

**SPECIALTY TRAINING CURRICULUM**

**FOR**

**RHEUMATOLOGY**

**MAY 2007**

Joint Royal Colleges of Physicians Training Board

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## **Introduction**

Rheumatology incorporates the investigation, diagnosis, management and rehabilitation of patients with disorders of the musculoskeletal system i.e., the locomotor apparatus, bone and soft connective tissues. The rheumatological disorders thus include diverse conditions such as inflammatory arthritis, autoimmune rheumatic disorders, soft tissue conditions including injuries, osteoarthritis, spinal pain and other chronic pain syndromes and metabolic bone disease. Many rheumatologists practice the specialty exclusively but others practice in internal medicine, rehabilitation, or sports medicine. Rheumatology requires interdisciplinary knowledge and awareness of new developments in internal medicine, immunology, orthopaedics, neurology/pain management, rehabilitation, psychiatry, nursing and professions allied to medicine. Rheumatologists practising in adult medicine must understand the sequelae of childhood and adolescent rheumatological disease

### **1: Rationale**

#### *The purpose of the curriculum*

The purpose of this curriculum is to train a specialist in Rheumatology. The curriculum describes the competencies required to satisfactorily achieve a certificate of completion of training (CCT) and to be registered on the Specialist Register in Rheumatology. The CCT specialist will be able to work as a consultant specialist within the National Health Service and will have the knowledge, skills and attitudes required to do this i.e. capable of providing a high standard of professional service. The curriculum also serves to provide essential information for those considering higher medical training in Rheumatology and those wishing to apply for Article 14 entry to the specialist register through PMETB.

#### *The development of the curriculum*

The content of the curriculum and the teaching / learning methods described were chosen by the Specialty Advisory Committee (SAC) in Rheumatology. The knowledge, skills and attitudes required for a trained specialist were drawn up by the SAC in 2004 and have been reviewed annually. Regular meetings were held by the SAC involving all relevant stakeholders (guidance was given by the Joint Committee on Higher Medical Training and officials from PMETB). The SAC membership represents teachers, trainers and trainees in the specialty and the opinions of the British Society for Rheumatology was gained through its representation on the SAC. The input of those responsible for Rheumatology trainees regionally was sought through consultation with the Regional Specialty Advisors in Rheumatology. The curriculum was drawn up and reviewed by the SAC and submitted for PMETB approval by the JRCPTB.

#### *The appropriateness of the curriculum*

The competencies to be achieved as described within the curriculum build on the core medicine training. The early years of specialty training build on the competencies successfully achieved in the foundation training. This curriculum describes the

competencies expected in higher medical training in Rheumatology and how they will be attained and assessed.

#### *Linkages to previous and subsequent training*

The core medical training curriculum follows on from the foundation curriculum. The Rheumatology curriculum follows on from the successful attainment of Level 1 competency of training in General Internal Medicine (Acute) by completion of core training (core medical training – CMT or acute care core stem training (medicine (ACCS(M))). Trainees entering higher training in Rheumatology will have shown an appropriate level of knowledge through success in Part 1 of the Membership of the Royal College of Physicians. This curriculum will provide the competencies to the level of CCT. The JRCPTB generic curriculum complements both the specialty and core medical training curricula, and runs through from F2 to CCT.

A proportion of trainees will choose to undertake training to achieve Level 2 competencies in General Internal Medicine (GIM) (Acute) in addition to the Rheumatology competencies.

#### *Duration of training*

Although this curriculum is competency based, the duration of training must meet the European minimum of 4 (four) years for post registration in full time training adjusted accordingly for flexible training (EU directive 93/16/EEC requires that flexible training can be no less than 50% whole time equivalent). The SAC has advised that training from ST1 will usually be completed in 6 (six) years in full time training. Trainees achieving Level 2 GIM (Acute) competencies in addition to Rheumatology will usually complete training in 7 (seven) years in full time training.

#### *Relevance to programmes of training*

The curriculum will be achieved by completing the necessary posts within educationally approved training programmes in Rheumatology (and Internal Medicine for those training for Level 2 competencies in GIM(Acute)). Until 2007 these posts will be at SHO and specialist registrar level. From August 2007 these will be described as specialty training years 1 through to specialty training year 6/7.

#### Generic Curriculum

This specialty curriculum is complementary to the generic curriculum which applies to all 28 physicianly specialities. The generic curriculum follows the headings of good medical practice and runs through from core training to CCT (see fig 1). Trainees should read and understand both their specialty curriculum and the generic curriculum. Both curricula should be seen as integrated so that generic competencies are acquired at all stages of specialty training. Some generic components are also further expanded and deepened for some specialties (eg palliative medicine). When planning specialty programmes, deaneries and trainers should ensure that both specialty and generic competencies can be acquired and assessed.

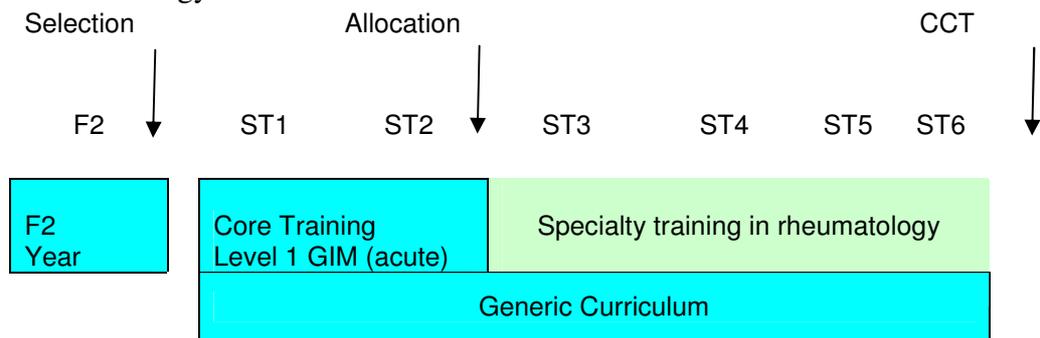
## General Internal Medicine (Acute) curriculum

The new curriculum for General Internal Medicine (Acute) is split into 3 parts.

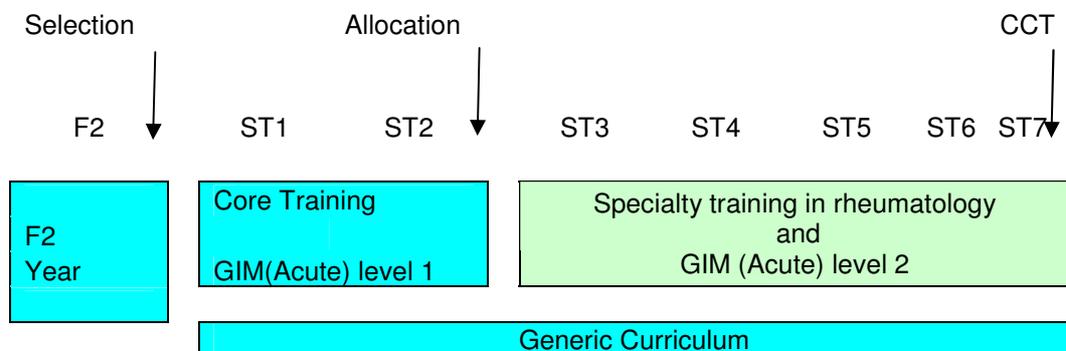
Level one competencies will be achieved by all physicianly trainees during core training (core medical training – CMT or acute care common stem – ACCS) and must be achieved before progression to specialty training.

Level 2 competencies will be achieved by those who plan to take part in the acute medical take. To participate in the acute medical take and to be responsible for the care of unselected acutely ill patients as a senior medical appointment a clinician requires a CCT in a medical specialty, such as rheumatology and a certificate in GIM (Acute). The Level 2 GIM (Acute) training programme ensures a trainee's ability to provide acute medical care in the acute setting. Upon successful attainment of Level 2 competencies, the trainee will be certificated in GIM (Acute). The SAC in acute and general medicine has advised that it will generally be necessary for a trainee to spend two years in general and acute medicine from entry into ST3 in order to deliver the competencies required. The exact structure of a training programme that combines rheumatology and Level 2 GIM (Acute) may vary between Deaneries

### Training in rheumatology alone



### Training in rheumatology and GIM (Acute) to level 2



## **2: Content of learning**

Defining the objectives of the generic skills of the specialist trainees in training in any of the medical specialties has relied on two documents; the first is "Good Medical Practice" produced by the GMC; the second is the generic curriculum for training in acute medicine. In the following section, we have defined the learning content using the following framework:

- A general outline of the objectives of higher medical training in rheumatology.
- We have then described the specific outcomes, in terms of clinical knowledge, skills and attitudes required to gain a CCT in Rheumatology, together with mapping of how these will be assessed.
- We have then mapped the generic standards outlined in 'Good Medical Practice' (GMC 1998) to the rheumatology curriculum.

