Based Practice

- 1) Demonstrate ability to provide cost effective care:
 - a. Utilization of appropriate diagnostic tests
 - b. Appropriate use of antibiotics
- 2) Use the health care system to provide optimal patient care outside the hospital system
- 3) Fully utilize the chain of command in both the supervision of subordinates and the interaction with seniors
- 4) Recognize emergencies and communicate the problem to appropriate personnel
- 5) Utilize the Patient Safety Net

2. Resident Supervision (Orthopaedic Oncology Service)

The resident is part of the orthopaedic oncology team and a valued resource to provide care of patients in the clinic, the hospital, and the operating room. The resident acts under the direct supervision of the orthopaedic oncology attending surgeons. All patients evaluated by the resident in the hospital or clinic will be discussed with and examined by the attending surgeon as well. The resident's daily activities are managed by the faculty

members Drs. Kristy Weber, Samer Attar and Frank Frassica. This provides the opportunity for immediate feedback.

Surgical procedures are performed under the direct supervision of an attending physician at all times, including nights, weekends, and holidays. The attending surgeon will be there for the timeout and all critical portions of the case (this usually means the entire case). The surgical attending determines the resident's level of competence and allows for the appropriate degree of responsibility.

The resident reports directly to the attending surgeon. The attending surgeon, at a minimum, is immediately available by pager or, when on call, within 30 minutes by request on site.

Contact information:

Julie Wiseman (Weber) 410-955-2888

Brittany Bridgeford (Frassica-administrative) 410-502-1714

Marina Romanova (Frassica/Attar – patient care, Attar - administrative) 410-502-2698

Danie Noble, R.N.

410-502-7139

410-283-6214 (pager)

Kristy Weber, M.D.

410-283-2771 (pager)

Frank Frassica, M.D.

410-283-8102 (pager)

Samer Attar, M.D.

410-283-0017 (pager)

3. Clinical Activities

The JH residents have multiple opportunities to see musculoskeletal oncology patients in clinic and in the operating room. They also round on the inpatient tumor service on a daily basis. They spend time in three different faculty clinics (Drs. Weber, Attar, and Frassica) with regular teaching during each patient presentation. They spend time in the operating room with Drs. Weber and Attar. The residents also see inpatient oncology consults related to both sarcoma and metastatic bone disease.

4. Required Readings

Musculoskeletal Oncology and Metabolic Disease In AAOS Board Review Text, J. Lieberman (ed), AAOS, p. 391-489, 2009 (Weber/Frassica – section editors).

McCarthy EF and Frassica FJ: Pathology of Bone and Joint Disorders, p.185-269, W.B. Saunders, 1998.

The James F. Wenz, M.D. Orthopaedic Surgery Resident Survival Guide, 2007

Orthopaedic Pathology Sample Cases for Studying (on CD), Frassica, et al

Frassica FJ: Board Preparation Questions: Pathology/Oncology, 2007

Journal Club articles – twice during each rotation (2-3 articles chosen about relevant tumor topics)

Additional reference - FM Enzinger and Weiss SW: Soft Tissue Tumors, 3rd ed, p. 165-230, 381-430, 579-628, 735-756, 821-888, Mosby, 1995

5. Didactic Activities

Johns Hopkins Board Review Course (spring)– 1 comprehensive day of musculoskeletal pathology
OITE review (fall) – 1 comprehensive day of musculoskeletal pathology
Formal tumor journal club – twice per rotation (residents present and discuss articles with faculty)
Formal case presentations (for evaluation) – twice per rotation
Weekly multidisciplinary tumor conference with review of clinical/radiographic/pathologic presentation of patients as well as proposed treatment
Informal teaching in clinic related to each tumor patient with review of initial imaging, workup and treatment
Informal teaching in OR related to indications and technical considerations for surgical management of patients with primary bone/soft tissue tumors or metastatic bone disease
PDF file attached with additional reading/course curriculum

6. Schedule

The residents (chief and occasional intern) split the time where needed most. There is a concerted effort to be sure there is a reasonable mix of both clinic and OR cases. The residents round each morning on the tumor service. There is a journal club with formal case presentation twice each rotation.

Monday

Frank Frassica, M.D. – clinic
Samer Attar, M.D. – OR

Tuesday

Kristy Weber, M.D. – OR
Samer Attar, M.D. – clinic (every other week)

Wednesday

7am – Weekly multidisciplinary tumor conference
Kristy Weber, M.D. – clinic

Thursday

Samer Attar, M.D. – clinic

Friday

Kristy Weber, M.D. – OR
Samer Attar, M.D. – OR

Orthopaedic Pathology

1. Rotation Goals and Objectives by Core Competency

General Goals & Objectives PGY 1 Year

A. Patient Care

There is no direct patient care in this rotation, however, residents are expected to always make the correct diagnosis.

B. Interpersonal and Communications Skills

The resident must be able to accurately discuss various diseases as well as make oral presentations about specific orthopaedic diseases.

C. Professionalism

The resident is expected to be on time every day. He/she is expected to have mastered the daily reading assignment

D. Medical Knowledge

- 1) The resident will be able to compare and contrast the clinical, radiologic, and histopathologic features of the following entities:

Primary vs. Secondary Osteoarthritis

Differential Diagnosis of Synovitis

Pigmented Villonodular Synovitis vs Hemosiderotic Synovitis

Pigmented Villonodular Synovitis Involving Bone vs. Giant Cell Tumor of Bone

Primary Synovial Chondrometaplasia vs. Secondary Synovial Chondrometaplasia.

Primary Synovial Chondrometaplasia vs. Synovial Chondrosarcoma.

Tumoral Calcinosis vs. Calcium Pyrophosphate Deposition Disease

Subcondroral Cysts

The Pathology of Total Joint Failure: Aseptic vs. Septic Loosening

Extra-Articular Pigmented Villonodular Synovitis vs. Epithelioid Sarcoma

The Cytologic Grading Of Cartilage Lesions

Enchondroma vs. Low Grade Central Chondrosarcoma

Osteochondroma vs. Surface Chondrosarcoma vs. Periosteal Chondroma

Chondrosarcoma of the Spine vs. Chordoma

Chondroblastoma vs. Clear Cell Chondrosarcoma

Chondromyxoid Fibroma vs. Medullary Chondrosarcoma

Dedifferentiated Chondrosarcoma vs. Sarcoma Complicating a Bone

Infarct

Dense Periosteal Reactions: Parosteal Osteoma vs. Osteoid Osteoma vs.

Stress Fracture

Osteoblastoma vs. Osteoblastic Osteosarcoma

Parosteal Osteosarcoma vs. Periosteal Osteosarcoma

Intraosseous Well-Differentiated Osteosarcoma vs. Fibrous Dysplasia

Aneurysmal Bone Cyst vs. Telangiectatic Osteosarcoma

Myositis Ossificans vs. Parosteal Osteosarcoma

Distal Femoral Cortical Irregularity Syndrome vs. Osteosarcoma

Bizarre Parosteal Osteochondromatous Proliferation vs. Florid Reactive
Periostitis vs. Osteosarcoma.

Cystic Angiomatosis vs. Epithelioid Hemangioepithelioma vs.
Angiosarcoma

Unicameral Bone Cyst vs. Intraosseous Lipoma

Aneurysmal Bone Cyst vs. Simple Bone Cyst

Giant Cell Tumor vs. Giant Cell Reparative Granuloma

Giant Cell Tumor vs. Malignant Fibrous Histiocytoma

Nonossifying Fibroma vs. Giant Cell Tumor vs. Chondroblastoma

Fibrous Dysplasia vs. Osteofibrous Dysplasia vs. Adamantinoma

Desmoplastic Fibroma vs. Fibrosarcoma

Primary Lymphoma Of Bone vs. Ewing's Sarcoma (And Peripheral
Neuroectodermal Tumor)

Osteomyelitis vs. Eosinophilic Granuloma

Chronic Osteomyelitis vs. Solitary Plasmacytoma

Lytic Paget's Disease vs. Fibrous Dysplasia and Osteoblastoma

Late Phase Paget's Disease vs. Osteoblastic Metastatic Carcinoma

Radiation Osteodysplasia vs. Metastatic Neoplasm

Bone Marrow Edema vs. Osteonecrosis vs. Artifact\

E. Practice Based Learning and Improvement

The resident will learn how to research topics on the internet.

F. Systems-Based Practice

The resident will participate in the weekly interdisciplinary conference as well as the monthly disease conference.

2. Resident Supervision

There is daily interaction with the Professor who helps the resident learn to diagnose bone and joint disease.

Contact Information:

Edward F. McCarthy, M.D.

Office: 410-614-3653

3. Clinical Activities

None.

4. Required Readings

McCarthy and Frassica: The Pathology of Bone and Joint Disorders

5. Didactic Activities

The residents have required readings each night that take from 2 to 4 hours. They review cases and then discuss the cases with the Professor.

6. Weekly Schedule

The residents meet daily with the Professor from 2 – 3:30. Prior to meeting, residents are required to review and diagnose cases. The remaining portion of the day is devoted to reading and study.

Division of Pediatric Orthopaedics

7. Rotation Goals and Objectives by Core Competency

General Goals & Objectives PGY-2 Year

A. Patient Care

The resident will develop the ability to:

- 1) Perform and document comprehensive surgery history and physical examination (H&P) and generate cost-effective evaluation and management plan
- 2) Counsel patients on risks, goals, limits and alternatives of surgical procedures and the importance of postoperative care
- 3) Demonstrate ability to teach medical students basic surgical H&P
- 4) Understand the indications for and interpret complex serological and radiographic testing in orthopaedic surgery, including computed tomography and MRI/MRA
- 5) Develop complex diagnostic and patient management skills, including participation in out-patient clinics
- 6) Establish and implement effective patient care plans
- 7) Perform selected parts of surgical procedures under direct supervision
- 8) Assist in major surgical procedures and perform under guidance those portions of the operations that are appropriate to the resident's level of training

B. Interpersonal and Communication Skills

The resident will develop the ability to:

- 1) Provide compassionate in-patient and out-patient care as determined by patients, families colleagues and auxiliary health care professionals
- 2) Work effectively as a member of a health care team
- 3) Participate meaningfully in multidisciplinary conferences

C. Professionalism

The resident will develop the ability to:

- 1) Demonstrate sensitivity and responsiveness to patients' culture, age, gender and disabilities
- 2) Demonstrate integrity and a commitment to patients which supersedes self-interest
- 3) Participate meaningfully in ongoing professional development by submitting research to peer-reviewed journals and regional and national professional meetings.

