

Rotation Specific Objectives

Orthopaedic Trauma

The following document is intended to guide you in some of the specific knowledge and skills you should develop on this rotation. This document is intended to augment but not replace the “Objectives of Training and Specialty Training Requirements in Orthopedic Surgery” and the “Specific Standards of Accreditation for Residency Programs in Orthopedic Surgery”. A copy of these documents is supplied in your residency handbook and is also available on the Royal College website.

The resident is expected to be able to describe the rotation specific objectives prior to or at the commencement of the rotation.

It is understood that a residency in Orthopaedics is a continuum. Senior residents will be able to meet the same objectives as junior residents as well as the senior objectives.

1. MEDICAL EXPERT

1.1. Cognitive & Diagnostic

1.1.1. Junior Resident

- 1.1.1.1. Polytrauma patient
- 1.1.1.2. Initial ATLS management
- 1.1.1.3. Prioritization of injuries in trauma patients
- 1.1.1.4. The principles of open fracture management
- 1.1.1.5. Recognition of dysvascular limb and compartment syndrome
- 1.1.1.6. Understand the importance of pelvic fractures
- 1.1.1.7. Demonstrate knowledge of the concepts of “damage control orthopedics” vs. “early total care”
- 1.1.1.8. Isolated limb trauma
- 1.1.1.9. Principles of the management of:
 - 1.1.1.9.1. Fractures, dislocations and fracture dislocation with appropriate splintage
 - 1.1.1.9.2. Intraarticular fracture management
 - 1.1.1.9.3. Associated soft tissue injury
 - 1.1.1.9.4. Compartment syndrome
 - 1.1.1.9.5. Dysvascular limb
 - 1.1.1.9.6. Acute infection
 - 1.1.1.9.7. Malunion, nonunion, late infection
 - 1.1.1.9.8. Segmental bone loss
- 1.1.1.10. An understanding of associated conditions
- 1.1.1.11. Adult respiratory distress syndrome
- 1.1.1.12. DVT
- 1.1.1.13. Fat and pulmonary embolism
- 1.1.1.14. Multiple organ system failure
- 1.1.1.15. Chronic regional pain syndrome
- 1.1.1.16. Awareness and recognition of
 - 1.1.1.17. non-accidental trauma
 - 1.1.1.18. issues related to geriatric fractures
 - 1.1.1.19. pathologic fractures

1.1.2.Senior Resident

- 1.1.2.1. In addition to the junior objectives, a senior resident will be expected to integrate detailed knowledge as demonstrated by an ability to formulate a comprehensive treatment plan for the traumatized patient.
- 1.1.2.2. Insufficiency fractures

1.2. Technical

1.2.1.Junior Resident

- 1.2.1.1. Initial management of fractures and dislocations with appropriate reduction and splinting
- 1.2.1.2. Develop competencies as a surgical assistant, knowledge of the surgical approaches, handling soft tissues and appropriate wound closures.
- 1.2.1.3. Proficiency in the use of orthopaedic equipment, and power instruments used in the management of the trauma patient.
- 1.2.1.4. Technical skills involved in ATLS protocol
- 1.2.1.5. Operative management of simple fractures – ankle, wrist, hip
- 1.2.1.6. Management of compartment syndrome and acute infection

1.2.2.Senior Resident

- 1.2.2.1. Should be competent in basic techniques of fracture fixation and soft tissue management including open fractures.
- 1.2.2.2. Develop competence in basic surgical procedures of the traumatic patient including operative management of single limb trauma and polytraumatic injuries including:
 - 1.2.2.2.1. Intramedullary nailing of long bone fractures,
 - 1.2.2.2.2. Open reduction and internal fixation of diaphyseal, metaphyseal and articular fractures using standard AO techniques
 - 1.2.2.2.3. Techniques of external fixation for certain injuries including: intra-articular fractures with poor soft-tissues (knee and ankle joints), pelvic fractures, distal radius fractures, knee dislocations.
 - 1.2.2.2.4. Open reduction of irreducible joint dislocations
 - 1.2.2.2.5. Planning and surgical management of malunion, nonunion and chronic infection

