

MSK Module 15 – CBC Orthopaedic Surgery

Medical Expert & Scholar Objectives General

The following competencies will assist in satisfying the CanMeds objectives for medical expert including scholarship. It is the objective of the MSK Module 15 that each candidate obtains the ability to acquire an in-depth understanding of the basic mechanisms of normal and abnormal states and the application of current knowledge into practice.

These items were identified based on a national educational research initiative completed by the 2004 RCPSC Medical Education Traveling Fellow in collaboration with the all accredited academic universities across Canada and residency training programs educating future health care who manage patients with MSK conditions. Orthopaedic Surgery was one of the six disciplines in medicine participating in the study. The following list of competencies outlines the competencies rated to be very important for orthopaedic residents to demonstrate competency upon completion of their residency educational experience.

Reference:

Canadian multidisciplinary core curriculum for musculoskeletal health
J Rheumatol. 2007 Mar;34(3): 567-80

Terminal Objectives:

I Basic Competencies in Clinical Assessment and Diagnosis pertaining to MSK conditions including:

1. History Taking
2. Relevant History Taking
3. Physical Examination
4. Interpretation of appropriate investigations (including lab, radiology and EMG/NCT reports)

Enabling Objectives:

Selected Readings:

1. Articles (see attached)
2. Textbooks:
 - Clinical Orthopaedic Examination by Ronald McRae (3rd Edition), Churchill Livingstone, 1990
 - Practical Fracture Treatment by Ronald McRae (3rd Edition), Churchill Livingstone, 1994
 - Physical Examination of the spine and extremities by Stanley Hoppenfeld, Appleton-Century-Crofts/Norwalk, Connecticut 1976
 - Orthopedic Physical Assessment by David J. Magee, W.B. Saunders Company 1987
 - Primer on the Rheumatic Diseases by the Arthritis Foundation
 - Fundamentals of Skeletal Radiology by Clyde A. Helms by W.B. Saunders Company 1995
 - Orthopaedic Knowledge Update (MSK Infection) AAOS

Hospital Based Experience

- Infectious Disease team at Sunnybrook Hospital
- Section leader: Dr. Andrew Simor

Clinics

- Rheumatology Clinics – Section Leader: Dr. Arthur Bookman
- Osteoporosis Clinics – Section Leader: Dr. Heather McDonald-Blumer
- Physiatry Clinics (EMG/NCT testing) – Section Leader: Drs. John Flannery & Tania Bruno
- Genetic Clinics – Section Leader: Dr. Roberto Mendoza
- Skeletal Dysplasia – Section Leader: Dr. Ben Alman

Terminal Objectives

II Basic competencies in problem based symptomatic approach pertaining to:

- 1 Joint pain such as polyarticular, monoarticular, periarticular
- 2 Back pain (discogenic and spondyloarthropathies)
- 3 Regional pain or stiffness
- 4 A deformity (arthritis)
- 5 Generalized pain or stiffness
- 6 Decrease or loss of motion or weakness.
- 7 A mass (possible infection)

Candidates may be exposed to some of the above conditions and become competent in the ability to construct an appropriate differential diagnosis and plan of patient enquiry, limited investigations and assessment for a patient presenting with any of the above conditions.

Enabling Objectives:

Selected Readings:

3. Articles – candidate to complete a brief review to identify ONE key manuscript that would be useful to meet one of the objectives listed above
4. Textbook/URL – if there are any other textbooks for this section that you would recommend, please inform us of them.

Clinics

- Clinics with above mentioned clinicians (Full assessments & interpretation of radiology & reports)

Terminal Objectives:

III Basic competencies in the approach to emergent MSK conditions including:

- 1 A joint infection
- 2 A soft tissue infection
- 3 A bone infection
- 4 Temporal arteritis

Candidates will be competent in the ability to demonstrate an approach to diagnose, initially manage and demonstrate knowledge regarding when to immediately refer a patient with any of the above conditions to sub-specialty care.

Enabling Objectives:

Selected Readings:

5. Articles – candidate to complete a brief review to identify ONE key manuscript that would be useful to meet one of the objectives listed above
6. Textbook/URL – if there are any other textbooks for this section that you would recommend, please inform us of them.