D. Medical Knowledge

The resident will develop the ability to:

- 1) Demonstrate an initial familiarity with the Pediatric orthopaedic literature
- 2) Demonstrate sound habits of personal scholarship and scientific inquiry while building upon core of fundamental knowledge in orthopaedic surgery
- 3) Perform at greater than 15th Percentile on the OITE
- 4) Demonstrate accuracy in clinical evaluation skills, including the correct interpretation of basic and advanced laboratory and radiological studies

Specialty- Specific Knowledge and Skills

- 1) Perform physical exam for spinal deformity, limb pathology, & CP
- 2) Understand diagnoses, treatment & complications of femur, tibia, & ankle fractures
- 3) Diagnose compartment syndromes in children
- 4) Prevent pressure sores in casts and dressing
- 5) Apply hip spica casts for femur fractures
- 6) Apply Ponseti casts for clubfeet
- 7) Measure Cobb angles for spine deformity
- 8) Treat supracondylar humerus fractures non-operatively and operatively
- 9) Perform lengthening of adductor, hamstring and Achilles tendon
- 10) Stabilize slipped capital femoral epiphysis

E. Practice-Based Learning and Improvement

The resident will develop the ability to:

- 1) Demonstrate an ability to learn from error
- 2) Locate, appraise and assimilate evidence from scientific studies related to common orthopaedic surgical problems
- 3) Develop fundamental research skills that can be used to plan the design of a research project to be carried out during the research blocks
- 4) Demonstrate ACGME core competency as judged by faculty advisor

F. Systems Based Practice

The resident will develop the ability to:

- 1) Understand the university-based practice of orthopaedic surgery, including interactions with other health care organizations, and how these elements of health care affect the practice
- 2) Advocate for quality patient care and assist patients in dealing with system complexities
- 3) Practice cost-effective health care and resource allocation through evidence-based medical practice that does not compromise quality of care
- 4) Understand practice management issues, such as patient processing, evaluation and management coding, procedural terminology, documentation of services rendered and other reimbursement process-related issues

General Goals & Objectives PGY-3 Year

A. Patient Care

The resident will develop the ability to:

- 1) Perform and document comprehensive surgery history and physical examination (H&P) and generate cost-effective evaluation and management plan
- 2) Counsel patients on risks, goals, limits and alternatives of surgical procedures and the importance of postoperative care
- 3) Demonstrate ability to teach medical students basic surgical H&P
- 4) Understand the indications for and interpret complex serological and radiographic testing in orthopaedic surgery, including computed tomography and MRI/MRA

- 5) Develop complex diagnostic and patient management skills, including participation in out-patient clinics
- 6) Establish and implement effective patient care plans
- 7) Perform selected parts of surgical procedures under direct supervision
- 8) Assist in major surgical procedures and perform under guidance those portions of the operations that are appropriate to the resident's level of training

B. Interpersonal and Communication Skills

The resident will develop the ability to:

- 1) Provide compassionate in-patient and out-patient care as determined by patients, families colleagues and auxiliary health care professionals
- 2) Work effectively as a member of a health care team
- 3) Participate meaningfully in multidisciplinary conferences

C. Professionalism

The resident will develop the ability to:

- 1) Demonstrate sensitivity and responsiveness to patients' culture, age, gender and disabilities
- 2) Demonstrate integrity and a commitment to patients which supersedes self-interest
- 3) Participate meaningfully in ongoing professional development by submitting research to peer-reviewed journals and regional and national professional meetings.

D. Medical Knowledge

The resident will develop the ability to:

- 1) Demonstrate an expanded familiarity with the orthopaedic literature
- 2) Demonstrate sound habits of personal scholarship and scientific inquiry while building upon core of fundamental knowledge in ortho surgery
- 3) Perform at greater than 15th Percentile on the OITE
- 4) Demonstrate accuracy in clinical evaluation skills, including the correct interpretation of basic and advanced laboratory and radiological studies

Specialty- Specific Knowledge and Skills

- 1) Understand diagnoses, treatment and complications of femur, tibia, & ankle fractures
- 2) Diagnose compartment syndromes in children
- 3) Prevent pressure sores in casts and dressing
- 4) Apply hip spica casts from femur fractures
- 5) Apply Ponseti casts for clubfeet
- 6) Measure Cobb angles for spine deformity
- 7) Treat supracondylar humerus fractures non-operatively and operatively
- 8) Perform lengthening of adductor, hamstring and Achilles tendon
- 9) Stabilize slipped capital femoral epiphysis

E. Practice-Based Learning and Improvement

The resident will develop the ability to:

- 1) Demonstrate an advanced ability to learn from error
- 2) Locate, appraise and assimilate evidence from scientific studies related to common orthopaedic surgical problems
- 3) Develop fundamental research skills that can be used to plan the design from a research project to be carried out during the research blocks
- 4) Demonstrate ACGME core competency as judged by faculty advisor

F. Systems Based Practice

The resident will develop the ability to:

- 1) Understand the university-based practice of orthopaedic surgery, including interactions with other health care organizations, and how these elements of health care affect the practice
- 2) Advocate for quality patient care and assist patients in dealing with system complexities
- 3) Practice cost-effective health care and resource allocation through evidence-based medical practice that does not compromise quality of care

- 4) Under practice management issues, such as patient processing, evaluation and management coding, procedural terminology, documentation of services rendered and other reimbursement process-related issues.

General Goals & Objectives PGY-4 Year

A. Patient Care

The resident will develop the ability to:

- 1) Demonstrate caring and respectful behaviors when interacting with patients and families
- 2) Procure thorough, logical, concise patient histories with an emphasis on the musculoskeletal system.
- 3) Respond to the individual needs of patients and their families
- 4) Perform physical examinations that are accurate, comprehensive, and directed to patient's problems. This applies to the clinic, emergency department, and in-patient settings.
- 5) Integrate medical facts and clinical data as the basis for diagnosis
- 6) Evaluate risks, benefits, and alternative treatments
- 7) Formulate and carry out of a complete and effective treatment plan (operative and non-operative)
- 8) Counsel patient and family in treatment procedure, options, and potential outcomes
- 9) Disseminate of education and services to the patient which are aimed at preventing treatment complications and maintaining health
- 10) Understand and perform medical procedures related to treatment plan
- 11) Work well with entire team of health care professionals and be involved in care of the patient

B. Interpersonal and Communication Skills

The resident will develop the ability to:

- 1) Foster a compassionate, therapeutic relationship with patients and their families
- 2) Listen to patients and include them in treatment decisions
- 3) Listen to information provided by other members of the health care team

C. Professionalism

The resident will develop the ability to:

- 1) Respect patient wishes and provide adequate counseling, education, and informed consent instruction to patients
- 2) Demonstrate an ethically sound practice of medicine
- 3) Demonstrate sensitivity to cultural, age, gender, and disability issues among patients

D. Medical Knowledge

The resident will develop the ability to:

- 1) Exhibit a fund of medical knowledge that is up-to-date and ability to cite literature appropriately
- 2) Investigate topics as needed for clinical assignments
- 3) Understand and use of basic science principles as related to medical practice

Specialty Specific Knowledge & Skills

- 1) Understand, recognize, and discuss skeletal dysplasia
- 2) Understand the etiology, diagnosis and treatment of sickle cell anemia and hemophilia
- 3) Understand the characteristics, pathogenesis, diagnostic features, and management of neuromuscular disorders
- 4) Recognize and treat, in conjunction with a multidisciplinary team, cerebral palsy, juvenile rheumatoid arthritis, and spinal deformities
- 5) Understand, recognize, and non-operatively and operatively manage upper limb, leg length, hip, and lower limb deformities and disorders
- 6) Understand the clinical manifestations, treatment, and long-term prognosis of complex gait disorder and fractures
- 7) Understand the characteristics, pathogenesis, management, and treatment of the complex trauma problems

Specialty Specific Psychomotor Skills

- 1) Interpret and synthesize patient history, clinical exam, and diagnostic tests into a differential diagnosis for the conditions listed above

- 2) Know the indications for an interpretation of various laboratory, radiologic, and other diagnostic tests for the condition listed above
- 3) Plan appropriate surgery based upon the diagnosis and clinical findings
- 4) Perform or assist in surgical procedures required to address the conditions listed above (i.e. scoliosis surgery, limb length problems, tumors, fracture care, neuromuscular disease, cerebral palsy, myelomeningocele, developmental deformities, DDH, Legg Perthes disease, congenital anomalies).

E. Practice-Based Learning and Improvement

The resident will develop the ability to:

- 1) Assess one's own patient management skills and ability to make appropriate changes in practice
- 2) Integrate evidence from scientific studies in the care of patient's problems
- 3) Demonstrate knowledge of study designs and statistical methods in order to evaluate scientific studies
- 4) Use available information technology to obtain and manage information
- 5) Take time to educate students and other health care professionals

F. Systems Based Practice

The resident will develop the ability to:

- 1) Know how to provide cost-effective care
- 2) Advocate for patients within the health care system
- 3) Refer patient to appropriate practitioners and agencies within the health care system
- 4) Access consultants appropriately and use of their assistance in the management of ongoing care

General Goals & Objectives PGY-5 Year

A. Patient Care

The resident will develop the ability to:

- 1) Demonstrate caring and respectful behaviors when interacting with patients and families

- 2) Procure thorough, logical, concise patient histories with an emphasis on the musculoskeletal system.
- 3) Respond to the individual needs of patients and their families
- 4) Perform physical examinations that are accurate, comprehensive, and directed to patient's problems. This applies to the clinic, emergency department, and in-patient settings.
- 5) Integrate medical facts and clinical data as the basis for diagnosis
- 6) Evaluate risks, benefits, and alternative treatments
- 7) Formulate and carry out of a complete and effective treatment plan (operative and non-operative)
- 8) Counsel patient and family in treatment procedure, options , potential outcomes
- 9) Disseminate education and services to the patient which are aimed at preventing treatment complications and maintaining health
- 10) Understand and perform medical procedures related to treatment plan
- 11) Work well with entire team of health care professionals and be involved in care of the patient

B. Interpersonal and Communication Skills

The resident will develop the ability to:

- 1) Foster a compassionate, therapeutic relationship with patients and their families
- 2) Listen to patients and include them in treatment decisions
- 3) Listen to information provided by other members of the health care team

C. Professionalism

The resident will develop the ability to:

- 1) Respect patient wishes and provide adequate counseling, education, and informed consent instruction to patients
- 2) Demonstrate an ethically sound practice of medicine
- 3) Demonstrate sensitivity to cultural, age, gender, and disability issues among patients

D. Medical Knowledge

The resident will develop the ability to:

- 1) Exhibit a fund of medical knowledge that is up-to-date and ability to cite literature appropriately.
- 2) Investigate topics as needed for clinical assignments.
- 3) Understand and use of basic science principles as related to medical practice.

Specialty Specific Knowledge & Skills

- 1) Understand, recognize, and discuss skeletal dysplasia
- 2) Understand the etiology, diagnosis and treatment of sickle cell anemia & hemophilia
- 3) Understand the characteristics, pathogenesis, diagnostic features, and management of neuromuscular disorders
- 4) Recognize and treat, in conjunction with a multidisciplinary team, cerebral palsy, juvenile rheumatoid arthritis, and spinal deformities
- 5) Understand, recognize, and non-operatively and operatively manage upper limb, leg length, hip, and lower limb deformities and disorders
- 6) Understand the clinical manifestations, treatment, and long-term prognosis of complex gait disorder and fractures
- 7) Understand the characteristics, pathogenesis, management, and treatment of the complex trauma problems

Specialty Specific Psychomotor Skills

- 1) Interpret and synthesize patient history, clinical exam, and diagnostic tests into a differential diagnosis for the conditions listed above
- 2) Know the indications for an interpretation of various laboratory, radiologic, and other diagnostic tests for the condition listed above
- 3) Plan appropriate surgery based upon the diagnosis and clinical findings
- 4) Perform or assist in surgical procedures required to address the conditions listed above (i.e. scoliosis surgery, limb length problems, tumors, fracture care, neuromuscular disease, cerebral palsy, myelomeningocele, developmental deformities, DDH, Legg Perthes disease, congenital anomalies)

E. Practice-Based Learning and Improvement

The resident will develop the ability to:

- 1) Assess one's own patient management skills and ability to make appropriate changes in practice
- 2) Integrate evidence from scientific studies in the care of patient's problems
- 3) Demonstrate knowledge of study designs and statistical methods in order to evaluate scientific studies
- 4) Use available information technology to obtain and manage information
- 5) Take time to educate students and other health care professionals

F. Systems Based Practice

The resident will develop the ability to:

- 1) Know how to provide cost-effective care
- 2) Advocate for patients within the health care system
- 3) Refer patient to appropriate practitioners and agencies within the health care system
- 4) Access consultants appropriately and use of their assistance in the management of ongoing care

2. Resident Supervision (Pediatric Orthopaedic Surgery)

Residents on the Pediatric Orthopaedic Rotation are supervised continuously. They see patients at least one day per week with an attending Pediatric Orthopaedic Surgeon. Each patient is seen by this staff member, and the plan is discussed.

