

# **Medical University of South Carolina**

## **Department of Orthopaedic Surgery**

### **Mission Statement**

The Mission of the Department of Orthopaedic Surgery at the Medical University of South Carolina is to provide outstanding training to our orthopaedic residents. We provide a superior academic and clinical education. We accomplish this by demonstrating excellence in patient care, providing a solid foundation to allow an understanding of orthopaedic research and fostering lifelong learning and teaching.

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 their clinical and surgical skills by working closely with faculty members in providing patient care and conducting research. The resident will be 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 new knowledge. Participation in research activities is required throughout the five-year program and residents are required to produce a manuscript suitable for submission to a peer reviewed journal by the completion of their residency.

### **Resident Recruitment and Appointment**

Applicants for the residency apply through the National Residency Matching Program. The application process involves on line application and an interview. Formal recruiting of applicants is not routinely performed. If the applicant matches to the program and fulfills the institutional requirements for residency, the applicant will be appointed to the residency. The appointment is reviewed annually by the program director and, if the resident performance is deemed acceptable, the program director will request appointment for the following year with the Office of Graduate Medical Education. The monitoring process for this recruitment is by 360 evaluations through the Evaluate system, review of any other information submitted regarding the resident and twice yearly meetings between the resident and the program director.

### **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.

#### **OBJECTIVE OF 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

**GOAL OF 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 of 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
- Fostering an environment for the faculty to achieve and excel in research, clinical care and education
- Assuming 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.**

**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

**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 non traditional therapies

## **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

## **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

## **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

## **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.

## **ROLE OF THE RESIDENT**

The role of the orthopaedic resident at the Medical University has three basic components. The first priority is patient care. By performing excellent patient care, the resident is available to experiences that will provide the educational base for a career in orthopaedic surgery. The second role is that of an educator of themselves, residents, students. The third element is research. Every resident will complete a research project prior to completion of the residency. These research projects must be suitable for submission for peer review publication and/or scientific or poster exhibit. Yearly research presentations are expected in the final three years of residency.

Qualities that are most important in a resident are the same as those in a senior orthopaedic surgeon. The most important of these qualities is honesty in dealing with one's colleagues, attending surgeons, and patients. Based on this honesty, a resident develops increasing confidence and reliability. Honest mistakes are expected. There is nothing wrong with an honest mistake as long as that mistake is first acknowledged by the resident him or herself, and secondly, to the other persons involved.

## **BASIC PRINCIPLES FOR RESIDENTS**

### **Relations with Other Services:**

All residents should be polite and have good relations with residents on other services. Inevitably, problems will arise. If the conflict is not resolved among the residents, then go to the program director or chair. This can then be discussed with their counterpart in the other department involved. Do not criticize non-MD medical personnel or other employees. Rather, learn how to get their interest and cooperation. Know names. Do not be too casual. Address senior men and women appropriately. Send a factual written note to Dr. Hartsock when there are negative and potentially correctable things that affect patient care. Treat all faculties with respect. Be careful about casual remarks that can be overheard, in the elevator, lounge and OR. Avoid potentially sexually harassing remarks, jokes, and activities.

### **Do's and Don'ts for Residents and Patient Care:**

Progress notes to begin with POD #1, etc. Need neat and tailored writing and stay on lines. All progress notes must include the date and time of day. Keep traction neat. Weights hang free. Pin Tract care is important - Check Daily. "Balanced" means free movement at every point. Anticoagulate and use mechanical DVT prophylaxis appropriately. Always Sterile prep skin before injection. If there is a question as to whether a procedure can be done without supervision, ask a superior

### **Resident Evaluation and Advancement:**

Residents are formally evaluated using standard evaluation formats on a regular basis. In addition, residents may be evaluated at any time during the program when their performance reflects character and behavior flaws or cognitive skill performance deficiencies. These evaluations are completed by the teaching staff and forwarded to the program director. Each resident will meet with the program director every 6 months and their evaluations will, in part, determine the residents' advancement. At the conclusion of each rotation evaluations should be discussed with the faculty on that rotation and included in their permanent file. The department chairman, education committee or program director will discuss problems with an individual resident's performance with the resident experiencing these difficulties. Recurrent problems with individual residents will follow the disciplinary and corrective actions outlined in the Medical University of South Carolina, College of Medicine Resident Handbook. A final written evaluation is completed for each resident who finishes this orthopaedic residency-training program. This evaluation will include a review of the resident's performance during the final period of training and verifies that the resident has demonstrated sufficient professional ability to practice confidently and independently. This evaluation is maintained as a permanent part of the individual's record and is kept both by the orthopaedic residency training program as well as the graduate medical education department.

### **Academic Discipline and Resident Complaints or Grievances:**

The academic discipline and termination procedures are outlined as part of the Graduate Medical Education Resident Handbook. This is available in a separate handbook from the Office of Graduate Medical Education. However, for any individual resident who

wishes to discuss this with the Program Director, the "open-door" policy applies. For clarity of issues, the following additional items are noted: Any Orthopaedic Surgery resident may be placed on academic probation for unsatisfactory performance standards or objectives of the orthopaedic program. Recommendation for placement on probation/remediation can be made by any of the teaching faculty members. The ultimate decision to recommend probationary status rests with the Program Director. Prior to placing a resident on probationary/remediation status, a formal request by the Program Director must be submitted to and approved by the Graduate Medical Education Director of the Medical University of South Carolina. The Graduate Medical Education Director will consider the request, and if action is warranted, the individual will be placed on probation. During this period, which must last for at least 30 days, but may be as long as 12 months, the individual will be given the appropriate opportunity to improve their performance to a satisfactory level. An academic or proficiency program may be designed for the resident as outlined by the Program Director. Probationary periods may be extended when deemed appropriate.

If indicated, termination of a resident at the end of probationary period is by the recommendation of the Program Director to the Graduate Medical Education Director.

An individual who is on probation may have his or her training extended. No provisions exist for appeal of extension of training. This decision rests with the Program Director and is subject to approval of the Graduate Medical Education Director.

The Program Director will notify an individual in writing of removal from probationary status, continuation of probation or extension of training.

Probationary status may end for any one of the following reasons: the individual has improved to a satisfactory status determined by the Program Director, the individual has voluntarily withdrawn from the program, or the individual is terminated from the training program.

The resident in a written format must present formal complaints or concerns about a faculty member or the orthopaedic surgery residency program. These will be reviewed at the faculty/staff meetings and the Chairman of Orthopaedic Surgery will recommend potential solutions to these problems. Formal responses will be given to the individual filing the complaint.

In addition to this formal process, an informal one exists whereby residents are encouraged to make recommendations regarding policies and program structures on a continual basis to the Program Director. Time is devoted to this important element of the resident's training during the bi annual resident evaluation process.

The policy for disciplinary issues, adjudication of grievances, and related matters are applied uniformly to all residents in the program. Due process is assured to clarify any issue concerning the recommendation for disciplinary action. Further guidance concerning grievances is covered in the MUSC Graduate Medical Education Manual.

**Impaired Resident Physicians:**

Impairment is defined as the response to an emotional or psychological problem that is severe enough to prevent the physician from appropriately discharging his professional responsibilities. This response may be strictly behavioral or may be complicated by substance abuse. Every attempt will be made to identify impairment at an early stage so that appropriate treatment may be instituted.

When there is suspicion that a resident is impaired, that person will be evaluated by Program Director who will recommend a course of action to include appropriate counseling as well as modification of professional responsibilities (reassignment, less demanding workload) or a mandatory leave of absence. Every effort will be made to assist the resident in successfully completing their housestaff training, if possible, after completion of treatment. The department will establish specific routes of referral when counseling and treatment are required. Additionally, counselors will be made available, confidentially, to any house officer who requests one.

Ongoing, frequent evaluations of the progress of the impaired resident will be made and documented in his record. Treatment obtained as a condition for continuation in the training program will be documented in the record. Communication with the therapist by the Program Director will be only to confirm that treatment is underway and to formulate a remediation plan if indicated. Full professional responsibilities will resume only when the appropriate treatment is completed and the therapist and Chairman agrees that the house officer is ready to assume those responsibilities.

**Resident Coordinator:**

There is a full-time resident Coordinator, Mrs. Cassandra Tucker the department secretaries will also assist the residents in their needs related to the particular service on which they work. The following needs to be noted regarding secretarial support for residents.

- Secretaries are assigned to faculty members.
- Do your own copying (articles, medical records, etc.).
- The orthopaedic resident library and other resident quarters include computers whose continued function depends on care and proper usage. Please help with that. Proper care of books and educational multimedia is expected.

**Dictation, Documentation, Coding and Charges:**

Faculty must be knowledgeable about, show interest in and properly carry out procedure and E&M coding for outpatient and inpatient encounters. Audits will be conducted and reviewed to maintain high quality department business. The Coding Specialist will review coding, charting and reimbursable encounters in all inpatient and out patient procedures (ER, OR, Outpatient and E&M).

**The only appropriate hand written notes are:**

- Progress notes on inpatients
- Brief discharge notes on outpatients.

- Brief notes on outpatient charts related to counseling, phone contacts and prescription renewals.

**Dress Code:**

- Think of yourself as a private physician and dress accordingly.
- Normal dress is dress trousers, shirt and tie, and clean white coat. Blue jeans and other casual attire are not permitted. Gum, snuff, toothpicks, etc. are not appropriate when working. Female residents are to wear a dress, slacks or skirt and blouse.
- Residents' on-call, in and out of the Emergency Room, may wear scrubs during the on-call period.
- Residents may wear scrubs on operating days when they are in and out of the operating room.
- Shoes must not be covered with blood or plaster.
- Please wear socks with your shoes. This gives a more professional appearance.
- When going in and out of the operating room in scrubs remove shoe covers, masks, and caps. Replace when re-entering.
- A well-groomed mustache is acceptable.
- Nametags must be worn at all times.

**Duty Hours:**

- Duty hours must be limited to 80 hours per week, averaged over a four week period, inclusive of all in-house call activities and all moonlighting.
- Duty periods of PGY-1 residents must not exceed 16 hours in duration.
- Duty periods of PGY-2 residents and above may be scheduled to a maximum of 24 hours of continuous duty in the hospital.
- Programs must encourage residents to use alertness management strategies in the context of patient care responsibilities.
  - Strategic napping, especially after 16 hours of continuous duty and between the hours of 10:00 p.m. and 8:00 a.m., is strongly suggested.
- It is essential for patient safety and resident education that effective transitions in care occur.
  - Residents may be allowed to remain on-site in order to accomplish these tasks; however, this period of time must be no longer than an additional four hours.
- Residents must not be assigned additional clinical responsibilities after 24 hours of continuous in-house duty.
- In unusual circumstances, residents, on their own initiative, may remain beyond their scheduled period of duty to continue to provide care to a single patient. Justifications for such extensions of duty are limited to reasons of required continuity for a severely ill or unstable patient, academic importance of the events transpiring, or humanistic attention to the needs of a patient or family.
- Under those circumstances, the resident must:
  - appropriately hand over the care of all other patients to the team responsible for their continuing care; and, document the reasons for remaining to care for the patient in question and

- submit that documentation in every circumstance to the program director.

The program director must review each submission of additional service, and track both individual resident and program-wide episodes of additional duty. Maximum In-House On-Call Frequency

**PGY-2** residents and above must be scheduled for in-house call no more frequently than every-third-night (when averaged over a four-week period)

**PGY-1** residents should have 10 hours, and must have eight hours, free of duty between scheduled duty periods.

**INTERMEDIATE-LEVEL** residents [as defined by the Review Committee] should have 10 hours free of duty, and must have eight hours between scheduled duty periods. They must have at least 14 hours free of duty after 24 hours of in-house duty.

**PGY-5** residents in the final years of education [as defined by the Review Committee] must be prepared to enter the unsupervised practice of medicine and care for patients over irregular or extended periods.

This preparation must occur within the context of the 80-hour, maximum duty period length, and one-day-off-in seven standards. While it is desirable that residents in their final years of education have eight hours free of duty between scheduled duty periods, there may be circumstances [as defined by the Review Committee] when these residents must stay on duty to care for their patients or return to the hospital with fewer than eight hours free of duty.

Circumstances of return-to-hospital activities with fewer than eight hours away from the hospital by residents in their final years of education must be monitored by the program director.

Residents must be scheduled for a minimum of one day free of duty every week (when averaged over four weeks). At-home call cannot be assigned on these free days.

Moonlighting must not interfere with the ability of the resident to achieve the goals and objectives of the educational program.

Time spent by residents in Internal and External Moonlighting (as defined in the ACGME Glossary of Terms) must be counted towards the 80-hour Maximum Weekly Hour Limit.

**PGY-1 residents are not permitted to moonlight.**

Time spent in the hospital by residents on at-home call must count towards the 80-hour maximum weekly hour limit. The frequency of at-home call is not subject to the every-

third-night limitation, but must satisfy the requirement for one-day-in-seven free of duty, when averaged over four weeks.

At-home call must not be so frequent or taxing as to preclude rest or reasonable personal time for each resident.

Residents are permitted to return to the hospital while on at-home call to care for new or established patients. Each episode of this type of care, while it must be included in the 80-hour weekly maximum, will not initiate a new “off-duty period”.

Duty hours are to be recorded by the resident in to the Evaluate system. Failure to do this within fifteen days will result in a warning and a suspension of clinical privileges until the issue has been corrected. Three infractions of this rule will result in the resident being placed on remediation for the academic year. The director of the GME office also has the authority to terminate a resident for repeated violation of this rule.

