

HOUSTON METHODIST HOSPITAL ORTHOPAEDIC SURGERY TRAINING PROGRAM OVERALL PROGRAM GOALS

GOALS

This training program will provide thorough exposure to all components of orthopaedic surgery and will train residents in the care of patients with musculoskeletal injuries and diseases. In this program, residents will develop the knowledge and skills needed to assess, plan, and confidently carry out evidence-based and ethical treatment of adult and pediatric patients with surgical and/or non-operative orthopaedic problems. Residents will participate in the pre-, intra-, and post-operative care of orthopaedic surgery patients and develop insight and experiences relevant to their future careers as orthopaedic surgeons.

GENERAL 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 must:

- Develop the necessary skills to take a complete orthopaedic (and subspecialty) history and physical examination of patients
- Develop competence in the preadmission care, hospital care, operative care, and follow-up care (including rehabilitation, if applicable) of patients
- Develop competence in non-operative outpatient diagnosis and care of musculoskeletal injuries, diseases, and other orthopaedic problems
- Develop motor skills, including proper use of surgical instruments and operative techniques, and apply these skills to clinical and operative activities
- Gather essential and accurate information about 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 (also practice-based learning and improvement)
- Demonstrate the ability to practice culturally competent medicine
- Use information technology to support patient care decisions and patient education
- Perform medical and invasive procedures appropriate to the training of an orthopaedic resident.
- Work with health care professionals (nurses, etc.) to provide patient-focused care

Medical Knowledge:

Residents must demonstrate medical knowledge of established and evolving biomedical, clinical, epidemiological, and social behavioral sciences, as well as the application of this knowledge to patient care. Residents are expected to:

- Apply knowledge of anatomy, biomechanics, pathology, and physiology specific to orthopaedic surgery, including:
 - Orthopaedic surgical techniques and approaches
 - Principles and practice of joint arthrodesis
 - Principles and practice of joint arthroplasty

- Principles and practice of amputations
- Operative and non-operative treatment of musculoskeletal infections
- Principles and practice of care for benign and malignant primary and secondary bone tumors
- An understanding of non-traumatic soft tissue disorders
- Spinal anatomy, surgical approaches, and common disorders including fractures / dislocations, scoliosis and kyphosis, low back pain, disc disorders, spinal canal stenosis, and spondylolisthesis
- Sports medicine principles and practice including ankle injuries, knee injuries, shoulder and elbow injuries, and dislocations
- Arthroscopic principles and practice of the upper and lower extremities
- Principles and practice of fracture care [acute (splinting, casting,...etc.) and definitive (surgical) care] of common injuries, such as: lower extremity injuries, hip fractures, acetabular / pelvic fractures; shoulder, arm, and forearm fractures, hand and foot fractures, and spinal fractures in both adult and pediatric patients
- Principles and practice of hand surgery including peripheral nerve injuries, wrist disorders, compartment syndrome, arthritis of the hand, Dupuytren's contracture, carpal tunnel syndrome, ulnar tunnel syndrome, and stenosing tenosynovitis
- Principles and practice of foot and ankle surgery including disorders of the hallux, pes planus, lesser toe abnormalities, rheumatoid foot, diabetic foot, neurogenic disorders, disorders of the nails and skin, and disorders of the tendons and fascia
- Principles and practice of pediatric orthopaedic surgery
- Demonstrate the appropriate use and interpretation of radiographic techniques commonly used in orthopaedic surgery
- Demonstrate an investigatory and analytic thinking approach to clinical situations
- Apply the basic and clinically supportive sciences which are appropriate to orthopaedic surgery

Practice Based Learning and Improvement

Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate science evidence, and to continuously improve patient care based on consistent self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

- Examine their own strengths, deficiencies, and limits in their knowledge and expertise
- Set learning and improvement goals
- Identify and perform appropriate learning activities
- Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems
- Utilize practice (evidence)-based guidelines for evaluation and management of orthopaedic surgery patients
- Use information technology to optimize learning, including web based databases available within and outside the hospital setting and medical libraries within and outside the hospital setting
- Participate in the education of patients, families, students, residents, and other health professionals
- Obtain and use information about their own population of patients and the larger population from which their patients are drawn
- Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness
- Examine errors in practice using quality improvement methods and initiate improvements to eliminate or reduce errors in practice

Interpersonal and Communication Skills

Residents must acquire and demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

- Communicate effectively with patients, families, and the public, as appropriate across a broad range of socioeconomic and cultural backgrounds
- Communicate effectively with physicians, other health professionals, and health related agencies
- Work effectively as a member or leader of a health care team or other professional group
- Act in a consultative role to other physicians and health professionals
- Maintain accurate and clear medical documentation
 - Write legible prescriptions and orders
 - Dictate accurate and clear documentation of patient encounters and assessment for the medical records
- Create and sustain a therapeutic and ethically sound relationship with patients
- Use effective learning skills and elicit and provide information using effective nonverbal, explanatory questioning, and writing skills
- Develop a physician-patient relationship based upon honest and open communication and respect and partner with patients to develop a treatment and healthcare management plan
- Educate patients, families, and professionals in the issues related to orthopaedic conditions
- Obtain, interpret, and evaluate consultations from other medical specialties

Professionalism

Residents must demonstrate a commitment to varying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

- Compassion, integrity, and respect for others
- Responsiveness to patient needs that supersedes self-interest
- Respect for patient privacy and autonomy
- Accountability to patients, society, and the profession
- Sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation
- Commitment to excellence and ongoing professional development
- Commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices
- Sensitivity and responsiveness to fellow health care professionals' culture, age, gender, and disabilities
- Respond to communication effectively and honestly with patients and other consulting health professionals involved in patient care

