Goals and Objectives for the Orthopaedic Surgery Resident
McGill Orthopaedic Sports Medicine and Minimally Invasive (MGH & Shriners)
Junior Residents

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 Orthopaedic Surgery" and the "Specific Standards of Accreditation for Residency Program in Orthopaedic 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.

JUNIOR RESIDENT

1. Medical Expert

Basic Science

a) General knowledge of functional anatomy and musculoskeletal physiology as it applies to athletic performance.
b) Appreciation of biomechanics as it relates to specific functions: walking, running, jumping, throwing
c) Basic understanding of pathophysiology of acute injuries in the athletic population.
d) Basic knowledge of the pathophysiology of degenerative disorders of the upper & lower extremity as it pertains to physically active individuals.
e) Knowledge of exercise physiology and its relevance to overall fitness & athletic performance.

Basic Clinical Knowledge

a) Awareness of mechanisms of injury as it applies to acute and chronic injuries in the athlete.
b) Awareness of clinical signs and symptoms and presentation of common acute athletic injuries, as well as degenerative conditions about the upper and lower extremities.

History and Physical

a) Ability to elicit a complete history and to physically examine the knee to elicit ligamentous instability, meniscal pathology, tendonitis, and degenerative disease.
b) Ability to elicit a complete history and to physically examine the shoulder to evaluate glenohumeral instability, rotator cuff tears, impingement, tendonitis, acromio-clavicular joint pathology.
c) Ability to elicit a complete history and to physically examine the ankle to evaluate sprains, instability, other acute traumatic injuries.

Interpretation and Utilization of Information

a) Ability to order the appropriate and necessary blood tests as it pertains to the above conditions.
b) Ability to interpret standard radiographs and blood work as it pertains to the above conditions.

Clinical Judgment and Decision Making

Ability to demonstrate a basic understanding of potential treatment options for the above-mentioned conditions.

Technical Skills

a) Demonstrate knowledge of surgical principles and a basic familiarity with common surgical procedures used to treat the above conditions.
b) Demonstrate familiarity with intra-articular injection and Arthrocentesis techniques for the knee, shoulder, ankle and elbow.
c) Diagnostic arthroscopy.

2. Communicator

a) Able to effectively demonstrate skills as a communicator and work and communicate effectively with other physicians, allied health professionals, patients and families.
b) Able to complete, and organize an accurate history as well as physicals, progress notes, consultations and discharge summaries.
c) Understands the role of communication in fostering patient satisfaction and compliance.
d) Elicits psychosocial information pertinent to the health of the patient including:
    - socioeconomic background,
    - ethnic,
    - cultural, and
    - spiritual values.
    - work & athletic goals and achievements

e) Demonstrates the ability to deliver information to the patient and their support group in a way which is understandable.
f) Understands and obtains informed consent using medical knowledge and awareness of current consent legislation and the Canada Health Act.
g) Demonstrate the ability to describe procedures to the patient and patient's support group.
h) The ability to obtain an appropriate informed consent for patients undergoing interventions.

3. Collaborator

a) Awareness of a team approach to the management of athletic problems involving physician, surgeon, therapist, coach/trainer, nutritionist and parents.
b) Interacts and consults effectively with all allied health professionals and acknowledges their roles and expertise.
c) Understand and develop patient care plan with other members of the inter-professional health care team.

d) Demonstrate the ability to work within an inter-professional team in regards to research and administrative duties.
e) Able to delegate appropriately and effectively to other members of the healthcare team.

4. Manager

a) Shows ability to incorporate the use of current information technology into the practice of medicine (e.g.: use of PACS, internet, digital imaging…)
b) Shows a basic understanding of the use of healthcare resources in a cost-effective and patient sensitive manner.
c) Exhibits an ability to effectively organize his/her work and work effectively as part of a team to ensure total and continuing care of his/her patients.

5. Health Advocate

a) Shows an ability to act as an effective healthcare advocate for the patient, society, and the community.
b) Recognize and understands the psychological, social, and physical determinants of patient health.
c) Understand patient advocacy issues in regards to family, care giver and social care network.
d) Recognize the emotional stress for patients and families faced with orthopaedic conditions and optimize psychosocial support network for the patient
e) Recognize the impact of injury / illness on the patient as it relates to current & future sporting and athletic activities.

6. Scholar

a) The trainee exhibits a familiarity with sources of current scientific literature as it pertains to sports medicine and arthroscopy.
b) Develops an ability to critically evaluate and appraise medical literature.
c) Shows an ability and interacts in teaching medical students and allied healthcare workers and patients.
d) Able to organize and successfully complete a research project.

