

Hand Surgery Rotation At Queen's Medical Center, PGY-5

Description of Rotation

The Hand Surgery rotations include a three-month rotation as a PGY-5 (Chief) resident. Residents on rotation participate in at least four half day clinics with attending staff, where fifteen to twenty patients per day are worked up by the resident and presented to attending(s). In addition residents cover upper extremity (hand) emergency call at the Queen's Medical Center with three of the attending physicians. Resident evaluations and working, or differential diagnoses are discussed with attendings and treatment is planned and implemented. Residents have the opportunity for continuity of care, with the clinical spectrum covered from presentation in Emergency Department, through operative treatment and post-operative outpatient follow-up, including emphasis on occupational therapy principles and prescriptions. This rotation takes place primarily at the Queen's Medical Center, where the Emergency Department and operating rooms, are in close proximity to the attendings' offices. Residents also present Queen Emma Clinic patients, with upper extremity disorders, to attendings, with emphasis on making an accurate diagnosis, formulating a treatment plan and carrying out effective care, with expected outcomes. Residents develop upper extremity surgical experience, with graduated responsibility. Residents participate in five to six, one-half days per week of operating room responsibilities. Operative cases performed by the resident, with close attending supervision are the more complex type (flexor tendon repair, reconstruction, total shoulder and elbow arthroplasty) appropriate for the PGY-5 resident. Residents' operative performance(s) are critiqued and formative and summative evaluations are given. Residents are tested using the ASSH self-assessment examination.

Length:	3 months of PGY-V year
Locations:	Queens Medical Center
Primary Supervisors:	Dr. Robert Atkinson (Office: 521-8128) Dr. Daniel Singer (Office: 521-8109) Dr. John Juliano Dr. Shim Ching (Plastic Surgery)

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 pathology, degenerative arthritis 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. Be able to perform a comprehensive orthopedic evaluation and physical exam of the upper extremity for degenerative, inflammatory, trauma and post traumatic arthritis and deformities, with special attention to neurological/vascular status, skin and soft tissue coverage, and muscle/tendon function.
4. Be able to formulate a medical and surgical problem list delineating goals to be achieved, and complications to be avoided when reconstructive hand surgery is performed.
5. Learn to prevent intra-operative technical complications during upper extremity surgery.
6. Make an early diagnosis and provide prompt treatment of acute post operative complications, including nerve, DVT wound dehiscence and infection.

7. Learn to integrate the clinical presentation of upper extremity pain with imaging data to make decisions regarding operative care.
8. Be able to assess postoperative progress of hand & upper extremity surgery patients and of patients undergoing elective reconstructive elbow and shoulder arthroplasties.
9. Learn to prescribe in hospital and outpatient PT, OT, utilizing Queens's Medical Center post arthroplasty clinical care pathways. Incorporate occupational therapy into the patients' post operative course.
10. Be able to effectively counsel patients and families and caregivers about the plan of care.
11. Be a vital part of the inpatient team under the supervision of attending faculty.
12. Be aware of, identify and provide post surgical precautions and goals for occupational/physical therapists.
13. Take and pass Queens conscious sedation certifying exam.
14. Be aware of and use treatment algorithms for the work up and treatment of the infected elbow and shoulder arthroplasty.
15. Perform joint aspirations for shoulder, elbow and wrist, in the process of a work up for infection.
16. Learn to properly prepare and drape patients for upper extremity procedures.
17. Learn to perform a primary fixation of hand, forearm, and humeral fractures.
18. Be skilled in preoperative templating and in the postoperative radiographic assessment of shoulder and elbow arthroplasty.
19. Understand and use algorithms for soft tissue coverage of upper extremity injuries.
20. Treat finger tip amputations with patients' functional needs in mind.
21. Treat flexor and extensor tendon injuries operatively.
22. Appropriately evaluate MRI, CT, and plain radiograph findings for the upper extremity.
23. Classify burn injuries.
24. Be able to perform a Z plasty.

Medical Knowledge

Competency

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

Objectives

1. Understand and use the classification systems for fractures and dislocations in upper extremity, with emphasis on hand, wrist and forearm/elbow.
2. Discuss and understand the biomechanics of flexor pulley system, its anatomy and the results of its injury.
3. Know and describe the surgical steps and relevant anatomy during the anterior and posterior approaches to the radius and ulna. Know surgical approaches used in the treatment of hand injury and infection.
4. Know and describe various approaches for total elbow and shoulder and wrist arthroplasty.
5. Know and describe injury and instability patterns in the hand, in the patient with rheumatoid arthritis, and (their) treatment options.
6. Know and be able to use various implants for ligament reconstructions, fracture fixation, and joint stabilization/ reconstruction.
7. Understand burn pathophysiology.
8. Understand local rotation flap concepts.
9. Understand flexor and extensor tendon repair techniques, and reconstructive options in tendon loss injuries.
10. Know treatment principles of traumatic amputations, and indications for replantation.

11. Know principles for common congenital malformations (syndactyly, polydactyly, RLD, constriction ring syndrome).
12. Promptly identify common post operative complications and discuss their prevention.
13. Complete cadaver dissection of upper extremity and cite common surgical exposures.
14. Know and be able to cite outcome studies, and factors that predispose to complications after operative treatment of U.E. traumatic conditions.
15. Know appropriate study design for the evaluation of a fixation technique or specific implant (E.g. distal radius fracture).
16. Differentiate between patients who are best treated by non operative means.
17. Understand vascular occlusive disease states and their treatment.
18. Know classification of nerve injuries, appropriate treatment, and prognoses after nerve repair in the U.E.
19. Learn biomechanical principles of tendon transfers.
20. Take ASSH self assessment exam.

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, especially faculty.
2. Modify self-directed learning appropriately, including feedback provided from the OITE results, as it pertains to hand/upper extremity items on exam.
3. Appraise and assimilate evidence from scientific studies to enhance patient care, especially as it relates to hand surgery and reconstructive 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 (Arthroplasty DVDs, CDs, Vumedi, etc).
6. Contribute to discussions concerning patient care with other health care professionals, attendings, including consultants.
7. Attend and participate in teaching conferences and rounds.
8. Present one Grand Rounds on a hand surgery topic cleared with rotation preceptor.
9. Produce a pre-rotation list of specific goals and objectives; share these goals and objectives 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 hand service setting.

3. Integrate the care of hand surgery patients in inpatient settings. Use clinical pathways for upper extremity arthroplasties.
4. Use diagnostic and therapeutic procedures appropriately and judiciously.
5. Carefully and thoughtfully evaluate the risks, benefits, limitations, and costs of patient care.
6. Provide data for M&M 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 Queens Medical Center.
12. Provide information on systems issues that may improve patient care (this performed at department meetings).

Professionalism

Competency

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

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 and 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 and colleagues.
7. Understand and be empathetic to the patient with amputation loss.

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 Program Director.)
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 and treatment of patients on the hand surgery service.

Teaching Methods

PGY-3 and 5 residents on the Hand Surgery service function with a 1:1 faculty/resident ratio. Teaching is by case-method with didactic support in the form of basic science lectures, journal club, grand rounds, morbidity and mortality conferences. Improvement in knowledge, patient care and communication skills is expected and monitored between the third and fifth year rotations.

Assessment Method (residents)

Resident performance will be subject to daily formative evaluation in the operating room, and the clinic; resident is given a specific formative evaluation 2 weeks into the rotation, to address any deficiencies; the 360 degree evaluation process (using faculty, nurse managers, residents and patient evaluations) will take place at the end of each quarter. Semiannual Program Director/Faculty/Resident evaluation meetings will provide summative evaluation.