Post graduate training leading to recognition as a specialist should furnish the doctor with knowledge and skills which will enable them to become competent in the field of rheumatology. The curriculum will enable trainees to become competent in the:

- establishment of a differential diagnosis for patients presenting with clinical features of rheumatological conditions by appropriate use of history, clinical examination and investigation.
- performance of the core investigations required for all physicians practising rheumatology
- development of management plans for the "whole patient" with a sound knowledge of the appropriate treatments including health promotion, disease prevention and long term management plans.
- communication of the diagnosis and management options with the patient and other members of the multidisciplinary team.
- application of sufficient knowledge and skill in diagnosis and management to ensure safe independent practice.
- provision of effective team working and leadership skills
- application of knowledge of the appropriate basic sciences relevant to rheumatology
- management of time and other resources to the benefit of their patients and colleagues
- facilitation of effective learning by other clinical and allied staff.
- maintenance of professional standards through continuing development and learning
- critical appraisal and analysis of clinical research methodology and results.

The trainee should also follow the generic professional standards laid out in the GMC document 'Good Medical Practice' (GMC 1998).

### **2.1 Knowledge**

The overall aim is to acquire a sound knowledge of the natural history and pathophysiology of rheumatological disease and the basic scientific principles and evidence base underpinning the current practice of rheumatology. This knowledge base will be applied to ensure safe and competent clinical practice.

## 1. Basic Science underpinning the musculoskeletal and immune systems

The trainee will be able to:

- a. Describe the anatomy of the musculoskeletal system
- b. Identify surface anatomy of the musculoskeletal system
- c. Describe the physiology and biochemistry of the musculoskeletal system, including joints, bones, muscles and soft tissues
- d. Describe the structure and function of the musculoskeletal system in health and disease
- e. Explain the innate and adaptive immune systems, including cellular and humoral immunity
- f. Evaluate the concept of autoimmune disease in the light of the normal functions of the immune system

## 2. Pharmacology underpinning rheumatological practice

The trainee will demonstrate

- a. knowledge of the pharmacology of all drugs used in rheumatological practice, including analgesics, non-steroidal anti-inflammatory drugs, slow acting anti-rheumatic drugs, immunosuppressive agents, biologic agents, drugs used in treating patients with metabolic bone diseases, non-analgesic drugs used in the management of patients with chronic pain, drugs used in the management of gout, corticosteroids
- b. ability to identify and evaluate, information on new drugs
- c. ability to identify, evaluate and notify appropriate authorities of, potential adverse drug effects noticed within their clinical practice

## 3. Rheumatological Disorders

For each of the following conditions, the trainee should demonstrate knowledge of:

- epidemiology
- aetiology
- pathogenesis
- pathology
- clinical features
- natural history
- potential impact, physical, psychological and functional on the individual
- potential impact on the individual's carers
- potential impact on society
- investigation
- pharmacological and non-pharmacological management, including the evidence base thereof

### a. **Musculoskeletal pain problems and soft tissue rheumatism.**

Including:

Neck pain

Spinal pain

Intervertebral disc disorders

- Spinal canal or foraminal stenosis & related syndromes
- ”Whiplash”
- Limb pain syndromes
  - eg rotator cuff disease
  - enthesopathies including epicondylitis, plantar fasciitis
  - bursitis
  - non-specific limb pain
- Complex regional pain syndromes - algodystrophy
- Chest wall pain syndromes
- Fibromyalgia and related somatoform disorders
- Benign joint hypermobility
- Pain problems specific to childhood – eg nocturnal limb pain, Osgood-Schlatter’s disease, Perthe’s disease
- Occupational and sports related problems

**b. Osteoarthritis and related conditions:**

Including:

- Osteoarthritis of large joints
- Generalised osteoarthritis
- Diffuse idiopathic skeletal hyperostosis
- Neuropathic arthritis

**c. Crystal associated arthropathies**

- Gout
- Pseudogout
- Apatite deposition disease
- Oxalate metabolism disorders

**d. Rheumatoid arthritis**

- Articular manifestations
- Systemic manifestations
  - including respiratory, ocular, neurological, haematological, dermatological manifestations
- Complications
  - including cervical myelopathy, amyloid, septic arthritis

**e. Spondyloarthropathies**

- Ankylosing spondylitis
- Psoriatic arthritis
- Enteropathic arthropathies
- Reactive arthritis
- Whipple’s disease

**f. Juvenile Idiopathic Arthritis**

*in relation to young adult and adult patients*

**g. Autoimmune connective tissue diseases**

- Systemic lupus erythematosus
- Antiphospholipid syndrome
- Systemic sclerosis

Sjogrens syndrome  
Inflammatory muscle disease  
Overlap syndromes  
Relapsing polychondritis  
Vasculitides  
- Including:  
    Giant cell arteritis (and polymyalgia rheumatica)  
Wegener's granulomatosis  
    Polyarteritis nodosa and micropolyarteritis  
    Churg Strauss vasculitis  
    Behcet's disease  
    Takayasu's arteritis  
    Cutaneous vasculitis  
    Panniculitis  
    Henoch Schonlein purpura  
    Cryoglobulinaemia

**h. Bone disorders**

Including  
Osteoporosis  
Rickets and osteomalacia  
Bone & joint dysplasias  
Renal bone disease  
Regional disorders – Paget's disease, hypertrophic pulmonary osteoarthropathy, osteonecrosis, Perthe's disease, osteochondritis dissecans, transient regional osteoporosis

**i. Metabolic, endocrine and other disorders**

**Including:**  
Endocrine disorders affecting bone, joint or muscle (eg thyroid, pituitary, parathyroid disorders)  
Metabolic disorders affecting joints (eg alkaptonuria, haemochromatosis )  
Heritable collagen disorders  
Haemoglobinopathies  
Haemophilia and other disorders of haemostasis

**j. Infection and arthritis:**

Septic arthritis  
Osteomyelitis  
Post-infectious rheumatological conditions, including rheumatic fever, post-meningococcal arthritis  
Lyme disease  
Mycobacterial, fungal & parasitic arthropathies  
Viral arthritis  
Human Immunodeficiency virus and Acquired immunodeficiency syndrome  
Hepatitis C

- k. **Neoplastic disease**
  - Paraneoplastic musculoskeletal syndromes
  - Primary and secondary neoplastic conditions of connective tissue
  - Tumours of bone
  - Pigmented villonodular synovitis
  
- l. **Miscellaneous disorders:**
  - Sarcoidosis
  - Eosinophilic fasciitis
  - Familial Mediterranean Fever
  - Hypogammaglobulinaemia & arthritis
  - Amyloidosis
  - Sweets syndrome (neutrophilic dermatoses)

#### **4. Rheumatological disorders in the elderly**

The trainee will be able to

- a. Describe the epidemiology of rheumatological disorders in the elderly
- b. Evaluate the impact of rheumatological diseases on the elderly

#### **5. Paediatric and Adolescent Rheumatology**

The trainee will::

- a. Be aware of the spectrum of disorders that present as musculoskeletal symptoms in childhood and adolescence.
- b. Understand the differential diagnosis of musculoskeletal pain in children and adolescents
- c. Identify and appreciate their own limitations in assessing and managing children and adolescents with musculoskeletal symptoms.
- d. Understand the principles underpinning the management of children and adolescents with rheumatic disease.
- e. Classify the arthritides occurring in children.
- f. Understand the different models of clinical care of children and adolescents with arthritis.
- g. Describe and evaluate the sequelae of childhood and adolescent rheumatological disease
- h. Identify and appreciate the particular requirements of adolescents and young adults with arthritis in the transition period as they come under the care of adult rheumatologists

#### **6. Investigations used in Rheumatological practice**

For each of the following investigations the trainee will be able to:

- Select the appropriate investigation in the light of their clinical assessment of a given patient
- Provide a rationale for the investigation
- Interpret the investigation result in the context of the given patient

**Blood tests:****Haematology:**

Full blood count; clotting screen; lupus anticoagulant; erythrocyte sedimentation rate; plasma viscosity; Haemoglobin electrophoresis; Coombs test; haematinics; blood film report

**Biochemistry:**

Renal, hepatic and bone biochemistry; muscle enzyme levels; sex hormones; endocrine function tests; Immunoglobulin levels and serum/urine electrophoresis; lipid profile

**Immunology:**

Autoantibody assays, including Rheumatoid factor, anti CCP antibodies , ANA, anti-DNA antibodies, antibodies to ENA, anti-cardiolipin antibodies, ANCA; Complement levels, cryoglobulins; cold agglutinins

**Synovial fluid analysis**

To perform polarised light microscopy

To interpret the results of gram stain and culture, cytology

**Microbiology/Serology:**

Blood/synovial fluid/sputum/urine/CSF microscopy and culture

Serological tests for viral infections, including hepatitis

HIV testing

**Pathology:**

Histology reports of tissue biopsies of synovium, skin, liver, lung, kidney and lymph node

Cytology reports from body fluids including sputum, urine and synovial fluid

**Imaging:**

Radiographs of chest, joints, abdomen

Isotope bone scans

Dual energy X ray absorptiometry scans

V/Q scans

Reports of CT scans, MRI scans, ultra sound scans, arthrography

**Neurophysiology:**

Reports of nerve conduction studies and electromyographic studies

**7. The role and activities of other members of the multi-disciplinary team.**

Sound rheumatological practice relies upon an effective multi-disciplinary team, including input from nurses, therapists, chiropodists/podiatrists, orthotists, dieticians and clinical psychologists. For these team members, it is essential that the rheumatologist can:

- Describe their role
- Describe, in principle, their activities

- Identify which patients may benefit from their input
- Recognise effective ways of communication with them and between members of the team

### **8. Orthopaedic surgery in the context of rheumatological practice**

Rheumatology has a close interface with orthopaedic surgery: patients with the same conditions are often seen by practitioners from both specialties; a significant number of patients with rheumatological conditions benefit from surgery.

