

## **Pediatric Orthopaedics Rotation at Kapiolani Women's & Children's Medical Center PGY-4**

### **Description of Rotation**

The JABSOM Orthopedic Resident rotation at KMCWC has been expanded for Pediatric Orthopedic Surgery with Dr. Robert Durkin, Dr. Byron Izuka, and Dr. William Burkhalter. The resident rotation in the 4th year is two months (separate from any PGY-3 rotation) that month being negotiable prior to the start of the academic year. The summer months (May, June, July and August) are highly preferred because of case type and volume. The rotation is pediatric focused and the site director is Robert C. Durkin MD, member of POSNA & AAOS. The residents spend 2.5 days per week in the operating room and 2.5 days per week in the outpatient offices with 3 attending surgeons. The resident is mandated to the 80 work week but takes on call duties (surgical, postop followup) with each surgeon on a regular schedule. A weekly 4 hour didactic session is supervised by Dr. Robert Durkin. The 4<sup>th</sup> year didactic schedule includes Pediatric Musculoskeletal exam & normal development, pediatric hip diseases, Idiopathic Scoliosis & Pediatric Spinal Deformity, Congenital & Developmental Foot Conditions, Musculoskeletal infections in children, Benign bone/joint tumors in children, Angular limb deformity, Osteochondroses & Sports Injury in children, and review of pediatric trauma. The surgical experience is broad and pediatric focused. The most recent 4<sup>th</sup> year resident had the following case load – 6 shoulder (including sports & trauma), 16 humerus/elbow (including 12 supracondylar fractures and 4 lateral condyle fractures), 6 forearm/wrist, 3 hand/fingers, 5 pelvis/hip (including SCFE & surgical dislocation cases, no periacetabular osteotomies performed during this rotation), 23 femur/knee (including ACL, arthroscopy, fractures), 7 leg ankle (including ligamentous reconstruction, 4 foot/toes, 13 other, and 4 spinal deformity arthrodeses with instrumentation for scoliosis, total 89 surgical cases. The resident is competent in surgical treatment of basic pediatric trauma. He also assisted in outpatient treatment of infants with clubfoot and infants with DDH.

Length: 2 months of PGY-IV year  
Location: Kapiolani Medical Center:  
Primary Supervisors: Robert Durkin, M.D. (Office: 945-3766)  
William Burkhalter, M.D. (Office: 945-3766)  
Byron Izuka, M.D. (Office: 485-8985)

Institutional Training Coordinator: Robert Durkin, M.D.

### **Patient Care**

#### **Competency**

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

#### **Objectives**

1. Demonstrate caring and respectful behaviors (verbal and non-verbal) with patients and families.
2. Elicit appropriate patient medical history information using effective questioning and listening skills.
3. Efficiently assess pediatric orthopaedic patients and document clinical findings in a clear and quantitative form, including range of motion examination, strength

- assessment, and the results of standard test such as the Ortolani maneuver, the Ober test, the Ely, the Galleazzi, and the Trendelenburg.
4. Properly evaluate and treat common pediatric orthopaedic conditions such as Perthes, slipped capital femoral epiphysis, hallux valgus, osteomyelitis, and hip dysplasia.
  5. Properly evaluate and be familiar with treatment of more complex pediatric orthopaedic conditions such as osteogenesis imperfecta, neuromuscular disorders, spinal deformity, and congenital deformities of the upper and lower extremities.
  6. Be exposed to severe and neglected problems such as the sequelae of sepsis and untreated Ricketts.
  7. Formulate appropriate treatment recommendations, including non-surgical and surgical treatment goals for the above conditions.
  8. Demonstrate proper casting techniques including Ponseti and spica casting.
  9. Demonstrate appropriate preoperative evaluation, including consent and surgical site marking for surgical procedures.
  10. Residents are instructed by our attending staff in the technique of informed consent and anticipatory guidance for parents and patients at our facility.
  11. Demonstrate appropriate postoperative management, including adeptly close surgical wounds, place drains, and apply appropriate post surgical dressing.
  12. Demonstrate knowledge of potential outcomes including complications of treatment.

