



**SPECIALTY TRAINING CURRICULUM**  
**FOR**  
**M.D. RHEUMATOLOGY**

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# 1 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.

## 2 Rationale

### 2.1 The Purpose of the Curriculum

The purpose of this curriculum is to define the training for a specialist in Rheumatology. The curriculum describes the competencies required to satisfactorily achieve a level where the candidate may be tested for an MD Rheumatology degree. On successfully being awarded this degree, the candidate is eligible to be registered as a specialist Rheumatologist by the Pakistan Medical & Dental Council.

### 2.2 The Development of the Curriculum

This curriculum was developed by the Faculty of Rheumatology at the Shaheed Zulfiqar Ali Bhutto Medical University – PIMS (SZABMU-PIMS) with considerable guidance from the syllabus prepared by the Specialty Advisory Committee for Rheumatology under the direction of the Joint Royal Colleges of Physicians Training Board (JRCPTB) of the United Kingdom.

### 2.3 Enrolment with SZABMU-PIMS

Trainees are required to register for specialist training with SZABMU at the start of their training programmes. Enrolment with SZABMU, including the complete payment of enrolment fees, is required before SZABMU will be able to recommend trainees for this specialist training at Pakistan Institute of Medical Sciences (PIMS).

### 2.4 Training Pathway

Speciality training in Rheumatology consists of core and higher speciality training. Core medical training (CMT) provides physicians with:

- The ability to investigate, treat and diagnose patients with acute and chronic medical symptoms and
- Quality review skills for managing inpatients and outpatients.

Higher speciality training then builds on these core skills to develop the specific competencies required to practice independently as a consultant rheumatologist. Core training may be completed in the form of either:

- Enrolment in a six year MD Rheumatology programme with the first two years being spent in General Medicine and passing the Intermediate Module Examination before joining Rheumatology itself.
- FCPS (General Medicine); with getting a 2 year exemption from the CMT requirement.
- MD (General Medicine); with getting a 2 year exemption from the CMT requirement.
- MRCP (UK or Ireland); with getting a 2 year exemption from the CMT requirement.
- Board Certification in Internal Medicine (USA); with getting a 2 year exemption from the CMT requirement.
- Other certification of equivalence of CMT training as acceptable by the Pakistan Medical & Dental Council; with getting a 2 year exemption from the CMT requirement.

The full curriculum for specialty training in Rheumatology therefore consists of the curriculum for any of the above plus this specialty training curriculum for Rheumatology.

There are common competencies that should be acquired by all physicians during their training period starting within the undergraduate career and developed throughout the postgraduate career, for example communication, examination and history taking skills. These are initially defined for CMT and then developed further in the specialty. This curriculum supports the spiral nature of learning that underpins a trainee's continual development. It recognizes that for many of the competencies outlined there is a maturation process whereby practitioners become more adept and skilled as their career and experience progresses. It is intended that doctors should recognize that the acquisition of basic competences is often followed by an increasing sophistication and complexity of that competence throughout their career. This is reflected by increasing expertise in their chosen career pathway.

## **2.5 Duration of Training**

Although this curriculum is competency based, the duration of training must meet the minimum of 4 (four) years in full time training in Rheumatology and allied fields like rehabilitation, immunology and radiology.

The training for those intending to specialize only in Rheumatology will usually be completed in 6 (six) years in full time training (2 years core plus 4 years specialty training).

Trainees who wish to acquire dual accreditation in General Medicine as well as Rheumatology will have to undergo four year training followed by an exit examination in addition to the time they have spent in acquiring the General Medicine certification.

## **3 Content of Learning**

### 3.1 Programme Content and Objectives

Defining the objectives of the generic skills of the specialist trainees in training in any of the medical specialties has relied on two concepts; the first is "Good Medical Practice"; the second is the acquisition of "Common Competencies". 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.
- The specific outcomes, in terms of clinical knowledge, skills and attitudes required to gain a specialist status in Rheumatology, together with mapping of how these will be assessed.

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 practicing 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.

### 3.2 Good Medical Practice (GMP)

This concept covers the following domains:

Domain 1 – Knowledge, Skills and Performance

Domain 2 – Safety and Quality

Domain 3 – Communication, Partnership and Teamwork

Domain 4 – Maintaining Trust



The “GMP” column in the syllabus defines which of the 4 domains are addressed by each competency. Most parts of the syllabus relate to “Knowledge, Skills and Performance” but some parts will also relate to other domains.