The trainee will be able to:

- Identify circumstances in which orthopaedic referral is appropriate
- Describe the indications for, principles of and complications of, those orthopaedic procedures commonly carried out on patients with rheumatological conditions. These include joint replacements, arthrodeses, nerve decompressions, spinal decompression procedures, arthroscopic and open joint lavage, procedures for soft tissue problems in the hands, shoulders and knees.
- Recognise effective ways of communicating with orthopaedic surgeons, including the role of combined clinics.

### **9. Other medical specialties in the context of rheumatological practice**

A significant proportion of patients who see rheumatologists need input from other specialists including renal physicians, respiratory physicians, neurologists, neurosurgeons, rehabilitationists, anaesthetists and specialists in pain relieving procedures and psychiatrists. The trainee will be able to:

- Identify circumstances in which referral to other specialists is appropriate
- Describe the principles of the specialist help provided by other specialists
- Recognise ways of communicating effectively with other specialists

### **10. Complementary therapy and unconventional treatment approaches**

A significant proportion of patients with rheumatological diseases consult alternative practitioners, including chiropractors, osteopaths and homeopaths.

The trainee will be able to:

- Describe, in principle, the main activities of these treatment approaches
- Identify and evaluate the evidence base underlying these approaches
- Identify, in principle, the potential advantages and disadvantages of these approaches

## **Teaching and learning methods to aid achievement of knowledge objectives**

Section 4 A-H

### **Assessment of achievement of knowledge objectives:**

At time of writing, relevant knowledge is assessed by discussion of cases and published articles, and by educational presentations by the trainee. A formal knowledge assessment is to be developed and is expected to be implemented in autumn 2007



## 2.2 Clinical Skills & Attitudes

The overall aim is to develop the ability to perform a clinical assessment of patients with rheumatological disorders (as identified in 2.1.3, above), select and interpret appropriate investigations and formulate a differential diagnosis and management plan. The trainee should be able to communicate their conclusions effectively to the patient and other clinical colleagues.

### 1. History taking & clinical examination: Overview

Skills	Attitudes/Behaviours	Learning methods	Assessment
<p><b>History</b> – To be able to elicit and correctly interpret a history of:</p> <ul style="list-style-type: none"> <li>▪ the presenting symptoms of rheumatological disease ie pain, stiffness, weakness, loss of function &amp; non-articular manifestations</li> <li>▪ the impact on the individual of the rheumatological disease</li> <li>▪ the psychosocial problems associated with rheumatological disease</li> <li>▪ other general medical problems</li> </ul>	<p>To respect the patient and their perspective of their problem; to value good communication with the patient</p>	<p>Section 4 A, C,F</p>	<p>Mini-CEX Other validated methods of skills assessment e.g. OSCE MSF</p>
<p><b>Examination</b> - To identify</p> <ul style="list-style-type: none"> <li>▪ the normal musculoskeletal system and its variations including at extremes of age</li> <li>▪ the surface anatomical features of the shoulder girdle, elbow, hand/wrist, hip/pelvis, knee, ankle/foot, spine</li> <li>▪ the normal range of movement (active and passive) of these joints</li> <li>▪ the actions of major muscle/tendons acting on these jts</li> <li>▪ the clinical signs associated with inflammation or structural damage of joints &amp; periarticular structures (muscles, tendons, entheses, bursae and bone)</li> <li>▪ non-articular, systemic and other features of rheumatic disease</li> <li>▪ general medical complications of rheumatological disease</li> <li>▪ diffuse or regional pain disorders or somatisation disorders</li> </ul> <p>All trainees should be able to perform and demonstrate a GALS (Gait Arms Legs Spine) screening examination All trainees should be able to perform and demonstrate a regional musculoskeletal examination (REMS)</p>			

## 2. History taking & clinical examination: Regional musculoskeletal examination: identifying and interpreting abnormalities

<p><b>Shoulder pathology:</b> The trainee should be able to identify</p> <ul style="list-style-type: none"><li>▪ Rotator cuff lesions</li><li>▪ Glenohumeral/capsular pathology</li><li>▪ Muscle wasting, proximal myopathy (deltoid)</li><li>▪ S/C joint pathology - synovitis</li><li>▪ A/C joint pathology – synovitis</li><li>▪ Shoulder pain due to pain referred from viscera or neck</li></ul>
<p><b>Elbow pathology:</b> The trainee should be able to identify</p> <ul style="list-style-type: none"><li>▪ Olecranon bursitis</li><li>▪ Elbow joint pathology</li><li>▪ Radio-ulnar joint pathology</li><li>▪ Medial or lateral epicondylitis</li><li>▪ Ulnar nerve entrapment</li></ul>
<p><b>Hand &amp; wrist pathology:</b> The trainee should be able to identify</p> <ul style="list-style-type: none"><li>▪ Radiocarpal joint pathology</li><li>▪ Distal radio-ulnar joint pathology</li><li>▪ MCP or IP joint pathology</li><li>▪ Hand deformities</li><li>▪ Muscle wasting</li><li>▪ Flexor or extensor tenosynovitis or tendon nodules</li><li>▪ Rupture or attenuation of flexor or extensor tendons of fingers or thumb</li><li>▪ De Quervain's tenovaginitis</li><li>▪ Carpal tunnel syndrome</li></ul>
<p><b>Hip/pelvic pathology:</b> The trainee should be able to identify</p> <ul style="list-style-type: none"><li>▪ trochanteric, iliopsoas, gluteal bursitis</li><li>▪ hip joint pathology including dysplasia</li><li>▪ real &amp; apparent leg length inequality</li><li>▪ SI joint pathology</li><li>▪ muscle wasting, proximal myopathy, Trendelenberg sign</li><li>▪ deformities of the hip, Thomas' test</li><li>▪ pathology of symphysis pubis</li><li>▪ pathology of pelvis - fractures</li><li>▪ hip pain due to pain referred from lumbar region</li><li>▪ lesions of tendons and entheses</li></ul>

<p><b>Knee pathology:</b> The trainee should be able to identify</p> <ul style="list-style-type: none"> <li>▪ knee joint pathology, including internal derangements</li> <li>▪ deformities</li> <li>▪ muscle wasting, myopathy</li> <li>▪ prepatellar, anserine bursitis</li> <li>▪ popliteal cyst</li> <li>▪ damage to collateral ligaments</li> <li>▪ knee pain due to pain referred from hip or lumbar spine</li> <li>▪ lesions of tendons and entheses</li> <li>▪ Osgood-Schlatter's disease</li> <li>▪ Adolescent anterior knee pain/Patello-femoral syndrome</li> </ul>
<p><b>Ankle &amp; foot pathology:</b> The trainee should be able to identify</p> <ul style="list-style-type: none"> <li>▪ ankle (tibiotalar) pathology</li> <li>▪ subtalar/midtarsal joint pathology</li> <li>▪ MTP &amp; IP joint pathology</li> <li>▪ lesions of the Achilles tendon, entheses and retrocalcaneal bursa</li> <li>▪ deformities of the ankle and foot</li> <li>▪ foot pain due to pain referred from lumbar spine</li> <li>▪ plantar fasciitis</li> <li>▪ tenosynovitis of tib post and peroneal tendons</li> <li>▪ rupture of tib posterior or Achilles tendon</li> <li>▪ lesions of bone (eg stress fracture)</li> </ul>
<p><b>Spinal pathology:</b> The trainee should be able to identify</p> <ul style="list-style-type: none"> <li>▪ Cervical spine pathology</li> <li>▪ Thoracic spine pathology</li> <li>▪ Lumbar spine pathology</li> <li>▪ Spinal nerve root entrapment syndromes</li> <li>▪ Spinal deformities including adolescent scoliosis</li> </ul>
<p><b>Extra-articular pathology:</b> The trainee should be able to identify</p> <ul style="list-style-type: none"> <li>▪ Raynauds phenomenon</li> <li>▪ Vasculitic skin lesions</li> <li>▪ Rheumatoid nodules</li> <li>▪ Rash – psoriasis, pustular psoriasis, onycholysis, balanitis, lupus rashes, erythema nodosum, calcinosis</li> <li>▪ Nail lesions – pitting, onycholysis, splinter haemorrhages, nailfold infarcts</li> <li>▪ Scleritis, episcleritis, conjunctivitis, iritis</li> <li>▪ Sclerodactyly</li> <li>▪ Tophi</li> <li>▪ Other medical complications of rheumatic disease affecting internal organs</li> </ul>