7. Professional

a) Displays dependability, reliability, honesty and is forthright with patients and colleagues.
b) Displays an understanding and sensitivity to age, gender, culture and ethnicity issues.
c) Displays responsibility and self-discipline and punctuality.
d) Communicates with patients with compassion and empathy.
e) Recognizes his/her own limitations and is able to seek and give advice/assistance when necessary.
f) Understands the principles and practice of biomedical ethics as it relates to sports medicine and minimally invasive orthopedic surgery.
g) Demonstrates the ability to work within the scope of clinical and technical acumen and obtains responsible and timely patient referrals.
h) Practice ethically consistent with the obligations of a physician and expectations of the community in regards to gender, culture, ethnicity, race, spiritual values and socioeconomic standard.

i) Demonstrates the ability to put patient and parents at ease and inspire confidence in the treatment plan.

Goals and Objectives for the Orthopaedic Surgery Resident
McGill Orthopaedic Sports Medicine and Minimally Invasive (MGH & Shriners)
Senior Residents

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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.

SENIOR RESIDENTS

1. Medical Expert

i. Basic Science

a) Detailed knowledge of biomechanics as it relates to specific functions: walking, running, and throwing.
b) Detailed knowledge of principles of knee and shoulder rehabilitation as it pertains to athletic injuries and degenerative problems and postoperative rehabilitation.

ii. Basic Clinical Knowledge

a) Detailed knowledge of mechanisms of injury as it applies to acute and chronic injuries in the athlete.
b) Knowledge of the non-surgical and surgical management of common problems about the knee including: instability, meniscal pathology, degenerative arthritis.
c) Thorough knowledge of the non-surgical and surgical management of complex knee disorders including:

- Osteochondral lesions
- Patellofemoral arthritis and instability
- Chronic and complex knee instabilities
- Malalignment disorders
- Failed Arthopolasty/Ligament Reconstruction

d) Knowledge of the non-surgical and surgical management of common problems about the shoulder including: impingement, rotator cuff tears instability adhesive capsulitis, AC joint pathology.
e) Thorough knowledge of the non-surgical and surgical management of complex shoulder disorders including:

- Multidirectional instability
- Internal Impingement
- Labral tears

iii. History and Physical

a) Ability to elicit a complete history and to physically examine the knee to elicit ligamentous and multiple ligament instability meniscal pathology tendonitis, degenerative disease and patello-femoral pathology.
b) Ability to elicit a complete history and to physically examine the shoulder to evaluate anterior and multi-directional instability, rotator cuff pathology, labral pathology and AC joint arthritis and instability, internal impingement.
c) Ability to elicit a complete history and physically examine the ankle to evaluate sprains, instability, other acute traumatic injuries.

iv. Interpretation and Utilization of Information

a) Ability to order and interpret the appropriate and necessary blood and fluid tests and imaging as it pertains to all the above conditions.
b) Ability to interpret imaging tests ordered including x-ray, CT, MRI, MR-Arthrography, Arthrography and bone scan as it pertains to all the above conditions.

v. Clinical Judgement and Decision Making

a) Able to demonstrate a knowledge of the appropriate work-up and non-surgical and surgical management for the above-mentioned conditions.
b) Demonstrate a good understanding of the impact of the disease process and its necessary treatment in the patient's life and sport.
c) Demonstrate a knowledge of factors involved in return-to-play decisions for competitive and recreational athletes.

vi. Technical Skills

a) Demonstrate a knowledge & understanding of the various surgical techniques used to treat the above-mentioned conditions.

b) Exhibit a proficiency in performing the following basic surgical procedures in the knee:
    1. Diagnostic Arthroscopy
    2. Arthroscopic Debridement
    3. Arthroscopic partial menisectomy
    4. Arthroscopic removal of loose bodies
    5. Total knee Arthroplasty
    6. Repairs of Traumatic tendon tears about the knee (patellar tendon, Quads tendon)

c) Develop a proficiency in performing the following advanced surgical procedures in the knee:

    1. Complex partial menisectomies (bucket-handle tears)
    2. Meniscal repair – all inside and inside-out
    3. ACL Reconstruction (arthroscopic)
    4. Mosaicplasty/cartilage grafting
    5. Tibial Tubercle Osteotomy