### **Moonlighting:**

Moonlighting is discouraged. Legally, no one can prevent a resident from using off time in any manner that is not detrimental to the accredited status of the program. However, residency only lasts five years, including the opportunity to read basic texts and articles that should be covered, plus reviewing patients and procedures that warrant considerable time. If the resident sacrifices this small amount of one's career for work in the form of moonlighting, they will never regain this time, nor will he ever go back and read these basic texts. There is only one intense training period in a surgeon's life; this period of residency defines a future career. The resident's first responsibility is to their patients, and education. This requires being present and awake at conferences. Extracurricular medical activity for financial remuneration is self-defeating and generally non-educational; thus moonlighting is discouraged.

The resident who wishing to moonlight is to provide the Chairman's office with the location of the moonlighting practice, outlining the amount of time involved. Failure to do so will be grounds for dismissal. Any resident scoring less than the 50th percentile on the Orthopaedic In-Training Examination (OITE) will not be allowed to moonlight. A violation will be grounds for dismissal.

### **Department of Orthopaedic Surgery Faculty:**

The faculty is committed to resident education and, therefore, wishes to have open communication with the residents at any time. The resident staff should feel free to contact any faculty member regarding any problems that they wish. Communication is the best method to avoid problems. If the resident has any questions, he or she should contact the attending surgeon, since the attending is the individual ultimately responsible for patient care.

Faculty guidelines are written separately and include full-time academic faculty as well as part-time paid and unpaid clinical faculty.

**Academic Departmental Offices:**

All full-time faculty have offices in the Clinical Science Building. There is also a residents' office. These offices should be a quiet, adult work environment. Children and family of the faculty and residents should be in the offices only on selected occasions. This is true of all offices where work is ongoing in the Department.

**Orthopaedic Surgery Full Time Attendings (MUSC)**

Harry Demos, M.D.  
C. David Geier MD  
John A. Glaser, M.D.  
Richard Gross, M.D.  
Langdon H. Hartsock, M.D.  
Lee Leddy MD  
John McFadden MD  
William McKibbin MD  
Christopher Merrell MD  
James Mooney MD  
William Muirhead MD  
Frederick Reed, Jr., M.D.  
H. Del Schutte, M.D.  
Gerald Shealy MD  
Shane Woolf MD

**Affiliated Clinical Faculty:**

Donald Johnson, M.D.  
Keith D. Merrill, M.D.  
James R. DeMarco, M.D.  
Robert H. Bowles, M.D.  
Joe Calandra, M.D. (Educational Consultant)  
James DeTorre M.D.

**Research Faculty:**

William R. Barfield, Ph.D.  
Qian Kay Kang, M.D.  
Xuejen Wen MD, Ph.D.  
Hai Yao, Ph.D.

**Conferences:**

A schedule is published monthly listing topics, times and locations. Please refer to this on a regular basis. An attending orthopaedic surgeon is responsible for each conference, and any questions should be directed towards them.

**Fracture Conference:**

Monday                      6:30 a.m. – 7:15 a.m. CSB-708                      Hartsock

**Grand Rounds:**

Tuesday 6:30 a.m. – 7:15 a.m. CSB-300 Demos

**Research, Specialty, Basic Science, Core:**

Tuesday 3:00p.m. – 6:00 p.m. CSB-708

**Total Joint Pre-Op :**

Thursday 6:30 a.m. - 8:00 a.m. CSB-708 Demos/Schutte  
Bi-Weekly

**M&M:** Wed Monthly 6:30-7:15 a.m.

**Journal Club:** Monthly 5:00 p.m. - 6:30 p.m. CSB-708 McKibbin

**Pediatric Pre-Op Conference:** Friday 6:30 a.m. - 8:00 a.m. CSB-708 Gross

It is encouraged that the residents attend all teaching conferences, but also arrive on time and prepared

**Journal Club:**

Journal club is held monthly at the home of an attending. Dr. McKibbin oversees scheduling.

**Journal Club Goals and Objectives:**

1. Stimulate residents to read the current literature
  - Foster good reading habits
  - Identify the best sources for reading
  - Identify knowledge gaps
  - Learn how to search the literature
2. Increase resident knowledge of study design and statistics
  - Understand different types of studies
  - Learn to identify questions and pose hypotheses
  - Critically analyze the methods and results of studies
  - Understand basic statistics enough to critically read literature
  - Identify study strengths and weaknesses
3. Ensure residents understand the hierarchy of evidence
  - Understand the concept of levels of evidence
  - Understand systematic reviews, meta analysis and guidelines
    - Learn how evidence must be combined with clinical experience and patient preference to optimize decision making

**General Format for Journal Club presentations:**

- *Reviewer's name*
- *Date*
- *Article Title and Source*
- *What was the purpose of the study?*
- *State the study design of the article*
- *State the setting in which the research was conducted*
- *Patients.*
- *Describe the intervention studied*
- *What outcome measures were used to evaluate the intervention?*
- *Briefly summarize the results in one or two sentences*
- *State the conclusion of the paper in one sentence*
- *Grade the paper as excellent, good, fair or poor*
- *Commentary*
- *Note any funding sources*

**Audiovisual Equipment:**

Audiovisual equipment for teaching, namely LCD, slide projectors, VCR and accessories, plus PACS units, are kept in the Conference Room. Any equipment removed temporarily from the Conference Room must be returned immediately upon completion of its use. There is also a video cabinet in the Resident's Office.

**The resident's room must be kept neat, tasteful, clean, usable, and available.**

**Operating Room:**

Residents will be pre-assigned elective cases and will prepare with appropriate readings for these cases. The senior resident on each service will assign the resident surgeon for the case. Residents will appear in the operation room at least 10 minutes before the scheduled start of any case and, in any cases that require longer preparation, appropriately earlier so that the time of the incision can be the scheduled time of the case. Residents are responsible for the pre-operative orders, and daily post-operative care. In general residents will dictate the operative note when there is "substantial" involvement in the case - this varies with each faculty. Resident or faculty will dictate operative notes immediately after the case. The Senior Resident should check the operating room tables before surgery and be sure everything that is needed is present and functional. He should demonstrate this to the junior resident on each case. No patient for reconstructive arthroplasty will be anesthetized until all equipment is checked and ready.

**Clinics:**

One resident will be assigned to each clinic when possible to accompany the attending physician and gain experience in ambulatory care. In the Veterans Administration Hospital and McLennan Banks clinic, residents are responsible for seeing all patients in the clinics. Attending coverage will be provided for each clinic so that attendings may see whatever patient the resident desires. An attending should clear all patients that are scheduled for elective admission for surgery. The resident's attitude toward patients

should be courteous at all times, treating patients in the same way that they would like themselves to be treated. It is the Chief Resident's responsibility to see that adequate staffing exists for all clinics so that patient care remains at a high standard.

**On Call:**

The Chief Resident will provide an on-call roster on a monthly basis at the Medical University Hospital. An on-call room is provided for the junior resident on-call. The junior resident will remain in the hospital for the entire duration of call. Orthopaedic coverage will be provided in-house for 24 hours a day, 365 days a year. The senior resident (2<sup>nd</sup> call MUH) may take call from home as long as he or she is within 15 minutes distance of the hospital. The on-call team will provide coverage for the Medical University and the VA Hospital, in that order of priority. At any given time, there will be a junior resident and a senior resident (or Chief) on call. The MUH chief resident is ultimately responsible for day to day on-call patient problems and management. An attending surgeon will be on-call. The senior resident on call will contact the attending on call for all problems during the first two months of the academic year. After this time, it will be at the discretion of the attending as to which resident will initiate contact. Should the junior resident have a problem, or need advice, he/she should contact the senior resident (or Chief Resident) first, before the faculty. No cases should be taken to the operating room without approval of the attending orthopaedic surgeon. There will be on site coverage by the attending for all surgical procedures. The attending of the day will be notified of all 1 West (Trauma) patients. This includes all outpatient visits to 1 West, all orthopaedic admissions. The senior resident (or Chief Resident) will see and personally review all patients pre-operatively. He/she will also come in when the junior resident has any problem that needs senior level assistance. The residents' on-call are to communicate in advance with each team for details on all patients and are responsible for rounds. When a case is completed, one resident should be freed by the Chief Resident to answer pages. If additional residents are needed, they should be called in by the senior resident or Chief Resident. Duty hours for residents on call will be 5:00pm through 6:00 am the following morning.

## ANNUAL SOCIAL EVENTS

Specifically scheduled social occasions will be:

- A Christmas party for the department
- A formal Visiting Professor for one and one-half days, once a year (optionally twice a year)
- Siegling Society Research Day Dinner
- Departmental Picnic for Faculty, Staff and Residents
- Graduation party (Festschrift) will be held annually for graduating residents.

### **FESTSCHRIFT:**

During June the resident's commencement will be held. This celebration has been known traditionally as Festschrift.

#### William K. Nelson Award

Alumni and friends of the Department of Orthopaedic Surgery at the Medical University of South Carolina provides a prize for the resident who gets the highest raw score each year on the in-training examination. This award will be presented during the Festschrift banquet.

#### John A. Siegling Teaching Award

The Department of Orthopaedic Surgery residents vote annually for the faculty member that best typifies the role of instructor and mentor. This award will be presented during the Festschrift banquet.

#### John A. Siegling Society Research Day

During April, the residents will present their papers during the daylong conference. A Visiting Professor will serve as a guest lecturer. All PGY-3, PGY-4 and PGY-5 residents will present their research. The Visiting Professor will give a scholarly talk, and a non-orthopaedic talk at the evening banquet. Alumni, local attending staff, and wives will be invited.

Papers will be judged by the Visiting Professor and a prize will be awarded for the best paper.

#### Resident Outstanding Research Presentation Award

Awarded for the best clinical and/or basic science paper given. A cash award for each recipient will be awarded.

#### Outstanding Alumnus Award

Presented annually to the Alumni member voted by his peers as exhibiting the finest qualities of an Orthopaedic Surgeon and contributed the most to the field.

## **RESIDENT VACATION/EDUCATIONAL TRIP GUIDELINES**

### **VACATION/TRAVEL:**

- Each resident is allowed 3 weeks of vacation - 1 week/rotation.
- No vacations can be taken during the first or last week of a rotation.
- No vacations during first two weeks of July or the last two weeks of June.
- No vacation or other travel during annual AAOS meeting
- Written notification and approval for vacation must be received 6 weeks prior to vacation. VA requires 3 months advance notice so clinics can be cut back. Vacation notification should be submitted to Dr. Leddy. Approval will be obtained by completing the RESIDENT TRAVEL APPROVAL FORM and obtaining necessary signatures. If vacation time is requested by a junior resident on a service, the chief resident also needs to sign the approval form prior to the other signatures.
- If possible, schedule vacation when the attending(s) on service is away.
- No more than one resident away (vacation or meeting) on service concurrently.
- No more than two residents away at any time on the University service. The two residents cannot be from the same subspecialty service.
- No more than one resident from any PGY year away at one time except for during AAOS or other courses.
- Requests for exceptions will be reviewed by the program director or chair.
- PGY4 residents will be allowed 3 extra days time off for fellowship interviews. These will need to be approved through the same process as vacations and meetings.
- PGY5 residents will be allowed 3 extra days time off for job interviews. These will need to be approved through the same process as vacations and meetings.

### **MEETINGS:**

- Each resident will have up to 5 days for professional meetings a year.
- "Ski course/country clubs" like meetings count as one/half day vacation and one/half day of the 5 allotted meeting days.
- During the PGY-2 year, residents will be sent to the Basic AO course for internal fixation of fractures.
- The AAOS is the expense priority for the PGY-5, but time off for a review course will be given, and expensed through the department even in lieu of AAOS.
- Resident travel **directly** funded by industry sponsorship is not allowed.

### **SCOA Annual Meeting:**

Residents are expected to attend this meeting (within work requirements). There must be enough coverage for the hospital during this meeting. Normally, the residents and wives will be invited to a single social function. Details are flexible.

### **PRESENTATION PROCESS:**

- The faculty mentor prior to submission must approve all resident abstracts.
- Once abstract is approved resident generates a manuscript in publishable form and submits to the faculty mentor for review 6 weeks prior to the scheduled presentation. If manuscript is not completed and/or is poorly constructed the

abstract for the meeting is withdrawn. Posters and oral presentations carry equal weight.

- Residents with abstracts accepted to national meetings (i.e., AAOS, ORS, Soc. Biomaterials, Specialty Meetings, POSNA, AOA, Am College Sports Med) will have 2 extra days added to 5 professional meeting days. Abstracts accepted to state and regional meetings will add 1 extra day to professional meeting days.
- The same abstract can only be presented at one national (Continental US) and one state/regional meeting. This does not apply to the SC Orthopaedic Society meeting. Approved presentation travel will be funded by the Department of Orthopaedics or through a grant.
- The annual \$2,250.00 resident educational funding can also be used for travel, books, loupes and CD ROMs. Auto rentals are not included. Computers and other technology are State Property and can not be kept at PGY-5 graduation time. The Residency Program Coordinator will monitor and maintain the monthly balances in the annual allotment.

### **BOARD CERTIFICATION REQUIREMENTS**

Certification requirements are listed below and can be found at the following web address <https://www.abos.org/ModDefault.aspx?module=Candidates&section=BoardCertOver>

#### III. MINIMUM EDUCATIONAL REQUIREMENTS FOR BOARD CERTIFICATION

The Board has established the following minimum educational requirements for certification. These requirements should not be interpreted as restricting programs to minimum standards. Throughout these rules, the term “accredited” denotes approval by the Accreditation Council for Graduate Medical Education.