They are also supervised in the OR. Each case is discussed at Indications Conference. Each surgical case is mentored by an attending surgeon, who performs or supervises the resident for the entire case or on occasion, the critical portions of the case.

Residents are supervised on rounds, which are made as a team each day.

Residents are supervised on call. There is an attending available from each specialty to discuss cases. There is a review of emergency cases performed at 7 am after each call day. Inpatient consultations are each staffed by a Pediatric Orthopaedic Attending.

Contact Information:

Paul Sponseller, M.D., M.B.A. 410-283-8206 (pager)	Marsha Buie Pat Spiegel	410-955-3137 410-287-6015
Michael Ain, M.D. 410-283-0352 (pager)	Brenda Oleszczuk	410-955-3135
Arabella Leet, M.D. 410-434-0578 (pager)	Rita Lowe	410-955-4553
John Tis, M.D. 410-283-8323 (pager)	TBD	410-502-9937
Colleen Cullen, CRNP 410-283-2660 (pager)	Peggy Wilckens, PA-C 410-283-4903 (pager)	
Chris Fisher, PA-C 410-283-1558 (pager)	Tresie Yost, RN 410-283-0252 (pager)	
Sunny Park, CRNP 410-283-7378 (pager)	Kristen Venuti, CRNP 410-283-2337 (pager)	

3. Clinical Activities

General Pediatric Orthopaedic clinic: at least one day per week for each resident
Cerebral Palsy Clinic: two days per week
Myelomeningocele clinic: two days per month
Scoliosis clinic: one day per week
Operating room: there are 9 full block Pediatric Orthopaedic days in the Operating room each week. Residents participate in these cases on an evenly divided basis.
Trauma: Johns Hopkins is the Premier Level-I trauma center for pediatrics.

4. Required Readings

Lovell and Winter Pediatric Orthopaedics: Read 1-3 assigned chapters, covering the text during the rotation
Flynn J, Skaggs D, Flynn J: Staying Out of Trouble in Pediatric Orthopaedics. Lippincott Williams and Wilkins 2006.

Core Readings in Pediatric Orthopaedics:

Weinstein SL: Natural History of Pediatric Orthopaedic Disorders. 2000 JBJS pp 980-990
Mubarak SJ: One-Stage Correction of the Spastic Hip JBJS 1992: 1347 }
Feiwell E: Effect of Hip reduction on function in Myelomeningocele. JBJS 60A: 169

Weinstein SL et al: Health and Function in Idiopathic Scoliosis 50 year F/U, JAMA 2003; 559-67
 Nachemson AL: Brace effectiveness in AIS JBJS 27A: 815-822, 1996
 McMaster MJ: Natural History of Congenital Scoliosis JBJS 64A: 1982
 Murray PM, Weinstein SL: Natural History of Scheuermann Kyphosis JBJS 75A: 236
 Zionts LE, MacEwen GD: Treatment of DDH between 1 and 3: JBJS 68A: 829
 Catterall A: Natural History of Perthes JBJS 52B: 37-62
 Stulberg SD: Natural History of Perthes JBJS 63A: 1095
 Herring JA: Effect of Treatment on Outcome of Perthes. JBJS 86A: 2121
 Gelberman RH: Femoral retroversion and SCFE. JBJS 69A: 1000
 Carney BT: Long-Term Follow up of SCFE JBJS 73A: 667
 Paley D et al: multiplier method JBJS 2000: 1432- 1445
 Ponseti IV: Current Concepts in Clubfoot JBJS 74A: 448
 Simons GW: Complete Subtalar release I & II JBJS 1044-1056
 Fredrickson BE: Natural History of Spondylolysis/lithesis JBJS 66A:699
 Phillips WE: Rotatory Atlantoaxial Subluxation. JBJS 1989: 664-667
 Salenius P: Development of Tibiofemoral angle JBJS 57A: 259
 Levine AM: Metaphyseal-diaphyseal angle. JBJS 64A: 1158-1163
 Pirone AM: Management of Supracondylar Humerus Fractures in Children 1988: JBJS 70A:641-649

5. Didactic Activities

There are conferences four of the five days per week: Monday and Wednesday are didactic lectures. Monday's lecture is given by an attending and Wednesday's lecture is given by a resident, mentored by an attending. Tuesday is the Physical Diagnosis conference, presenting physical examination on an instructive patient before the Pediatric Orthopaedic team, supervised by an attending. Thursday is Departmental Grand Rounds. Friday is Indications conference, covering the surgical cases for the upcoming week with discussion and references.

The following are the didactic lectures covered each rotation with assigned attending and assigned reading chapter in Lovell and Winter textbook of pediatric orthopaedics:

Principles of Pediatric Ortho; connective tissue disorders (PS) {Chapters 2,5,6};
 Skeletal Dysplasia (MA) {Chapter 8}
 Pediatric Bone and Joint Infections (PS) {Chapter 13}
 Cerebral Palsy (AL) {Chapter 15}
 Myelomeningocele (PS) {Chapter 16}
 TL Spinal Deformity (PS) {Chapter 18, 19,20} This is a 2-week topic
 DDH (JT) {Chapter 24}
 Perthes (MA) {Chapter 25}
 SCFE (AL) {Chapter 26}
 Leg Length Inequality (JT) {Chapter 29}
 Pediatric Foot Deformity (JT) {Chapter 30}

Resident Lectures (moderated by an attending)(Wednesday 6:15 am)

Localized Disorders of Bone and Soft Tissue (Ain) {Chapter 10}
 Spondylolysis and -lithesis (PDS){chapter 21}

Pediatric Cervical Spine and TL spine trauma (PS){chapter 22}
Angular Deformities of the Lower Extremity (JT) {Chapter 28}
OI (PDS) {chapter 6,7}
NF1 (NHM) {Chapter 6}
Fibrous Dysplasia (Leet) {Chapter 14}
Pediatric knee disorders (Discoid meniscus, popliteal cyst, OCD, ACL) (Leet) {Ch 32}
Fractures of the Humerus (upper, midshaft and lower) (PDS) {chapter 33}
Fractures of the radius and ulna (upper, midshaft and lower) (PDS) {chapter 33}
Lower Extremity Fractures (Leet){chapter 33}

In addition, there is a set of 12 questions to go with each topic, written by our division. Once per quarter, the residents take the Orthopaedic Self-Assessment Exam for Pediatrics and it is scored and reviewed by an attending.

6. Schedule

Monday

Didactic Conference 6-6:45 AM
Trauma review 6:45-7:15 AM
Inpatient Rounds 7:15-8 AM
Clinic 8-5 Johns Hopkins Outpatient Center (with Sponseller or Tis), or
General Operating Room (with Leet or Ain)

Tuesday

Physical Diagnosis Conference 6:45-7 AM
Trauma review 7-7:15 AM
Inpatient Rounds 7:15-7:45 AM

Clinic 8-5 at Johns Hopkins Outpatient Center (Ain) or
General Operating room (Sponseller)

Wednesday

Didactic Conference 6:15-7 AM
Trauma review 7-7:15 AM
Inpatient Rounds 7:15-7:45 AM
Cerebral Palsy Clinic 8-5 at Kennedy Krieger Institute (Leet) or
General Operating Room (Sponseller or Ain)

Thursday

Trauma review 6:00-6:15 AM
Inpatient rounds 6:15-7:00 AM
Departmental Grand Rounds 7-8 AM
Resident Lectures 8-12 followed by
Outpatient Operating Room (Tis) or
Clinic 12-5 Johns Hopkins Outpatient Center (Sponseller)

Friday

Indications Conference 6-7 AM
Trauma Review 7:00-7:15 AM

Inpatient Rounds 7:15-7:45 AM
General Operating Room 8-5 (Ain, Sponseller, Tis), or
Cerebral Palsy Clinic 8-12 or
Clinic Johns Hopkins Outpatient Center (Leet 8-12, Ain 13-5)
Spina Bifida Clinic (Kennedy Krieger Institute every other Friday afternoon 1-5)

Research Rotation

General Goals & Objectives

As part of resident education in basic medical science, each resident is required to undertake and complete a thesis research project. The objective of the resident thesis research project is to provide residents with the knowledge and skills needed to perform independent research, culminating in a topically significant, publication-quality manuscript.

PGY 1 – 2 Years

Residents develop a research strategy with their chosen research mentor and complete necessary IRB/ACUC protocols in PGY-1 and apply for grant funding as needed in PGY-2. This enables Residents to be productive in their PGY – 3 Year.

PGY – 3 Year

In PGY-3, residents are provided with an 8-10-week research rotation, throughout which they are free of scheduled clinical duties. The general goal for residents during this period is to carry out the major portion of his or her research project. This typically includes time-intensive activities such as experimentation, data collection, and analysis. Specific research goals are established by the faculty members with whom each resident is conducting their research.

PGY – 4 – 5 Years

Residents complete remaining data analysis required, prepare a written manuscript, and ideally submit their work for publication in a peer-reviewed journal. In addition, residents are encouraged to submit their work for presentation at a national scientific meeting.

Performance/Progress

Resident performance during research rotation is evaluated by their research mentor with particular attention to scientific acumen and productivity. Each resident's progress is also monitored during regular meetings with his or her assigned research advisor, a member of the Department of Orthopaedic Surgery Research Committee.

Residents are expected to present their research each year at Resident Research Rounds. Additionally, the Chief Residents are required to present their research on Chief Resident Day, on graduation morning.

Spine Division

7. Rotation Goals and Objectives by Core Competency

General Goals & Objectives PGY-2 Year

A. Patient Care

- 1) Learn the essentials of completing a history and physical examination of the spine patient.
- 2) Learn the appropriate plain radiographs to order for the evaluation of spine patients.
- 3) Learn to read and interpret plain radiographs as they pertain to cervical, thoracic and lumbar trauma.
- 4) Cervical, thoracic and lumbar degenerative conditions and adult deformity.
- 5) Recognize the signs and symptoms associated with spinal emergencies of cauda equina syndrome epidural hematoma and neurologic spinal compromise.
- 6) Know the evaluation strategy for the patient with spinal trauma.
- 7) Demonstrate competence of basic operating room skills:
 - a. Positioning to avoid injury, prepping and draping
 - b. The orthopedic exposure to the spine and related anatomy
 - c. Layer closure
 - d. Proper placement of pedicle screws and lateral mass screws
 - e. Demonstrate basic proficiency in the use of Kerrison punches and LeKSELL ronguers
- 8) Demonstrate the ability to care for patients postoperatively:
 - a. Wound care
 - b. Antibiotic prophylaxis
 - c. Anticoagulation management
 - d. Pain management
 - e. Neurologic evaluation
- 9) Consistently perform the surgical time out prior to incision, and ensure appropriate marking prior to surgery.
- 10) Demonstrate knowledge of spinal orthotics including all types of cervical collars, TLSO type braces, Jewett braces and their appropriate indication and usage.
- 11) Report medical errors to the attending surgeon when recognized.
- 12) Organize and supervise the medical students and paramedical staff in the daily care of the service patients.