2. COMMUNICATOR

2.1. Junior Resident

- 2.1.1. Demonstrate skills in working with patients and families who present with communication challenges such as anger, confusion, and issues related to gender, ethnicity, cultural and religious background. This would also involve communication with those with traumatic brain injury and critical injuries.
- 2.1.2. Deliver information including options of care, possible complications and long term prognosis in a humane and understandable way. The resident should encourage discussion and participation in developing a treatment plan. This will lead to obtaining informed consent.
- 2.1.3. Demonstrate skill in communicating with other members of the trauma team and other health care personnel involved in the care of the traumatized patients.
- 2.1.4. Communicate effectively with appropriate consultants and synthesize their input into the care plan.
- 2.1.5. Clearly document the patient encounter including trauma records, progress notes, operative notes and discharge summaries.

2.2. Senior Resident

- 2.2.1. Will demonstrate the ability to deliver bad news in a humane and compassionate manner.
- 2.2.2. Will be able to verbally present the findings and care plan for the patient.

3. **COLLABORATOR**

3.1. Junior Resident

- 3.1.1. Understand the importance of the multidisciplinary trauma team and describe their roles.
- 3.1.2. Effectively work as a member of the trauma team both acutely and in the long term management of the trauma patient.
- 3.1.3. Learn to resolve interpersonal conflict.

3.2. Senior Resident

- 3.2.1. Understand community resources available to aid in the management of trauma patients and communicate effectively with those individuals or groups.

4. **LEADER**

4.1. Junior Resident

- 4.1.1. Understand the importance of allocation of resources for the trauma patient and prioritize care.
- 4.1.2. Understand provincial trauma programs.

4.2. Senior Resident

- 4.2.1. Set priorities and manage time to balance patient care, educational activities and personal life
- 4.2.2. Understand health care funding as it relates to trauma care and the principle of cost-appropriate care.

5. **HEALTH ADVOCATE**

5.1. Junior Resident

- 5.1.1. Understand the life style issues and different work place environments that lead to an increased risk of trauma
- 5.1.2. Describe the appropriate provincial legislation relating to decreasing trauma risk

5.2. Senior Resident

- 5.2.1. Describe a plan to decrease the risk of trauma in their community
- 5.2.2. Advocate for the health of their community to include seat belt legislation, use of helmets for high risk sports and the treatment and prevention of osteoporosis.

6. **SCHOLAR**

6.1. Junior Resident

- 6.1.1. The resident will pose a learning question and do an appropriate literature search, they will then interpret this evidence and suggest a change in practice if necessary
- 6.1.2. Present an effective lecture or presentation

6.2. Senior Resident

- 6.2.1. Understand the principles of MCOMP
- 6.2.2. Understand critical appraisal and demonstrate the ability to critically review an appropriate article in the trauma literature
- 6.2.3. Demonstrate effective teaching techniques

7. PROFESSIONAL

7.1. Junior Resident

- 7.1.1. Describe informed consent and alternative consent givers
- 7.1.2. Maintain patient confidentiality and describe the limits as defined by professional practice standards and the law

7.2. Senior Resident

- 7.2.1. Manage any conflict of interest that arises
- 7.2.2. Understand and demonstrate the importance of balancing personal and educational activities.