##### ***A. Time requirements:***

1. Five years (60 months) of accredited post-doctoral residency are required.
2. Prior to July 1, 2000, four of these years (48 months) must be served in a program whose curriculum is determined by the director of an accredited orthopaedic surgery residency. Three of these years (36 months) must be served in an accredited orthopaedic surgery residency program. One year (12 months) may be served in an accredited graduate medical program whose educational content is determined by the director of an accredited orthopaedic surgery residency program.

Beginning on July 1, 2000, one year (12 months) must be served in an accredited graduate medical education program whose curriculum fulfills the content requirements for the PGY-1 (see B.1.) and is determined or approved by the director of an accredited orthopaedic surgery residency program. An additional four years (48 months) must be served in an accredited orthopaedic surgery

residency program whose curriculum is determined by the director of the accredited orthopaedic surgery residency.

3. Each program may provide individual sick leave and vacation times for the resident in accordance with overall institutional policy. However, one year of credit must include at least 46 weeks of full-time orthopaedic education. Vacation or leave time may not be accumulated to reduce the five-year requirement.

4. Program directors may retain a resident for as long as needed beyond the minimum required time to ensure the necessary degree of competence in orthopaedic surgery. According to the current Special Requirements of the Residency Review Committee for Orthopaedic Surgery, the committee must be notified of such retention. This information must also be provided to the Board on the Record of Residency Assignment form.

#### ***B. Content requirements:***

1. Requirements for postgraduate year one.

Prior to July 1, 2000, a minimum of nine months during the PGY-1 must be based in clinical services other than orthopaedics. This requirement may be fulfilled by a year of accredited residency in any broad based program involving patient care.

Beginning on July 1, 2000, the residency program director should be responsible for the design, implementation, and oversight of the PGY-1. The PGY-1 must include:

a) A minimum of six months of structured education in surgery to include multisystem trauma, plastic surgery/burn care, intensive care, and vascular surgery.

b) A minimum of one month of structured education in at least three of the following-- emergency medicine, medical/cardiac intensive care, internal medicine, neurology, neurological surgery, rheumatology, anesthesiology, musculoskeletal imaging, and rehabilitation.

c) A maximum of three months of orthopaedic surgery.

2. Orthopaedic requirements beyond the PGY-1.

a) ***Minimum distribution.*** Orthopaedic education must be broadly representative of the entire field of orthopaedic surgery. The minimum distribution of educational experience must include:

- 12 months of adult orthopaedics
- 12 months of fractures/trauma
- Six months of children's orthopaedics

3. Six months of basic and/or clinical specialties.

Experience may be received in two or more subject areas concurrently. Concurrent or integrated programs must allocate time by proportion of experience.

b) ***Scope.*** Orthopaedic education must provide experience with all of the following:

(1) ***Children's orthopaedics.*** The educational experience in children's orthopaedics must be obtained either in an accredited

position in the specific residency program in which the resident is enrolled or in a children's hospital in an assigned accredited residency position.

(2) **Anatomic areas.** All aspects of diagnosis and care of disorders affecting the bones, joints, and soft tissues of the upper and lower extremities, including the hand and foot; the entire spine, including intervertebral discs; and the bony pelvis.

(3) **Acute and chronic care.** Diagnosis and care, both operative and nonoperative, of acute trauma (including athletic injuries), infectious disease, neurovascular impairment, and chronic orthopaedic problems including reconstructive surgery, neuromuscular disease, metabolic bone disease, benign and malignant tumors, and rehabilitation.

(4) **Related clinical subjects.** Musculoskeletal imaging procedures, use and interpretation of clinical laboratory tests, prosthetics, orthotics, physical modalities and exercises, neurological and rheumatological disorders and medical ethics.

(5) **Research.** Exposure to the evaluative sciences, clinical and/or laboratory research.

(6) **Basic Science.** Instruction in anatomy, biochemistry, biomaterials, biomechanics, microbiology, pathology, pharmacology, physiology, and other basic sciences related to orthopaedic surgery. The resident must have the opportunity to apply these basic sciences to all phases of orthopaedic surgery.

c) **Options.** Twelve months of the four required years under the direction of the orthopaedic surgery residency program director may be spent on services consisting partially or entirely of:

(1) Additional experience in general adult or children's orthopaedics or fractures/trauma.

(2) An orthopaedic clinical specialty.

(3) Orthopaedics-related research.

(4) Experience in a graduate medical education program whose educational content is pre-approved by the director of the orthopaedic surgery residency program.



## **IN -TRAINING EXAMINATION**

All residents will take the Orthopaedic In-Training Examination in November of each year. You will receive a printout of your raw score on the examination and how you compared to your peers. The In-Training Examination should be used as an index of the resident's progress and of the program's ability to provide educational material for the residents. First year residents should become familiar with basic texts in the department library.

## **CONFERENCE ROOM/LIBRARY UPKEEP AND USAGE**

You are all aware of the library's significance to the Department as well as to your studies. We are constantly striving to make it a more complete organized source of information.

Without your cooperation, our efforts become futile.

Please allow the same courtesy to others as you would want for yourself. The library is for your usage and let's keep it that way so it's use won't have to be restricted for it's own protection.

In an effort to properly maintain our library, books are not to be removed from this area. It is your responsibility to return books to their proper place on the shelves when you are finished.

Please remember that our library also serves as the department conference room where many meetings and conferences are held. Therefore, x-rays, charts, paperwork, etc. should not be left scattered about the room.

## **RADIATION SAFETY FILM BADGES**

For all rotations, you will be required to wear a radiation safety badge at all times when you are in the hospital. This badge measures exposure to radiation received while doing x-rays. It is very important to get these readings monthly. You will receive a plastic badge holder for you to keep during your five years here and a new film badge every month. Please put your old film badge in the Residency Coordinators box located in CSB 708. Your new film badge will be placed in your mailboxes.

### **Please note the following:**

The badge is to be worn at all times in the hospitals on the outside of your clothing between the waist and neck. Security personnel check for these badges. If you are caught not wearing or using this badge a \$50.00 dollar fine will be enforced.

Be sure to leave your film badge in the hospital overnight. DO NOT take this home with you. Never leave your badge where heat could cause a faulty reading.

The radiation sensors are quite fragile, so please do not "play" with your badge.

If your badge becomes contaminated with any patient fluids or chemicals, please hand carry it to Radiation Safety in Harborview Office Towers.

## **OPERATING ROOM ATTIRE POLICY**

All personnel entering the Semi-Restricted and restricted areas of the O.R. will wear a scrub suit or scrub dress. Scrub suit tops must be tucked inside trousers. Tunic tops may be worn outside pants.

When leaving the O.R. personnel must change into street clothes, or cover their scrub attire with a white lab coat. Personnel transporting patients/specimens may cover their O.R. attire with a yellow cover gown.

All O.R. apparel is laundered between uses in the laundry facilities used by the hospital.

Attire that is visibly wet or soiled will be changed.

All scalp and facial hair will be adequately covered and confined while in the operating room.

Shoe covers, which are changed whenever they become torn, wet, or soiled, may be worn to facilitate good housekeeping.

Masks are worn at all times in restricted areas. They must cover the mouth and nose, and be secured to prevent venting at the sides. Masks are either on or off.

Scrub suits must conceal all undergarments.

All Jewelry must be confined within scrub attire or removed when personnel enter Semi-Restricted or restricted areas of the surgical suite.

Personnel should not wear nail polish or artificial nails in restricted areas of the O.R.

Protective eyewear, impervious gowns, and gloves should be worn whenever activities could place one at risk for a splash to the eye, face, or other area. Gloves should be worn in all O.R. suites.

Closed system airflow garments are used as directed in Main O.R. (total joint room).

### **MEDICAL RECORDS**

Whether digital or on paper, timely completion of medical records is mandatory.

## **PGY-1 ORTHOPAEDIC SURGERY INTERN ROTATION**

The PGY1 year is supervised by the program directors of both Surgery and Orthopaedic Surgery.

### **The Orthopaedic Residency review Committee requirements are:**

- A minimum of six months of structured education in surgery, to include multisystem trauma, plastic surgery/burn care, intensive care, and vascular surgery
- A minimum of one month of structured education in at least three of the following:
  - emergency medicine, medical/cardiac intensive care, internal medicine, neurology,
  - neurological surgery, pediatric surgery or pediatrics, rheumatology,
  - anesthesiology, musculoskeletal imaging, and rehabilitation; and
  - A maximum of three months of orthopaedic surgery.

Goals and Objectives for the various rotations as a PGY1 can be found at the following website address:

<http://clinicaldepartments.musc.edu/ortho/residents/2010-2011DepartmentGoalsObjectives.pdf>

### **PGY 2-5 YEARS**

The program director is also responsible for the design, implementation and oversight of PGY-2 through PGY-5 years that must include at least 3 years of rotations on orthopaedic services; and may include rotations on related services such as plastic surgery, physical medicine and rehabilitation, rheumatology, or neurological surgery.

**TRAUMA SERVICE**  
**ROTATION SPECIFIC LEARNING OBJECTIVES**

Educational Objectives - Trauma

***Goals:***

- 1) Be able to perform a complete history and physical exam of a trauma victim including spine, pelvis, upper and lower extremities, including skin and integument, peripheral nerves, vascular status, muscles, ligaments, bones, joints, tendons, etc.
- 2) Be able to order and interpret plain radiographs and advanced studies (ct & mri) pertinent to diagnosing and treating fractures and dislocations.
- 3) Be able to classify injuries and initiate treatment including closed reduction, application of splints and casts.
- 4) Be able to describe indications for surgery for musculoskeletal injuries.

**Medical knowledge**

- -history of fracture care
- -biology of bone healing
- -biology of soft tissue healing
- -physiologic response to trauma
- -classification of open injuries
- -classification of fractures
- -principles of non-op care
- -principles of internal fixation
- -principles of external fixation
- -risk factors for complications
- -physiology of comp. syndrome
- -risk factors for malunion and non-union
- -specific fractures (list each)

## **Patient Care**

- -be able to present patient history, physical exam, x-rays, in conference or over phone
- -daily rounds
- -daily prog notes
- -consults - ER, inpatient
- -pre-op assessment
- -post-op checks
- -monitoring vital signs, labs
- -monitor for complications-compartment syndrome, DVT, PE, skin breakdown, nerve palsy, infection, blood loss, ileus, constipation, UTI, gastric ulcers, stroke, MI, pneumonia, atelectasis, delirium, dementia, alcohol or drug withdrawal.
- -order PT, OT, SOC services. D/C planning
- -coordinate care with other services - plastic, general surgery, neurosurgery
- -order consults - cardiology etc.
- -order pain management PCA, etc.
- -discharge summaries
- -op notes
- -participate in surgical procedures
- -apply/remove splints, cast, dressings
- -atraumatic wound closures
- -provide surgical exposure – retraction
- -specific fractures - femur, ankle, forearm, etc.
- -apply traction pin

- -apply ex-fix
- -use of imaging devices in OR
- -apply halo device

### **Practice Based Learning and Improvement**

- -flu at McClennan Banks and Bone & Joint
- -participate in weekly faculty conference
- -participate in monthly M&M
- -prepare for surgical procedures using texts, journals
- -prepare for conferences using provided handouts, etc.
- -attend AO Basic Course
- -support Medical Student learning

### **Interpersonal and Communication Skills**

- -demonstrate effective physician-patient communication
- -demonstrate effective physician-staff communication
- -demonstrate effective physician-physician communication
- -clear, written and dictated notes

### **Professionalism**

- -Comply with all ACGME duty hour regulations
- Regularly report duty hours

### **Systems Based Practice**

- -be able to describe SC Trauma System
- -understand the costs of care for trauma victims
- -describe how to work with D/C planning and Social Services for patients

- -understand the effect of an injury on overall patient well being and to society
- -understand how patient social and psychological condition influence outcome for the same or similar injury in another patient

## PGY-2

- Should be able to evaluate a patient using ATLS guidelines
- Should be able to perform a complete orthopaedic exam of a trauma patient
- Should be able to obtain pertinent history for mechanism of injury, age, occupation, PMH, etc
- Should be able to order appropriate x-rays to evaluate for a fracture or dislocation
- Should be able to know when to order a CT scan or MRI
- Should be able to reduce dislocations of the shoulder, hip, knee and other joints
- Should be able to understand the need for adequate analgesia and sedation for reduction of fractures and dislocations and coordinate with other team members to obtain
- Should be able to reduce and splint common fractures such as distal radius and ankle
- Should be able to apply skeletal traction pins for femur fractures
- Should Understand the uses of traction devices applied by EMS and the use of MAST trousers
- Should be able to describe a wound or soft tissue injury to other members of the team
- Should be able to interpret x-rays to other team members
- Should be able to coordinate care with other members of the team including General Surgery, Neurosurgery, Plastic Surgery, and Anesthesia
- Should be aware of potential for development of compartment syndrome and know how to measure compartment pressures
- Should understand risks for development of skin breakdown from backboards, and other complications including infection, DVT/PE, ARDS and pneumonia

- Should be able to recognize vascular insufficiency and initiate consultations with vascular surgery
- Should be able to recognize peripheral nerve injuries and spinal cord injuries and communicate findings to other members of team
- Should be able to examine a patient for spine injury
- Should be able to document an orthopaedic exam
- Should be able to write and understand admission and post operative orders
- Should be able to make rounds daily on patients and monitor vital signs, lab values, pain management, and make appropriate interventions
- Should be able to write daily progress notes and coordinate care with nurses, therapists, and discharge planning coordinators
- Should be able to apply a simple external fixator to the tibia
- Should be familiar with the principles of internal fixation related to forearm fractures
- Should gain experience in IM nail of femur, tibia, and humerus
- Should gain experience in internal fixation of fractures of the proximal femur
- Should gain experience in hemiarthroplasty of the hip
- Should be able to percutaneously pin a distal radius fracture
- Understand pelvic fracture classification, understand when to apply pelvic clamp for hemorrhage control
- Should be able to present trauma cases at weekly fracture conference
- Should gain exposure to the principles of management of articular fractures and assist with surgery of these fractures
- Should learn how to correctly perform debridement of an open fracture and irrigation
- Should understand the causes of non union
- Should learn careful soft tissue handling techniques