**3. For each of the following presentations, the trainee will demonstrate the skills and attitudes identified in the grid below:**

Patients presenting with:

- A monoarthropathy
- An oligoarthropathy
- A polyarthropathy
- An axial arthropathy
- An inflammatory multi-system disorder
- Muscle weakness
- Regional limb pain
- Spinal musculoskeletal pain disorders
- Uexplained musculoskeletal pain
- Rheumatological emergencies

<b>Skills</b>	<b>Attitudes/Behaviours</b>	<b>Teaching and learning methods</b>	<b>Assessment</b>
On the basis of history and examination, arrives at an appropriate differential diagnosis	Respects the patient; Values the need for careful and accurate clinical assessment	Section 4 A-H	Mini-CEX, OSCE, CBD
Chooses and interprets the appropriate investigations	Respects the need for an accurate diagnosis but also for effective use of scarce and (where relevant) potentially toxic, resources	Section 4 A, B, C,E,H	Mini-CEX, OSCE, CBD
Formulates an appropriate management plan.	Relates theoretical knowledge to patient management. Ensures an evidence-based approach is employed Keeps up to date with published medical evidence	Section 4 A-H	Mini-CEX, OSCE, CBD
Communicates the diagnosis, its implications and the treatment options to the patient and facilitates the patient in agreeing a management plan	Respects the patient's perspective and autonomy; appreciates the potential impact on the patient and their family	Section 4 A, B, C,F	MSF, Mini-CEX
Involves and refers to the members of the multi-disciplinary team and other specialists appropriately	Values the skills and knowledge of colleagues	Section 4 A-H	Mini CEX, CBD
Makes appropriate arrangements for follow up and monitoring of the patient	Maintains the patient's interests as paramount; values optimal resource allocation	Section 4 A-H	Mini-CEX, CBD, MSF
Communicates effectively and appropriately with other members of the team, with the patient's GP and with the patient's family or carers; Documents clearly in the patient record	Respects the patient's wishes and needs regarding communication with relatives etc; respects the need for effective communication with the primary care team; respects the need for accurate record keeping	Section 4 A, B,C,F	MSF

**4. For each of the following conditions, the trainee will demonstrate the skills and attitudes identified in the grid below**

Patients with:

- A regional musculoskeletal pain problem (2.1.3.a)
- A spinal musculoskeletal pain problem (2.1.3.a)
- Osteoarthritis (2.1.3.b)
- A crystal arthropathy (2.1.3.c)
- Rheumatoid arthritis (2.1.3.d)
- A spondyloarthropathy (2.1.3.e)
- An autoimmune connective tissue disease (2.1.3.g)
- A bone disorder (2.1.3.h)
- A rheumatological manifestation of a metabolic or endocrine disorder (2.1.3.i)
- An arthritis or rheumatological condition secondary to infection, including septic arthritis (2.1.3.j)
- One of the miscellaneous disorders identified in Section 2.1.3.l

Skills	Attitudes/Behaviours	Teaching and learning methods	Assessment
Communicates to the patient the diagnosis, prognosis and treatment options, using patient literature and other media, as appropriate	Respects patients. Appreciates the importance of effective communication by all appropriate means	Section 4 A-H	Mini-CEX Other validated methods of skills assessment e.g. OSCE
Identifies and discusses, the patient's views on causation and management of the patient's condition	Values the patient's perspective	Section 4 A, B,C	
Agrees a management plan with the patient, including discussion of the risks and benefits of treatments	Respects the need for a collaborative approach with patients	Section 4 A-H	MSF
To refer to, and communicate with, other members of the multi-disciplinary team, as appropriate	Respects other members of the team and the need to communicate professionally with them	Section 4 A,B,C	
Selects and make appropriate arrangements for long term follow up of the patient. This may involve monitoring for treatment- and disease-related complications	Values the importance of appropriate follow up arrangements. Takes responsibility for ensuring adequate follow up and monitoring	Section 4 A-H	
Performs appropriate follow up medical services. Includes tailoring the approach to the specific needs of a patient in the context of the known impact and complications of the given condition	Respects the individual's autonomy. Keeps up to date with current best practice	Section 4 A,B,C	
Refers appropriately to other specialists. This will particularly require a close liaison with orthopaedic surgeons	Values the role of other specialists; respects the importance of effective communication with other specialists	Section A,B,C,D,E,F	
Where a patient indicates a desire to, discusses the risks and benefits of complementary or unconventional treatment approaches	Respects the patient's wishes to discuss other approaches	Section A,B,C,D,E,G	

Identifies and accesses non-NHS agencies, as appropriate, for patients. This may include patient self-help groups, social services, housing departments, Citizens advice bureaus, disablement resettlement officers	Values the need for a holistic approach; respects the role of other agencies; values the need for effective communication with other agencies	Section A,B,C,D,E	
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### 5. Practical procedures:

<p>To be able -</p> <ul style="list-style-type: none"> <li>▪ to identify, in a given patient, the need for: <ul style="list-style-type: none"> <li>○ joint aspiration and/or injection with corticosteroid and/or local anaesthetic</li> <li>○ soft tissue injection with corticosteroid and/or local anaesthetic</li> </ul> </li> <li>▪ to aspirate and inject joints competently using the appropriate techniques</li> <li>▪ to recognise the macroscopic appearance of normal and abnormal synovial fluid (non-inflammatory, inflammatory, haemorrhagic and septic)</li> <li>▪ to identify synovial fluid crystals on polarised microscopy</li> <li>▪ Competency is required in all of the following procedures: <ul style="list-style-type: none"> <li>○ Hand and wrist: PIP, MCP, wrist intra-articular injections. Carpal tunnel, flexor and extensor tendon sheath soft tissue injections</li> <li>○ Elbow: Elbow joint intra-articular injection. Entheses, olecranon bursa soft tissue injections.</li> <li>○ Shoulder: Glenohumeral joint, ACJ intra-articular injections. Sub-acromial bursa.</li> <li>○ Hip: bursal soft tissue injections.</li> <li>○ Knee: Intra-articular injection. Bursal injections.</li> <li>○ Ankle and foot: Ankle, , MTP intra-articular injections. Plantar fascial injections.</li> </ul> </li> <li>▪ The following procedures are optional <ul style="list-style-type: none"> <li>○ Injections under X ray guidance: Hip, Sacro-iliac joint, facet joint, sub-talar joint</li> <li>○ Ultra-sound guided injections</li> <li>○ Caudal epidural injection</li> <li>○ Occipital nerve block</li> <li>○ Suprascapular nerve block</li> <li>○ Nailfold capillaroscopy</li> <li>○ Intra-articular injections of Yttrium or osmic acid</li> <li>○ Punch skin biopsy</li> <li>○ Needle muscle biopsy</li> </ul> </li> </ul>	<p><b>Teaching &amp; learning methods</b></p> <p>Section 4 A,C,E</p>	<p><b>Assessment</b></p> <p>DOPS</p>
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## 2.3 Maintaining Good Medical Practice

### A) Learning

Objective: To inculcate the habit of life long learning

SUBJECT	KNOWLEDGE	SKILLS	ATTITUDES/BEHAVIOURS
<b>Life long learning</b>	Define continuing professional development.  4 A,B, C, E	Recognise and use learning opportunities. Use the potential of study leave to keep oneself up to date.  4 A,C	Be: <ul style="list-style-type: none"> <li>• self motivated</li> <li>• eager to learn,</li> </ul> Show: <ul style="list-style-type: none"> <li>• Willingness to learn from colleagues.</li> <li>• willingness to accept criticism.</li> </ul> 4 A,C,E

## 2.4 Maintaining Trust

### A) Professional behaviour

Objective: To ensure that the trainee has the knowledge, skills and attitudes to act in a professional manner at all times.