## **Medical Knowledge**

### **Competency**

Residents must demonstrate 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 be able to:

### **Objectives:**

1. Quantitatively assess growth potential and utilize this knowledge to devise a treatment plan that optimizes equality of limb length at the cessation of growth.
2. Understand and utilize the common classification systems applied to congenital malformations and perform common surgical procedures such as simple syndactyly release and removal of polydactylic digits.
3. Understand and use classification systems for Perthes and SCFE.
4. Understand spectrum of club foot, and variations in its treatment.
5. Appropriately evaluate orthopaedic literature and present this literature in case presentations.
6. Cite levels of evidence in the orthopedic case-driven medical literature.
7. Understand and apply the basic biomedical statistics in evaluation of the medical literature.
8. Demonstrate the ability to select treatment based on evidence from literature.

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

### **Competency**

Residents must demonstrate the ability to investigate and evaluate their care of patients,

to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life long learning. Residents are expected to develop skills and habits to be able to:

**Objectives:**

1. Evaluate one's own knowledge, incorporating feedback from others
2. Modify self-directed learning appropriately including feedback provided from the OITE results.
3. Appraise and assimilate evidence from scientific studies to enhance patient care, especially as it relates to pediatric orthopaedic diagnoses and treatments.
4. Effectively use information technology to access and manage patient information.
5. Effectively use information technology and other resources to support one's own ongoing self-education (DVDs, etc)
6. Contribute to discussions concerning patient care with other health care professionals, attendings, and consultants
7. Attend and participate in didactics and rounds
8. Produce a pre-rotation list of specific goals and objectives for the rotation; share these goals with the Program Director and faculty preceptors; track progress towards achieving these goals and objectives; and report on the accomplishments.

**Systems Based Practice**

**Competency**

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

**Objectives**

1. Collaborate with and maintain appropriate professional attitudes and behaviors toward other medical professionals and allied health personnel
2. Assess how one's own actions affect others, especially in the pediatric setting
3. Integrate the care of pediatric patients in inpatient settings
4. Use diagnostic and therapeutic procedures appropriately and judiciously
5. Evaluate risks, benefits, limitations, and costs of patient care
6. Provide data for conferences to positively affect patient care
7. Participate in clinical pathways designed to improve patient outcomes
8. Serve as patient advocates in dealing with system complexities
9. Serve as patient advocates for quality patient care
10. Work effectively with other services, health care agencies, and case managers
11. Work to improve the system of medical care at the Kapiolani Medical Center for Women and Children

**Professionalism**

**Competency**

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

**Objectives**

1. Exemplify and display an observable respect and compassion toward patients
2. Exemplify reliability, punctuality, integrity and honesty
3. Accept responsibility for one's own actions and decisions
4. Apply sound ethical principles in medical practice, including issues of patient confidentiality, informed consent, provision for the withholding of care, and interactions with insurance companies or disability agencies
5. Consider the effects of personal, social, and cultural factors in the disease process and patient management
6. Demonstrate non-judgmental sensitivity and responsiveness to the age, culture, disability status, and gender of patients, families and colleagues

**Interpersonal and Communication Skills****Competency**

Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates. Residents are expected to:

**Objectives**

1. Establish trust and maintain rapport with patients and families
2. Complete dictations and chart notes in a timely manner (monitored by medical records department and Institutional Site Coordinator)
3. Discuss diagnoses, prognoses and treatment options clearly and accurately to patients
4. Synthesize information and present clinical and diagnostic information clearly to colleagues
5. Utilize effective listening skills
6. Communicate and interact with staff/team in respectful, responsive manner
7. Promote teamwork, and coordinate the work up of orthopedic trauma patients

**Teaching Methods**

PGY-4 residents on the Pediatric Orthopaedics service function with better than a 1:1 faculty/resident ratio. Teaching is by case-method with didactic support in the form of lecture and Socratic review of resident reading assignments in topics in pediatric orthopaedic surgery. Residents on the Pediatric Orthopaedics rotation at Kapiolani are exempt from attending didactics at University Towers.

