

Spine Service Rotation

Rotation Specific Objectives (RSO)

Department of Orthopedics and Rehabilitation
University Of Massachusetts

The purpose of this RSO is to outline and clarify the objectives of the SPINE Service rotation at the UMASS Medical Center. This document is meant to serve as a guide to the educational objectives of the Spine Rotation and to delineate the expectations and responsibilities of the Resident and the Attending Faculty. It is imperative that this educational experience comply with the concepts of the core competencies outlined by the ACGME and mandated by the Residency Review Committee (RRC).

1. Core Knowledge

The resident is expected to demonstrate directed study of the basic science of the spine, specifically spinal anatomy histology, biomechanics, physiology and pathophysiology. The resident is expected to participate in spine journal club and anatomic dissection of the spine.

2. Clinical Evaluation

The resident is expected to provide care that is compassionate, appropriate, and effective. This care is to be based on the most current scientific information and to incorporate the knowledge of other health professionals as appropriate.

3. Non-Operative Patient Care

The resident is expected to analyze clinical results and use methodologies for on going improvement. Appropriate use of information technology, the literature, and statistical analysis are tools to be employed in this endeavor.

4. Spinal Surgical Training & Postoperative Care And Rehabilitation

The Resident will have significant exposure to spine surgery in operating room so that at the end of his residency he has some experience in performing disk herniation surgery, decompressive laminectomy, noninstrumented posterolateral spinal fusion, and iliac crest bone graft harvest. In addition the resident will have exposure to

operative and nonoperative spine fracture management as well as an opportunity to develop postoperative skills required in the management of adult degenerative disk disease and spinal deformity.

5. Interpersonal Communication

The resident is expected to function effectively as a member of the health care team and demonstrate skillful information exchange with patients, fellow residents, and faculty.

6. Professionalism

The resident is expected to act at all times in an ethical manner. The resident will demonstrate a commitment to excellence and treat all patients with respect, compassion, and a right to privacy.

7. Systems-Based Practice

The resident is expected to advocate for quality medical care. In this context, the resident must practice cost effective care without compromising quality.

These basic competencies are to be taught by staff role modelling and by staff serving as preceptors in surgery, clinics, and office settings. Other effective tools to be employed are conferences, case presentations, and day-to-day interaction with the attending staff. The resident will meet with faculty members mid rotation to assess his/her progress toward the RSO and address any deficiencies. Progress will be monitored by faculty observation and an end of rotation evaluation form.

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Junior Resident

The Junior Resident will spend a three-month rotation on the spine service. The educational goals are for the resident to develop the knowledge base required to assess and treat disease and injury of the spine. This introduction is intended to incorporate the basic surgical skills required in the treatment of elective and

emergency spinal conditions. The educational goals are for the resident 1) learn a systematic approach to the diagnosis and basic treatment of spinal conditions 2) develop knowledge base for perioperative and postoperative patient care 3) Learn basic surgical techniques required for spinal surgery

The basic knowledge to be mastered in order to achieve these objectives includes:

- The musculoskeletal history
- The musculoskeletal physical exam
- Focused orthopedic Spine history and specific diagnostic tests on the physical exam
- The interpretation of skeletal x-ray, CT, MRI, and bone scan
- Recognition and emergency treatment of spine fractures and dislocations
- Trauma care including Spine Precautions, Bracing and Surgical Care
- Knowledge of Incomplete Spinal cord Injury Syndromes, Cauda Equina syndrome. and their prognostic relevance.
- Recognition of adult respiratory distress syndrome; fat embolism.
- Nonoperative treatment of axial neck and low back pain
- Recognition of the various forms of disk herniations, radiculopathy and myelopathy and a basic knowledge of their non-operative and operative treatment
- Techniques of Halo vest application and Halo traction
- Suture and knot tying skills
- Basic surgical approaches to the cervical, thoracic and lumbar spine.
- An introduction to basic segmental fixation techniques of the spine
- An introduction to laminectomy, discectomy, and fusion
- General principles and indications for Lumbar Laminectomy, Lumbar fusion Anterior Cervical Discectomy and fusion and segmental fixation.
- Pain management & Post-operative infection
- Wound problems of dehiscence, hematoma, and seroma .Prophylaxis, diagnosis, and treatment of deep venous thrombosis and pulmonary embolism.
- Recognition and understanding of spine/disk infections

The expectations to be met by the Junior Resident on the Spine rotation are:

- The resident will be assigned to the spine service that will include elective reconstructive and trauma patients. The resident will make morning and afternoon rounds on these patients.
- The resident is to assist in the operating room on orthopedic surgical cases as assigned.
- The resident will be involved in the overall treatment of patients from admission through the operating room and post-operatively up to discharge.
- The resident will take in house night call. The resident will notify the responsible attending of any admissions.
- The resident will attend all University teaching conferences including Grand Rounds and Core Curriculum. Surgical cases that begin during conferences will be started by the attending.
- The resident will attend the weekly Spine Conference. The resident is expected to actively participate in the conference by analyzing and discussing cases.
- Compliance with Massachusetts State Health Department Code Regulations regarding resident work hours is mandatory. The resident should arrange appropriate transfer of inpatient care when he/she must leave the hospital.

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Senior Resident

The educational objective for the Senior resident is to further develop the resident's orthopedic knowledge and surgical skills to the point that the resident feels confident in his/her abilities and is competent to care for all spinal conditions encountered in the practice of general orthopedics. This is the natural progression of the training process and is based on skills learned in previous years. The goal is to allow the resident more autonomy and responsibility and to participate fully with the attending in the plan of care and surgical decisions for more complex orthopedic patients.

The knowledge to be mastered to achieve these objectives includes:

- A thorough knowledge of the pertinent points of an orthopedic history and a skilled physical exam utilizing all of the orthopedic specific physical exam modalities.
- Indications for and the proper utilization of laboratory diagnostic tests of the musculoskeletal system.
- Understanding the value of and the proper utilization of consultants from other medical disciplines
- Indication and planning for all common spine related conditions
- Development of surgical skills to the point where the resident can perform lumbar laminectomy, discectomy and fusion with the attending as 1st assistant.
- The diagnosis and management of all post-operative complications including infection, wound problems, DVT, PE, perioperative blood loss, and cauda equina syndrome.
- Diagnosis and management of failure of nonoperative and operative spine care.
- Indications and planning for Spine surgery.

The expectations to be met by the Senior Resident on the Spine rotation are:

- The resident will be assigned to the Spine service that will include Reconstructive and trauma patients.
- The resident will assist and mentor junior residents as necessary.
- The Resident will assist in the operating room
- The resident will plan, organize, and present the Spine Conference.
- The resident will attend all University teaching conferences including Grand Rounds and Core Curriculum. Surgical cases that begin during the conferences will be started by the attending.
- The resident will attend Wed. afternoon general orthopedic clinic.
- The resident will see orthopedic Spine consults as assigned resident or attending.
- Develop knowledge of the Spine literature and be able to use the literature to support treatment plans.

- Compliance with Massachusetts State Health Department Code Regulations regarding resident work hours is mandatory. The resident should arrange appropriate transfer of patient care when he/she must leave the hospital.