- Should learn about casting and orthotics
- Should learn how to evaluate outpatients at McClennan-Banks clinic and at the West Ashley Bone and Joint Center for non-traumatic conditions. Obtain a history and perform a directed physical exam. Be able to orally present the history, physical and x-ray findings
- Develop detailed knowledge of anatomy and surgical approaches
- Develop detailed knowledge of individual types of fractures through reading texts, journals, using electronic media, etc

#### PGY-4

- Should act as chief resident on the service. Responsible for administrative functions, directly work with PGY-2 resident to coordinate plan of care for each patient. Responsible for working with medical students to maximize learning opportunities for them.
- All PGY-2 goals apply
- Should be able to coordinate care of multiple patients, triage and prioritize injuries in individual and multiple patients
- Should be able to direct the efforts of the team to maximize effective and efficient care.
- Should be a role model to the PGY-2 resident of the competent and caring physician
- Encourage learning of PGY-2 resident through reading, questions, etc
- Develop detailed knowledge of complex fracture types especially articular fractures and use that knowledge to determine an optimal care plan for each patient and fracture
- Should be able to perform surgical stabilization of a variety of fracture types using plates, screws, IM nails, external fixators, etc. using sound principles of fracture management
- Should begin developing expertise in surgical treatment of articular fractures such as tibial plateau, distal femur, pilon, elbow, distal radius, proximal humerus, talus, calcaneus

- Understand fracture classification for acetabulum fractures. Begin to develop skills in surgical approaches and internal fixation depending on analysis of resident skill by attending
- Understand pelvic fracture classification. Be able to apply Ex Fix to pelvis and plate the pubic symphysis
- Should be able to understand causes of mal union and non-union and assist at surgery. Perform surgery under direct supervision of attending
- Should be able to supervise daily ward rounds. Monitor patients for possible complications. Coordinate care with other services and nurses
- Should be able to accurately post cases
- Should be the chief resident at McClennan Banks clinic and assist the PGY-2 resident in seeing and evaluating patients
- Should read and study texts, journals, and electronic media

**FOOT AND ANKLE GOALS AND OBJECTIVES**

|                     | <b>Junior Resident</b>   | <b>Senior Resident</b>   |
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| <b>Patient Care</b> | <p>Able to effectively develop the initial patient care and clinical skills to facilitate adequate evaluation of common Foot and Ankle conditions seen in adolescents and adults patients</p> <p>Demonstrates clinical skills that include:</p> <p><b><i>Medical Interviewing &amp; Physical Examination</i></b><br/> will demonstrate the ability to perform and document an effective patient interview<br/> elicit the chief complaint<br/> elicit a history of the presenting complaint(s)<br/> obtain the past medical, surgical and social history<br/> obtain a list of current medications<br/> perform a review of systems<br/> - will demonstrate the ability to perform and document an accurate physical examination<br/> determine the overall alignment the foot (planus, neutral, cavus)<br/> identify the location of pain and tenderness to palpation<br/> identify and note bony deformities<br/> identify and note joint condition<br/> identify and note tendon problems</p> <p><b><i>Diagnostic Studies (selection, interpretation)</i></b><br/> will demonstrate the ability to order the appropriate xrays (if indicated) to evaluate the presenting complaint(s)<br/> know when weightbearing xrays of foot are indicated<br/> know when non-weightbearing xrays of foot are indicated</p> | <p>In general a senior resident or fellow will meet the learning objectives of the junior resident</p> <p>Demonstrates a refined set of clinical skills</p> <p><b><i>Medical Interviewing &amp; Physical Examination</i></b><br/> will demonstrate the ability to perform and document an effective specific patient interview<br/> elicit the chief complaint<br/> elicit a concise history of the presenting complaint<br/> details pertinent to the presumptive diagnosis<br/> obtain the past medical, surgical and social history<br/> pertinent to the presumptive diagnosis<br/> obtain a list of current medications<br/> perform a review of systems<br/> - will demonstrate the ability to perform and document an accurate physical examination<br/> determine the overall alignment of the foot<br/> comment on the presence of specific deformities of the hindfoot, midfoot and forefoot<br/> identify the location of pain and tenderness to palpation<br/> details pertinent to the presumptive diagnosis<br/> identify and note particular bony deformities<br/> identify and note particular joint conditions<br/> identify and note tendon imbalances</p> <p><b><i>Diagnostic Studies (selection, interpretation)</i></b><br/> will demonstrate the ability to order the appropriate xrays (if indicated) to evaluate the presenting complaint(s)<br/> know when weightbearing xrays of foot are indicated<br/> know when non-weightbearing xrays of foot are indicated</p> |

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|  | <p>know when know when weightbearing xrays of ankle are indicated<br/> know when non-weightbearing xrays of ankle are indicated<br/> know when full-length views of tibia-fibula are indicated<br/> know when a CT scan of the foot, ankle or leg is indicated<br/> know when an MRI of the foot, ankle or leg is indicated<br/> will demonstrate the ability to provide a basic interpretation of the images<br/> able to identify normal anatomy<br/> able to describe pertinent positive findings<br/> able to provide a basic correlation of xray findings with history and examination</p> <p><b>Synthesis of Clinical Data, Differential Diagnosis</b><br/> will demonstrate the ability to analyze their findings to form a clinical impression for the cause of the presenting complaint(s)<br/> able to formulate a brief differential diagnosis<br/> able to include the most likely diagnosis in their differential</p> <p><b>Formulate a Treatment Strategy</b><br/> will demonstrate the ability to formulate a basic plan of care<br/> able to identify, describe and prescribe nonoperative options for the condition<br/> medications<br/> physical therapy<br/> orthotics, braces, casts and splints<br/> able to identify, describe and discuss operative options for the condition<br/> formulate an basic operative plan containing the indicated surgical procedures</p> <p>Demonstrate procedural and surgical skills with supervision appropriate to the level of training that include:</p> <p><b>Ability to Perform Essential Procedures</b><br/> will demonstrate the ability to perform the common procedures for outpatients and in-house consult<br/> Splint and cast application<br/> Joint aspiration/injection<br/> Closed reduction of fractures of the foot, ankle and leg<br/> will demonstrate the ability to perform basic surgical skills<br/> identify the appropriate position of the patient for surgery<br/> know when the patient should be supine, lateral decubitus or prone<br/> know how to place patient in the appropriate position safely<br/> perform the preparation and draping of the patient for surgery<br/> identify the location of the incision(s)<br/> know the basic details of the exposure(s)<br/> know the pitfalls, dangers and difficulties inherent to the exposure<br/> know the steps to performing the procedure<br/> know the layered closure of the exposure<br/> know how to dress the wound<br/> know how to immobilize the extremity properly after surgery<br/> applying the splint, cast or brace at the conclusion of the operation</p> <p>Demonstrate ability to manage inpatients:<br/> will demonstrate the ability to provide postoperative inpatient care for foot and ankle patients after surgery</p> | <p>will demonstrate the ability to or (indicated) to evaluate the present<br/> know when weightbearing xrays<br/> know when non-weightbearing x<br/> know when know when weightb<br/> know when non-weightbearing x<br/> know when and what special vie<br/> indicated to assess a particular c<br/> know when full-length views of<br/> know when a CT scan of the foot<br/> know when contrast is indicated<br/> know when to request modificat<br/> questions<br/> know when an MRI of the foot,<br/> know when contrast is indicated<br/> know when to request modificat<br/> questions<br/> will demonstrate the ability to p<br/> interpretation of the images<br/> able to identify normal anatomy<br/> able to interpret xrays in support<br/> able to identify and describe per<br/> able to identify and describe per<br/> able to discuss all xray findings<br/> diagnosis in correlation with his</p> <p><b>Synthesis of Clinical Data, Diff</b><br/> will demonstrate the ability to an<br/> defend/support their clinical im<br/> presenting complaint(s)<br/> able to formulate a detailed diff<br/> rank likelihood of each possible<br/> able to determine the most likely<br/> conclusion<br/> discuss the individual clinical da</p> <p><b>Formulate a Treatment Strateg</b><br/> will demonstrate the ability to fo<br/> able to identify, describe and pre<br/> the condition and modify option<br/> patient<br/> medications<br/> physical therapy<br/> orthotics, braces, casts and splin<br/> able to identify, describe and dis<br/> condition and modify options sp<br/> formulate an detailed operative p<br/> procedures individualized to a p<br/> discuss reasoning for and agains<br/> procedure from the surgical plan</p> <p><b>Ability to Perform Essential Pro</b><br/> will demonstrate the ability to pe<br/> outpatients and in-house consult<br/> through these procedures<br/> Splint and cast application</p> |
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|                                 | <p>manage pain after surgery<br/> manage known medical comorbidities after surgery<br/> recognize the onset of acute postoperative decompensation<br/> recognize postoperative complications<br/> will demonstrate ability to develop and implement a management plans and initiate strategies including appropriate consultation with the supervising physician</p>   | <p>Joint aspiration/injection<br/> Closed reduction of fractures of foot and ankle<br/> will demonstrate the ability to perform closed reduction of fractures of foot and ankle for the junior resident with attending supervision<br/> identify the appropriate position of the patient<br/> know when the patient should be positioned<br/> know how to place patient in the correct position<br/> know when and how to modify the position of the patient<br/> individual patient<br/> perform the preparation and draping of the patient<br/> know when and how to modify the position of the patient<br/> an individual patient<br/> identify the location of the incision<br/> know when and how to modify the position of the patient<br/> individual patient<br/> know the basic details of the exposure<br/> know the pitfalls, dangers and dissection<br/> know when and how to modify the position of the patient<br/> individual patient<br/> know the steps to performing the procedure<br/> know when and how to modify the position of the patient<br/> individual patient<br/> know the layered closure of the wound<br/> know how to dress the wound<br/> know how to immobilize the extremity<br/> applying the splint, cast or brace<br/> know when and how to modify the position of the patient<br/> an individual patient</p> <p>Demonstrate ability to manage a patient with a foot and ankle injury<br/> will demonstrate the ability to perform a provisional diagnosis for foot and ankle patients after surgery<br/> resident activities<br/> manage pain after surgery<br/> manage known medical comorbidities<br/> recognize the onset of acute postoperative decompensation<br/> a provisional diagnosis<br/> recognize postoperative complications<br/> problem and formulate a treatment plan<br/> - will demonstrate the ability to perform a provisional diagnosis<br/> the possibility of postoperative complications<br/> - will demonstrate the ability to perform a provisional diagnosis<br/> varying postoperative interventions<br/> rehabilitation protocols as appropriate</p> |
| <p><b>Medical Knowledge</b></p> | <p><i>Possess an appropriate fund of medical knowledge</i><br/> will be able to answer questions appropriate to their level of training correctly in the following areas<br/> anatomy<br/> physiology<br/> biomechanics<br/> disease-specific facts<br/> will demonstrate willingness and ability to acquire new information by his/her actions and words, clearly show a desire to learn about all aspects of Orthopaedic surgery</p> | <p><i>Possess an appropriate fund of medical knowledge</i><br/> will be able to answer questions appropriate to their level of training correctly in the following areas<br/> anatomy<br/> physiology<br/> biomechanics<br/> disease-specific facts<br/> - will be able to discuss the current literature on<br/> gaps and controversies surrounding the current literature<br/> will demonstrate willingness and ability to acquire new information</p>  |