- 13) Develop patient management and discharge plans for patients admitted directly to the hospital.

B. Interpersonal and Communication Skills

- 1) Able to listen to patients concerns and express sensitivity and empathy for their medical problems.
- 2) Explain the risks and goals of surgery to patients and their families and alternatives to surgery (perform informed consent).
- 3) Establish an effective patient-doctor relationship – attire, grooming, manner of speech, concern, and commitment.
- 4) Establish an appropriate level of communication and relationship with ancillary staff:
 - a. Refrain from abusive behavior
 - b. Be courteous
 - c. Report Staff who are disrespectful and do their duties in a less than satisfactory manner
- 5) Be able to use legible handwriting and print one's name under all signatures.
- 6) Date and time all notes.
- 7) Dictate final update of discharge summaries on the day of discharge.
- 8) Answer patient telephone calls on the same day that they are received.

C. Professionalism

- 1) Sensitive and responsive to differences in culture, gender, age, and impairments of both patients and staff.
- 2) Sensitive to the needs of spine patients in terms of emotional support.
- 3) Reliable in the performance of responsibilities.
- 4) Respectful of the opinions of other healthcare professionals.
- 5) Ability to express opinions in a manner that is sensitive to others.

D. Medical Knowledge

- 1) Knowledge of the basic anatomy of the spine and the extremities.
- 2) Working knowledge of common orthopaedic emergencies with a specific emphasis on spine.
 - a. Cauda equine syndrome
 - b. DVT and PE
 - c. Epidural hematoma

- 3) Working knowledge of cervical and lumbar spinal stenosis, cervical and lumbar radiculopathy, and spinal deformity.
- 4) Working knowledge of basic spinal implants.
- 5) Ability to apply knowledge base in the care of patients.

E. Practice Based Learning and Improvement

- 1) Ability to analyze the effectiveness of his or her own interpretative, problem solving, and surgical skills.
- 2) Ability to use available information technology to obtain and manage information.
- 3) Receptive to constructive criticism.

F. Systems-Based Practice

- 1) Demonstrate ability to provide cost effective care:
 - a) Utilization of appropriate diagnostic tests
 - b) Appropriate use of antibiotics
 - c) Appropriate timing and indications for discharge to home and step down units (rehabilitation and nursing home)
- 2) Utilization of the health care system to provide optimal patient care outside the hospital system.
- 3) Ability to fully utilize the chain of command in both the supervision of subordinates and the interaction with seniors.
- 4) Ability to recognize emergencies and communicate the problem to appropriate personnel.

General Goals & Objectives PGY-3 Year

A. Patient Care

- 1) Continue to refine skills and ability to complete a history and physical examination of the spine patient.
- 2) Learn the principle of ordering and interpreting additional diagnostic studies; CT, CT myelograms, MRI and EMG/NCV.
- 3) Formulate a differential diagnosis of a patient with spinal disorders such as low back pain, spinal stenosis, cervical and lumbar radiculopathy, scoliosis and kyphosis.
- 4) Recognize and formulate an initial treatment plan for orthopaedic spine trauma.
- 5) Recognize and formulate an initial treatment plan for the orthopaedic emergencies of cauda equina syndrome epidural hematoma, sepsis, and neurologic compromise.

- 6) Know the indications for surgical treatment of spinal stenosis, cervical and lumbar radiculopathy, spinal deformity, and spinal trauma.
- 7) Know the historical and current treatment of cervical and lumbar degenerative conditions, trauma and adult deformity.
- 8) Know basic spinal osteotomies.
- 9) Demonstrate technical competence in the operation room:
 - a. Techniques for spinal decompression: cervical discectomy, lumbar discectomy, cervical and lumbar laminectomy
 - b. Identification of intraoperative spinal level
 - c. Correlation of radiographic pathology to intraoperative findings
 - d. Perform anterior transperitoneal and retroperitoneal exposure with assistance
 - e. Perform Smith Peterson osteotomies
 - f. Perform placement of anterior cervical interbody grafts and anterior cervical plates and screws
 - g. Perform cervical discectomy, central laminectomy with assistance
- 10) Demonstrate the ability to care for patients postoperatively:
 - a. Evaluate post operative wounds and determine appropriate time for suture removal
 - b. Coordinate appropriate additional consultation needs when appropriate
 - c. Anticoagulation management
 - d. Advance Antibiotic management
 - e. Neurologic evaluation
 - f. Pain management
- 11) Consistently perform the surgical time out prior to incision.
- 12) Report medical errors to the attending surgeon when recognized.
- 13) Organize and supervise the medical students, junior resident, fellows and paramedical staff in the daily care of the service patients.
- 14) Coordinate and evaluate in-patient spine consultations and present to on-call attending.
- 15) Develop patient management plan for patients admitted directly to the hospital.

B. Interpersonal and Communication Skills

- 1) Able to listen to patients concerns and express sensitivity and empathy for their medical problems.
- 2) Explain the risks and goals of surgery to patients and their families and alternatives to surgery (perform informed consent).
- 3) Establish an effective patient-doctor relationship – attire, grooming, manner of speech, concern, and commitment.

- 4) Establish an appropriate level of communication and relationship with ancillary staff:
 - a. Refrain from abusive behavior
 - b. Be courteous
 - c. Report staff who are disrespectful and do their duties in a less than satisfactory manner
- 5) Be able to use legible handwriting and print one's name under all signatures.
- 6) Date and time all notes.
- 7) Dictate final update of discharge summaries on the day of discharge.
- 8) Answer patient telephone calls on the same day that they are received.

C. Professionalism:

- 1) Sensitive and responsive to differences in culture, gender, age, and impairments of both patients and staff.
- 2) Sensitive to the needs of cancer patients in terms of emotional support.
- 3) Reliable in the performance of responsibilities.
- 4) Respectful of the opinions of other healthcare professionals.
- 5) Ability to express opinions in a manner that is sensitive to others.

D. Medical Knowledge

- 1) Firm knowledge of the functional and surgical anatomy of the spine and extremities.
- 2) Working knowledge and ability to formulate an initial treatment for common orthopaedic emergencies with an emphasis on spine.
 - a. Compartment syndrome
 - b. Cauda equine syndrome
 - c. Spinal trauma
 - d. Epidural hematoma
 - e. Sepsis
 - f. PE/DVT
 - g. Post operative wound infections.
 - h. Presentation, and radiographic features of cervical and lumbar spinal stenosis, cervical and lumbar radiculopathy, and spinal deformity
- 3) Working knowledge of the work-up and the non-operative treatment of cervical and lumbar radiculopathy and myelopathy, and adult deformity.
- 4) The operative indications and appropriate procedure for cervical and lumbar radiculopathy, myelopathy and adult deformity.
- 5) The proper clinical and imaging work-up for spinal trauma.
- 6) The appropriate use of spinal orthotics and braces.

- 7) The operative indications and treatment algorithm for cervical, thoracic and lumbar trauma with an emphasis on:
 - a. Odontoid fracture
 - b. Cervical/ Lumbar facet fractures
 - c. Osteoporotic compression fracture
 - d. Thoracic and Lumbar Burst fractures.

E. Practice Based Learning and Improvement

- 1) Ability to analyze the effectiveness of his or her own interpretative, problem solving, and surgical skills.
- 2) Ability to use available information technology to obtain and manage information.
- 3) Receptive to constructive criticism.

F. Systems-Based Practice

- 1) Demonstrate ability to provide cost effective care:
 - a) Utilization of appropriate diagnostic tests
 - b) Appropriate use of antibiotics
 - c) Appropriate timing and indications for discharge to home and step down units (rehabilitation and nursing home)
- 2) Utilization of the health care system to provide optimal patient care outside the hospital system.
- 3) Ability to fully utilize the chain of command in both the supervision of subordinates and the interaction with seniors.
- 4) Ability to recognize emergencies and communicate the problem to appropriate personnel.

1. Resident Supervision (Spine Division)

The resident assigned to the Spine Division at the Johns Hopkins Hospital Main Campus are valued members of the spine team. Patient safety, open communication and team work are considered to be critical features of the Orthopaedic Spine Service. Everyone is willing to help each other to maximize patient safety and provide the best patient care possible. All house staff, fellows, PAs and NPs should feel comfortable calling the patient's attending or any of the Spine faculty if that attending is not available. Residents act under the direct supervision of the attending spine staff. Resident daily activities are supervised by the attending staff.

Daily Rounds

Morning rounds will be performed that will include a careful physical examination and observation of incision or postop dressings if they have not yet been changed before the OR by the residents and fellows together on all of the inpatients. A progress note will be written at that time. Any changes in neurologic status or medical condition will be immediately

communicated by phone to the attending or the covering attending. Communication of patient status with the attending can be performed verbally during am attending rounds or by phone if the attending does not attend attending rounds. Review of patient status will be performed with Alice Armour, PA on her arrival in the am.

Afternoon rounds will be performed by a resident and/or fellow. Review of patient status with Alice Armour, PA will also be performed before she leaves for the day.

Consults

Consults are the responsibility of the Spine Fellows under the supervision of the attending designated as the Spine Attending for that day. Spine service residents may be asked to assist in the initial evaluation.

Operating Room

An attending will be present for the time out and present or immediately available for all critical portions of the case.

Contact Information:

Lee Riley, III, M.D.

Nancy Ochrcin 410-955-6930

410-283-1650 (pager)

David Cohen, M.D.

Debbie Davis

410-955-0981

410-283-6962 (pager)

Khaled (Kal) Kebaish, M.D.

Halina Kowalczyk

410-955-3376

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443-287-2121

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Alice Armour, PA-C

410-283-1891 (pager)

Tonya Lewis, CRNP

410-283-0203

Laura Woodward, CRNP

410-283-4590

Kristen Viehman, PA-C

410-283-5462

3. Clinical Activities

Daily Rounds

Morning rounds will be performed that will include a careful physical examination and observation of incision or postop dressings if they have not yet been changed before the OR by the residents and fellows together on all of the inpatients. A progress note will be written at that time. Any changes in neurologic status or medical condition will be immediately communicated by phone to the attending or the covering attending. Communication of patient status with the attending can be performed verbally during 7:00 am attending rounds or by phone if the attending does not attend attending rounds. Review of patient status will be performed with Alice Armour, PA on her arrival in the am.

Afternoon rounds will be performed by a resident and/or fellow. Review of patient status with Alice Armour, PA will also be performed before she leaves for the day.

Consults

Consults are the responsibility of the residents in conjunction with the spine fellows under the supervision of the attending designated as the Spine Attending for that day.

Operating Room

A minimum of three days a week should be spent in the operating room. Residents are welcome and encouraged to participate in any surgery on the Spine Service for all part of the case as their didactic and call schedules allow. When On Call residents are encouraged to scrub in as time allows and will be notified of key moments of cases in order to maximize their learning during the rotation.

Clinic

A minimum of 1 day a week should be spent in clinic. Residents are welcomed and encouraged to participate in any clinic on the Spine Service as their didactic and call schedules allow. On Call residents are encouraged to participate in clinic as time allows and will be notified of interesting cases, physical findings and radiographs in order to maximize their learning during the rotation.

4. Required Readings

Textbook

Orthopaedic Surgery Essentials: Spine Bono CM and Garfin SR eds. Lippincott Williams and Wilkins– Weekly chapter readings and Tuesday 7 am.

Journal Articles

Topical articles provided by the Spine fellows on a weekly basis. Specific articles are assigned to residents weekly for them to present to the spine faculty during Spine Journal Club (Wednesday 7 am).

