

SPINE ROTATION-SPECIFIC OBJECTIVES

PATIENT CARE

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 at all times
- Gather essential and accurate information about patients by performing a thorough history and physical exam, particularly a detailed neurologic exam which should represent an understanding of underlying pathology, ie reflexes, clonus, bulbocavernous reflex, Hoffman sign, Babinski sign.
- Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment. This includes indications for operative and nonoperative treatment of various spine pathologies, including scoliosis, disc disease and trauma.
- Develop and carry out patient management plans, counsel and educate patients and their families, including risks, benefits and alternate treatment options.
- Use information technology to support patient care decisions and patient education.
- Perform competently invasive procedures appropriate for their level of training, ie surgical positioning, approaches, decompression, implant placement, wound closure, and being proficient in acting as a first assist.
- Respond rapidly, effectively, and appropriately to patient related calls/questions.
- Treat all patients regardless of sex, age, ethnicity, socioeconomic status with respect

MEDICAL KNOWLEDGE

Residents should demonstrate knowledge about established and evolving biomedical (clinical, cognate [e.g. epidemiological] and basic) 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 clinically supportive sciences which are appropriate to spine surgery.
- Think about and analyze, data critically and creatively as needed for each unique patient experience.
- Understand degenerative and congenital pathologies, deformity, trauma, and infections of the spine.
- Identify and expedite treatment of cauda equina
- Accurately identify different types of spondylolisthesis and scoliosis
- Accurately diagnose burst fractures, compression fractures, chance fractures, and fracture dislocations.
- Successfully complete the OKU spine book and reading list

PRACTICE-BASED LEARNING AND IMPROVEMENT

Residents should be able to investigate, evaluate, and improve their patient care practices by appropriate appraisal and assimilation of scientific evidence. Residents are expected to:

- Analyze practice experience and perform practice-based improvement activities using a systematic methodology and participating in indication conferences and learning indications for nonoperative and operative treatment of spine pathology.
- Locate, appraise, and assimilate evidence from scientific studies related to their patients' spinal pathologies.
- Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
- Use information technology to manage information, access on-line medical information, and support their own education
- Facilitate the learning of students and other health care professionals by being an active participant in weekly spine conference.
- Reading current literature in Spine Journal and JBJS during the rotation

INTERPERSONAL AND COMMUNICATION SKILLS

Residents should demonstrate interpersonal and communication skills that result in effective information exchange with patients, patients' families, and professional associates. Residents are expected to:

- Demonstrate honest, open, polite, and effective communication with patients, staff, and colleagues (medical students, residents, attendings).
- Use effective listening skills, especially for patients with chronic pain and complex histories.
- Elicit and provide effective information to patients and health care associates.
- Work effectively with others as a member of a health care team or other specialists ie general surgeons in surgical approaches, infectious disease specialists for complex infections, and neuromonitoring in the operating room.
- Work with orthotists in placement of cranial tongs and halo immobilization.

PROFESSIONALISM

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

- Demonstrate respect, compassion, and integrity
- A responsiveness to the needs of patients that supersedes self-interest
- Accountability to patients and the profession
- Commitment to excellence and on-going professional development
- Demonstrate a commitment to ethical principles pertaining to informed consent, confidential patient information, and ethics.
- Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities

- Interact in a consistently professional manner with all inpatients, outpatients, referring physicians, orthopedic residents, attendings, and all patients at the University.
- Demonstrate competency in managing hospital patients, including antibiotics, DVT prophylaxis, rehabilitation, and discharge instructions.

SYSTEMS-BASED PRACTICE

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

- Understand how their patient care and other professional practices affect other health care providers and health care organizations and how these elements of the system affect their own practice.
- Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
- Have the opportunity to work with members from various health care systems including academic setting, veterans administration hospital, private hospital, and pediatric hospital.
- Understand how different types of medical practice and health care delivery systems differ from one another including methods of controlling health care costs and allocating resources.
- Advocate for quality patient care and assist patients in dealing with system complexities.
- Demonstrates understanding of impact of proper coding and billing during office visits and surgeries.
- Use/sign electronic medical records appropriately and timely
- Use electronic medical records and access imaging studies

SPINE GENERAL PATIENT ASSESSMENT SKILLS

In a patient presenting with a complaint related to the spine the resident will demonstrate competency in the following skills:

- Obtaining a focused Patient History
- Performing an appropriate Physical Examination
- Demonstrate an understanding of appropriate laboratory studies and imaging studies.
- Order and appropriately interpret relevant imaging studies:
 - Radiographs
 - MRI (with/without enhancement)
 - CT
 - Bone Scans
- Understand therapeutic/rehab aides
 - PT/OT
 - Orthotics
 - Canes/walkers
 - Rehab hospital or SNF

ORTHOPAEDIC SPINE ROTATION: OVERALL GOALS AND OBJECTIVES

- Evaluation (including history and physical, interpretation of radiographic studies and creating a treatment plan) of patients in orthopaedic spine clinic, the ER, and the Trauma room.
- Learn and incorporate various UCSD on-line/EMR system resources to improve and expedite patient care.
- Learn and use internet-based systems (e.g. Pub Med) to research patient diagnoses, treatment outcomes, and other aspects of patient care.
- Understand non-operative treatment of common spine conditions,
 - Indications and potential consequences/prognosis for non-operative treatment
 - Type of bracing
 - Spinal precautions after injury/surgery
 - Rehabilitation options
- Learn and be proficient with the evaluation of spinal injuries.
- Understand operative treatment of common spinal disorders.
 - Indications for operative treatment (including timing for intervention).
 - Operative risks, benefits, possible complications
 - Perioperative treatment
 - Antibiotic coverage
 - DVT prophylaxis
 - Rehabilitation
 - Patient education
 - Postoperative protocols
- Communicate with other services (i.e. general surgery, neurosurgery, trauma, critical care, and other consultant services).
- Self-study for spine by reading journals, books including but not limited to the Spine Orthopaedic Knowledge Update (OKU and SKU).
- OITE review based on spine topics
- Attendance at weekly Grand Rounds and other lectures.
- Attendance at monthly M&M.
- Daily (team) rounds when on duty
- Understand indications for further imaging (CT scan, MRI, etc.).
- Learn to recognize and treat spine emergencies.
- Evaluation of consults in a timely manner.
- Present case(s) at weekly spine conference with relevant literature.
- Establish basic operating principles including soft tissue handling, surgical approaches to the spine, basic spinal decompressions, and insertion of spinal implants such as interbody cages and pedicle screws.
- Supervise and teach medical students with basic skills such as suturing.