Rotation Specific Objectives

Foot & Ankle

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1. MEDICAL EXPERT

1.1. Cognitive & Diagnostic

1.1.1. Junior Resident

- 1.1.1.1. Understanding of normal and abnormal gait.
- 1.1.1.2. Understanding and assessment of deformities of forefoot, midfoot, hindfoot and ankle
- 1.1.1.3. Understanding and recognition of feet at high risk for ulceration, and the presence of ulcers
- 1.1.1.4. Understand appropriate use of diagnostic imaging and tests for assessment of foot and ankle pain and deformity
- 1.1.1.5. Understand non-operative management of common foot and ankle pathology
- 1.1.1.6. Understand the assessment and diagnosis of soft tissue and bony injuries to the foot and ankle

1.1.2. Senior Resident

- 1.1.2.1. Understand, assess, provide a differential diagnosis and management of common foot and ankle pathologies
- 1.1.2.2. Understand and prescribe appropriate rehabilitation and non-operative management of common foot and ankle pathologies

1.2. Technical

1.2.1. Junior Resident

- 1.2.1.1. Performance of local anesthetic blocks for foot and ankle surgery
- 1.2.1.2. Describe common surgical approaches for hindfoot, midfoot, forefoot and ankle.
- 1.2.1.3. Perform diagnostic and therapeutic injections of foot and ankle joints
- 1.2.1.4. Initial management of diabetic/Charcot foot
- 1.2.1.5. Initial management of ischemic/gangrenous foot
- 1.2.1.6. Performance of:
- 1.2.1.7. Simple forefoot reconstruction
- 1.2.1.8. Simple foot and ankle fractures

1.2.2. Senior Resident

- 1.2.2.1. Understand, assess and treatment of arthritis involving ankle, subtalar, midfoot and forefoot joints
- 1.2.2.2. Understand, assess and treatment of:
- 1.2.2.3. Foot and ankle tendinopathies
- 1.2.2.4. Complex foot and ankle fractures
- 1.2.2.5. Complex forefoot reconstruction
- 1.2.2.6. Diagnostic and operative ankle arthroscopy
- 1.2.2.7. Complications of foot and ankle surgery
- 1.2.2.8. Definitive management of ischemic/gangrenous foot
- 1.2.2.9. Definitive management of diabetic/Charcot foot

2. COMMUNICATOR

- 2.1. The ability to communicate and interact with multidisciplinary health care teams.
- 2.2. The ability to manage and to communicate with non-compliant and difficult patients.
- 2.3. To effectively and compassionately convey bad news to patients.

3. COLLABORATOR

- 3.1. Consult effectively with other physicians and health care professionals.
- 3.2. Contribute effectively to other interdisciplinary team activities.
- 3.3. Share knowledge effectively to formulate a health care plan.

4. LEADER

- 4.1. Coordinating the use of medical devices such as, orthotics and braces, in a fiscally responsible manner.

5. HEALTH ADVOCATE

- 5.1. Identify risk factors that can lead to nonunion, foot ulceration, amputation, and Charcot foot, and advise patients on lifestyle modifications to improve outcomes.
- 5.2. Outline community resources available to patients/families dealing with orthopedic foot/ankle disease and injury:
- 5.3. Social work
- 5.4. Physiotherapy
- 5.5. Occupational therapy
- 5.6. Dietary/nutritional services
- 5.7. Prosthetic support services
- 5.8. Chiropodists, podiatrists
- 5.9. Pain management services

6. SCHOLAR

- 6.1. To formulate a clinically relevant learning question, conduct a literature search, and present findings.

7. PROFESSIONAL

- 7.1. Deliver the highest quality care with integrity, honesty and compassion respecting confidentiality
- 7.2. Understand that professionalism requires ongoing Continuing Professional Development
- 7.3. Sympathize with the needs of the patient even when they conflict with medical advice
- 7.4. Respond to conflict constructively and with compassion

**Western University Division of Orthopedics
Trauma, Foot and Ankle CTU– Leader Domain**

The Trauma, Foot and Ankle CTU has primary responsibility for the teaching of the Leader domain. This is accomplished through direct mentoring of residents who have been assigned the task of managing a Trauma Unit. This includes supervision of junior housestaff, and development of surgical care plans that includes procuring the correct equipment for the planned procedures.