Required reading and Didactic Schedule:

- Week 1: Physical Exam of the Spine: Bono Chapter 1
- Week 2: Spinal Imaging: Bono Chapter 14,28
- Week 3: Cervical Trauma: Bono Chapter 35
Spinal cord injury and paralysis: Bono Chapter 58
- Week 4: Thoracic and Lumbar trauma: Bono Chapter 45
Spinal Injuries in sports: Bono Chapter 36
- Week 5: Pyogenic Infections: Bono Chapter 73
Atypical Spine Infections: Bono Chapter 81
- Week 6: Primary Benign Tumors: Bono Chapter 88
Primary Malignant Tumors: Bono Chapter 92
Metastatic disease: Bono Chapter 97
- Week 7: Cervical Spondylosis and Stenosis: Bono Chapter 109
Cervical radiculopathy: Bono Chapter 114
- Week 8: Thoracic spondylosis, stenosis: Bono Chapter 122
Lumbar stenosis, disc herniation: Bono Chapter 132
discogenic back pain: Bono Chapter 142,146
- Week 9: Deformity: Bono Chapter 156,163,175
- Week 10: Inflammatory spondyloarthopathy: Bono Chapter 188,196
Osteoporosis: Bono Chapter 206

5. Didactic Activities

Monday	Combined Neurosurgery/Ortho Spine Conference – 1 st Monday 5pm
Tuesday	Bono Text Review with Dr Kebaish/Neubauer 7 am – 8 am
Wednesday	Spine Journal Club with spine faculty and fellows 7am – 8am
Thursday	Departmental Grand Rounds 7am – 8 am M&M Departmental Didactics Conference 8am to 12 am
Friday	Spine Indications Conference 6:30 am to 7:30 am

6. Schedule

Monday

OR Kebaish GOR 11 8am to 6pm

or

Clinic Riley (GSS 215) or Cohen/Neubauer (JHOC 5) 8am to 4pm

Combined Neurosurgery/Ortho Spine Conference (Meyer 1) – 1st Monday 5pm – 6pm

Tuesday

Bono Text Review with Dr Kebaish 7am – 8am

OR Riley GOR 6 or Kebaish GOR 11 8am - 6pm

or

Clinic Cohen (GSS 215) or Neubauer (WM)

Wednesday

Spine Journal Club with spine faculty and fellows 7am – 8am

OR Riley GOR 11 8am-6pm

or

OR JHOC Cohen/Neubauer 8am-1pm

or

Clinic Kebaish (JHOC 5) 8 am – 4pm

Thursday

Departmental Grand Rounds 7am – 8 am

M&M

Departmental Didactics Conference 8am to 12 am

OR Riley GOR 7 or Cohen GOR11

or

Clinic Kebaish (JHOC5) 9am -2pm

Friday

Spine Indications Conference 6:30 am to 7:30 am

OR Cohen GOR 11 or Neubauer GOR 7 8am – 6pm

or

Clinic Riley (JHOC) 9am – 4pm

Division of Sports Medicine and Shoulder Surgery

1. Rotation Goals and Objectives by Core Competency

The PGY-2 on the sports rotation with Dr. Cosgarea should be able to:

A. Patient Care

- 1) Demonstrate ability to initiate an appropriate treatment plan based on a patient's presenting complaints and physical findings.
- 2) Order and interpret the appropriate diagnostic tests.
- 3) Evaluate patient questions and concerns by telephone when paged after hours.

B. Interpersonal and Communication skills

- 1) Demonstrate appropriate interactions with office and OR staff.
- 2) Develop a professional and effective relationship with patients.
- 3) Follow the lead of the secretarial staff in completing medical record keeping responsibilities.

C. Professionalism

- 1) Display appropriate professional behavior in collegiate training room with athletes and trainers.
- 2) Demonstrate professional behavior with athletes and coaches during game coverage.
- 3) Display appropriate professional behavior interacting with elite athletes in the office.

D. Medical Knowledge

- 1) Learn the pathophysiology of common sports related injuries through use of the teaching modules and weekly sports symposium.
- 2) Complete general textbook and journal readings as directed.
- 3) Prepare for surgery by reading operative notes, textbooks and journal articles, and watching instructional videos.
- 4) Understand the principles of postoperative care and rehabilitation following ACL reconstruction and shoulder stabilization surgery.
- 5) Learn about the unique aspects of treating the elite athletes outside of the traditional office setting by participating in college training room and game coverage events.

E. Practice Based Learning and Improvement

- 1) Perform a competent knee arthroscopy including the use of Gillquist techniques to visualize the posterior compartments.
- 2) Practice arthroscopic techniques on the office knee simulator to prepare for the operating room.
- 3) Perform a thorough and comprehensive sports patient evaluation including patient interview, physical examination, radiographic interpretation and development of a treatment plan.
- 4) Understand the principles and know the key steps in performing ACL reconstruction surgery.
- 5) Understand the principles and know the key steps in performing shoulder stabilization surgery.
- 6) Understand the principles and know the key steps in performing meniscus suture repair surgery.

F. System Based Practice

- 1) Demonstrate ability to provide cost effective care.
- 2) Demonstrate ability to communicate with anesthesia faculty and staff.
- 3) Demonstrate ability to provide cost effective care.
- 4) Demonstrates basic knowledge of rehabilitation and communicate rehabilitation protocols with physical therapists.

The PGY-2 on the sports rotation with Dr. McFarland should be able to:

A. Patient Care

- 1) Demonstrate knowledge of home instruction for patients leaving the hospital
- 2) Demonstrate familiarity with instructions for the patient at their first postoperative visit for shoulder surgeries. (i.e. familiarity with the first postop home instruction sheets and the rationale behind the instructions)
- 3) Is familiar with rehabilitation protocols for shoulder surgeries (i.e. knowledge of printed forms along with content and rationale for the rehab protocols)
- 4) Capable of dealing with patient questions about their care and the rehabilitation as outlined in the forms above.

B. Interpersonal and Communication Skills

- 1) Assume responsibilities for coverage when attending not available.
- 2) Answer patient inquiries and telephone calls in a timely and thorough fashion.
- 3) Perform dictations according to guidelines of this portion of the Sports Medicine service.

C. Professionalism

- 1) Be professional toward patients, fellows, physician assistants, nurses, student athletes, athletic training staff at the University and elsewhere.

D. Medical Knowledge

- 1) Demonstrate adequate understanding of the pathophysiology, clinical presentation, the physical examination and non surgical and surgical treatment of the following entities:
 - Rotator cuff disease
 - Adhesive capsulitis/stiff shoulder
 - Shoulder instability
 - Degenerative arthritis of the shoulder

E. Practice Based Learning and Improvement

- 2) Resident should demonstrate capability and proficiency in performing each of the following:
 - Diagnostic shoulder arthroscopy and portal placement
 - Debridement structure within the shoulder arthroscopically
 - Arthroscopic knot techniques
 - Surgical approaches for open surgery in the shoulder
 - Arthroscopic anterior acromioplasty
 - Rotator cuff repair
 - Distal clavicle excision
 - Portions of a shoulder stabilization procedure
 - Hemiarthroplasty, total shoulder and reverse total shoulder arthroplasty

F. System Based Practice

- 1) Demonstrate ability to document telephone conversations.
- 2) Demonstrate ability to adequately communicate with referring physicians.
- 3) Demonstrate basic knowledge of requirement for E&M coding under different levels of care.
- 4) Understand the postoperative global period for billing purposes.

G. Clinical Assessment Objective

- 1) Capable of obtaining thorough and pertinent history for traumatic and atraumatic shoulder disorders
- 2) Capable of a thorough physical examination for shoulder problems.
- 3) Capable of adequately and competently completing shoulder examination form for preoperative assessment
- 4) Capable of examination of the shoulder under anesthesia
- 5) Capable of complete neurological evaluation of the upper extremity

2. Resident Supervision (Sports Medicine and Shoulder Surgery Division)

- A. The orthopaedic resident assigned to the Sports Medicine Service, is an important member of the sports medicine team, providing care for patients in the Green Spring Station office, the hospital, the undergraduate training room and the operating room. The resident acts under the direct supervision of the sports medicine attending faculty, either Andrew Cosgarea, M.D. or Edward McFarland, M.D.
- B. The resident's daily activities are managed by the attending faculty, providing the opportunity for close supervision and immediate feedback. The attending is always immediately available in the office, training room and operating room. All patients evaluated by the resident are discussed with and examined by the attending. Surgical procedures are performed under the direct supervision of an attending faculty at all times. The attending determines the resident's level of competence and allows for the appropriate degree of responsibility.
- C. For inpatient care, the attending is immediately available by telephone or pager or, when on trauma call, on site within 30 minutes. For inpatient and emergency department consults, the attending can be contacted by telephone or pager. If neither attending is available, an attempt should be made to reach one of the 2 other sports medicine specialists with privileges at Johns Hopkins Hospital: John Wilckens M.D. or Bashir Zikria, M.D. If no sports medicine specialist is available then the faculty member assigned to trauma call that day should be contacted.

Contact Information:

Andrew J. Cosgarea, M.D., Director, Sports Medicine and Shoulder Surgery

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Sameer Dixit, M.D.

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Kim Geppi, Assistant to Sameer Dixit, M.D.

Office: 410-847-3735

3. Clinical Activities

- A. Residents spend 4 days a week in the operating room. On surgical days the resident is responsible for preoperative assessment in the preoperative care unit. In the operating room the resident functions as first assistant. At times they perform portions of the surgical procedure independently, under the direct supervision of the attending surgeon. Postoperatively they are responsible for writing orders, arranging for physical therapy and facilitating discharge home or transfer to the floor. Each inpatient is seen by the resident in the hospital at least once a day, with the exception of Sundays when the sports resident is relieved of all clinical responsibilities. The sports resident is responsible for responding to patients calls transferred through the answering service, with the exception of Sundays.
- B. Residents spend one day a week in the office seeing patients with the attending. The clinical responsibility starts with interviewing and examining new and established patients. The resident then presents the patient to the attending physician and formulates a differential diagnosis. The resident returns to the room with the attending for confirmation of the examination and development of a treatment plan. The resident is expected to analyze and interpret radiographic and laboratory data, and to order additional studies as necessary. Paperwork is completed and office visit dictations are performed at the discretion of the attending.

4. Required Readings

Orthopaedic Knowledge Update: Sports Medicine 3. Garrick JG, Ed. AAOS. 2004.

Operative Techniques: Sports Knee. Miller MD, Cole BJ, Cosgarea AJ, Sekiya JK. Saunders, Philadelphia. May 2008.

Examination of the Shoulder: The Complete Guide. McFarland EG Ed. Thieme. 2006

"ACL Injuries"

Sebastianelli, Wayne J., M.D., Orthopaedic Sports Medicine Board Review Manual, 2005

"Posterior Cruciate Ligament & Posteriolateral Corner Injuries"

Wascher, Daniel C., M.D., and Veitch, Andrew J., M.D., Orthopaedic Sports Medicine Board Review Manual, 2005

"Elbow Injuries in Sports"

Dugas, Jeffrey, R., M.D., and Cain, E. Lyle, Jr., M.D., Orthopaedic Sports Medicine Board Review Manual, 2005

"Anterior Instability of the Shoulder"

McFarland, Edward G., M.D., and Selhi, Harpal S., M.D., Orthopaedic Sports Medicine Board Review Manual, 2005

"Rotator Cuff Injury"

Ciccotti, Matthew A., Ciccotti, Michael C., and Ciccotti, Michael G., M.D., Orthopaedic Sports Medicine Board Review Manual, 2005

"Meniscal Injuries"

Manson, T.T., M.D., Cosgarea, Andrew, M.D., Sports Medicine, Vol 4, No 10, November/December, 2004

"Osteochondral Injury of the Knee"

Scopp, Jason M., M.D., Mandelbaum, Bert R., M.D., and Cosgarea, Andrew, M.D., Orthopaedic Sports Medicine Board Review Manual, 2005

5. Didactic Activities

"Perspectives in Anterior Cruciate Ligament Rehabilitation" John H. Wilckens, M.D.

