

PEDIATRIC ORTHOPEDIC SURGERY ROTATION-SPECIFIC OBJECTIVES

PATIENT CARE

Provide family centered patient care that is developmentally and age appropriate, compassionate, and effective for the treatment of health problems and the promotion of health

- Develop skills in history taking skills and musculoskeletal exam skills
- Understand the indications and use of diagnostic tools used by pediatric orthopedic surgeons (ultrasound, MRI, joint aspirations)
- Gain an understanding of the diagnosis and treatment of orthopedic conditions in children and adolescents.

The clinical year 1 resident will develop diagnostic and treatment skills by:

- Developing a broad knowledge of pediatric orthopedic conditions - intensive reading program has been outlined and is presented to the residents when starting the service.
- Learning to deal with the parent-child-physician triad, and to develop sensitivity to the patient as a member of the family unit.
- Developing specific patient skills:
 - Understand indications for conservative treatment and surgery
 - Develop surgical skills
 - Develop outpatient orthopedic skills (casting, other non-surgical treatment)
 - Develop skill in working with other members of the hospital team, including physicians from other services, inpatient and outpatient nursing, operating room staff, physical and occupational therapy, etc.
 - Become knowledgeable in managing patient care in the managed care environment as it relates to both private and hospital based physician practices.

The clinical year 3 resident will improve diagnostic and treatment skills by:

- Improve knowledge of pediatric orthopedic conditions; read current literature on relevant clinical problems and new techniques
- Improve professional skills with interactions between physician, parent and child
- Improve specific patient skills:
 - Expand on surgical skills
 - Teach outpatient orthopedic skills
 - Act as the primary consultant to other services

MEDICAL KNOWLEDGE

Understand the Scope of established and evolving biomedical, clinical, epidemiological and social-behavioral knowledge needed by a pediatric orthopedic surgeon. Demonstrate the ability to acquire, critically interpret and apply this knowledge in patient care

- Demonstrate knowledge in child development milestones

- Demonstrate knowledge of normal variations in foot, knee, and lower extremity development.
- Demonstrate ability to interpret gait patterns

Clinical Year 1 Resident:

- Cognitive Goals: Completion of a comprehensive reading program in pediatric orthopedics including complete reading of Lovell and Winters text on pediatric orthopedics, a practical fracture text (Rang) as well as a more comprehensive text on Children's Fractures (Wilkins, Rockwood and Green). This reading plus weekly journal club and teaching conferences on pediatric orthopedic topics will initiate the development of a cognitive base. The goal of clinical skills includes understanding the diagnosis and treatment of all common pediatric orthopedic surgery problems (especially fractures and infections).
- Psychomotor Goals: The residents will learn to reduce common children's fractures both with local and general anesthesia. They will learn basic operative skills related to pediatric orthopedics including treatment of closed and open fractures, aspiration and surgical drainage of suspected infections, as well as performing common orthopedic elective operations (simple tendon lengthenings, muscle releases in cerebral palsy, simple corrective osteotomies, etc).

Clinical Year 3 Resident:

- Cognitive Goals: The Clinical Year 3 resident will be expected to read on more complex children's orthopedic topics including myelodysplasia (Menelaus), cerebral palsy (Bleck), hip dysplasia (Tonnis), scoliosis (Moe, Bradford, Winter, Lonstein). This reading plus weekly Journal Club and teaching conferences on pediatric orthopedic topics will expand the cognitive base for the Clinical Year 3 resident. The goal for clinical skills includes primary diagnosis and treatment of all common and complex pediatric orthopedic surgery problems and also to assist in managing more complex problems. They will further their cognitive knowledge base by organizing the topics for Journal Club.
- Psychomotor Goals: The resident will learn to treat more complex-children's fractures both with local and general anesthesia. They will also assist and often perform more complex pediatric orthopedic operations such as surgical treatment of scoliosis, congenital dislocation of the hip and Legg-Perthes disease.

The clinical year 1 resident will develop knowledge and skills in research by:

- Attending the monthly Children's Hospital Orthopedic Research Meeting
- Exposure to current orthopedic research projects at Children's Hospital
- Developing an understanding of research methodology
- Participating in journal club, with critical appraisal of the research methodology used in each paper reviewed.
- Participating in research projects as desired

The clinical year 3 resident will improve knowledge and skills in research by:

- Attending the monthly Children's Hospital Orthopedic Research Meeting
- Participation if desired with current orthopedic research projects at Children's Hospital
- Improving understanding of research methodology

- Critical review of articles in journal club, with critique of the research methodology used in each paper reviewed

Overall goals are to:

- Prepare residents for the pediatric components of the American Board of Orthopedic Surgery exam.
- Prepare residents for the pediatric orthopedic components of a general orthopedic practice.
- Inspire residents who may wish to pursue pediatric orthopedic surgery as a career option (direct them toward later fellowship training.)
- Prepare residents for the complexity of practice in the 21st Century (managed care, molecular medicine, computerized medicine, concepts not yet anticipated).

