Musculoskeletal Medicine
Training Module

Workbook 5

Diagnostic Imaging
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The Australasian Faculty of Rehabilitation Medicine (Royal Australasian College of Physicians)

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ATTACHMENTS

1. Workbook Evaluation Form
Introduction

The purpose of the workbook is to help guide you through a self-directed learning program on musculoskeletal (MSK) rehabilitation, in this case diagnostic imaging.

The learning objectives are designed to make clear what is expected from you. A deep approach to learning will hopefully enable you to transfer your knowledge and skills into the clinical situation and provide expert care for patients with musculoskeletal problems. How well you understand this “topic” will ultimately affect them.

You can choose to work in small groups or on your own. The clinical scenarios will help guide your research as each one covers different topics of the curriculum in MSK. The skills you need to acquire are detailed in the learning objectives.
Learning Objectives

Skills

- Demonstrate accuracy in describing normal findings for all joints (Plain x-ray, CT, MRI and US).

- Describe and interpret abnormal findings of the musculoskeletal (MSK) system and be able to relate the pathology to the clinical setting. Include:
  - arthritis
  - osteoporosis
  - pagets disease
  - tumours
  - osteomyelitis
  - fractures and dislocations
  - soft tissue injury
  - surgical hardware

- Demonstrate ability to communicate effectively with patients, families, colleagues and health providers regarding investigations and their findings. (Using appropriate language for each group).

- Demonstrate ability to design and run training sessions on diagnostic imaging for medical Students, Interns, RMO’s, Registrars, Consultants and General Practitioners using small group teaching with learning objectives and problem solving.

- Demonstrate ability to give a verbal or written report of your interpretation of normal/ abnormal diagnostic imaging. (i.e. suitable for medical legal reports).
Learning Opportunities

- Attend Radiology meetings
  For you to arrange individually or in small groups. Take your patient’s films and ask for clarification of abnormal and/or normal findings.

- Consultants and Supervisors
  Ask your Consultant for advice/ clarification of imaging. Use protected teaching time for tutorials on this topic.

- State training sessions
  Arrange invited speakers (give them specific topics you would like covered)
  Interactive teaching session conducted by peers.

- Peer training sessions
  (For you to arrange i.e. discuss as a small group/ online)
  Write clinical scenario’s based on actual patients for each other to solve.

- Independent workshops/ courses

- Patients under your care
  View and interpret all diagnostic images of patients under your care.
  Practice explaining imaging results with patients and families.

- Library resources / texts/ journals
Checklist for Diagnostic Imaging

Identified the investigation type  □
   (CT, MRI, US, X ray)

Patient name/gender/age identified  □

Area imaged identified  □

Description of  □
   bone
   joints
   soft tissue

Accurate diagnosis  □

List of differential diagnoses  □

Presented findings fluently  □

Able to relate normal/abnormal findings to the patient  □

Able to summarise findings  □
   (with reference to patient symptoms and signs)
Evaluation

Always start with **self-evaluation** because ultimately you will be the one evaluating your own independent practice in future years.

**Self**
- Can you interpret diagnostic imaging correctly and consistently?
- Do you consistently miss the same point?
- How can you change this?
- Does your patient understand your explanation?

**Peer**
- Practice describing imaging findings with peers
- Devise a checklist for consistency.

**Consultant**
When you feel ready ask your Consultant to evaluate your skills. Show them your checklist and ask them to use it. Ask for what you did well and what you need to improve on.

*You should attempt this process every few weeks to receive feedback on your performance. (Formative feedback)*

**Supervisor**
This may be the same person as above. Include your MSK learning objectives and be sure your supervisor is aware of your efforts. Repeat evaluations as many times as necessary until you consistently reach the standard required. There is no limit to how many times you try.

*You should attempt this process at least twice per term to receive feedback on your performance. (Formative feedback)*

**Formal Examinations**
This process formally tests your knowledge, skills and attitudes. The checklists will be provided for examiners to use in the assessment process. *(Summative assessment)*
Clinical Scenarios

1. A 45-year-old man presents with acute onset low back pain following lifting a heavy bag. He has no history of serious illness and is most concerned that he has “broken” his back. He has been referred to you by his GP to assess and manage.
   a) What investigations will you order and why? (Consider red flags and yellow flags in your response with appropriate support from the literature.)
   b) The patient insists you order an MRI or CT. What is your response to this?

2. A 50 year old woman has abnormal findings on her MRI. (L5 S1 disc protrusion).
   a) How will you explain these findings to the patient and what will you advise concerning prognosis?

3. A solicitor has requested a report from you regarding one of your patients. The patient has low back pain with no neurological loss, a normal MRI but with significant loss of function.
   a) How will you approach this responding to this request? (Include in your answer how you will address privacy issues, legal requirements, ethical concerns and patient advocacy). Review the literature to assist you with your choices.

4. You notice one of your colleagues is having difficulty with describing both normal and abnormal X ray findings. S/he attends the Registrar training sessions with you. Your peer has asked you to assist his/her learning (as you seem to have a good approach).
   a) What will you do? What methods will you use in your teaching session/s?
Suggested Learning Resources

Recommended Readings

1. www.boneandjointdecade.org
2. www.orthosearch.com
3. www.radiology.uiowa.edu

These sites are a guide only and it is suggested you use these as a starting point for your research into this topic. There is no set recommended text; this is for you to search out which text best meets your learning needs.
Evaluation of Musculoskeletal Rehabilitation Training Workbook

Diagnostic Imaging

Please take a few moments to complete this evaluation form. Your thoughtful comments will be reviewed by the Vocational Training Committee and will assist the Committee in the planning and development of future training resources.

1. Was the workbook helpful in your learning of this topic? (i.e. Did it clarify what knowledge attitude and skills you needed to reach competency in this area?)

2. Did you find the clinical scenarios and references helpful?

3. Do you feel your skills have improved as a result of using the workbook? Have you used your improved skills in the clinical setting?

4. If you have not used your new skills, what has prevented you from doing so?
5. What further questions about this topic remain in your mind?

6. Please give any additional comments about other aspects of the workbook, including requests for future workbook topics (or improvement on the existing book).

7. What other support do you feel the Faculty could provide to assist or facilitate your learning in Musculoskeletal Medicine?

Name ______________________ date ___________ signature_________________

Thank you for your assistance.

The Vocational Training Committee

*Please return completed evaluation forms to: AFRM, 145 Macquarie Street, Sydney*