SUBJECT	KNOWLEDGE	SKILLS	ATTITUDES/BEHAVIOURS
<b>(i) Continuity of care</b>	Understand the relevance of continuity of care.	Ensure satisfactory completion of reasonable tasks at the end of the shift/day with appropriate handover Documentation of/for handover. Make adequate arrangements to cover leave.	Recognise the importance of: <ul style="list-style-type: none"> <li>• punctuality</li> <li>• attention to detail.</li> </ul>
<b>(ii) Doctor-patient relationship</b>	Understand all aspects of a professional relationship. Establish the limiting boundaries surrounding the consultation. Deal with challenging behaviour in patients which transgress those boundaries, e.g. aggression, violence, racism and sexual harassment.	Help the patient appreciate the importance of cooperation between patient and doctor. Develop a relationship that facilitates solutions to patient's problems. Deal appropriately with behaviour falling outside the boundary of the agreed doctor patient relationship in patients,	Adopt a non-discriminatory attitude to all patients and recognise their needs as individuals. Seek to identify the health care belief of the patient. Acknowledge patient rights to accept or reject advice. Secure equity of access to health care resources for minority groups. Act with compassion at all times

		e.g. aggression, violence, sexual harassment.	
<b>(iii) Recognises own limitations</b>	Know the extent of one's own limitations and know when to ask for advice.	Reflection on individual practice	Be willing to consult and to admit mistakes.
<b>(iv) Stress</b>	Know the effects of stress Have knowledge of support facilities for doctors.	Develop appropriate coping mechanisms for stress and ability to seek help if appropriate.	Recognise the manifestations of stress on self & others.
<b>(v) Relevance of outside bodies</b>	Have an understanding of the relevance to professional life of: The Royal Colleges GMC PMETB Postgraduate Dean Rheumatology Specialty Advisory Committee Defence unions British Society for Rheumatology BMA Patient representation groups	Recognise situations when appropriate to involve these bodies/individuals.	Be open to constructive criticism. Accept professional regulation. Respect the views of patient representation groups.
<b>(vi) Personal health</b>	Know about occupational health services. Know about one's responsibilities to the public. Know not to treat oneself or one's family.  <i>4 A,C,H</i>	Recognise when personal health takes priority over work pressures and to be able to take the necessary time off.  <i>4 A,B, C</i>	Recognise personal health as an important issue.  <i>4 4 A,C,E</i>

## B) Ethics and Legal Issues:

Objective: To ensure the trainee has the knowledge and skills to deal appropriately with ethical and legal issues that arise during the management of patients with rheumatological and other medical disorders.

SUBJECT	KNOWLEDGE	SKILLS	ATTITUDES/BEHAVIOURS
(i) Informed consent	Know the process for gaining informed consent Understand process of consent for tissue/sample storage and use. How to gain consent for a research project	Give appropriate information in a manner patients understand and be able to gain informed consent from patients Appropriate use of written material	Consider the patient's needs as an individual
(ii) Confidentiality	Be aware of relevant strategies to ensure confidentiality. Be aware of situations when confidentiality might be broken	Use and share all information appropriately Avoid discussing one patient in front of another Be prepared to seek patients wishes before disclosing information	Respect the right to confidentiality.
(iii) Legal issues relating to: Criminal matters	Know where to seek advice relating to responsibilities in serious criminal matters.	Be able to obtain suitable evidence or know whom to consult if in doubt.	Recognise the importance of legal issues in medical practice and always be ready to seek advice.

iv) Ethical issues relating particularly to clinical rheumatology	Be aware of professional guidelines published by the GMC, BSR and other bodies related to clinical rheumatology  4 B,D,E,H	Be able to communicate ethical issues with patients, colleagues and the public, surrounding: Confidentiality Informed consent  4 A,B, C	Respect opinions of patients. Respect the opinion of colleagues. Be prepared to discuss difficult cases with experienced colleagues and take advice. Be willing to refer on to a colleague if conflict exists between personal values and those of the patient.  4 A, B, C
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**C) Patient Education and Disease Prevention:**

Objective: To ensure that the trainee has the knowledge, skills and attitudes to be able to educate patients effectively about rheumatological disease.

<b>SUBJECT</b>	<b>KNOWLEDGE</b>	<b>SKILLS</b>	<b>ATTITUDES/BEHAVIOURS</b>
(i) Educating patients about: <ul style="list-style-type: none"> <li>disease</li> <li>investigations</li> <li>management</li> </ul>	Know disease course and manifestations. Know investigation procedures including possible alternatives / choices. Be aware of management strategies for rheumatological disease.	Give information to patients clearly in a manner that they can understand including written information. Encourage questions. Discuss management plans and follow up arrangements	Consider involving patients in developing mutually acceptable investigation plans. Encourage patients to access: <ul style="list-style-type: none"> <li>further information</li> <li>patient support groups</li> </ul>
(ii) Environmental & lifestyle risk factors	Understand the risk factors that may influence certain rheumatological diseases, including; Life style Smoking Alcohol Medication	Advise on lifestyle changes. Advise on teratogenic potential of medication. Involve other health care workers as appropriate.	Do not display prejudice
(vi) Epidemiology & screening	Know the methods of data collection and their limitations. Know principles of 1° & 2° prevention & screening.  4 A,B,C,D,E,G,H	Assess an individual patient's risk factors. Encourage participation in appropriate disease prevention or screening programmes.  4 A,B,C	Consider the: <ul style="list-style-type: none"> <li>positive &amp; negative aspects of prevention</li> <li>importance of patient confidentiality</li> </ul> Respect patient choice.  4 A,B,C

## 2.5 Working with Colleagues:

Objective: to demonstrate good working relationships with colleagues

SUBJECT	KNOWLEDGE	SKILLS	ATTITUDES/BEHAVIOURS
(i) Interactions between: <ul style="list-style-type: none"> <li>• hospital &amp; GP</li> <li>• hospital &amp; other agencies e.g. social services</li> <li>• medical and surgical specialties</li> </ul>	Know the roles and responsibilities of team members. Know how a team works effectively. Know the roles of other clinical specialties and their limitations. Know the role of multidisciplinary management in rheumatological disorders.	Show leadership, delegate and supervise safely Be able to communicate effectively. Handover safely. Seek advice if unsure. Recognise when input from another specialty is required for individual patients. Be able to work effectively with GPs, other medical and surgical specialists and other health care professionals.	Show respect for others opinions. Be conscientious and work co-operatively. Respect colleagues, including non medical professionals, and recognise good advice. Recognise own limitations.
	4 A,B,C,E,H	4 A, B, G,H	4 A, B, C,G,H

## 2.6 Team Working and Leadership Skills

Objective: To demonstrate the ability to work in clinical teams and to have the necessary leadership skills

SUBJECT	KNOWLEDGE	SKILLS	ATTITUDES/BEHAVIOURS
Clinical teams. Respect others opinion Effective leadership skills	Roles & responsibilities of team members. How a team works. Ensuring colleagues understand the individual roles and responsibilities of each team member. Own professional status and specialty A knowledge of the field. The capacity to perceive the need for action and initiate that action	Respect skills and contribution of colleagues to be conscientious and work constructively. Respect for others opinion. To recognise your own limitations Objective setting; Lateral thinking; Planning; Motivating; Organising; Setting example; Negotiation skills.	Recognise own limitations. Enthusiasm; integrity; courage of convictions; imagination; determination; energy; and professional credibility.
	4A,B,C,E,F	4 A, B, C, F,G,H	4 A, B, G, H

## 2.6 Teaching and Educational Supervision:

Objective: To demonstrate the knowledge, skills and attitudes to provide appropriate teaching, learning and assessment opportunities in clinical rheumatology for varied groups (medical, other health professional and lay groups)

SUBJECT	KNOWLEDGE	SKILLS	ATTITUDES/BEHAVIOURS
(i) To have the skills, attitudes and practices of a competent teacher (through participation in a recognized course for medical educators)	The goals and objectives of undergraduate medical education as set out by the GMC. Identify adult learning principles. Identify learner needs. Identify learning styles. Structure teaching activities for large audiences, small groups and clinic based teaching. Principles of evaluation.	Facilitate learning process. Identify learning outcomes. Construct educational objectives. Design and deliver an effective teaching event. Communicate effectively with the learners. Use effective questioning techniques. Teach large and small groups effectively. Select and use appropriate teaching resources. Give constructive effective feedback. Evaluate programmes and events Use different media for teaching that are appropriate to the teaching setting. Be able to chair an educational event.	Demonstrate a willingness, enthusiasm and commitment to teach. Show respect for the learner. Demonstrate a professional attitude towards teaching. Demonstrate a learner centred approach to teaching. Seek feedback and demonstrate a willingness to change methods in response to constructive feedback.
(ii) Assessment	Know the principles of assessment Know different assessment methods Define formative and summative assessment	Use appropriate assessment methods Give constructive, effective feedback	Be honest and objective when assessing performance.
(iii) Appraisal	Know the principles of appraisal Know the structure of the appraisal interview  4 A,B,D,E,F	Participate in effective appraisal  4 A, B, C, F,G,H	Show respect for those participating in appraisal.  4 A, C,F

## 2.7 Research

### Understanding rheumatology research.

In addition to topics listed in the generic curriculum trainees should become generally conversant with several of the scientific methods which are used in rheumatological research.