"PCL Injuries" Timothy Johnson, M.D.

"Collateral Ligaments" Leigh Ann Curl, M.D.

"The Multiple Ligament-Injured Knee" Robert C. Schenck, Jr., M.D.

"The Posteriolateral Corner of the Knee" Michael J. Maynard, M.D.

"Osteochondral Injuries of the Knee" Andrew Cosgarea, M.D.

"The Meniscus: Structure, Function, Repair & Replacement" Andrew Cosgarea, M.D.

"Revision Anterior Cruciate Ligament Reconstruction Surgery" Richard J. Mason, M.D.

"Patellofemoral Disorders" Timothy S. Johnson, M.D.

"Miscellaneous Lower Extremity" John H. Wilckens, M.D.

"Elbow Injuries in Athletes" Andrew Cosgarea, M.D.

"The Shoulder - Anatomy & Biomechanics" John H. Wilckens, M.D.

"Anterior Shoulder Instability" Timothy S. Johnson, M.D.

"Shoulder Instability" John H. Wilckens, M.D.

"The Thrower's Shoulder: SLAP Lesions" Edward G. McFarland, M.D.

"Impingement Syndrome & Rotator Cuff" Leigh Ann Curl, M.D.

"Clavicle, AC & SC Joints" Edward G. McFarland, M.D.

"Miscellaneous Conditions in the Shoulder" Edward G. McFarland, M.D.

6. Schedule

Mon	5:00am-6:30am 7:00am-noon Noon-5:00pm	round on inpatients clinic with EGM at GSS clinic with AJC at GSS
Tues	5:00am-6:30am 6:30am-5:00pm	round on inpatients OR with EGM
Wed	5:00am-6:30am 6:30am-4:00pm 4:00pm-5:00pm	round on inpatients OR with AJC sports symposium with BZ
Thurs	5:30am-7:00am 7:00am-noon Noon-5:00pm	round on inpatients grand rounds, resident lectures OR with EGM

Fri	5:00am-6:30am	round on inpatients
	6:30am-5:00pm	OR with AJC
Sat	7:00am-8:30am	round on inpatients
Sun	restricted from clinical responsibilities	

Orthopaedic Trauma Service

1. Rotation Goals and Objectives by Core Competency

General Goals & Objectives PGY-1 Year

A. Patient Care

- 1) Learn the essentials concerning performing a history and physical examination
- 2) Learn the principles of interpreting a plain radiograph (be able to recognize a fracture)
- 3) Recognize the historical symptoms of trauma patients.
- 4) Know the evaluation strategy for the patient with traumatic injury.
- 5) Demonstrate common non-operative skills
 - a. Splint application
 - b. Cast application
 - c. Joint aspiration/injection
 - d. Fracture manipulation
 - e. Joint reduction
- 6) Demonstrate basic operating room skills:
 - a. Patient positioning
 - b. Preparation and draping of the patient
 - c. Assisting with retractors, lights, and maintaining a blood free field
 - d. Learn layered closure
 - e. Placement of suction drains
- 7) Demonstrate the ability to care for patients postoperatively:
 - a. Wound care
 - b. Antibiotic prophylaxis
 - c. Anticoagulation management
 - d. Pain management
 - 8) Consistently mark patients with initials prior to surgery and drape the initials into the surgical field.
- 9) Consistently perform the surgical time out prior to incision
- 10) Report medical errors to the attending surgeon when recognized
- 11) Organize and supervise medical students.
- 12) Develop patient management plan for patients admitted directly to the hospital

B. Interpersonal and Communication Skills

- 1) Listen to patients' concerns and express sensitivity and empathy for their injuries, personal losses, and basic medical problems
- 2) Explain the risks and goals of surgery to patients and their families and alternatives to surgery (perform informed consent for simple procedures)
- 3) Establish an effective patient-doctor relationship – attire, grooming, manner of speech, concern, and commitment
- 4) Establish an appropriate level of communication and relationship with ancillary staff:
 - a. Refrain from abusive behavior
 - b. Be courteous
 - c. Report staff who are disrespectful and do their duties in a less than satisfactory manner (patient safety net)
- 5) Be able to use legible handwriting and print one's name under all signatures (or use the stamp)
- 6) Date and time all notes
- 7) Dictate discharge summaries on the day of surgery
- 8) Answer patient telephone calls on the same day that they are received

C. Professionalism

- 1) Be sensitive and responsive to differences in culture, gender, age, and impairments of both patients and staff
- 2) Be sensitive to the needs of trauma patients in terms of emotional support
- 3) Be reliable in the performance of responsibilities
- 4) Respect the opinions of other healthcare professionals
- 5) Express opinions in a manner that is sensitive to others

D. Medical Knowledge

- 1) Working knowledge of the common orthopaedic emergencies
 - a. Compartment syndrome
 - b. Cauda equina syndrome
 - c. Fat embolism syndrome
 - d. Pulmonary embolism
 - e. Deep venous thrombosis

- 3) Basic working knowledge of simple common fractures
 - a. Clavicle
 - b. Distal radius
 - c. Ankle
 - d. Hip

E. Practice Based Learning and Improvement

- 1) Analyze the effectiveness of his or her own interpretative, problem solving, and surgical skills
- 2) Use available information technology to obtain and manage information
- 3) Be receptive to constructive criticism

F. Systems-Based Practice

- 1) Demonstrate ability to provide cost effective care:
 - a. Utilization of appropriate diagnostic tests
 - b. Appropriate use of antibiotics
- 2) Utilize the health care system to provide optimal patient care outside the hospital system
- 3) Utilize the chain of command in both the supervision of subordinates and the interaction with seniors
- 4) Recognize emergencies and communicate the problem to appropriate personnel

General Goals & Objectives PGY-2 Year

A. Patient Care

- 1) Complete the history and physical examination form, interpret imaging studies, and formulate a differential diagnosis of a patient with high and low energy trauma.
- 2) Recognize the historical relevant history indicating high energy trauma.
- 3) Identify patients with common orthopaedic emergencies: open fracture, compartment syndrome, and infection.
- 4) Know the appropriate radiographic evaluation for patients with fractures.
- 5) Select appropriate adjunctive studies for common trauma conditions.
- 6) Be able to choose reasonable options for the fixation of common fracture patterns, including ankle, distal radius, hip, femur, and tibia fractures.
- 7) Demonstrate proficiency in formulating a preoperative plan for fracture surgery.

- 8) Demonstrate technical competence in the operating room:
 - a. Perform intramedullary nailing independently
 - b. Perform bipolar hemi-arthroplasty independently
 - c. Demonstrate basic proficiency in the dissection of nerves and blood vessels
- 9) Demonstrate the ability to care for patients postoperatively:
 - a. Wound care
 - b. Antibiotic prophylaxis
 - c. Anticoagulation management
 - d. Pain management
- 10) Consistently mark patients with initials prior to surgery and drape the initials into the surgical field.
- 11) Consistently perform the surgical time out prior to incision
- 12) Report medical errors to the attending surgeon when recognized
- 13) Organize and supervise the interns, junior and senior residents, and paramedical staff in the daily care of the service patients.
- 14) Develop patient management plan for patients admitted directly to the hospital

B. Interpersonal and Communication Skills

- 1) Listen to patients' concerns and express sensitivity and empathy for their medical problems
- 2) Explain the risks and goals of surgery to patients and their families and alternatives to surgery (perform informed consent)
- 3) Establish an effective patient-doctor relationship – attire, grooming, manner of speech, concern, and commitment
- 4) Establish an appropriate level of communication and relationship with ancillary staff:
 - a. Refrain from abusive behavior
 - b. Be courteous
 - c. Report staff who are disrespectful and do their duties in a less than satisfactory manner
- 5) Use legible handwriting and print one's name under all signatures
- 6) Date and time all notes
- 7) Dictate operative notes on the day of surgery
- 8) Dictate discharge summaries on the day of surgery
- 9) Answer patient telephone calls on the same day that they are received

C. Professionalism

- 1) Be sensitive and responsive to differences in culture, gender, age, and impairments of both patients and staff
- 2) Be sensitive to the needs of trauma patients in terms of emotional support
- 3) Be reliable in the performance of responsibilities
- 4) Respect the opinions of other healthcare professionals
- 5) Express opinions in a manner that is sensitive to others

D. Medical Knowledge

- 1) Demonstrate working knowledge of the presentation history, clinical presentation, and radiographic findings of common fracture patterns
- 2) Answer the sample written trauma questions
- 3) Identify specific patterns of classification for common fracture patterns and their clinical relevance
- 4) Apply knowledge base in the care of patients

5) Practice Based Learning and Improvement

- 1) Analyze the effectiveness of his or her own interpretative, problem solving, and surgical skills
- 2) Use available information technology to obtain and manage information
- 3) Be receptive to constructive criticism

6) Systems-Based Practice

1. Demonstrate ability to provide cost effective care:
 - a. Utilization of appropriate diagnostic tests
 - b. Appropriate use of antibiotics
 - c. Economical selection of implants for fracture care
2. Utilize the health care system to provide optimal patient care outside the hospital system
3. Fully utilize the chain of command in both the supervision of subordinates and the interaction with seniors
4. Recognize emergencies and communicate the problem to appropriate personnel

General Goals & Objectives PGY-5 Year

A. Patient Care

- 1) Complete the history and physical examination form, interpret imaging studies, and formulate a differential diagnosis of a patient with trauma to the musculoskeletal system
- 2) Recognize the historical symptoms and signs of trauma orthopaedic emergencies
- 3) Know the evaluation strategy for the patients with single and multiple long bone trauma
- 4) Be able to choose reasonable options for the treatment of long bone and peri-articular fractures of the upper and lower extremity:
 - a. Displaced ankle fractures
 - b. Displaced tibia fractures
 - c. Tibial plateau fractures
 - d. Femoral shaft fractures
 - e. Intertrochanteric fractures
 - f. femoral neck fractures
- 5) Demonstrate technical competence in the operating room:
 - a. Perform intramedullary nailing independently (under supervision)
 - b. Perform bipolar hemi-arthroplasty independently (under supervision)
 - c. Perform open reduction internal fixation of ankle fractures independently (under supervision)
 - d. Perform open reduction and internal fixation of distal radius fractures with minimal supervision (under supervision)
 - e. Perform external fixation of long bone fractures independently (under supervision)
 - f. Perform open reduction internal fixation of femoral neck and intertrochanteric hip fractures independently (under supervision)
- 6) Demonstrate the ability to care for patients postoperatively:
 - a. Wound care
 - b. Antibiotic prophylaxis
 - c. Anticoagulation management
 - d. Pain management
- 7) Consistently mark patients with initials prior to surgery and drape the initials into the surgical field.
- 8) Consistently perform the surgical time out prior to incision

- 9) Report medical errors to the attending surgeon when recognized
- 10) Organize and supervise the interns, junior and senior residents, and paramedical staff in the daily care of the service patients.
- 11) Develop patient management plan for patients admitted directly to the hospital