Systems-Based Practice

Residents must demonstrate an awareness of responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

- Work effectively in various health care delivery settings and systems relative to orthopaedic surgery.
- Coordinate patient care within the health care system relative to orthopaedic surgery.
- Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate
- Advocate for quality patient care and optimal patient care systems
- Work in interprofessional teams to enhance patient safety and improve patient care quality
- Participate in identifying system errors and implementing potential systems solutions

- Recognize how their patient care and other professional practices affect other healthcare professionals, the healthcare organization, and the larger society and how these elements of the system affect their own practice
- Describe how types of medical practice and delivery systems differ from one another, including methods of controlling healthcare costs and allocating resources

PRACTICE SETTING AND PATIENT POPULATION

The Orthopaedic Residency will take place primarily at The Methodist Hospital under the guidance of the Program Director (Dr. Weiner) and the Department Chair (Dr. Mathis); with outside rotations for pediatric orthopaedic surgery (Shriners Hospital for Children-Houston) and trauma and orthopaedic trauma (Memorial Hermann Hospital). Both institutions are within walking distance of The Methodist. Residents will gain experience in the care of patients in the outpatient clinics (2 half days per week), inpatient units (daily rounds, teaching rounds, post-op rounds, and acute care as needed), and in the operating room where they will act in the role of first assist to the primary surgeon with progressive responsibilities throughout the program.

CLINICAL EXPERIENCE

The resident will serve as a member of the Orthopaedic Team and will work with other team members to maximize patient care. The resident will care for and write orders for patients on the orthopaedic inpatient service. The resident will perform consults on patients on non-orthopaedic services and from the emergency department. The resident will receive bedside teaching daily in Teaching Rounds with the Program Director. They will work with the attending physicians (in a mentorship format) within the outpatient clinics and operating rooms.

Supervision of Patient Care and Procedures

Residents will see an average of 15 to 20 patients a day in clinic and are expected to provide assessment, evaluation, and management conclusions to the attending physician of the ambulatory patient including history and examination, review of medical records, review and interpretation of diagnostic tests and consultations, and implementation of therapy. The resident will review each new and follow up patient seen with the mentoring faculty. The faculty will provide supervision and guidance to the resident in the management of all patients evaluated in the clinic and will assume the definitive diagnosis and care of the patient.

Residents will also first assist on between 10 to 15 operative cases per week chosen by the Program Director and subspecialty Chiefs to represent the wide variety of orthopaedic pathology. They will be actively engaged in the preparation and surgical approaches to operative procedures and will gradually perform more of each procedure as their knowledge-base and surgical skills expand.

RESEARCH EXPERIENCE

Residents will gain knowledge of the principles and practice of Orthopaedic Research. They will be encouraged to be actively engaged in research activities throughout their training and will spend four months specifically dedicated to these activities under the guidance of the Program Director (Dr. Weiner) and the Director of Research (Dr. Harris); with full access to the facilities and resources of the Institute for Orthopaedic Research and Education; and the Methodist Hospital Research Institute.

It is expected that residents will have completed at least one project of quality sufficient for presentation at a major orthopaedic meeting (AAOS, ORS, ISSLS, etc.) and publication in a major orthopaedic journal (JAAOS, JBJS, Spine, J Arthroplasty, etc.) by their Chief (PGY5) year.

EVALUATION

Evaluation of Resident Performance

The Program Director will discuss expectations with each resident at the initiation of the program. At each clinical encounter and operative procedure, the mentoring attending will discuss performance providing verbal feedback regarding strengths, areas for improvement, and suggesting educational goals for subsequent experiences. Mentoring faculty will be encouraged to notify the program director at any time during the program with either commendation or concern regarding the resident's performance.

Faculty members directly supervising residents will complete a computer-based evaluation form using the residency management software system (New Innovations) monthly. This evaluation will be reviewed personally with each resident by the Program Director at the end of a one-month rotation. Competency in six core areas will be assessed. Quarterly evaluation by the program director will also be performed in which the resident will meet with the residency program director to review a summary report of the resident's assessment and performance in the core competencies. Individual counseling regarding strengths and potential weakness will be provided. Future career development will be discussed, and each resident will have an opportunity to discuss their concerns. The summary report will be signed by both the resident and the program director and will become part of the permanent record.

Evaluation of Faculty/Educational Program

Orthopaedic faculty involved in teaching the residents will be evaluated anonymously by the residents using the electronic residency management software system. Rotation evaluations (monthly) will include specific items about the rotation, clinical experience, and the faculty's teaching activities. The evaluations will be confidential and will be reviewed by the program director and departmental chair. Feedback on faculty performance will be used to improve teaching.

Residents will have the opportunity to evaluate and comment on services formally on the Methodist GME-administered Annual Survey of Residents' Educational and Clinical Experiences, which is also administered via New Innovations. The residents will have informal opportunities to provide feedback about the program to faculty, Program Director, and the chief Resident.

SUGGESTED READINGS AND REFERENCES

The Orthopaedic Library on OPC 25 has all major orthopaedic texts, subspecialty texts, AAOS publications (OKU) and journals readily available. Residents in this program should emphasize the major texts (Campbell's, Chapman's), sections describing basic principles, and specifics regarding upcoming patients / surgeries during PGY 1-PGY 3 years; and subspecialty texts with increasing detail during their more senior years.

Residents also have electronic internet access (24/7) to the Houston Academy of Medicine Texas Medical Center Library, which has more than 9,000 electronic journals and databases. The library is less than a block from The Methodist Hospital.