These could include:

- epidemiology - principles and techniques; study design
- genetics – association and linkage studies, whole genome approaches, SNPs etc, statistical techniques
- cell biology – signalling, genetic manipulation – transfection, use of siRNA, protein and RNA analysis techniques, gene profiling, stem cell research
- immunology – animal models, including gene knockout/knock-in mice, flow cytometry, cytokine measurement, characterisation of autoantibodies
- pharmacology – drug development, assessment, trial design, pharmacogenetics
- behavioural and psychological studies – methods of assessment, models; pain research
- bio-engineering – design, modelling, testing; tissue engineering

The list is not exhaustive, and it is not envisaged that trainees will be familiar with more than 3 or 4 areas; of these they would commonly be very familiar with only one and competent to understand research carried out in 2 or 3 others.

### Conducting rheumatology research

Full time research (one year fellowships and additional years out of programme leading to a higher degree) is strongly encouraged but optional since this is usually dependent on funding.

All trainees should be required to carry out *some research*, starting with *audit* and continuing with “*post-audit*” research questions which are often thrown up by audits. Case reports and case series should be written up as *short papers* and presented, often as *posters* at national or regional meetings. Participation in *clinical trials* is encouraged, particularly as co-investigators to gain experience of trial design, LREC/MREC functions, recruitment and analysis of results. *Clinical collaboration* with local laboratory or epidemiological research should be undertaken whenever possible, e.g. assembling patient databases. *Short laboratory projects* can sometimes be arranged in local research units, similar to those undertaken by BSc/MSc students, and not requiring full-time work.

Trainees are encouraged to undertake a period of full time research and have a good knowledge of research methodology. There should be active involvement with research projects throughout the training period.

<b>SUBJECT</b>	<b>KNOWLEDGE</b>	<b>SKILLS</b>	<b>ATTITUDES</b>
To be able to plan and analyse a research project.	<p>Be able to set up a hypothesis and test it.</p> <p>Know how to design a research study.</p> <p>Know how to use appropriate statistical methods.</p> <p>Know the principles of research ethics and the role of research ethics committees (CoREC LREC, MREC).</p> <p>Know how to write a scientific paper.</p> <p>How to identify sources of research funding.</p> <p>4 B,C,D,E,F,G,H</p>	<p>Undertake systematic critical review of scientific literature.</p> <p>Ability to frame questions to be answered by a research project.</p> <p>Develop protocols and methods for research.</p> <p>Obtain ethical committee approval for a research proposal.</p> <p>Participate in collaborative research with clinical/scientific colleagues.</p> <p>Be able to use databases.</p> <p>Be able to accurately analyse data.</p> <p>Write and submit a case report or scientific paper.</p> <p>Have good written and verbal presentation skills.</p> <p>4 B,D,E,G,H</p>	<p>Demonstrate curiosity and a critical spirit of enquiry.</p> <p>Demonstrate the persistence needed to follow a project from inception to completion.</p> <p>Ensure patient confidentiality.</p> <p>Demonstrate knowledge of the importance of ethical approval and patient consent for clinical research.</p> <p>Humility and the acknowledgement of the contribution of others.</p> <p>4 A, B,C,E</p>

## 2.8 Clinical Governance

Objective: Demonstrate an understanding of the context, the meaning and the implementation of Clinical Governance.

SUBJECT	KNOWLEDGE	SKILLS	ATTITUDES
<p>(i) The organisational framework for Clinical Governance at local, health authority and national levels. Understanding of the benefits a patient might reasonably expect from Clinical Governance. Creating an environment where mistakes and mismanagement of patients can be openly discussed and learned from</p>	<ul style="list-style-type: none"> <li>• Define the important aspects of Clinical Governance.</li> <li>• Medical and clinical audit.</li> <li>• Research and Development.</li> <li>• Integrated care pathways.</li> <li>• Evidenced based practice.</li> <li>• Clinical effectiveness.</li> <li>• Clinical risk systems.</li> <li>• To define the procedures and the effective action when things go wrong in own practice or that of others.</li> <li>• Complaints procedures.</li> </ul>	<p>Be an active partaker in clinical governance.            Be able to undertake medical and clinical audit. Be actively involved in audit cycles.            Be active in research and development.            Critically appraise medical data research. Practice evidence based medicine.            Aim for clinical effectiveness (best practice) at all times.            Educate self, colleagues and other health care professionals.            Be able to handle and deal with complaints in a focused and constructive manner. Learn from complaints.            Develop and institute clinical guidelines and integrated care pathways. Be aware of advantages and disadvantages of guidelines.            Report and investigate critical incidents.            Regular review of adverse events and modify practice accordingly.            Take appropriate action if you suspect you or a colleague may not be fit to practice.</p>	<p>Make the care of your patient your first concern.            Respect patient's privacy, dignity and confidentiality.            Be prepared to learn from mistakes, errors and complaints.            Recognise the importance of team work.            Share best practice with others.            Willingness to cultivate a questioning approach to current practice of rheumatology and motivation to make improvements.</p>

(ii) Risk management	<p>Knowledge of such matters as H&amp;S policy, policies on needle stick injuries, note keeping, communications and staffing numbers.</p> <p>Knowledge of risk assessment, perception and relative risk</p> <p>Know the complications and side effects of treatments.</p>	<p>Confidently and authoritatively discuss risks with patients and to obtain informed consent.</p> <p>Able to balance risks and benefits with patients.</p>	<p>Willingness to respect and accept patients views and choices</p> <p>Willingness to be truthful and to admit error to patients, relatives and colleagues.</p>
(iii) Evidence	<p>Know &amp; understand: the principles of evidence based medicine</p> <p>the types of evidence</p>	<p>Able to critically appraise evidence.</p> <p>Ability to be competent in the use of databases, libraries and the internet.</p> <p>Able to discuss the relevance of evidence with individual patients</p>	<p>Display a keenness to use evidence in the support of patient care and own decisions therein.</p>
(iv) Audit	<p>Know &amp; understand: the audit cycle</p> <p>data sources</p> <p>data confidentiality</p>	<p>To be able to design, plan and carry out an audit project on a relevant clinical topic. To achieve this the trainee will be required to -</p> <ul style="list-style-type: none"> <li>▪ specify an appropriate standard of practice for auditing,</li> <li>▪ identify suitable outcome measures</li> <li>▪ apply appropriate statistical methods to achieve a robust study design and analysis of results</li> </ul> <p>complete the audit 'loop' to demonstrate whether change in practice has occurred</p>	<p>Consider the relevance of audit to: benefit patient care</p> <p>clinical governance</p>
(v) Guidelines	<p>Know the advantages and disadvantages of guidelines</p> <p>Methods of determining best practice</p> <p>4 B,C,D,E,H</p>	<p>Ability to utilise guidelines</p> <p>Be involved in guideline generation, evaluation and review.</p> <p>4 A,B,C,F, H</p>	<p>Show regard for individual patient needs when using guidelines</p> <p>Willingness to use guidelines as appropriate</p> <p>4 A,B,C,H</p>

## 2.9 Structure of the NHS and the Principles of Management

Objective: To display knowledge of the structure and organisation of the NHS nationally and locally.

SUBJECT	KNOWLEDGE	SKILLS	ATTITUDES
<b>Structure of the NHS and the principles of management</b>	<p>Know the structure of the NHS, primary care groups, Trusts and Hospital Trusts.</p> <p>Know the local Trusts structure including Chief Executives, Medical Directors, Clinical Directors and others.</p> <p>Know the role of postgraduate deaneries, specialist societies, the royal colleges and the general medical council.</p> <p>Know finance issues in general in the Health Service, especially budgetary management.</p> <p>Know the appointments procedures and the importance of equal opportunities.</p> <p>Know of Central Government health regulatory agencies (e.g. NICE, Healthcare Commission)</p> <p>4 B, B,C,D,E</p>	<p>Develop skills in managing change and managing people.</p> <p>Develop leadership skills to play a leading role in developing local rheumatological services.</p> <p>Develop interviewing techniques and those required for performance reviews.</p> <p>Be able to build a business plan.</p> <p>To acquire the management skills relevant to participation in and leadership of a rheumatology team. To achieve this the trainee will be required to demonstrate -</p> <ul style="list-style-type: none"> <li>▪ effective time management</li> <li>▪ negotiating skills</li> <li>▪ participation in staff organisation</li> <li>▪ effective supervision of junior medical staff</li> </ul> <p>effective team leadership</p> <p>4 A, B,F,G,H</p>	<p>Show an awareness of equity in health care access and delivery.</p> <p>Demonstrate an understanding of the importance of a health service for the population.</p> <p>Show respect for others, ensuring equal opportunities.</p> <p>Demonstrate a willingness to assume managerial responsibilities.</p> <p>4 A, B, C,F</p>