B. Interpersonal and Communication Skills

- 1) Listen to patients' concerns and express sensitivity and empathy for their medical problems
- 2) Explain the risks and goals of surgery to patients and their families and alternatives to surgery (perform informed consent)
- 3) Establish an effective patient-doctor relationship – attire, grooming, manner of speech, concern, and commitment
- 4) Establish an appropriate level of communication and relationship with ancillary staff:
 - a. Refrain from abusive behavior
 - b. Be courteous
 - c. Report staff who are disrespectful and do their duties in a less than satisfactory manner (utilize patient safety net)
- 5) Use legible handwriting and print one's name under all signatures (or use stamp)
- 6) Date and time all notes
- 7) Dictate operative notes on the day of surgery
- 8) Dictate discharge summaries on the day of surgery
- 9) Answer patient telephone calls on the same day that they are received

C. Professionalism

- 1) Be sensitive and responsive to differences in culture, gender, age, and impairments of both patients and staff
- 2) Be sensitive to the needs of cancer patients in terms of emotional support
- 3) Be reliable in the performance of responsibilities
- 4) Respect the opinions of other healthcare professionals
- 5) Express opinions in a manner that is sensitive to others

D. Medical Knowledge

- 1) Working knowledge of the classification of common fractures
- 2) Working knowledge of the classification of open fractures
- 3) Working knowledge of the principles of intramedullary nailing
- 4) Working knowledge of the principles of plate fixation
- 5) Working knowledge of results of fracture treatment

E. Practice Based Learning and Improvement

- 1) Analyze the effectiveness of his or her own interpretative, problem solving, and surgical skills
- 2) Use available information technology to obtain and manage information
- 3) Be receptive to constructive criticism

F. Systems-Based Practice

- 1) Demonstrate ability to provide cost effective care:
 - a. Utilization of appropriate diagnostic tests
 - b. Appropriate use of antibiotics
- 2) Utilize of the health care system to provide optimal patient care outside the hospital system
- 3) Fully utilize the chain of command in both the supervision of subordinates and the interaction with seniors
- 4) Recognize emergencies and communicate the problem to appropriate personnel:
 - a. Compartment syndrome
 - b. Cauda equina syndrome
 - c. Acute infections
 - d. Chronic infections
 - e. Fat embolism syndrome
 - f. Pulmonary embolus

2. Resident Supervision (Trauma Service)

The resident is part of the trauma surgery team, providing care of patients in the emergency department, the clinic, the hospital, and the operating room. The resident acts under the direct supervision of the trauma surgery staff at all times. All patients evaluated by the resident will be discussed with and examined by the attending surgeon as well. The resident's daily activities are

managed by the faculty – Greg Osgood, M.D.. This provides the opportunity for immediate feedback.

Surgical procedures are performed under the direct supervision of an attending physician at all times, including nights, weekends, and holidays. The surgical attending determines when a resident should and has achieved independence in procedures, and in supervising other residents and students.

The resident reports directly to the attending surgeon. The attending surgeon, at a minimum, is immediately available by telephone or pager or, when on call, within 30 minutes by request on site.

For inpatient and emergency department consults, the attending “on call” that day should be contacted and will be responsible for treatment plan and staffing any immediate operative intervention. The trauma faculty will coordinate inpatient follow-on care for those patients requiring admission and outpatient care for those discharged from the emergency department. For questions regarding inpatients or patients in PACU, the attending surgeon who performed that patient’s surgery should be contacted. For any trauma emergencies (outside of the emergency department) when Greg Osgood is not on call, contact Greg Osgood, M.D. during day hours and the orthopaedic on call faculty after 8PM. If no one is available, contact Greg Osgood, M.D.

Contact information:

Laronda Johnson 410-955-1796

Greg Osgood, M.D.

410-493-4867 (cell)

410-283-3209 (pager)

410-363-2289 (home)

3. Clinical Activities

Patient Rounds

Daily pre-rounds are performed by the adult service resident team. Urgent patient calls are addressed by the intern for the service or the on-call resident.

The team conducts supervised patient rounds with a faculty member daily. The medical history and current physical examination are discussed for each patient. A history and physical examination is performed by the faculty member. Relevant examination techniques are discussed fully. The team plan is discussed at length and documented by the faculty member. Interventions are performed during and after rounds, based on the faculty member’s plan. The care plan is coordinated with the adult service and trauma nurse practitioners.

New inpatient consultations and new inpatient visits are staffed by a faculty member during daily patient rounds.

Mon, Wed, Fri: Greg Osgood, M.D.

Tues: Kristy Weber, M.D.

Thurs: Edward McFarland, M.D.

Surgical Care

The orthopaedic trauma service has a trauma operating room 4 days per week: Monday, Tuesday, Thursday, and Friday. Scheduling operative cases on Wednesday is possible on an add-on basis only in available unscheduled operating time or after regular elective operating hours. Scheduling

elective and emergency operative cases is performed by the resident team and Dr. Greg Osgood's office coordinator Laronda Johnson, in close coordination with Greg Osgood, M.D..

Operations are performed by the residents on the orthopaedic trauma service with direct supervision by Greg Osgood, M.D. or other assisting faculty. A team approach is taken to performing surgical procedures in which all residents participate in components of the procedure. Residents will only perform elements of the surgical procedure that they are capable of performing, as determined by the faculty member.

Pre-operative and post-operative interdisciplinary patient care coordination responsibilities are shared between the residents and the trauma faculty. Pre-operative clearance and the medical optimization of patients prior to surgery are the shared responsibilities of residents and faculty of the medicine, surgery, and orthopaedic trauma services. The day-to-day coordination of this care is discussed on rounds daily and as needed.

Office Hours / Clinic

Two orthopaedic trauma clinics are conducted weekly. Wednesday is a full-day clinic that is supervised by Greg Osgood, M.D. Thursday afternoon clinic is conducted by the orthopaedic trauma nurse practitioner or another orthopaedic surgery faculty member. Both are attended by available orthopaedic trauma team residents.

Patients are first evaluated and examined by residents. Every patient is presented formally to the supervising attending or nurse practitioner. A history and physical examination is performed by the faculty member. Relevant examination techniques are discussed fully. The plan is discussed at length and documented by the faculty member.

Pre-operative paperwork and coordination of pre-operative evaluation is conducted by residents, nurses, and faculty during clinic, in addition to after-hours.

Additional Patient Care

Residents assist in the daily phone call requests of patients to answer clinical questions, assist in scheduling surgery, and write prescriptions.

4. Required Readings

Week 1- Ballistic Fractures

Management of the Polytrauma Patient

Chapter 49 – Gunshot Wounds and Open Fractures

Chapter 50 – Evaluation of the Trauma Patient

Circumferential pelvic antishock sheeting: a temporary resuscitation aid.

Routt ML Jr, Falicov A, Woodhouse E, Schildhauer TA.
J Orthop Trauma. 2002 Jan;16(1):45-8.

Detection of traumatic arthrotomy of the knee using the saline solution load test.

Nord RM, Quach T, Walsh M, Pereira D, Tejwani NC.
J Bone Joint Surg Am. 2009 Jan;91(1):66-70.

Week 2- Pelvic Fractures

Chapter 53 Pelvic, Acetabular, and Sacral Fractures

Pelvic fracture in multiple trauma: classification by mechanism is key to pattern of organ injury, resuscitative requirements, and outcome.

Dalal SA, Burgess AR, Siegel JH, Young JW, Brumback RJ, Poka A, Dunham CM, Gens D, Bathon H.
J Trauma. 1989 Jul;29(7):981-1000; discussion 1000-2.

Pattern of organ injuries in pelvic fracture: impact force implications for survival and death in motor vehicle injuries.

Siegel JH, Dalal SA, Burgess AR, Young JW.
Accid Anal Prev. 1990 Oct;22(5):457-66.

Week 3- Acetabular Fractures

Chapter 53 Pelvic, Acetabular, and Sacral Fractures

The computerized tomography subchondral arc: a new method of assessing acetabular articular continuity after fracture (a preliminary report).

Olson SA, Matta JM.
J Orthop Trauma. 1993;7(5):402-13.

The effects of simulated transverse, anterior column, and posterior column fractures of the acetabulum on the stability of the hip joint.

Vrahas MS, Widding KK, Thomas KA.
J Bone Joint Surg Am. 1999 Jul;81(7):966-74.

Week 4- Hip Fractures

Femur Fractures

Chapter 54 – Hip Dislocations and Femoral Head Fractures

Chapter 55 – Fractures of the Hip

Chapter 56 – Fractures of the Femoral Shaft and Distal Femur

The value of the tip-apex distance in predicting failure of fixation of peritrochanteric fractures of the hip.

Baumgaertner MR, Curtin SL, Lindskog DM, Keggi JM.
J Bone Joint Surg Am. 1995 Jul;77(7):1058-64.

Early versus delayed stabilization of femoral fractures. A prospective randomized study.

Bone LB, Johnson KD, Weigelt J, Scheinberg R.
J Bone Joint Surg Am. 1989 Mar;71(3):336-40.

Adult respiratory distress syndrome, pneumonia, and mortality following thoracic injury and a femoral fracture treated either with intramedullary nailing with reaming or with a plate. A comparative study.

Bosse MJ, MacKenzie EJ, Riemer BL, Brumback RJ, McCarthy ML, Burgess AR, Gens DR, Yasui Y.
J Bone Joint Surg Am. 1997 Jun;79(6):799-809.

The association between supracondylar-intercondylar distal femoral fractures and coronal plane fractures.

Nork SE, Segina DN, Aflatoon K, Barei DP, Henley MB, Holt S, Benirschke SK.
J Bone Joint Surg Am. 2005 Mar;87(3):564-9.

Week 5- Tibia Fractures

Chapter 57 – Knee Dislocations and Patella Fractures

Chapter 58 – Tibial Plateau and Tibia-Fibula Shaft Fractures

Intramedullary nailing of proximal quarter tibial fractures.

Nork SE, Barei DP, Schildhauer TA, Agel J, Holt SK, Schrick JL, Sangeorzan BJ.
J Orthop Trauma. 2006 Sep;20(8):523-8.

[Randomized trial of reamed and unreamed intramedullary nailing of tibial shaft fractures.](#)

Study to Prospectively Evaluate Reamed Intramedullary Nails in Patients with Tibial Fractures Investigators, Bhandari M, Guyatt G, Tornetta P 3rd, Schemitsch EH, Swiontkowski M, Sanders D, Walter SD.

J Bone Joint Surg Am. 2008 Dec;90(12):2567-78.

Recombinant human bone morphogenetic protein-2 for treatment of open tibial fractures: a prospective, controlled, randomized study of four hundred and fifty patients.

Govender S, Csimma C, Genant HK, et. al. BMP-2 Evaluation in Surgery for Tibial Trauma (BESTT) Study Group.
J Bone Joint Surg Am. 2002 Dec;84-A(12):2123-34.

Frequency and fracture morphology of the posteromedial fragment in bicondylar tibial plateau fracture patterns.

Barei DP, O'Mara TJ, Taitsman LA, Dunbar RP, Nork SE.
J Orthop Trauma. 2008 Mar;22(3):176-82.

Complications associated with internal fixation of high-energy bicondylar tibial plateau fractures utilizing a two-incision technique.

Barei DP, Nork SE, Mills WJ, Henley MB, Benirschke SK.
J Orthop Trauma. 2004 Nov-Dec;18(10):649-57.

The value of the ankle-brachial index for diagnosing arterial injury after knee dislocation: a prospective study.

Mills WJ, Barei DP, McNair P.
J Trauma. 2004 Jun;56(6):1261-5.

