

Adult Orthopaedic & Fracture/Trauma Rotation at Queen's PGY-2

Description of Rotation

The Queens Medical Center (QMC) is a level II trauma center, which services multisystem trauma patients from our entire state, via a trauma hotline and air ambulances. The PGY-2 residents are on the trauma service at QMC for their entire year. They are an integral part of the trauma service. Four compensated faculty members participate in trauma call. These faculty attending supervise and scrub with residents on trauma cases. Residents also have two half-day follow up trauma clinics per week, one in the Queen Emma Clinic, and one in the faculty traumatologist's office. Patient volume is largest in the attendings' clinics. When on call the orthopedic resident interacts with the general surgeon(s) on call and follows patients operatively, and postoperatively, including in the SICU. Every effort is made to have resident follow their patients in the outpatient setting, within the 80 hour work week rules. Residents have excellent trauma case volume and case mix including all multisystem trauma patients admitted to the QMC.

Length: 12 months of PGY-II year
Location: Queen's Medical Center, Queen Emma Clinic, Faculty Attendings' Offices
Primary Supervisors: Robert Atkinson, M.D. (Office: 521-8128)
Morris Mitsunaga, M.D. (Office: 522-9633)
Patrick Murray, M.D. (Office: 973-3917)
Kevin Christiansen, M.D. (Office: 522-9633)
J. Kimo Harpstrite, M.D. (Office: 536-2261)
PGY-5 Chief Resident A (Pager: call the program offices)

Site Coordinator: Robert Atkinson, 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. Perform a comprehensive orthopedic evaluation and physical exam for trauma patients admitted to QMC, including cases involving multisystem trauma, pelvic trauma, SCI, cervical and thoracolumbar spinal injury, and appendicular long bone injuries.
4. Formulate a medical problem list, with prioritization of medical issues to facilitate the development of treatment plans for multisystem trauma patient(s).
5. Formulate surgical treatment goals for long bone fracture and pelvic fractures.
6. Prevent intra-operative technical complications during the treatment of long bone injuries.
7. Make an early diagnosis and provide prompt treatment of acute compartment syndrome in the upper and lower extremities.
8. Integrate the clinical presentation with imaging data to make decisions regarding

- operative care.
9. Assess postoperative progress of trauma patients (including SICU course), arthroplasty patients, and patients undergoing elective reconstructive bone and joint surgery.
 10. Diagnose and Treat postoperative complications, including wound infections and skin loss, DVT, PE, and shock.
 11. Prescribe and/or consult with allied health specialists in PT, OT, Vocational counseling, psychiatry and social work as appropriate.
 12. Effectively counsel patients and families and caregivers about the plan of care.
 13. Be a vital part of the inpatient team under the supervision of attending faculty.
 14. Be aware of, identify and provide weight-bearing precautions and postoperative goals for therapists.
 15. Recognize and diagnose peripheral nerve and vascular injuries and provide counseling regarding recommended treatment.
 16. Diagnose and treat common joint dislocations in the emergency department setting (e.g. shoulder, elbow, hip, ankle).
 17. Properly insert Steinmann pins for traction, including proximal tibia, distal femur, calcaneal and olecranon pins.
 18. Properly diagnose (by exam and evaluation of imaging studies), and discuss the methods of treatment for common long bone and periarticular fractures, and injuries to the hand, foot, spine and pelvis.
 19. Diagnose and manage most open wounds, including bites, and wounds associated with open fractures.
 20. Apply well molded casts, splints, and dressings for most orthopedic conditions. (For example, long and short arm and leg casts/splints, R. Jones dressing).
 21. Perform joint aspirations for the ankle, knee, hip, wrist, elbow and shoulder, and obtain appropriate lab analysis of aspirate, assess laboratory results and formulate appropriate treatment recommendations.
 22. Properly prepare and drape patients for surgical procedures.
 23. Adeptly close surgical wounds, place drains, harvest and apply skin (stsg) grafts, and apply appropriate post surgical dressing.

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. Define the classification systems for long bone and periarticular injuries.
2. Discuss and understand fracture physiology and the biomechanics of long bone injuries.
3. Describe the treatment principles of fracture fixation, including screw and plate biomechanics, principles of ring fixateur use, and indications for the use of locking plate(s).
4. Define the physiology of compartment syndrome, relevant anatomy and operative approaches.
5. Promptly identify common post operative complications and discuss their prevention.
6. Complete cadaver dissection and cite common surgical exposures used in the

- fixation of long bone injuries.
7. Define the characteristics of various joint fluid aspirates (inflammatory, infectious, etc.).
 8. Describe common mechanical/technical errors in the fixation of long bone and periarticular fractures.
 9. Understand basic bone metabolism, including disease states of osteoporosis and osteomalacia.
 10. Cite levels of evidence in the orthopedic case-driven medical literature.
 11. Understand and apply the basic biomedical statistics in evaluation of the medical literature.
 12. Achieve a score of the 50% 'ile or better in OITE.
 13. Describe the clinical presentations and appropriate treatments for various common tendonopathies and ligament injuries of the shoulder, elbow, knee and ankle.
 14. Differentiate between patients who have non operative versus operative fractures and conditions.
 15. List the principles of CRPS and other pain syndromes not typically helped by surgery.
 16. Define and discuss soft tissue injuries of the knee and shoulder.
 17. Classify various nerve injuries, with prognosis and appropriate treatment strategies.
 18. Describe the physiology of wound and fracture healing.
 19. Assess and apply the medical literature to help prevent DVT and PE in the orthopedic patient.

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 trauma 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 (DVDs, CDs, Vumedi etc)
6. Contribute to discussions concerning patient care with other health care professionals, attendings, including trauma team and consultants
7. Attend and participate in teaching conferences 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 trauma service setting
3. Integrate the care of trauma 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 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 the Queens Medical Center

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 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 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 of orthopedic trauma patients

Teaching Methods

PGY-2 residents on the Adult Orthopaedics and Fracture/Trauma 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.

Assessment Method (residents)

Resident performance will be subject to daily formative evaluation in the operating room, and the clinic; the 360 degree evaluation process (using faculty, nurse managers, residents, medical student and patient evaluations) will take place at the end of each quarter. Semi-annual Program Director/Faculty/Resident evaluation meetings will provide summative evaluation.