PRACTICE-BASED LEARNING AND IMPROVEMENT

Demonstrate knowledge, skills and attitudes needed for continuous self-assessment, using scientific methods and evidence to investigate, evaluate, and improve patient care practice

- Identify guidelines for the diagnosis and treatment of complex problems of the musculoskeletal system, including pediatric trauma, and learn the rationale for these standards in optimizing treatment.
- Identify personal learning needs, systematically organize relevant information resources, and plan for continuing to acquire data.
- Monthly meetings with site supervisor for feedback, self-assessment, and practice improvement.
- Part of self-assessment is learning what one knows and then teaching:

The clinical year 1 resident will develop teaching skills by:

- Observing others teach and participating in all teaching conferences:
 - Monday Radiology Rounds
 - Monday Indications Conference
 - Friday Radiology Rounds
 - Friday Journal Club
 - Friday Resident Teaching Conference (Chalk Talk)
- Learning techniques of clinical and classroom teaching by the preceptor role model; observing various individuals and learning from their varied teaching styles.
- Developing presentation skills by presenting patients at conferences, presenting articles at journal club, along with other opportunities to present information to a group and organize group discussion.

The clinical year 3 resident will improve teaching skills by:

- Active presentation and participation in all teaching rounds
- Serving as a role model and mentor to more junior residents and medical students
- Improve presentations skills by presenting patients at conferences, presenting articles at journal club, along with other opportunities to present information to a group and organize group discussion.

INTERPERSONAL AND COMMUNICATION SKILLS

Resident will at all times demonstrate behavior that is respectful, courteous, and compassionate. Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and professional associates.

Clinical Year 1 Residents are expected to:

- Learn the ability to have honest, simple, and effective communication with parents, family members, patients, staff, and colleagues.
- Create a therapeutic and ethically sound relationship with parents and patients
- Learn age-appropriate, effective listening skills
- Elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
- Work effectively with others as a member or leader of a health care team or other professional group
- Talk to family members about social and emotional issues surrounding the patient's illness
- Write a thorough yet concise, legible, and timely consultation note that summarizes the findings and recommendations of the evaluation.

Clinical Year 3 Residents are expected to:

- Demonstrate and teach junior residents and medical students honest, simple, and effective communication with parents, family members, patients, staff, and colleagues.
- Sustain a therapeutic and ethically sound relationship with parents and patients, as well as team members worked with on first rotation at Children's Hospital
- Demonstrate and teach age-appropriate, effective listening skills
- Elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
- Work effectively with others as a member *and* team leader of a health care team or other professional group
- Talk to family members about social and emotional issues surrounding the patient's illness
- Write a thorough yet concise, legible, and timely consultation note that summarizes the findings and recommendations of the evaluation.

PROFESSIONALISM

Clinical year 1 and 3 residents will at all times:

- Demonstrate respect, compassion, and integrity in response to the needs of patients and their families.
- Demonstrates a commitment to excellence and ongoing professional development.
- Demonstrates sensitivity to culture, age, gender, and disabilities of patients and fellow health care professionals.
- Learn the affective components of being a physician including good inter-professional

and doctor patient skills. This will be achieved through close association with the faculty members who will serve as a role model. Professionalism in the hospital, clinic, and operating room will be learned and is expected at all times.

SYSTEMS BASED PRACTICE

Clinical year 1 residents will:

- Learn the ability to readily interact with all important ancillary services necessary to provide orthopaedic care to the pediatric patient. This would include the physical therapist, occupational therapist, rehabilitation therapist, social workers, orthopedic technicians, prosthetists, nursing staff of the emergency room, the operating room, and on the ward.
- Learn competency in coordinating all aspects of perioperative and postoperative rehabilitation and physical therapy.
- Develop an understanding of how patient care and other professional practices affect other health care professionals, health care organizations, and the largest society in how these elements of the systems affect one's own practice.
- Gain knowledge of 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.
- Work as part of a team that frequently gets referrals and consults from outside institutions as part of a regional pediatric hospital.

Clinical year 3 residents will:

- Demonstrate and teach junior residents and medical students the ability to readily interact with all important ancillary services necessary to provide orthopaedic care to the pediatric patient. This would include the physical therapist, occupational therapist, rehabilitation therapist, social workers, orthopedic technicians, prosthetists, nursing staff of the emergency room, the operating room, and on the ward.
- Demonstrate competency in coordinating all aspects of perioperative and postoperative rehabilitation and physical therapy.
- Demonstrate an understanding of how patient care and other professional practices affect other health care professionals, health care organizations, and the largest society in how these elements of the systems affect one's own practice.
- Demonstrates knowledge of 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.
- Work as the team leader *and* a member of a team that frequently gets referrals and consults from outside institutions as part of a regional pediatric hospital.