Week 6- Malunions, Nonunions, Infections

Prevention of Complications of Orthopaedic Trauma

Chapter 61 – Nonunions, Osteomyelitis, and Limb Deformity Analysis

The clamshell osteotomy: a new technique to correct complex diaphyseal malunions.

Russell GV, Graves ML, Archdeacon MT, Barei DP, Brien GA Jr, Porter SE.
J Bone Joint Surg Am. 2009 Feb;91(2):314-24.

Week 7- Pilon Fractures

Hindfoot Fractures

Midfoot Fractures

Chapter 59 – Foot Trauma

Chapter 60 – Fractures of the Ankle and Tibial Plafond

A prospective study evaluating incision placement and wound healing for tibial plafond fractures.

Howard JL, Agel J, Barei DP, Benirschke SK, Nork SE.
J Orthop Trauma. 2008 May-Jun;22(5):299-305; discussion 305-6.

Talar neck fractures: results and outcomes.

Vallier HA, Nork SE, Barei DP, Benirschke SK, Sangeorzan BJ.
J Bone Joint Surg Am. 2004 Aug;86-A(8):1616-24.

Fractures of the calcaneus.

Barei DP, Bellabarba C, Sangeorzan BJ, Benirschke SK.
Orthop Clin North Am. 2002 Jan;33(1):263-85, x. Review.

Operative compared with nonoperative treatment of displaced intra-articular calcaneal fractures: a prospective, randomized, controlled multicenter trial.

Buckley R, Tough S, McCormack R, Pate G, Leighton R, Petrie D, Galpin R.
J Bone Joint Surg Am. 2002 Oct;84-A(10):1733-44.

Week 8 - Fractures of the Shoulder Girdle

Humerus Fractures

Chapter 52 – Fractures of the Humeral Shaft and Distal Humerus

Nonoperative treatment compared with plate fixation of displaced midshaft clavicular fractures. A multicenter, randomized clinical trial.

All readings are from the American Academy of Orthopaedic Surgeons Comprehensive Orthopaedic Review unless otherwise specified.

5. Didactic Activities

Board Rounds

All inpatient consultations and Emergency Department consultations are presented formally by the on-call residents every weekday. Board Rounds are attended by faculty from the adult service, pediatric service, and hand service at the Johns Hopkins Hospital. Resident attendance is mandatory from each of these services. Elements of the patient's history, physical examination, and radiographs are discussed. Residents and attendings engage in relevant clinical discussion regarding each patient. The plan for each patient is formalized and coordinated one of the three teams present.

Weekly Orthopaedic Trauma Didactics

Wednesday morning didactic sessions are held prior to clinic on a weekly schedule. The topic of discussion centers on the weekly reading schedule. Additionally, orthopaedic trauma skills are demonstrated during this session. PGY-2 and PGY-5 residents on the service must attend. Residents are responsible for the weekly reading and for participating in the discussion. The attending will present the topic and lead the discussion.

Journal Club

Journal Club is held on an evening during the 8-week trauma block. The topic of discussion and relevant journal articles are selected to supplement the education provided by clinical exposure during that trauma block. An attempt is made to minimize redundancy in articles and topical discussion. Residents off-service are encouraged to attend as they are able, based on resident work hours restrictions.

Motor Skills Lab

Hands-on orthopaedic trauma skills labs are fully explained in other modules of the resident manual.

6. Schedule – Orthopaedic Trauma Service

Monday

0645 – 0715: Board Rounds

0730 – End of Day: Trauma Operating Room

Timing Based on Clinical Activity: Faculty Supervised Rounds

Tuesday

0700 – 0715: Board Rounds

0730 – End of Day: Trauma Operating Room

Timing Based on Clinical Activity: Faculty Supervised Rounds

Wednesday

0700 – 0715: Board Rounds

0715 – 0815: Weekly Orthopaedic Trauma Didactics

0815 – 1800: Orthopaedic Trauma Clinic

Timing Based on Clinical Activity: Faculty Supervised Rounds

Thursday

0600 – 0615: Board Rounds

0630 – 1100: Resident Didactics

1200 – 1700: Orthopaedic Trauma Clinic

Timing Based on Clinical Activity: Faculty Supervised Rounds

[0830 – End of Day: Trauma Operating Room (attended by residents as available)]

Friday

0700 – 0715: Board Rounds

0730 – End of Day: Trauma Operating Room

Timing Based on Clinical Activity: Faculty Supervised Rounds

Saturday

Clinical care managed by the on-call faculty and resident team

Timing Based on Clinical Activity: Faculty Supervised Rounds

Sunday

Clinical care managed by the on-call faculty and resident team

Timing Based on Clinical Activity: Faculty Supervised Rounds

ORTHOPAEDIC SURGERY

Call Schedule Policy

The Junior resident On Call at Johns Hopkins must remain in the Johns Hopkins Medical facility at all times. The Chief resident On Call must:

- Have his/her pager, **and** be available at all times
- Be able to respond to any emergency
- Be at the hospital within 30 minutes of being called.

ORTHOPAEDIC SURGERY

Case Log Policy

All residents are required to submit their surgical case logs on the ACGME website.

These logs are monitored on a weekly basis by the Administrative Chief Resident. The Program Director reviews case logs monthly. Case logs are examined with each individual resident at their semi-annual review with the Program Director, and more often if indicated.

ORTHOPAEDIC SURGERY

JOHNS HOPKINS UNIVERSITY DUTY HOUR POLICY

- 1. Duty Hour limit per week** Duty hours shall be limited to 80 hours per week, averaged over a four-week period, inclusive of all in-house call activities. Duty hours mean all clinical and academic activities related to the residency program, (i.e., patient care (both inpatient and outpatient)), administrative duties related to patient care, the provision for transfer of patient care, time spent in-house during call activities, scheduled academic activities such as conferences and all other program required hours (which may include "strongly encouraged" activities). Duty hours do not include reading, preparation time spent away from the duty site, self-learning and pager call that does not require the resident to come to the hospital. When residents are called into the hospital from home, the hours residents spend in-house shall be counted toward the 80-hour limit.
- 2. Days off per week** Residents shall be provided with 1 day in 7 free from all educational and clinical responsibilities, averaged over a 4-week period, inclusive of call. One day means one continuous 24-hour period free from all clinical, educational, and administrative activities.
- 3. On-call schedule** In-house call means those duty hours beyond the normal work day when residents are required to be immediately available in the assigned institution. In-house call shall occur no more frequently than every third night, averaged over a four-week period. At-home call (pager call) means call taken from outside the assigned institution. The frequency of at-home call is not subject to the every third night limitation, however, must not be so frequent as to preclude rest and reasonable personal time for each resident. Residents taking at-home call shall be provided with 1 day in 7 completely free from all educational and clinical responsibilities, averaged over a 4-week period. The program director and the faculty shall monitor the demands of at-home call in the program and make scheduling adjustments as necessary to mitigate excessive service demands and/or fatigue.
- 4. Maximum hours on call** Continuous on-site duty, including in-house call, shall not exceed 24 consecutive hours. Residents may remain on duty for up to six additional hours to participate in didactic activities, transfer care of patients, conduct outpatient clinics, and maintain continuity of medical and surgical care. No new patients may be accepted after 24 hours of continuous duty. A new patient means any patient for whom the orthopaedic surgery service or department has not previously provided care.
- 5. Ten hour rest periods** Adequate time for rest and personal activities shall be provided. This shall consist of at least a 10-hour time period provided between all daily duty periods and after in-house call.
- 6. Moonlighting**

No moonlighting is permitted.

ORTHOPAEDIC SURGERY

Evaluation and Advancement Policy

Resident evaluations are confidential and are conducted throughout the year. Each Faculty member who works with a Resident in a rotation is required to report. The CORE Competencies of patient care, interpersonal and communication skills, professionalism, medical knowledge, practice-based learning/improvement and systems-based practice will be reviewed in the evaluation. The purpose of the evaluation process is to:

- Identify strengths and also areas for improvements to enable Residents to reach their full potential
- Make timely decisions on promotions, remediation or reappointment
- Provide a core of input for letters of recommendations

Evaluations are conducted by using multiple evaluators such as Faculty, peers, other professional staff, patient feedback and self evaluation. The Resident Program Director reviews all evaluations. The Resident Program Director will meet with the Residents twice per year to review evaluations and summarize their progress in the training program. Residents have the opportunity to indicate in writing where they have disagreements with their reviews. Residents will have access to their review.

The evaluations are performed routinely. Evaluations given in the Department include –

- Resident evaluation at the mid-point and completion of each rotation, with feedback
- Resident semi-annual evaluation of performance with feedback
- Resident final evaluation that reviews performance during the final period of the Residency Program. This evaluation will verify that the Resident has demonstrated adequate competence to enter practice without direct supervision. This evaluation becomes a permanent part of the Resident's file.
- Faculty evaluation by the Resident, which is performed annually and anonymously
- Evaluation of the Residency Program by the Resident, anonymously
- Evaluation of the Residency Program by the Faculty, anonymously

Advancement to the next PGY level in the Resident Program is based upon evaluations and successful completion of rotations.

ORTHOPAEDIC SURGERY

Illness Policy

If a Resident is unable to report to work as scheduled due to illness or injury, the Chief Resident must be contacted prior to the start of the shift. Any Resident who is fatigued due to On Call activity and does not feel safe to drive home, should either sleep at the hospital or take a taxi home. The Department will reimburse for the taxi.

ORTHOPAEDIC SURGERY

Major Conferences and Didactic Policy

Residents are required to attend our Thursday Meetings, which include Grand Rounds and didactics. We provide easy access to our calendar directly on our website –

<http://www.hopkinsortho.org/calendar.html#jan2010>

indicating the topics and details for the Grand Rounds and didactic lecturers. These are held on the East Baltimore Campus, as well as, the Bayview Medical Center. Attendance is monitored at each location by the Resident Program Coordinator, Resident Director and the Chief Residents. If the resident is on a specific rotation, such as hand, peds, spine, etc. or at an off site location, they are required to attend any service specific conferences, as well, which are over and above the Thursday Meetings Calendar of Events. All M & M meetings, Visiting Professors, and named lectures are mandatory for all residents to attend.

ORTHOPAEDIC SURGERY

Moonlighting Policy

Moonlighting is NOT permitted by Residents in the Department of Orthopaedic Surgery.

Residents who are in need of financial guidance for their personal expenses should contact FASAP (Faculty and Staff Assistance Program), at their web site –

<http://www.jhu.edu/hr/fasap/>

or meet with the Resident Program Director for a confidential discussion.

ORTHOPAEDIC SURGERY

Residency Selection Policy

Applications for the Residency Program are accepted through ERAS. All applicants are reviewed independently. Each applicant's folder is read and rated by at least two Orthopaedic Surgery Faculty. The application evaluation process reviews the candidate's institution, board scores, research potential, community service, and other information. Based on these reviews, candidates are then selected for the interview process.

All interviews with the selected candidates are held on a weekend in December with the Orthopaedic Surgery Faculty. All sub-interns and visiting medical students who have rotated within the year are invited to interview on the Friday prior to the interview weekend. At the end of each day, the Faculty collectively ranks each applicant in order of the above criteria. The final ranking is what we submit to ERAS.

ORTHOPAEDIC SURGERY

Vacation Policy

Residents are allowed 4 weeks of vacation in an academic year with one week allowed at a time for any given rotation. Vacations are not allowed during the months of June or July. Interns follow the vacation policy of General Surgery; which is 2 weeks of vacation taken in consecutive weeks during their Orthopaedic rotation block.