## 2.10 Information Technology, Computer Assisted Learning and Information Management

Objective: Demonstrate competence in the use and management of health information

<b>SUBJECT</b>	<b>KNOWLEDGE</b>	<b>SKILLS</b>	<b>ATTITUDES</b>
To demonstrate good use of information technology for patient care and for own personal development.	<p>Define how to retrieve and utilize data recorded in clinical systems.</p> <p>Define main local and national projects and initiatives in information technology relevant to clinical rheumatology.</p> <p>To understand the implications of the Data Protection Act for patient confidentiality.</p>	<p>Demonstrate competent use of database, word processing and statistics programmes.</p> <p>Undertake effective literature searches.</p> <p>Access relevant web sites and specialist databases to undertake searches.</p> <p>To appraise available software.</p> <p>To apply the principles of confidentiality and their implementation in terms of clinical practice in the context of information technology.</p> <p>Produce effective computer assisted presentations.</p>	<p>Demonstrate the acquisition of new attitudes in patient consultations in order to make maximum use of information technology.</p> <p>Be willing to offer advice to lay person on access to appropriate Internet sources and support groups.</p> <p>Adopt proactive and enquiring attitude to new technology.</p>
	4 A,B,C,D,E,F,G,H	4 A,C,E,F,G,H	4 A,F,G,H

## 2.11 The Curriculum: The Training Log

The curriculum has moved towards one that is competency-based and trainee assessment requires demonstration that skills have been acquired. The Training Log is the key document; it provides evidence of competence in Clinical Rheumatology. A summary of the use of the Training Record in the assessment process is given below.

WHAT NEEDS TO BE ACHIEVED	LEARNING ACTIVITIES	ASSESSMENT
A body of knowledge which every consultant rheumatologist should know	Personal study/CPD/courses On-the-job training/use of databases Attendance at specialist clinics	Educational supervisors' reports. Written case reports Evidence of achieving required clinical experience Record of CPD
Ability to identify and solve an unfamiliar clinical problem	Use of databases and references The advice of experienced colleagues. Presentations at clinical meetings	Educational supervisors' reports Written case reports Mini CEX
Competence in the practical procedures performed by a rheumatologist	On the job training, attendance at specialist courses	DOPS
Understanding the principles of audit	Undertaking an audit project that is written up and included in the log book	Assessed by the SAC representative at the PYA
Ability to understand the principles of research and the ability to assess the value of publications in the literature	Participation at journal clubs Undertaking a research project. Record of training in research including statistics	Trainers' reports at the PYA Publication(s) in peer-reviewed journal
Management skills	Active participation at departmental meetings Attendance on management course(s)	Reports from administrative and secretarial staff Trainers' reports
Professional behaviour/Good Medical Practice/Maintaining CPD	Reflective personal development	MSF assessment

### 3: Model of learning

#### *Model of Learning: Overview*

The core learning method for training in Rheumatology will be work-based experiential learning supported by independent self-directed learning and by a formal education programme run regionally or sub-regionally for rheumatology trainees. Key to the success of the work-based learning will be appropriate clinical and educational supervision. This will be overseen by the named educational supervisor but will also involve other consultants and clinicians with appropriate expertise.

Clinical skills acquisition will be predominantly by supervised work-based learning, supported where appropriate by skills laboratory activities (e.g. when initially learning joint injections). Skills competence will be assessed by means of directly observed, on-the-job activities, using the mini-CEX and DOPS assessments. Trainees will keep a portfolio of their activities, including assessments, which will inform both their appraisals and their Review of In-Training Assessments (RITAs).

The formal education programme will generally be away from the clinical site. It will allow the opportunity for collaborative learning between trainees and trainers. Such sessions will be mapped to the rheumatology curriculum. Additionally, in some cases, trainees may embark upon a relevant formal Masters programme to develop aspects of their knowledge and skills, both clinical and otherwise (e.g. research methods, literature searching). Trainees will also attend other off-site educational activities, in agreement with their educational supervisor. Such activities will include attendance at certain specialist meetings (e.g. the British Society for Rheumatology annual meeting) as well as relevant education courses. It is anticipated that there will be a formal knowledge assessment (MCQ/EMQ) implemented in autumn 2007.

Attitudinal development will be fostered by appropriate behaviours in the workplace, in addition to individual (with and without the educational supervisor) and group reflections (e.g. on training days) on aspects of practice. Again this may be supported by attendance at relevant courses, e.g., on communication, on ethical aspects of practice.

Professionalism will be assessed in the workplace by means of multi-source feedback.

#### *Clinical Placements*

The programme to which the trainee is appointed will be based in a region with a Programme Director answerable to the Postgraduate Dean via the Regional Rheumatology lead. The trainee will be based in different centres within the region, typically for periods of 12-18 months. In each centre the trainee will have a named consultant educational supervisors. In each centre, there is a minimum of one consultant per trainee. PMETB and selected representatives of the SAC are responsible for inspection and approval of training posts within programmes. The Deanery is responsible for local quality assurance of training and ensuring that training programmes meet the PMETB standards for postgraduate medical education.

Placements in the different training centres will be allocated to ensure that the trainee is exposed to the case mix of patients and experiences relevant to covering the learning outcomes of the programme. Thus specific opportunities in a given clinical centre will be mapped against the curriculum learning outcomes. Programme directors will then allocate trainees in a blueprinting exercise so that there is opportunity to cover all core learning outcomes during the trainee's individual programme. Where the learning outcome is relatively more specialised, e.g. the diagnosis and management of patients with the rarer inflammatory autoimmune conditions seen by the rheumatologist, trainees will spend time at those centres dealing with such patients in the latter half of their training. This is because more experienced trainees will be better placed to maximise such a learning opportunity and will also be more prepared to deal with patients with such complex conditions. In some circumstances, trainees may spend time in a department outside of their own region. This will be by agreement with the programme director and will have a clear purpose in terms of developing defined learning objectives.

#### *Learning in non-clinical aspects of the curriculum.*

Experiential work based learning is highly relevant to the achievement of non-clinical learning outcomes, e.g. in teaching, research and management areas. However, other learning opportunities are also relevant to such areas:

- *Teaching.* Attendance at appropriate courses on teaching and learning methods. Some may choose to take advantage of the distance learning opportunities in this area.
- *Management.* Attendance at appropriate management courses.

#### *Research.*

Trainees who wish to acquire extensive research competencies, in addition to those specified in the generic element of the curriculum, may undertake a research project as an ideal way of obtaining those competencies, all options can be considered including taking time out of programme to complete a specified project or research degree. Time out of programme needs prospective approval from the SAC and the support of the Postgraduate Dean. Funding will need to be identified for the duration of the research period. Only one full year of research will count towards completion of the programme. Trainees can choose whether or not to include one year of research time towards CCT and are required to confirm their intention at the time.

#### *Appraisal*

Personal appraisal, conducted with the trainee's educational supervisor at suitable intervals during each year, outwith the RITA process, is essential in ensuring that personal goals and educational needs are being met. Appraisal must be a developmental process in which the trainee's learning needs, achievements and goals are discussed with reference to the Rheumatology curriculum and to the GMC's Good Medical Practice document. Typically, three appraisals should be conducted per year: one within 2 weeks of starting a new post; a second after 4 months to review progress; and a third shortly

before the annual RITA. Appraisal meetings should be planned, private, confidential, uninterrupted and the key points of the appraisal documented and kept by the trainee (within the portfolio) and educational supervisor. Appraisals will be informed by the results of the assessments that the trainee undergoes, including multi-source feedback and patient satisfaction questionnaires (the trainee will undergo at least two of each during the period of their higher medical training).

#### *Training Record*

A Training Record will be maintained by the trainee. It will be counter-signed as appropriate by the educational supervisor to confirm the satisfactory fulfilment of the required training experience and the acquisition of the competencies that are enumerated in the Specialty Curriculum. The evidence of all assessments undertaken and progress must be kept within the record. It will remain the property of the trainee, and must be produced at the annual RITA assessments

## **4: Learning experiences**

For trainees to maximise their experiential learning opportunities it is important that they work in a 'good learning environment'. This includes encouragement for self-directed learning as well as recognising the learning potential in aspects of day to day work (e.g. what three things have I learnt from this ward round?) and generally adopting a positive attitude to training.

Learning from peers should also be encouraged and training should be 'fun'. Active involvement in group discussion is an important way for doctors to share their understanding and experiences. Lectures and formal educational sessions make up only a small part of the postgraduate training in rheumatology. The bulk of learning occurs as a result of clinical experience (Experiential learning) and self-directed study. The degree of self-directed learning will increase as trainees become more experienced. A supportive open atmosphere should be cultivated and questions welcomed.

The list of learning opportunities below offers guidance only, there are other opportunities for learning that are not listed here. Trainees will learn in different ways according to their level of experience.