Clinics

- Clinics with above mentioned clinicians
- Infectious disease experience during hospital based educational activity which will involve infections of all specialties and not specific to MSK.

The resident will become competent in the identification, initial management and appropriate referral to subspecialty care pertaining to the overall approach to the patient with an infectious process.

Terminal Objectives:

IV Basic competencies in the approach to non-traumatic conditions of the extremities and axial skeleton including:

- 1 Osteoarthritis and rheumatoid arthritis (including inflammatory arthritis)
- 2 Soft tissue disorders such as bursitis, tendonitis, tenosynovitis, enthesopathy and nerve entrapment
- 3 Muscle disorders of congenital, inflammatory and neurological origin
- 4 Bone conditions such as malignancy and infection

Candidates will be competent in the ability to demonstrate an approach for diagnosing patients with any of the MSK conditions listed above and demonstrate the ability to take a relevant history, to identify and characterize major non-traumatic extremity problems

Enabling Objectives:

Selected Readings:

5. Articles – candidate to complete a brief review to identify ONE key manuscript that would be useful to meet one of the objectives listed above.
6. Textbook/URL – if there are any other textbooks for this section that you would recommend, please inform us of them.

Clinics

- Clinics with the above mentioned clinicians (Full assessments & interpretation of radiology & reports)

Terminal Objectives:

V Basic competencies in the approach to patients presenting with conditions of the spine including:

- 1 Mechanical back pain relating to non-specific low back pain, spondylolysis, spondylolisthesis and lumbago
- 2 Spinal cord or root entrapment such as a herniated lumbar disc
- 3 Vertebral fractures of osteoporotic origin
- 4 Inflammatory back pain such as ankylosing spondylitis
- 5 The ability to take a history, identify and characterize destructive lesions of the spine such as infections/tumors/metastasis
- 6 Low back pain and sciatica
- 7 Neck pain (approach to the patient with neck pain that may not require surgery)
- 8 Sequelae to MSK related spine conditions

Candidates will be competent in the ability to take a relevant history, to identify and characterize the above listed conditions of the spine

Enabling Objectives:

Selected Readings:

1. Articles – candidate to complete a brief review to identify ONE key manuscript that would be useful to meet one of the objectives listed above
2. Textbook/URL – if there are any other textbooks for this section that you would recommend, please inform us of them.

Clinics

- Clinics with the above mentioned clinicians (Full assessments & interpretation of radiology & reports)

Terminal Objectives:

VI Basic competencies in the approach to patients presenting with joint and soft tissue conditions including:

1. Osteoarthritis
2. Rheumatoid arthritis (Inflammatory arthropathy) or any of the spondyloarthropathies
3. Soft tissue lesions or enthesopathy such as a rotator cuff lesion, tennis elbow or any other soft tissue condition
4. Fibromyalgia or chronic generalized pain
5. Crystalloid arthropathy
6. Rheumatic fever
7. An autoimmune connective tissue disease such as SLE
8. Viral arthritis such as HIV
9. Polymyalgia rheumatica

Candidates will be competent in the ability to specify the symptoms, signs and predisposing factors; to outline the assessment and appropriate investigations; to propose a differential diagnosis and; to outline the principles of management of a patient with any of the MSK conditions listed above.

Enabling Objectives:

Selected Readings:

1. Articles – candidate to complete a brief review to identify ONE key manuscript that would be useful to meet one of the objectives listed above
2. Textbook/URL – if there are any other textbooks for this section that you would recommend, please inform us of them.

Clinics

- Clinics with the above mentioned clinicians (Full assessments & interpretation of radiology & reports)

Terminal Objectives:

VII Basic competencies in the approach to patients presenting with MSK tumors or bone disorders including:

1. Osteoporosis
2. A patient with other metabolic bone diseases including osteomalacia and Paget's Disease
3. Juvenile chronic or idiopathic arthritis
4. genetic conditions and skeletal dysplasia

Candidates will be competent in the ability to specify the symptoms and signs; to outline the assessment and appropriate investigations; to propose a differential diagnosis and; to outline the principles of management of a patient with any of the above listed conditions.