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|  | by his(her) actions and words, clearly shows motivation to improve their abilities in all aspects of Orthopaedic surgery | by his(her) actions and words, c<br>all aspects of Orthopaedic surge<br>by his(her) actions and words, c<br>their abilities in all aspects of Or<br>will model/mentor the ideal to th |
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| <p><b>Practice-Based Learning &amp; Improvement</b></p> | <p><i>Recognizes gaps in knowledge and experience, uses constructive criticism to improve and applies scientific knowledge in daily duties</i></p> <p>Able to locate, appraise and assimilate evidence from scientific studies related to patients' health issues;</p> <p>Able to obtain and use information about his/her patient population and the larger population from which patients are drawn;</p> <p>Able to apply knowledge of study designs and statistical methods to the appraisal of clinical studies;</p> <p>Able to use information technology to manage information, access on-line medical information and support his/her own education;</p> <p>Able to facilitate the learning of medical students and other learners and other health care professionals on an informal basis in clinics, operating rooms and conferences;</p> <p>Ability to critically evaluate literature regarding Foot and Ankle conditons</p> <p>Ability to analyze the circumstances surrounding a complication and to formulate an improvement plan to improve future care.</p> | <p><i>Recognizes gaps in knowledge and experience, uses constructive criticism to improve and applies scientific knowledge in daily duties</i></p> <p>Easily and expertly locate, appraise and assimilate evidence from scientific studies related to patients' health issues;</p> <p>Easily and expertly obtain and use information about his/her patient population and the larger population from which patients are drawn;</p> <p>Easily and expertly apply knowledge of study designs and statistical methods to the appraisal of clinical studies;</p> <p>Easily and expertly use information technology to manage information, access on-line medical information and support his/her own education;</p> <p>Easily and expertly facilitate the learning of medical students and other learners and other health care professionals on an informal basis in clinics, operating rooms and conferences;</p> <p>Easily and expertly critically evaluate literature regarding Foot and Ankle conditons</p> <p>Easily and expertly analyze the circumstances surrounding a complication and to formulate an improvement plan to improve future care from an individual standpoint and for the benefit of the care team</p> <p><i>Be role model and peer-to-peer</i><br/><i>Actively guide them by your capabilities</i></p> <p>Demonstrates leadership in overseeing the care team</p> <p>Assures that learners on the breadth and depth of expertise and distribution of operative competency at all levels</p> |
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| <p><b>Interpersonal &amp; Communication Skills</b></p> | <p><i>Communicates effectively with patients, their families, professional colleagues and the allied health staff to work effectively as a member of a treatment team. Be able to interact with the leader and understand the challenges of being a leader of a treatment team</i></p> <p>Invites questions from patients and their families providing education regarding the patient's condition and the treatment plan;</p> <p>Able to create and sustain a therapeutic and ethically sound relationship with patients and their families;</p> <p>Able to effectively communicate information via various methods;</p> <p>Able to work effectively with other members of a health care team;</p> <p>Provides necessary reporting to more senior residents, fellows and attending staff to ensure good patient care;</p> <p><i>Demonstrates good listening skills and presents information in a clear and concise manner highlighting salient features</i></p> <p>Respond to patient phone calls and communication from allied health professionals.</p> | <p><i>Communicates effectively with colleagues and the allied health staff to work effectively as a member of a treatment team.</i></p> <p><i>Be role model and peer-to-peer. Actively demonstrate expertise and mentor to them the importance of</i></p> <p>Invites questions from patients and their families providing education regarding the patient's condition and encourages all members to contribute to the discussion</p> <p>Easily and expertly create and sustain a therapeutic and ethically sound relationship with patients and their families and encourages all members of the care team in</p> <p>Easily and expertly communicate information and teach all members of the care team</p> <p>Easily and expertly with other members of the care team to teach all members of the care team</p> <p>Easily and expertly report to attending staff to ensure good patient care and teach all members of the care team</p> <p><i>Demonstrates good listening skills and presents information in a clear and concise manner highlighting salient features</i></p> <p>Respond to all inquiries and communication from allied health professionals effectively and encourage all members of the care team to contribute to the discussion</p> |
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| <p><b>Professionalism</b></p> | <p><i>Demonstrates high standards of ethical and moral behavior, honesty and integrity, compassion and empathy, reliability and responsibility in his(her) daily activities as a member of the Orthopaedic Surgery Residency Program</i></p> <p>Effectively communicates and demonstrates care and respectful behaviors when interacting with patients and families;</p> <p>Maintains the strictest confidence in any and all interactions dealing with all patients;</p> <p>Demonstrates compassion and empathy</p> <p>Demonstrates respect, compassion and integrity in response to the needs of patients and their families;</p> <p>Demonstrates ethical principles pertaining to patient confidentiality</p> <p>Demonstrates the ability to practice culturally competent medicine</p> <p>Demonstrates sensitivity to the culture, age, gender and disabilities of patients;</p> <p>Promptly recognizes and acknowledges complications that arise;</p> <p>Maintain adequate documentation and timely completion of medical records;</p> <p>Complete teaching and rotation evaluations.</p> <p><b><i>Demonstrate Clinical Judgment (organize and prioritize information and tasks)</i></b><br/> - will demonstrate the ability to direct him(her)self in fulfilling all the clinical responsibilities assigned to him(her) on a daily basis</p> <p><b><i>Demonstrates awareness of limitations (seeks advice/assistance when appropriate)</i></b></p> | <p><i>Demonstrates high standards of ethical and moral behavior, honesty and integrity, compassion and empathy, reliability and responsibility in his(her) daily activities as a member of the Orthopaedic Surgery Residency Program</i></p> <p><b><i>Be role model and peer-to-peer</i></b><br/> <i>Actively guide them and encourage them to internalize the ideals of professionalism</i></p> <p>Effectively communicates and demonstrates care and respectful behaviors when interacting with patients and members of the care team these skills</p> <p>Maintains the strictest confidence in any and all interactions dealing with all patients and teaches all members of the care team these skills</p> <p>Demonstrates compassion and empathy</p> <p>Demonstrates respect, compassion and integrity in response to the needs of patients and their families; teaches all members of the care team these skills</p> <p>Demonstrates ethical principles pertaining to patient confidentiality and teaches all members of the care team these skills</p> <p>Demonstrates the ability to practice culturally competent medicine and teaches all members of the care team these skills</p> <p>Demonstrates sensitivity to the culture, age, gender and disabilities of patients and teaches all members of the care team these skills</p> <p>Promptly recognizes and acknowledges complications that arise; and teaches all members of the care team these skills</p> <p>Maintain adequate documentation and timely completion of medical records and teaches all members of the care team these skills</p> <p>Complete teaching and rotation evaluations of the care team these skills</p> <p><b><i>Demonstrate Clinical Judgment (organize and prioritize information and tasks)</i></b><br/> will demonstrate the ability to direct him(her)self in fulfilling all their clinical responsibilities assigned to him(her) on a daily basis<br/> ensures all clinical responsibilities assigned to him(her) on a daily basis are completely and properly fulfilled</p> <p><b><i>Demonstrates awareness of limitations (seeks advice/assistance when appropriate)</i></b></p> <p>Demonstrates an openness and willingness to accept feedback from leading the members of the care team</p> |
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|                                      |  | input of the team and of the a  |
| <p><b>Systems-Based Practice</b></p> | <p><i>Demonstrates an ability to work effectively in various healthcare settings and systems, concern for an attention to patient safety and attentiveness to timely completion of records and necessary applications</i></p> <p>Able to use information technology to support patient care decisions and patient education;</p> <p><i>Able to coordinate health care services aimed at preventing health problems or maintaining health (OT, PT);</i></p> <p>Able to work with other health care professionals from various disciplines to provide excellent patient-focused careMaintains the strictest confidence in any and all interactions dealing with all patients;</p> <p>Demonstrates knowledge of treatment plans and their impact on cost-effectiveness and efficiency of patient care;</p> <p>Acts as an advocate for quality of patient care;</p> <p>Able to assess, coordinate and improve the care of patients within the current health care model(s) or systems in the program [OT, PT and Rehab];</p> <p>Complete all requirements for compliance, risk management, and safety education.</p> | <p><i>Demonstrates an ability to w settings and systems, concern attentiveness to timely comp applications</i></p> <p><i>Be role model and peer-to-p Demonstrate your dedication healthcare system. Keep up responsibilities and encoura</i></p> <p>Easily and expertly use inform care decisions and patient edu team these skills</p> <p>Easily and expertly coordinat preventing health problems o teach the members of the team</p> <p>Easily and expertly work with various disciplines to provide teach the members of the team</p> <p>Maintains the strictest confid with all patients and ensures</p> <p>Easily and expertly demonstr their impact on cost-effective educates the members of the</p> <p>Easily and expertly acts as an encourages the members of th</p> |

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|  |  | <p>Easily and expertly assess, co-ordinate and manage patients within the current health care program [OT, PT and Rehab] and coordinate the activities of members of the care team</p> <p>Complete all requirements for safety education and encourage</p> |
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## **SPINE ROTATION LEARNING OBJECTIVES**

### ***Goals:***

- Provide background understanding of spinal anatomy, biomechanics and pathology
- Provide clinical and literature exposures to surgical indications and techniques
- Provide clinical and literature foundations for non-operative management
- Provide clinical and imaging correlation's for decision making with patients with spinal disease
- Provide a clinical model for recognition of the patient's role in understanding their spinal disorder and their role in its treatment

### **OBJECTIVES**

- At the completion of the rotation, the resident shall:
- **PATIENT CARE**
- Understand the principles of treating pain and decreasing suffering of patients
- Be familiar with a variety of spinal instrumentation systems and the indications and techniques for their use
- Become comfortable with non-operative and operative management of spinal disorders and the indications for each
- Be able to evaluate and treat spine trauma based on clinical and imaging data relative to neurologic injury and spinal stability

### **MEDICAL KNOWLEDGE:**

- Be familiar with anterior and posterior surgical approaches to the cervical, thoracic and lumbar spine including the specific osseous, vascular and neurologic anatomy

- Be acquainted with the epidemiology issues involved with spinal pain and the indications for the variety of non-operative and operative treatment programs
- Understand the pathophysiology and pathoanatomy of disc disease and its natural history
- Have read Orthopaedic Knowledge Update Spine and other relevant literature.

**PROFESSIONALISM:**

- Treat patients and colleagues with respect and dignity.

**SYSTEMS BASED PRACTICE:**

- Understand Worker's Compensation and other liability issues
- Be familiar with E&M as well as CPT coding for spinal care
- Have been exposed if possible to medico-legal proceedings such as a deposition or trial.

**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
- Recognize factors leading to spinal stability and instability
- Analyzed and researched failures and complications related to spinal surgery.

**INTERPERSONAL AND COMMUNICATION SKILLS**

Use effective communication skills including explanations, questioning and writing skills.

**HAND/UPPER EXTREMITY ROTATION LEARNING OBJECTIVES**

*Goals:*

- At the completion of these rotations the resident will be able to:
- Describe the important anatomic features of the hand, wrist and forearm.
- Demonstrate an increase in his/her knowledge of a spectrum of upper extremity pathology including traumatic, congenital, developmental and degenerative conditions.
- Diagnose and recommend non-operative and operative treatments for common problems which affect the hand and upper extremity.
- Appreciate the importance of Hand therapy and patient participation in achieving optimum results from treatment.

**Educational Objectives and Requirements:**

**Medical Knowledge**

*Junior Resident*

- Attends and participates in the scheduled hand conferences.
- Presents hand article at monthly journal club.

- Possesses an understanding of the functional anatomy of the upper extremity from the brachial plexus to the nail apparatus.
- Understands the history of hand surgery and the hand surgeon's role and responsibility in caring for the pathology of all components in the upper extremity: skin, soft tissues, nerves, blood vessels, tendons, ligaments, bones, and joints.
- Possesses an understanding of common nerve compression syndromes.
- Possesses an understanding of common soft tissue masses in the hand and wrist.
- Able to recommend a strategy for evaluating a patient with acute hand trauma.
- Demonstrates knowledge of surgical approaches in the upper extremity.
- Utilizes textbooks and literature sources for directed reading on topics brought up in clinic and/or the operating room.
- Understand the indications for replantation and revision amputation.
- Appreciate the importance of the soft tissues in Orthopaedic Surgery.

#### Senior Resident

- Demonstrates knowledge of and the use of staging systems such as those used for: arthrosis of the first carpometacarpal joint and Kienbock's disease.
- Understands classification and treatment of common congenital hand deformities.
- Demonstrates an understanding of the various surgical options to treat cubital tunnel syndrome.
- Ability on the basis of history, examination, laboratory values and radiographic findings to diagnose postoperative complications such as: infection, hematoma, nerve compression, complex regional pain syndrome, loss of fixation, and nonunion.

### **Patient Care**

#### Junior Resident

- Able to effectively apply appropriate and safe dressings, splints and casts in the ER, office, clinic, and operating room.
- Able to diagnose limb threatening conditions such as: compartment syndrome, vascular compromise, and necrotizing fasciitis.
- Specify the proper method for storing amputated parts prior to replantation.
- Able to obtain a complete and pertinent history from patients with common hand problems seen in the ER, office, clinic or in consultation as an inpatient.
- Demonstrates the knowledge of and ability to perform physical examination tests unique to the upper extremity.
- Demonstrates ability to manage the care of inpatients.
- Participates in the office in the evaluation and treatment of both new and return patients.
- Effectively communicates and demonstrates care and respect when interacting with patients and families.
- Able to work with other health care services (occupational therapy and home health) and professionals from various disciplines (e.g. infectious disease, medicine, rheumatology, cardiology) to provide excellent patient-focused care.

- Able to demonstrate surgical skills with attending supervision and instruction appropriate to the level of training and experience on the hand service.
- Able to use information technology to support patient care decisions and patient education.

### Senior Resident

- Demonstrates a refined and advanced level of patient care.
- Understands key points in the detailed history for specific problems such as numbness after a closed distal radius fracture.
- Capable of performing an appropriate and accurate physical exam, ordering indicated imaging or neurologic studies, and integrating the information to formulate an appropriate differential diagnosis and treatment plan including continued observation, therapy, or operative intervention.
- Possesses and is able to apply understanding of the expected postoperative progression and rehabilitation of patients following extensor and flexor tendon injuries.
- Demonstrates more advanced and refined surgical skills with faculty supervision appropriate to the level of training.
- Demonstrates knowledge of microsurgical skills and technique required for the repair of vessels and nerves.
- Possesses the knowledge to outline a treatment strategy for a patient with acute and chronic nerve palsy.
- Demonstrate comprehensive care (patient evaluation, development of treatment plan, patient management both non-operative and operative) of McClellan-Banks hand patients under attending supervision.

## **System Based Practice**

### Junior Resident

- Demonstrates knowledge of treatment plans and their impact on cost-effectiveness and efficiency of patient care.
- Understand and practice evidence based medicine.
- Acts as an advocate for quality of patient care.
- Coordinate appropriate care with therapists, social workers and counselors.

### Senior Resident

- Works as an effective member of a multidisciplinary team.
- Able to assess, coordinate and improve the care of patients within the current health care model at MUSC and actively teaches the junior resident.

## **Professionalism**

### Junior and Senior Residents

- Maintain the strictest confidence in any and all patient interactions.
- Demonstrate compassion and empathy for patients and their families.
- Demonstrate sensitivity to the culture, age, gender and disabilities of patients.
- Promptly recognize and acknowledge complications that arise.