6. Lateral retinacular release
7. High tibial Osteotomy (opening & closing Wedge)
8. Unicompartmental Knee Arthoplasty
9. Osteochondral fragment fixation

d) Develop a familiarity with complex reconstructive surgeries about the knee:
   1. Revision ACL Surgery
   2. Multiligamentous Knee Reconstruction

e) Develop a proficiency in performing the following surgical procedures in the shoulder:
   1. Open / Arthroscopic Anterior Instability Repairs
   2. Open /Arthroscopic Acromioplasty
   3. Open / Arthroscopic Distal Clavicle Excision
   4. Open / Mini-Open / Arthroscopic Rotator Cuff Repairs
   5. Introductions to principles of shoulder arthroscopy
   6. Manipulation under Anesthesia & capsular releases for adhesive capsulitis
   7. Arthroscopic Superior Labral Repairs
   8. Biceps Tenosesis & Tenotomy

f) Develop a familiarity with complex reconstructive surgical procedures in the shoulder / arm:
   1. Posterior Labral repairs
   2. AC joint stabilizations
   3. Subscapularis tendon repair & reconstruction
   4. Pec Major Repair
   5. Distal Biceps Repair
   6. Revision Instability Repairs
   7. Bony Instability Procedures

g) Develop an understanding of the principles of shoulder arthroscopic reconstructive techniques and basic ankle and elbow arthroscopy techniques.

2. Communicator

a) Able to effectively demonstrate skills as a communicator and work and communicate effectively with other physicians, residents, allied health professionals, patients and families.

b) Able to complete, and organize a concise and accurate history and physicals, progress notes, consultations, and discharge summaries.

c) Able to effectively demonstrate skills as a communicator and work and communicate effectively with other physicians, allied health professionals, patients and families.

d) Able to complete organized and accurate history and physicals, progress notes, consultations and discharge summaries.

e) Understands the role of communication in fostering patient satisfaction and compliance.

f) Elicits psychosocial information pertinent to the health of the patient including: socioeconomic background, ethnic, cultural, and spiritual values.

g) Demonstrates the ability to deliver information to the patient and their support group in a way which is understandable.
h) Understands and obtains informed consent using medical knowledge and awareness of current consent legislation and the Canada Health Act.
i) Demonstrate the ability to describe procedures to the patient and patient's support group.
j) The ability to obtain an appropriate informed consent for patients undergoing interventions.

3. Collaborator

a) Awareness of a team approach to the management of athletic problems involving physician, surgeon, therapist, coach/trainer, nutritionist, and parents.
b) Interacts and consults effectively with all health and allied health professionals and acknowledges their roles and expertise.
c) Able to delegate appropriately and effectively to other members of the healthcare team.
d) Demonstrate the ability to lead an inter-professional team.
e) Develop a care plan, integrate all members of the team needed and follow the plan to completion in regards to medical or nonmedical issues around the care of the orthopaedic patient.

4. Manager

a) Shows the ability to effectively incorporate the use of current information technology into the practice of medicine (eg.: use of PACS, internet, digital imaging, telemedicine…)
b) Shows an ability to use healthcare resources in a cost-effective and patient sensitive manner.
c) Exhibits an ability to effectively organize his/her work effectively as part of a team to ensure total and continuing care of his/her patients.
d) Lead the physician team and allocate manpower resources in regards to patient care.
e) Understand the role of the physician in regards to administrative duties in health care.
f) Demonstrate the ability to manage time allocation to inter and intra personal learning and duties.

5. Health Advocate

a) Shows an ability to act as an effective healthcare advocate for the patient, society and the community.
b) Promotion of the determinants of health in the community at large as it relates to this specific patient population.
c) Demonstrate the knowledge of resources available to those patients in need of community based care.
d) Understand the role of community based advocacy in regards to patients with particular & special needs.
e) Demonstrate the need to service as a patient advocate for scarce resources for the patient with particular & special needs.

f) Recognize the Impact of injury / illness on the patient as it relates to current & future sporting / athletic activities

6. Scholar

a) Exhibits a knowledge & understanding of current scientific literature as it pertains to sports medicine and arthroscopic surgery.
b) Exhibits an ability to critically evaluate and appraise medical literature and journal articles.
c) Shows and ability and interest in teaching and instructing students, junior residents and allied health-care workers as well as families and patients.
d) Exhibit an ability to instruct and teach procedural techniques to junior members of the team.
e) Able to organize and successfully complete a research project.
f) Demonstrate the ability to resolve previously identified deficits in knowledge and technical skill.

7. Professional

a) Displays dependability, reliability, honesty and is forthright with patients and colleagues.
b) Displays an understanding and sensitivity to age, gender, culture and ethnicity issues.
c) Displays responsibility, self-discipline and punctuality.
d) Communicates with patients with compassion and empathy.
e) Recognizes his/her own limitations and is able to give advice/assistance when necessary.
f) Understands the principles and practice of biomedical ethics as it relates to sports medicine and arthroscopic surgery.
g) Provides efficient, authoritative consultation to the referring source.
h) Serve as a role model to the junior members of the health care team in regards to balance between professional and personal roles.
i) Demonstrates ability to identify and remediate weakness in their managerial, administrative or education skills in regards to care of the patient.

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