### **A. Experiential learning opportunities**

1. Every patient seen, on the ward or in out-patients, provides a learning opportunity, which will be enhanced by following the patient through the course of their illness: the experience of the evolution of patients' problems over time is a critical part both of the diagnostic process as well as management. Patients seen should provide the basis for critical reading around clinical problems.
2. Every time a trainee observes another doctor, consultant or fellow trainee, seeing a patient or their relatives there is an opportunity for learning.
3. Ward-based learning including ward rounds. Ward rounds, including those post-take, should be led by a consultant and include feed-back on clinical and decision making skills.
4. Supervised consultations in outpatient clinics. Trainees should have the opportunity to assess both new and follow-up patients and discuss each case with the supervisor so as to allow feedback on diagnostic skills and gain the ability to plan investigations.
5. Trainees need to learn to make increasingly independent decisions on diagnosis, investigations and treatment consistent with their level of experience and competence and with maintaining patient safety. These decisions should be reviewed with their supervising consultant.
6. There are many situations where clinical problems are discussed with clinicians in other disciplines, such as radiology, pathology and multidisciplinary meetings. These provide excellent opportunities for observation of clinical reasoning.

### **B. Small group learning opportunities**

1. Case presentations and small group discussion, particularly of difficult cases, including presentations at clinical and academic meetings. This should include critical incident analysis.
2. Small group bedside teaching, particularly covering problem areas identified by the trainees.
3. Small group sessions of data interpretation, particularly covering problem areas identified by trainees.
4. Local resuscitation skills review by a resuscitation training officer including simulation with manikins.
5. Participation in audit meetings, journal clubs and research presentations etc.
6. Video consultation with subsequent small group discussion.

### **C. One-to-one teaching**

1. Review of out-patients, ward referrals or in-patients with supervising consultant.
2. Review/case presentations with educational supervisor including selected notes, letters and summaries.
3. Critical incident analysis.
4. Discussion between trainee and trainer of knowledge of local protocols.
5. Video consultation with subsequent individual discussion with trainer.
6. Feedback following a mini-CEX assessment provides an excellent teaching opportunity.

### **D. Regular teaching and external courses etc**

1. Lectures and small group teaching as part of regional teaching sessions for trainees.
2. Educational courses such as the British Society for Rheumatology (BSR) Core and Advanced courses.
3. Formal training in communication skills and in teaching skills.

### **E. Personal study**

1. Personal study including computer-based learning.
2. Practise examination questions and subsequent reading.
3. Reading journals and books.
4. Writing reviews and other teaching material.

### **F. Teaching others**

1. Teaching undergraduate medical students and students in allied health professions and postgraduate doctors provides excellent learning opportunities for the teacher.
2. Presenting cases at grand rounds or similar clinical meetings provides the opportunity to review the literature relating to the clinical case. This provides the opportunity for in depth study of one clinical problem as well as learning important critical thinking skills.
3. Journal club presentations allow development of critical thinking and in depth study of particular areas.

## **G. Research**

1. Research provides the opportunity to develop critical thinking and the ability to review medical literature. This is an essential skill for effective clinical practice as well as for the pursuit of more academic research.
2. Clinical research allows development of particular expertise in one area of rheumatology allowing more in depth knowledge and skills and helping to focus long term career aims and interests.

## **H. Audit and guidelines**

1. Participation in audit: trainees should be directly involved and expect, after understanding the rationale and methodology, to undertake a minimum of one in-depth audit every two-years of training.
2. Guideline generation/review.

## **5: Supervision and feedback**

### *Ensuring supervision*

Good educational supervision ensures that the formative system of appraisal is carried out. Similarly clear assessment using appropriate methods and tools ensure the supervision and identification of competencies gained. Educational supervisors are prepared and trained for the role including appraisal, the use of assessment methods, giving feedback and equality and diversity issues.

Trainees also require appropriate clinical supervision during specialty training to ensure patient safety as well as progress with learning and performance. Clinical supervision in rheumatology involves discussion about referrals, supervision of patient management including confirmation of diagnosis, discussion about appropriate management and investigation. There are opportunities for clinical observation during clinic appointments as well as discussion following the appointment. Clinical supervision can be provided by all members of the multi-disciplinary team with appropriate expertise and the opportunity to discuss clinical problems in a multi-disciplinary setting should be provided on a regular basis. The trainee must be aware of his/her own limitations and be able to seek advice and receive help at all times.

The educational supervisor will ensure that appropriate clinical supervision of the trainee occurs by discussing with the trainee issues of clinical governance, risk management and the report of any untoward clinical incidents involving the trainee. The educational supervisor is part of the rheumatology team and can address any identified concerns about the performance of the trainee or identified issues concerning patient or doctor safety.

The feedback from analysis of the PMETB trainee questionnaire and local Deanery quality assurance of training should also identify any concerns about appropriate educational and clinical supervision.

### *Ensuring feedback*

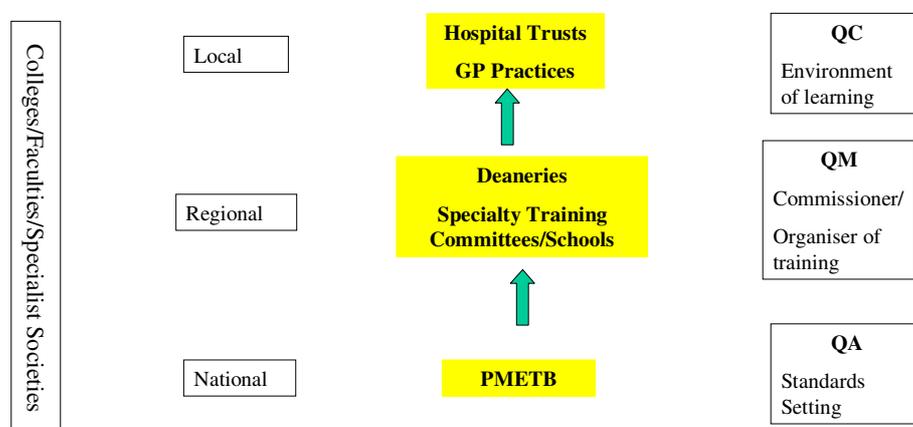
The educational supervisor meets with the trainee at regular intervals to undertake appraisal, set educational objectives, review progress against the curriculum, give both formative and summative feedback from work based assessments as well as countersigning the training portfolio and preparing the evidence for the annual supra regional RITA process. These regular opportunities to feedback on performance ensure that the trainee identifies progress and future development needs. Areas of concern will be identified and discussed. Identified weaknesses will be suitably addressed. Appraisals will be informed by the results of the assessments that the trainee undergoes, including multi-source feedback and patient satisfaction questionnaires (the trainee will undergo at least two of each during the period of their higher medical training).

Rheumatology is a multi disciplinary specialty and there will be opportunities for constructive feedback in both formal and informal settings from supervising consultant specialists, specialist nurses and therapists, as well as service users.

## 6: Managing curriculum implementation

Deaneries are responsible for quality management, PMETB will quality assure the deaneries and educational providers are responsible for local quality control, to be managed by the deaneries. The role of the Colleges in quality management remains important and will be delivered in partnership with the deaneries. The College role is one of quality review of deanery processes and this will take place within the SACs on a regular basis.

### The Organisation and Quality Assurance of PG Training



## 7: Curriculum review and updating

Curriculum review will be informed by a number of different processes. For instance the SAC will be able to use information gathered from specialty heads, specialty deans and the National Health Service. It will have available to it results of the trainee survey, which will include questions pertaining to their specialty. Interaction with the NHS will be particularly important to understand the performance of specialists within the NHS and feedback will be required as to the continuing need for that specialty as defined by the curriculum. It is likely that the NHS will have a view as to the balance between generalist and specialist skills, the development of generic competencies and, looking to the future, the need for additional specialist competencies and curricula.

## 8: Equality and diversity

In the exercise of these powers and responsibilities, the Royal Colleges of Physicians will comply, and ensure compliance, with the requirements of relevant legislation, such as the:

- Race Relations (Amendment) Act 2000;
- Disability Discrimination Act 1995 and Special Educational Needs and Disabilities Act 2001;
- The Disability Discrimination Act 1995 (amendment) (further and higher education) regulations 2006
- Age Discrimination Act in October 2006

The Federation of the Royal Colleges of Physicians believes that equality of opportunity is fundamental to the many and varied ways in which individuals become involved with the Colleges, either as members of staff and Officers, as advisers from the medical profession, as members of the Colleges' professional bodies or as doctors in training and examination candidates. Accordingly, it warmly welcomes contributors and applicants from as diverse a population as possible, and actively seeks to recruit people to all its activities regardless of race, religion, ethnic origin, disability, age, gender or sexual orientation.

#### Statutory responsibilities

The Royal Colleges of Physicians will comply, and ensure compliance, with the requirements of legislation, such as the:

- Human Rights Act 1998
- Freedom of Information Act 2001
- Data Protection Acts 1984 and 1998