- Maintain adequate documentation and timely completion of medical records.
- Complete teaching and rotation evaluations.
- Dress appropriately for duty.
- Demonstrate a commitment to on-going professional development.

### **Practice-Based Learning & Improvement**

#### Junior Resident

- Able to locate, appraise and assimilate evidence from scientific studies related to patients' diagnosis and clinical management.
- Able to apply knowledge of study designs and statistical methods to the appraisal of clinical studies.
- Ability to critically evaluate literature regarding patients with repetitive stress and motion disorders, their diagnosis, treatment and outcomes.

#### Senior Resident

- Demonstrates leadership and responsibility for overseeing the appropriate care of inpatients and consultations by the junior resident.
- Assures that learners on the Hand service are exposed to the breadth and depth of experience of upper extremity care including the distribution of operative cases and procedures at all levels.
- Able to facilitate the learning of medical students and junior residents on the Hand service on an informal basis in clinics, on the floor, in conferences and in the operating room.

### **Interpersonal and Communication Skills**

#### Junior and Senior Resident

- Demonstrate an ability to work as an effective and respectful member of the Hand Surgery team.
- Demonstrate effective listening skills and be able to communicate effectively through both speech and writing.
- Communicate effectively and in a timely manner with radiology, microbiology, and pathology in order to coordinate patient care effectively.
- Able to create and sustain a therapeutic and ethically sound relationship with patients and their families.
- Provide necessary reporting to senior resident and attending staff regarding changes in a patient's condition, results of diagnostic tests such as cultures, and recommendations from other consulting services.
- Provides for smooth transition of inpatient and outpatient care through effective communication before shift or service change.

## **TOTAL JOINT SERVICE** **MEDICAL UNIVERSITY OF SOUTH CAROLINA**

### **Educational Objectives and Requirements**

- Patient Care
  - Junior Resident

- Communicates effectively with patient/families
  - Effectively evaluates hip and knee pain in adult patients
  - Able to accurately and competently perform history and physical examinations
  - Able to identify and manage pre-operative risk factors related to arthroplasty surgery
  - Demonstrate knowledge in pre-operative planning and templating
  - Able to coordinate care between and communicate effectively with all members of the health care team
  - Demonstrates competency in the postoperative care of patients and treatment of postoperative complications
  - Able to formulate long-term patient care plan
  - Demonstrates competency with surgical approaches to hip and knee (surgical competence)
- Senior Resident
  - Possesses patient care competencies associated with H/P, physical exams, diagnosis, treatment plan and post-operative management
  - Communicates effectively with patient/families
  - Coordinates health care team patient care
  - Effectively supervises postoperative patient care and manages postoperative complications.
  - Able to evaluate/treat painful total joint replacements
  - Demonstrates mastery of primary and revision total joint arthroplasty techniques
- Medical Knowledge
  - Junior resident
    - Demonstrates basic knowledge of hip and knee implant design
    - Demonstrates basic knowledge of anatomy and mechanics of hip and knee
    - Demonstrates ability to evaluate radiographs before and after arthroplasty
    - Demonstrates knowledge of preoperative templating techniques
    - Demonstrates knowledge and interpretation of pre and postoperative laboratory studies
    - Demonstrates knowledge of diagnosis and treatment of complications related to reconstructive procedures of hip and knee
    - Demonstrates development of case presentation skills
  - Senior resident
    - Demonstrates advanced knowledge of all topics listed above
    - Demonstrates knowledge of revision surgical approaches

- Demonstrates knowledge of diagnosis and treatment of pain in symptomatic total joint patients
- Practice-Based Learning & Improvement
  - Junior resident
    - Demonstrates basic understanding of knowledge presented through CORE curriculum materials and is able to effectively assimilate into patient care practices
    - Demonstrates development of case presentation skills
    - Read case-specific articles from reading list
    - Use information technology such as OVID and Medline to enhance practice-based learning
  - Senior resident
    - Able to effectively teach general concepts/core curriculum to lower level residents
    - Able to identify, locate and utilize case-specific articles to enhance learning
    - Possesses ability to effectively teach preoperative templating and surgical approaches
    - Use information technology such as PubMed and Medline to enhance learning & teaching skills
- Interpersonal & Communication Skills
  - Junior resident
    - Able to create and sustain a therapeutic and ethically sound relationship with patients and their families
    - Able to effectively use listening skills
    - Able to effectively provide information via various methods
    - Able to work effectively with others as a member or leader of a health care team
    - Able to coordinate patient management with hospitalists, consultants, therapists, nurses, and discharge planners
  - Senior resident
    - Demonstrates leadership and communication skills for coordinating overall patient care
    - Demonstrates effective teaching and communication skills
    - Works effectively as leader of resident team
- Professionalism
  - Junior Resident
    - Exhibits a commitment to sound ethical principle in all aspects of patient care

- Interacts with patients and families in a respectful, ethical and compassionate manner
    - Develops and exhibits sensitivity to diverse patient and workforce population – with respect to age, culture, gender, etc.
  - Senior resident
    - Maintains sound, ethical patient care
    - Interacts with patients and families in a respectful, ethical and compassionate manner
    - Develops and exhibits sensitivity to diverse patient and workforce population – with respect to age, culture, gender, etc.
- Systems-Based Practice
  - Junior resident
    - Demonstrates understanding how total joint replacement surgery affects other members of health care team
    - Understands and demonstrates compliance with quality and performance measures (SCIP, CMS, P4P, PQRM, JCAHO)
    - Demonstrates awareness of economic issues in total joint arthroplasty surgery
    - Demonstrates awareness of health care workers' involvement in integrated care of total joint arthroplasty patient
    - Practices cost-effective medical care within the system or practice model without compromising quality of care
    - Acted as an advocate for quality of patient care
  - Senior resident
    - Demonstrates understanding of economic issues in total joint arthroplasty (reimbursement, implant cost, postoperative care)
    - Understands and demonstrates compliance with quality and performance measures (SCIP, CMS, P4P, PQRM, JCAHO)
    - Effectively coordinates patient care with other members of health care team
    - Demonstrates awareness of health care workers' involvement in integrated care of total joint arthroplasty patient
    - Practices cost-effective medical care within the system or practice model without compromising quality of care
    - Acted as an advocate for quality of patient care
    - Able to assess, coordinate and improve the care of patients within the current health care

## **PEDIATRIC ORTHOPAEDIC GOALS AND OBJECTIVES MEDICAL UNIVERSITY OF SOUTH CAROLINA**

### PGY-3

At the completion of the PGY-3 rotation in Pediatric Orthopaedics, the resident shall meet, but not be limited to only, the following objectives:

- Medical Knowledge
- Perform a complete Pediatric Orthopaedic history and physical assessment for the infant, toddler, child and adolescent
- Describe the mechanism of injury of common pediatric fractures (torus fracture, distal radius, forearm, tibia, elbow and distal tibia) and their management.
- Describe the characteristics of fractures secondary to child abuse, and the management of a child with a fracture suspected of being a result of abuse.
- Discuss the assessment of patients with scoliosis presenting at different ages and the role of brace management.
- Patient Care
- Interact in a caring and respectful manner with patients and families while obtaining necessary history and physical information.
- Develop and present basic treatment plans for Pediatric Orthopaedic conditions utilizing all available and appropriate technology and information.
- Implement treatment plans, both operative and non operative, with appropriate supervision of clinical faculty.
- Perform less complex Pediatric Orthopaedic invasive procedures with faculty support and supervision.
- Assist other health care professionals within the MUSC system and provide patient- oriented care.
- Practice-Based Learning and Improvement
- Utilize the available literature on specific pediatric orthopaedic topics as part of the decision-making process prior to the formation of treatment plans.
- Participate in Pediatric Orthopaedic pre-operative and post-operative conferences with a knowledge of the basic historical studies and data regarding specific topics
- Assist with the teaching of medical and nursing students within the Pediatric Orthopaedic clinic and while providing in-hospital care.
- Systems-Based Practice
- Be aware of the potential difficulties after hospitalization for Pediatric Orthopaedic patients and families due to economic factors and availability of services.

- Work in conjunction with faculty, nursing and discharge planners to ensure necessary home care, therapy, and other orthopaedic needs.
- Professionalism
- Demonstrate, by his/her behavior in the clinic, operating room, and on the floor, respect for patients, families and other health care professionals.
- Interpersonal and Communication Skills
- Develop effective listening skills, when working with patients, families and other members of the healthcare team, that will maximize diagnosis and management of Pediatric Orthopaedic patients.

### PGY-5

At the completion of the PGY-5 rotation in Pediatric Orthopaedics, the resident shall meet, but not be limited to, the following objectives:

- Medical Knowledge
- Familiarity and satisfaction of POSNA pediatric orthopaedic objectives.
- Discuss and participate in the management of both common and unusual pediatric fractures.
- Demonstrate technical ability in the treatment of, but not limited to, supracondylar fractures of the humerus, forearm, femoral and tibial fractures, stable and unstable sub capital femoral epiphysis (SCFE).
- Patient care
- Interact in a caring and respectful manner with patients and families while taking necessary histories and physical information in the clinic and in the hospital setting
- Develop and present treatment plans for Pediatric Orthopaedic conditions utilizing all available and appropriate technology and information.
- Implement treatment plans, both operative and non-operative, with the appropriate supervision of clinical faculty.
- Perform more complicated Pediatric Orthopaedic invasive procedures with faculty support and supervision.
- Assist other healthcare professionals within the MUSC system to provide patient oriented care for Pediatric Orthopaedic patients.
- Practice Based Learning and Improvement
- Utilize the available literature specific to Pediatric Orthopaedic topics as part of the decision making process, prior to the formation of treatment plans.
- Participate in pediatric preoperative and post operative conference with the knowledge of the basis and complex historical studies and data regarding specific topics.
- Assist with the teaching of medical and nursing students with in the Pediatric Orthopaedic clinic, and while providing in hospital care.

- Mentor the PGY-3 Resident in Pediatric Orthopedics in the cognitive, affective and psychomotor skill domain related to Pediatric Orthopaedics, and interact with the faculty to institute remedial action when indicated.
- System Based Practice
- Be aware of the potential difficulties after hospitalization for Pediatric Orthopaedic patients and families due to economic factors and availability of services.
- Work in conjunction with faculty, nursing, discharge planners and the PGY-3 resident to ensure required home care, therapy, and other orthopaedic needs.
- Professionalism
- Demonstrate, by his/her behavior in the clinic, operating room, and on the floor, respect for patients, families and other health care professionals.
- 6. Interpersonal and Communication Skills
- Develop effective listening skills, when working with patients, families, and other members of the healthcare team, that will maximize diagnosis, care and management of Pediatric Orthopaedic patients.

## SPORTS MEDICINE GOALS AND OBJECTIVES

The goals and objectives are outlined to comply with the six core competencies, as directed by the ACGME.

At the completion of the **junior** rotation in Sports Medicine, the resident shall meet, but not be limited to, the following objectives:

### 1 Medical Knowledge

- Familiarity and satisfaction of the educational curriculum as outlined by the American Orthopaedic Society of Sports Medicine.
- Demonstrate an appropriate knowledge of and ability to integrate basic science concepts key to management of sports medicine topics, including, but not limited to tendons, ligaments, muscle, cartilage, and meniscus.
- Discuss and participate in the management of both common and unusual sports injuries, especially those of the knee, shoulder, elbow, hip, and ankle.
- Demonstrate technical ability including, but not limited to, setup of arthroscopy and shoulder cases, diagnostic knee and shoulder arthroscopy, surgical treatment of meniscal tears, open tendon repairs, shoulder impingement syndrome, and arthroscopic knot tying.
- Demonstrate ability to make on-the-field and office decisions regarding an athlete's return to play.

### 2 Patient care

- Interact in a caring and respectful manner with patients and families while taking necessary histories and physical information in the clinic, training room, and on the sidelines.

- Develop thorough and consistent physical examinations for accurate diagnoses of sports injuries and utilize this information to appropriately order radiographic studies.
- Develop and present treatment plans for sports medicine conditions utilizing all available and appropriate technology and information, including textbooks, journals, CD-ROMs, educational courses, radiographs, and magnetic resonance imaging.
- Implement treatment plans, both operative and non-operative, with the appropriate supervision of the sports medicine faculty.
- Assist other healthcare professionals within the MUSC system, including, but not limited to, physical therapists, athletic trainers, and musculoskeletal radiologists, to provide patient oriented care for sports medicine patients.

### 3 Practice Based Learning and Improvement

- Utilize the available literature specific to sports medicine topics as part of the decision making process, prior to the formation of treatment plans.
- Participate in sports medicine conference with general knowledge and awareness of current literature and data regarding specific topics.
- Organize and participate in MRI-Arthroscopy Correlative Conference with the ability to interpret radiograph and MRI findings and predict arthroscopic findings.
- Assist with the teaching of medical students, nurse practitioner students, and pediatrics residents in sports medicine clinics.

### 4 System Based Practice

- Be aware of the potential difficulties after injury for sports medicine patients, athletes, families, trainers, and teams due to economic factors and availability of services.
- Work in conjunction with faculty, physical therapists, athletic trainers, coaches, radiologists, nutritionists, etc. to ensure appropriate diagnostic, treatment, and rehabilitative measures are in place.

### 5 Professionalism

- Demonstrate, by his/her behavior in the clinic, operating room, treatment room, and on the court or sidelines, respect for athletes, patients, trainers, coaches, families and other health care professionals.
- Demonstrate sensitivity and understanding to the athlete's gender, race, and culture.
- Demonstrate strong ethical principles in all aspects of patient care.