**Assessment Method (residents)**

Resident performance will be subject to daily formative evaluation in the operating room, and the clinic; the attending staff will evaluate each resident at the end of each rotation. Semi-annual evaluation meetings will provide summative evaluation by the JABSOM Orthopedic Surgery Residency Director and KMCWC Institutional Site Director.

## **Assessment Method (Program Evaluation)**

All residents are urged to voice their opinions where the program (or any part of it) is concerned. Residents are required to evaluate the program (anonymously) at the conclusion of each academic year.

## **Level of Supervision**

Under supervision of the attending staff, residents will provide inpatient and outpatient care for children with pediatric orthopaedic disorders. Duties will include outpatient assessment, history, and physical examinations, pre and post operative ward care, supervised performance of surgical and non-surgical procedures, and participation in outpatient and outreach clinics.

### **Outpatient**

#### **a. Supervision**

Resident outpatient supervision is provided by the attending surgeon who is in attendance; all new cases are presented to the attending surgeon after a diagnosis and treatment plan is formulated by the resident. Additions and revisions are made as indicated after presentation to the attending surgeon and examination of the patient is completed together. The attending and resident review and examine all those patients being seen on a return basis together.

#### **b. Progressive Responsibility**

The resident is given the opportunity to assume increasing responsibility in the outpatient setting by allowing him/her to diagnose and manage patients based upon his experience and demonstrated competence. Full attending supervision is provided and each plan is confirmed by direct participation of attending and resident in patient care.

### **Inpatient**

#### **a. Supervision**

Resident inpatient supervision is provided by the attending surgeon. All cases are supervised by the surgeons and the residents are required to evaluate the patient, establish a working diagnosis and formulate a treatment plan which is presented to the attending. The resident then follows his patient with the attending surgeon on a daily basis until the patient is discharged. Follow-up care is provided in the outpatient clinics.

#### **b. Progressive Responsibility**

Each resident is given the opportunity to assume increasing responsibilities on inpatients assigned to his care, based upon his/her level of experience and competence. Direct supervision is provided by appropriate attending surgeon during all phases of the educational process.

### **Operative**

#### **a. Supervision**

Supervision in surgery is provided in all instances. The attending physician is physically present for all surgeries from start to finish.

**b. Progressive Responsibility**

Progressive responsibilities are determined based upon the complexity of the case and the demonstrated competence of the resident. Portions or all of the surgery may be performed by the resident with direct attending surgeon supervision of all facets of care.

**Educational Resources**

List the educational resources

Educational Conferences:

Weekly educational conferences include 4 hours of didactics with an attending surgeon on a 1:1 basis. Conferences are held in the surgeon's office equipped with a computer, x-ray view boxes, and other visual aids. A weekly resident lecture series is an informal setting with all three attendings is planned to begin in the Spring 2009.

Library Space/Resources:

The Medical Staff at KMCWC have access to peer reviewed journals and textbooks 24/7, including on-line access to most journals and textbooks through the HPH HERO website. Resources are available in the Division of Pediatric Orthopaedic Surgery at KMCWC and the medical library in the Pediatric Department, John A. Burns School of Medicine. Reference DVDs, Self Assessment Exams, and CDs are stored in the library for access to all residents. A video library which contains instructional materials for hip reconstruction, scoliosis surgery, shoulder and knee arthroscopy and reconstruction.

Research Support/Personnel/:

Full support is provided to residents for clinical research at KMCWC. This includes three full-time Orthopaedic Surgeons, one part-time PhD candidate research assistant (Department of Kinesiology, University of Hawaii). In addition, resident projects through the residency program and Dr. Kimura are supported by the attending staff.