Enabling Objectives:

Selected Readings:

1. Articles – candidate to complete a brief review to identify ONE key manuscript that would be useful to meet one of the objectives listed above.
2. Textbook/URL – if there are any other textbooks for this section that you would recommend, please inform us of them.

Clinics

- Clinics with the above mentioned clinicians (Full assessments & interpretation of radiology & reports)

Terminal Objectives:

VIII Basic competency in the various methods for management and non-surgical treatment of MSK conditions including but not limited to:

1. Pharmacology and the ability to be familiar with the major indications, adverse effects, drug interactions and contra-indications of drugs commonly used in the management of MSK conditions. (With a focus on chronic pain management)

Candidates will be competent in the ability to understand the various mechanisms of action of common medications used for MSK conditions including but not limited to: analgesics, non-steroidal anti-inflammatories and Disease modifying anti-rheumatic drugs (DMARDS).

Enabling Objectives:

Selected Readings:

1. Articles – candidate to complete a brief review to identify ONE key manuscript that would be useful to meet one of the objectives listed above
2. Textbook/URL – if there are any other textbooks for this section that you would recommend, please inform us of them.
3. Pharmacology of medical therapies as outlined during various stages of the module either in hospital/clinic based exposure

Terminal Objectives:

IX Basic competency in the demonstration of non-surgical procedures pertaining to MSK conditions

1. Joint injections and aspirations
2. Peritendon injections

Candidates may become competent in the ability to perform a joint injection or aspiration and a peritendon injection (depending on opportunity to do so during the module).

Enabling Objectives:

Selected Readings:

1. Articles – candidate to complete a brief review to identify ONE key manuscript that would be useful to meet one of the objectives below
2. Textbook/URL – if there are any other textbooks for this section that you would recommend, please inform us of them.

Terminal Objectives:

X CanMeds 2000 and Related Knowledge

1. The ability to demonstrate the objectives outlined by CanMeds 2000 of being a medical/clinical expert and decision-maker, communicator, collaborator, manager, health advocate, scholar and professional
2. The ability to understand the basic science associated with bone and joint health such as: the structure and function of bone, joints, muscle, connective tissues and disease processes.
3. The ability to understand the basic physiology, cell biology and pathology relating to bone and joint health conditions which include: the ageing process, injury and disease states and repair of musculoskeletal tissues such as bone, cartilage, synovium, muscle and entheses.

Enabling Objectives:

Selected Readings:

1. Articles – candidate to complete a brief review to identify ONE key manuscript that would be useful to meet one of the objectives below
2. Textbook/URL – if there are any other textbooks for this section that you would recommend, please inform us of them.

Independent Study Time

- Access to the library for independent study time

Clinical Experience

- Hospital based infectious disease educational experience (Nursing, Medicine, Anaesthesia, PT/OT, discharge planning, investigations)
- Exposure to radiology, physiotherapy, occupational therapy, social services and patient advocacy, ward exposure and possible attendance at a team huddles as they present themselves either in hospital based experiences or ambulatory care clinics or testing sites.

Presentation at HOAC Friday Rounds

- Candidate will present a scholarly rounds presentation during a Friday morning rounds at the Holland Orthopaedic and Arthritis Centre

Evaluation Process based on CanMeds

- (Evaluation based on CanMeds Document)
 1. MCQs and SAQs (medical expert)
 2. ITERs (Professionalism – to be completed by the consultants)
 - mid-rotation all will be collected for direct review with resident candidate
 3. Structured Oral (Other CanMeds objectives & Medical Expert)
- Educational daily “log book”
- Evaluation of the rotation experience and self-evaluation of performance
- Exit interview and review of rotation based on the above collected data
 1. Constructive feedback after summative evaluation will be very important process for documentation
 2. Important to recognize that participation in a learning experience does not necessarily translate into competency. Various data sets that provide us with evidence along with the qualitative evaluation of the resident may assist in determining the success of a resident.