### 6 Interpersonal and Communication Skills

- Develop effective listening skills, when working with patients, families, and other members of the healthcare and athletic teams that will maximize diagnosis, care and management of sports medicine patients.

- Demonstrate effective communication strategies with the athletic trainers, coaches, and families to effectively facilitate understanding of the athlete's diagnosis, treatment, and rehabilitation as well as return to play.

The goals and objectives are outlined to comply with the six core competencies, as directed by the ACGME.

At the completion of the senior rotation in Sports Medicine, the resident shall meet, but not be limited to, the following objectives:

#### 1 Medical Knowledge

- Familiarity and satisfaction of the educational curriculum as outlined by the American Orthopaedic Society of Sports Medicine.
- Demonstrate an appropriate knowledge of and ability to integrate basic science concepts key to management of sports medicine topics, including, but not limited to tendons, ligaments, muscle, cartilage, and meniscus.
- Discuss and participate in the management of both common and unusual sports injuries, especially those of the knee, shoulder, elbow, hip, and ankle.
- Demonstrate technical ability including, but not limited to, setup and management of arthroscopy equipment, diagnostic hip and ankle arthroscopy, meniscal tears (repair and debridement), open tendon repairs, complex knee ligament reconstruction, cartilage repair and restoration procedures, anterior cruciate ligament tears, articular cartilage injuries, shoulder instability, rotator cuff tears, arthroscopic knot tying, shoulder impingement syndrome, AC joint arthritis, biceps transfer/tenotomy, open shoulder approaches including arthroplasty.
- Demonstrate ability to make on-the-field and office decisions regarding an athlete's return to play.

#### 2 Patient care

- Interact in a caring and respectful manner with patients and families while taking necessary histories and physical information in the clinic, training room, and on the sidelines.
- Develop thorough and consistent physical examinations for accurate diagnoses of sports injuries and utilize this information to appropriately order radiographic studies.
- Develop and present treatment plans for sports medicine conditions utilizing all available and appropriate technology and information, including textbooks, journals, CD-ROMs, educational courses, radiographs, and magnetic resonance imaging.
- Implement treatment plans, both operative and non-operative, with the appropriate supervision of the sports medicine faculty.
- Perform more complicated arthroscopic procedures with faculty support and supervision.

- Assist other healthcare professionals within the MUSC system, including, but not limited to, physical therapists, athletic trainers, and musculoskeletal radiologists, to provide patient oriented care for sports medicine patients.

### 3 Practice Based Learning and Improvement

- Utilize the available literature specific to sports medicine topics as part of the decision making process, prior to the formation of treatment plans.
- Participate in sports medicine conference with the knowledge of the classic studies and current literature and data regarding specific topics.
- Organize and participate in MRI-Arthroscopy Correlative Conference with the ability to interpret radiograph and MRI findings and predict arthroscopic findings.
- Assist with the teaching of medical students, nurse practitioner students, and pediatrics residents in sports medicine clinics.

### 4 System Based Practice

- Be aware of the potential difficulties after injury for sports medicine patients, athletes, families, trainers, and teams due to economic factors and availability of services.
- Work in conjunction with faculty, physical therapists, athletic trainers, coaches, radiologists, nutritionists, etc. to ensure appropriate diagnostic, treatment, and rehabilitative measures are in place.

### 5 Professionalism

- Demonstrate, by his/her behavior in the clinic, operating room, treatment room, and on the court or sidelines, respect for athletes, patients, trainers, coaches, families and other health care professionals.
- Demonstrate sensitivity and understanding to the athlete's gender, race, and culture.
- Demonstrate strong ethical principles in all aspects of patient care.

### 6 Interpersonal and Communication Skills

- Develop effective listening skills, when working with patients, families, and other members of the healthcare and athletic teams that will maximize diagnosis, care and management of sports medicine patients.
- Demonstrate effective communication strategies with the athletic trainers, coaches, and families to effectively facilitate understanding of the athlete's diagnosis, treatment, and rehabilitation as well as return to play.

**RALPH H. JOHNSON VETERANS ADMINISTRATION HOSPITAL**  
**ORTHOPAEDIC SURGERY ROTATION**

|              | Junior Resident   | Senior Resident/Fellow   |
|--------------|---|--|
| Patient Care | <p>Able to effectively develop the initial patient care and clinical skills to facilitate adequate evaluation of common conditions seen in the VA patient population;</p> <p>Demonstrates clinical skills that include reproducible physical examination of the hip, shoulder, knee, ankle foot, elbow and hand ;</p> <p>Able to demonstrate surgical skills with attending supervision appropriate to the level of training that includes TKA,THA, Knee scope, Shoulder scope, Carpal tunnel, Cubital tunnel surgery;</p> <p>Demonstrates basic understanding of the information gathering process of the detailed history and physical exam with attention to musculoskeletal exam and relevant comorbid states;</p> <p>Attends the weekly conference sessions; pre-op planning Monday and VA M&amp;M Wednesday as well as all non conflicting MUSC conferences</p> <p>Participate in Outpatient evaluation of new and return VA orthopedic patients;</p> <p>Demonstrate ability to manage inpatient care including post-op hip and knee patients ;</p> <p>Ability to evaluate patients with complex musculoskeletal problems and to detect allied conditions then seeking appropriate consultation when necessary;</p> <p>Effectively communicates and demonstrates care and respectful behaviors when interacting with patients and families;</p> <p>Able to develop and carry out patient management plans;</p> <p>Demonstrates the ability to practice culturally competent medicine;</p> <p>Able to use information technology to support patient care</p> | <p>In general a senior resident should be able to achieve the learning objectives. In addition to:</p> <p>Participate in Outpatient evaluation of oncology service patients;</p> <p>Demonstrate a refined and thorough physical evaluation of patients with hip, knee, ankle and hand such as: Able to perform and complete an appropriate and thorough physical exam, review appropriate imaging studies, and gather information to formulate a treatment plan including operative or non-operative intervention;</p> <p>Possess advanced physical examination skills making a diagnosis of common orthopedic problems</p> <p>Demonstrate basic understanding of the indications for non-operative management. Specifically understands the indications for and advanced imaging studies</p> <p>Is familiar with common surgical procedures capable of directing a THA, TKA, knee arthroscopy and common hip arthroscopy</p> <p>Possess and is able to apply knowledge of the expected postoperative course and rehabilitation of patients following common orthopedic procedures</p> <p>Able to recommend strategies for the management of complications;</p> <p>Ability to evaluate patients with common musculoskeletal problems and to detect allied conditions then seek appropriate consultation when necessary;</p> <p>Demonstrates ability to perform</p> |

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|                   | <p>decisions and patient education;</p> <p><i>Able to coordinate health care services aimed at preventing health problems or maintaining health OT and PT;</i></p> <p>Able to work with other health care professionals from various disciplines to provide excellent patient-focused care;</p> <p>Ability to recognize common postoperative or treatment related complications and initiate strategies including appropriate consultation with the supervising physician.</p> | <p>tunnel, ORIF hip and ORIF independently;</p> <p>Possesses and demonstrates surgical skills with faculty level of training including repair of knee , ankle, hand</p> <p>Effectively and responsibly postoperative intervals and protocols as necessary;</p> <p>Effectively oversees the ap under the supervision of th</p> <p>Attends the weekly confere M7M Wednesday and all M conferences</p> <p>Effectively communicates respectful behaviors when families;</p> <p>Able to counsel and educat</p> <p>Demonstrates the ability to medicine;</p> <p>Able to use information tec care decisions and patient c</p> <p>Able to provide health care health problems or maintai</p> <p>Able to work with other he various disciplines to provi care rehab, OT, PT, etc;</p> <p>Communicates patient care Physician.</p> |
|                   | Junior Resident  | Senior Resident/Fellow   |
| Medical Knowledge | Able to demonstrate basic preoperative and postoperative patient evaluation and assessment skills;   | Possesses in depth knowled surgery and total joint surg  |

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|--|---|---|
|  | <p>Possesses a basic understanding of the anatomy including hip, knee, hand, foot, shoulder, ankle;</p> <p>Possesses knowledge of appropriate imaging studies to recommend for the more common clinical conditions encountered in adult reconstruction reconstruction, basic rheumatology and pain management;</p> <p>Able to read and interpret these imaging studies mentioned above including plain x-rays CAT scan and MRI;</p> <p>Attends and participates in the weekly conferences and clinics</p> <p>Able to recommend a strategy for evaluating an adult with arthritis and or trauma;</p> <p>Able to recommend a staging workup for an individual with single bone trauma, arthritis and common tendon and ligament injuries, peripheral nerve syndromes;</p> <p>Understand staging systems commonly used for patients with single bone trauma;</p> <p>Ability on the basis of history, examination and laboratory findings to diagnose postoperative complications such as PE, DVT, DT's, malnutrition, pneumonia, UTI, wound infection.</p> | <p>Possesses a strong working reconstructive surgery, rheumatology and pain management</p> <p>Demonstrates an understanding of the various options to treat arthritic and traumatic conditions</p> <p>Ability to recognize and identify complications arising from reconstructive surgery</p> <p>Attends and participates in the weekly conferences and clinics</p> <p>Make recommendations regarding treatment, reflects an understanding of the various problems;</p> <p>Possesses the advanced skills necessary for performing adult reconstruction</p> <p>Ability on the basis of history, examination and laboratory findings to diagnose postoperative complications such as aortic stenosis, peripheral nerve syndromes, tumors.</p> |
|--|---|---|

|  | Junior Resident   | Senior Resident/Fellow   |
|--|---|--|
| <b>Practice-Based Learning &amp; Improvement</b> | <p>Able to locate, appraise and assimilate evidence from scientific studies related to patients' health issues;</p> <p>Able to obtain and use information about his/her patient population and the larger population from which patients are drawn;</p> <p>Able to apply knowledge of study designs and statistical methods to the appraisal of clinical studies;</p> <p>Able to use information technology to manage information, access on-line medical information and support his/her own education;</p> <p>Able to facilitate the learning of medical students and other learners on the Oncology service and other health care professionals on an informal basis in clinics, operating rooms and conferences;</p> <p>Attends and participates in the clinic;</p> <p>Ability to critically evaluate literature regarding patients with adult musculoskeletal disorders;</p> <p>Ability to analyze the circumstances surrounding a complication and to formulate an improvement plan to improve future care.</p> | <p>Able to locate, appraise and assimilate evidence from scientific studies related to patients' health issues;</p> <p>Able to obtain and use information about his/her patient population and the larger population from which patients are drawn;</p> <p>Able to apply knowledge of study designs and statistical methods to the appraisal of clinical studies;</p> <p>Able to use information technology to manage information, access on-line medical information and support his/her own education;</p> <p>Able to facilitate the learning of medical students and other learners on the Oncology service and other health care professionals on an informal basis in clinics, operating rooms and conferences;</p> <p>Demonstrates leadership in the clinic, overseeing the appropriate supervision of the R2 junior residents;</p> <p>Efficiently and effectively appraise and use scientific studies commonly used in the management of tumors, infection;</p> <p>Assures that learners on the Oncology service have breadth and depth of experience and distribution of operative competency at all levels.</p> |

|   |   |   |
|---|---|---|
|   | Junior Resident   | Senior Resident/Fellow  |
| <b>Interpersonal &amp; Communication Skills</b> | <p>Communicates with radiology and pathology in order to coordinate patient care effectively;</p> <p>Invites questions from patients and their families providing education regarding the patient's condition and the treatment plan;</p> <p>Able to create and sustain a therapeutic and ethically sound relationship with patients and their families;</p> <p>Able to effectively use listening skills;</p> <p>Able to effectively provide information via various methods;</p> <p>Able to work effectively with others as a member or leader of a health care team;</p> <p>Provides necessary reporting to more senior residents, fellows and attending staff to ensure good patient care;</p> <p>Respond to patient phone calls and communication from allied health professionals.</p> | <p>Communicates with radiology and pathology in order to coordinate patient care effectively;</p> <p>Invites questions from patients and their families providing education regarding the patient's condition and the treatment plan;</p> <p>Able to create and sustain a therapeutic and ethically sound relationship with patients and their families;</p> <p>Able to effectively use listening skills;</p> <p>Able to effectively provide information via various methods;</p> <p>Able to work effectively with others as a member or leader of a health care team;</p> <p>Provide timely and informative reporting to more senior residents, fellows and supervising physician with respect to patient condition or progress;</p> <p>Respond to patient phone calls and communication from allied health professionals.</p> |
|   | Junior Resident   | Senior Resident/Fellow  |

|                                      |  |  |
|--------------------------------------|--|--|
| <p><b>Professionalism</b></p>        | <p>Maintains the strictest confidence in any and all interactions dealing with all patients;</p> <p>Demonstrates compassion and empathy for those being evaluated for all VA patients;</p> <p>Demonstrates respect, compassion and integrity in response to the needs of patients and their families;</p> <p>Demonstrates ethical principles pertaining to patient confidentiality issues;</p> <p>Demonstrates sensitivity to the culture, age, gender and disabilities of patients;</p> <p>Promptly recognizes and acknowledges complications that arise;</p> <p>Maintains adequate documentation and timely completion of medical records;</p> <p>Completes teaching and rotation evaluations.</p> | <p>Maintains the strictest confidence in any and all interactions dealing with all patients;</p> <p>Demonstrates respect, compassion and integrity in response to the needs of patients and their families;</p> <p>Demonstrates ethical principles pertaining to patient confidentiality issues;</p> <p>Demonstrates sensitivity to the culture, age, gender and disabilities of patients;</p> <p>Promptly recognizes and acknowledges complications that arise;</p> <p>Maintains adequate documentation and timely completion of medical records;</p> <p>Completes teaching and rotation evaluations.</p> |
| <p><b>Systems-Based Practice</b></p> | <p><b>Junior Resident</b></p> <p>Maintains the strictest confidence in any and all interactions dealing with all patients;</p> <p>Demonstrates knowledge of treatment plans and their impact on cost-effectiveness and efficiency of patient care;</p> <p>Acts as an advocate for quality of patient care;</p>   | <p><b>Senior Resident/Fellow</b></p> <p>Maintains the strictest confidence in any and all interactions dealing with all patients;</p> <p>Demonstrates knowledge of treatment plans and their impact on cost-effectiveness and efficiency of patient care;</p> <p>Acts as an advocate for quality of patient care;</p>  |

|  |  |  |
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|  | <p>Able to assess, coordinate and improve the care of patients within the current health care model(s) or systems in the program OT, PT and Rehab;</p> <p>Complete all requirements for compliance, risk management, and safety education.</p> | <p>Able to assess, coordinate and improve the care of patients within the current health care model(s) or systems in the program;</p> <p>Work as an effective member of the team including social services, anesthesia, and pain management;</p> <p>Complete all requirements for compliance, risk management, and safety education.</p> |
|--|--|--|

## COMPETENCY OBJECTIVES FOR ORTHOPAEDIC ONCOLOGY ROTATION

### I. PATIENT CARE:

1. Gather data; order diagnostic tests, interpret data, make decisions; perform procedures; manage patient therapies; work with others to provide patient-focused care
2. Be punctual. The OR starts at 7:30 a.m. The patient must be marked by 7:00 and check to ensure H&P and Consent are on the chart. Be in the room at 7:15 ready to start. The clinic starts at 8:00. Begin seeing new/return patients that have arrived early.
3. Dress appropriately. Do not wear in scrubs from home and if you do, you must change before surgery. Infection is something we absolutely cannot afford in our patients with large implants who may be immune-compromised. Do not wear blood-soaked scrubs around the hospital and always have your white coat over your scrubs when leaving the OR. Shirt and tie or blouse as appropriate in clinic.
4. Be prepared. Read about the cases. For each patient, read the history on Powerchart as appropriate and know preop labs. Look up preop imaging.
5. Take good care of patients on the floor. Always check with us before removing drains (30 cc/shift is a good rule but may not always apply, such as in a previously radiated field). Do not order unnecessary tests...if in doubt ask. Do not transfuse blood without asking as our parameters may be different in different patients (except of course in emergent situations). Soft tissue cases get pre and postop Ancef and cases with implants or allografts get pre and postop Vancomycin.
6. Clinic dictations must be done with diligence and accuracy. These represent legal records and often patient care is determined by your dictation. Also, billing and coding are tied to quality and completeness of dictation. If you in doubt ask. Always be more

complete than less. They also represent a good way for us to assess how completely you understand and are able to diagnose/treat the medical conditions of the patient.

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

- communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families
- gather essential and accurate information about their patients
- make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment
- develop and carry out patient management plans
- counsel and educate patients and their families
- use information technology to support patient care decisions and patient education
- perform competently all medical and invasive procedures considered essential for the area of practice
- 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

**CHART STIMULATED RECALL:** (Morning conferences, case conferences, case log review). The resident should demonstrate informed decision making processes and develop and carry out a patient management plan.

**GLOBAL RATING OF LIVE PERFORMANCE:** This tool is an overall evaluation of the resident's live performance in the clinical arena. Within the scope of Patient Care it is best used to assess the resident's competency in developing and carrying out a patient management plan, surgical/medical procedures or to demonstrate the resident's ability to work within a team.

**ORAL EXAMINATION:** This may be the departments' mock oral American Board of Orthopaedic Surgery oral examination, weekly Socratic teachings or the daily informal oral examination based on questions asked to the resident during the clinical day to assess their ability to make informed decisions in patient care.

## **II. MEDICAL KNOWLEDGE:**

Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to: demonstrate an investigatory and analytic thinking approach to clinical situations know and apply the basic and clinically supportive sciences which are appropriate to their discipline

**ORAL EXAMINATION:** This may be the departments' mock oral American Board of Orthopaedic Surgery oral examination, weekly Socratic teachings or the daily informal oral examination based on questions asked to the resident during the clinical day to assess their ability to make informed decisions in patient care.

**CHART STIMULATED RECALL:** (Case conferences, M&M conferences, Morning Rounds)

**WRITTEN EXAMINATIONS:** The residents performance on written exams such as the OITE or Self-Assessments Exams will be reviewed with the resident and compared to other residents at the same level of training within the department and nationally.

### **Cognitive and Technical Objectives:**

The resident, upon completion of the rotation indicated, will demonstrate a satisfactory level of knowledge, clinical competence and technical competence as determined by the Chief of Service, Program Director or designate. This will be done by direct questioning, or observation of clinical practice in the following areas.

### **Objectives:**

- Identify the following definitions and terms (neoplasia, carcinoma/sarcoma, cyst, reactive lesions, hyperplasia, dysplasia)
- Identify the theories of etiology, pathogenesis, control of growth, methods of spread of neoplasms in general (local-systemic-privilege of joints) and of sarcomas in particular.
- Identify principles of biopsy technique
- Identify the principles of action of adjunctive methods of treatment

### **Local**

Cryotherapy  
Caustic agents  
Radiotherapy

### **Systemic**

Chemotherapy  
Immunotherapy

### **Regional Technique**

And their indications, timing and complications:

- Knowledge of the techniques and significance of staging (Enneking)
- Identify Principles of surgical management (margins, types of resections and compartments in different anatomical locations)

- Able to read and verbally describe characteristics of benign bone lesion on plain x-ray
- Able to read and verbally describe characteristics of malignant bone lesion on plain x-ray
- Able to recognize and describe differences between T1 and T2 weighted MRIs
- Able to describe situations where CT may be preferable to MRI and vice versa
- Able to describe workup for primary tumor of unknown origin
- Able to provide differential diagnoses of bone lesions based on location of lesion
- Able to describe diagnostic strategy of newly found bone lesion or soft tissue mass
- Able to describe diagnostic strategies/differential diagnoses/treatment strategies for the following tumors (and their variants):

**Bone tumors:**

- Giant cell tumor of bone
- Osteosarcoma
- Chondrosarcoma
- Ewing's sarcoma
- Osteoid osteoma
- Osteoblastoma
- Aneurysmal bone cyst
- Unicameral (simple) bone cyst
- Chondroblastoma
- Enchondroma
- Chondromyxoid fibroma
- Nonossifying fibroma
- Fibrous dysplasia
- Adamantinoma
- MFH of bone
- Fibrosarcoma
- Myeloma
- Eosinophilic granuloma
- Lymphoma of bone

**Soft tissue tumors:**

- Lipoma
- Liposarcoma
- Schwannoma (neurilemmoma)
- Malignant peripheral nerve sheath tumor
- Giant cell tumor of tendon sheath (PVNS)
- Myxoma
- PUS/MFH
- Desmoid (fibromatosis)
- Ganglion
- Synovial sarcoma
- Neurofibroma

Residents must demonstrate the following (primary lesions):

**COGNITIVE**

- Knowledge, but not technical competence in the surgical management of major surgical ablative therapy and reconstruction
- Limb sparing surgery, allograft considerations, implant considerations, allograft considerations, implant considerations, regional adjuvant techniques
- Knowledge of the methods of reconstruction allograft, autograft, custom prostheses, rotationplasty, amputations, arthrodesis

**TECHNICAL**

- Surgical management of intra-compartmental soft tissue tumors
- Surgical management of bone tumors in the distal extremities

Resident must demonstrate the following (metastatic tumors):

**COGNITIVE**

- Knowledge of the most common primary tumors metastasizing to bone
- Work-up for a tumor of unknown origin
- The radiologic picture of metastatic bone disease and its differential Diagnosis
- The investigation of a lytic lesion in bone
- Management of complications of metastatic bone disease (hypercalcemia)
  - Indications for surgery
- Knowledge of methods of spine decompression and stabilization

**TECHNICAL**

- Open reduction/internal fixation of pathologic factors
- Non-operative management of pathologic factors

Resident must demonstrate the following (infections):

**GENERAL**

Definitions & Terms - pus, sequestrum, involucrum

Etiology & Classification - bacterial (acute, chronic), viral, fungal

Pathogenesis - hematogenous, inoculation (compound wound), direct spread, septic arthritis, osteomyelitis (vertebral, girdle and extremities), and periprosthetic (acute and chronic)

Clinical Picture- Acute, subacute, chronic

Differential diagnosis

Discrimination between bone and joint clinical signs

**INVESTIGATIONS**

Laboratory & Bacteriology- Hematology (CBC, ESR, CRP)

Bacteriology, technique of staining and staining characteristics

- Methods of culture, pathology, gross and microscopic treatment of specimens
- Detailed knowledge of the organisms found to produce musculoskeletal infections, their incidence, frequency, methods of spread, methods of culture, microscopic characteristics, predilection for specific sites, tissues and conditions, pathogenesis of infection, mechanisms of spread.

Imaging- Radiology -- early and late changes – Radioisotope-Technetium/gallium/indium -

## CT and MRI

Biopsy - Principles of biopsy (fine needle, core needle, arthrocentesis, arthroscopy, open biopsy)

Treatment:

- General Principles
- Antibiotic selection
- Mechanisms of action

Pharmacology (including complications)

Indications for surgery

Pharmacology of

Antimicrobial Agents - Mechanisms of action, spectrum, dose and administration, metabolism, specific variations and their use related to specific conditions (renal failure), complications

Prognosis &

Complications - Nosocomial infections

Hospital bacteriologic environment

- Altered host resistance

Development of organism resistance, precautions

## **OSTEOMYELITIS**

COGNITIVE

- Clinical and radiologic assessment
- Classification
- Methods of clinical and radiologic investigation
- Complications

TECHNICAL - Non-operative management

- Simple surgical drainage
  - Complex surgical drainage, debridement
  - Adjunctive methods - management - (intracavitary antibiotics)
- Major bone resections and reconstruction

## **SEPTIC ARTHRITIS**

COGNITIVE - Clinical and radiologic assessment

- Classification
  - Methods of clinical and radiologic investigation
  - Complications
- Non-operative management
- Indications for surgery

TECHNICAL - Complex surgical drainage  
Late reconstruction for complications, instability, major joint destruction  
Simple surgical drainage  
Arthrocentesis, arthroscopy

Resident must demonstrate the following (concepts in tumors and tumor-like conditions):

COGNITIVE - Definition and terms (neoplasia, carcinoma/sarcoma, cyst, reactive lesions, hyperplasia, dysplasia  
- Theories of etiology, pathogenesis, control of growth, methods of spread of neoplasms in general (local-systemic-privilege of joints) and of sarcomas in particular  
-Clinical presentation bone pain, systemic manifestations, limb locations, spine locations  
-Epidemiology (geographical, social, risk factors)  
- Methods of investigation (lab-discriminating tests)  
- Radiological, scan, ultrasound, CT, MRI, skeletal survey, tomograms, arteriograms  
-Classification by cell of origin of primary tumors and reactive lesions of bone and primary soft tissue tumors  
-Principles of technique of biopsy  
- Principles of action of adjunctive methods of treatment  
-Local  
-Cryotherapy  
-Caustic agents  
-Radiotherapy  
-Systemic  
-Chemotherapy  
-Immunotherapy  
- Regional Technique  
And their indications, timing and complications  
- Clinical pathologic and radiologic picture of tumors and reactive lesions of bone and soft tissue tumors including incidence, epidemiology, natural history and prognosis  
- Technique of closed and open biopsy (including needle, trephine biopsy, i.e. spine)  
- Knowledge of the techniques and significance of staging (Enneking)  
- Methods of investigation - indications for each study, what each shows and usefulness  
-Principles of surgical management (margins, types of resections and compartments in different anatomical locations

## **GOALS AND OBJECTIVES UNIVERSITY SERVICE PGY 5**

### **INTRODUCTION**

The PGY 5 on the University service is expected to function as the administrative chief resident, oversee and participate in the care of patients on the service and have a significant role in the educational process of students, residents and other trainees. Because the PGY5 resident is not assigned to any one subspecialty service, separate competency based goals and objectives are listed below.

**Patient Care** that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health

By the end of the rotation the resident should be capable of performing routine adult Orthopaedic procedures independently

The resident will oversee and/or participate in the care of all patients on the service. This will include appropriate delegation of junior residents and mid level providers to ensure that appropriate care is rendered.

**Medical Knowledge** about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care

The resident should be able to identify and fill in gaps in medical knowledge. This will include both patient experience and formal reading.

The resident will have a knowledge base broad enough to teach more junior residents and other trainees about standard Orthopaedic problems and their treatment.

**Systems-Based Practice**, as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value

The resident will interact effectively with other health care providers involved with their patients.

The resident will have a good understanding of when consultation with other specialties is indicated

**Professionalism**, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

1) The resident will be committed to furthering the education of the more junior residents and students on the service.

2) The resident will maintain a respectful working relationship with both staff and faculty.

**Practice-Based Learning and Improvement** that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care

The resident will participate in Practice based learning programs such as Morbidity and Mortality conference, Grand rounds and Journal club.

The resident will be able to act as a resource for more junior residents looking for information regarding clinical situations.

**Interpersonal and Communication Skills** that result in effective information exchange and teaming with patients, their families, and other health professionals

The resident is expected to maintain open and frequent communication with faculty regarding all aspects of patient care.

The resident is expected to be available to families and other caretakers when possible, to communicate patient related issues.