### **3.2 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.

#### **Basic science underpinning the musculoskeletal and immune systems**

The trainee will be able to:

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

**GMP 1**

#### **Pharmacology underpinning rheumatological practice**

The trainee will demonstrate

- 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
- Ability to identify and evaluate, information on new drugs
- Ability to identify, evaluate and notify appropriate authorities of, potential adverse drug effects noticed within their clinical practice

**GPM 1,2**

#### **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 or how to access the evidence base.



## **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:
  - 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 – e.g. nocturnal limb pain, Osgood-Schlatter's disease, Perthe's disease
  - Occupational and sports related problems

### **Osteoarthritis and related conditions:**

Including:

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

### **Crystal associated arthropathies**

- Gout
- Pseudo gout
- Apatite deposition disease
- Oxalate metabolism disorders

### **Rheumatoid arthritis**

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

### **Spondyloarthropathies**

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

### **Juvenile Idiopathic Arthritis**

*in relation to young adult and adult patients*

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## **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

### **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

### **Metabolic, endocrine and other disorders including:**

Endocrine disorders affecting bone, joint or muscle (e.g. thyroid, pituitary, parathyroid disorders)

Metabolic disorders affecting joints (e.g. alkaptonuria, haemochromatosis) Heritable collagen disorders

Haemoglobinopathies as they relate to the musculoskeletal system

Haemophilia and other disorders of haemostasis as they relate to the musculoskeletal system

### **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

### **Neoplastic disease**

Paraneoplastic musculoskeletal syndromes

Primary and secondary neoplastic conditions of connective tissue  
Tumours of bone  
Pigmented villonodular synovitis

**Miscellaneous disorders:**

Sar  
coi  
do  
sis  
Eo  
sin  
op  
hili  
c  
fas  
ciiti  
s

Familial Mediterranean  
fever

Hypogammaglobuli  
naemia & arthritis

Amyloidosis

Sweets syndrome  
(neutrophilic dermatoses)

**GMP 1**



## **Rheumatological disorders in the elderly**

The trainee will be able to:

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

**GMP 1**

## **Paediatric and Adolescent Rheumatology**

The trainee will:

- Be aware of the spectrum of disorders that present as musculoskeletal symptoms in childhood and adolescence.
- Understand the differential diagnosis of musculoskeletal pain in children and adolescents
- Identify and appreciate their own limitations in assessing and managing children and adolescents with musculoskeletal symptoms.
- Understand the principles underpinning the management of children and adolescents with rheumatic disease.
- Classify the arthritides occurring in children.
- Understand the different models of clinical care of children and adolescents with arthritis.
- Describe and evaluate the sequelae of childhood and adolescent rheumatological disease
- 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

**GMP 1**

## **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:**

Hematology:

- Full blood count; clotting screen; lupus anticoagulant; erythrocyte sedimentation rate; plasma viscosity; Hemoglobin 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 polarized 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
- GMP 1,3**

**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
- Recognize effective ways of communication with them and between members of the team

**GMP 1,2,3**

**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.
- Recognize effective ways of communicating with orthopaedic surgeons, including the role of combined clinics.

**GMP 1,2,3**

### **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

**GMP 1,2,3**

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

A significant proportion of patients with rheumatological diseases consult alternative practitioners, including chiropractors, osteopaths, hakeems 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

**GMP 1,3**

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

Relevant knowledge is assessed by discussion of cases and published articles, and by educational presentations by the trainee. There will be a system of Continuous Medical Assessment (CME) through a semester modular system, with a final exit examination at the end of the training.

### **3.3 Clinical Skills & Attitudes**

In the tables below, the “Assessment Methods” shown are those that are appropriate as **possible** methods that could be used to assess each competency. It is not expected that all competencies will be assessed and that where they are assessed not every method will be used. See

section 5 Assessment for more details.

“GMP” defines which of the 4 domains of the Good Medical Practice Framework for Appraisal and Assessment are addressed by each competency. See section 2.0 for more details.

The overall aim is to develop the ability to perform a clinical assessment of patients with rheumatological disorders, 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.

## 4 Syllabus

### 1. History Taking & Clinical Examination - Overview

Skills	Behaviours	GMP	Assessment/Evidence of Competence
<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 i.e. 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> <li>• Identify and record risk factors for conditions relevant to mode of presentation</li> <li>• Use skills to overcome barriers to communication e.g. use of interpreter and written information</li> <li>• Identify possible cultural or religious barriers to effective communication</li> <li>• Draw a close to a consultation appropriately</li> <li>• Manage alternative and conflicting views from family, carers and friends</li> </ul>	<ul style="list-style-type: none"> <li>• Fully address patients' concerns, ideas and expectations</li> <li>• Respect patient confidentiality</li> <li>• Maintain cultural awareness and identity</li> <li>• Value patient comprehension</li> <li>• Recognise importance of a collateral history in certain situations e.g. unreliable history</li> </ul>	1,3,4	mini-CEX, PS

<p><b>Examination:</b> To identify:</p> <ul style="list-style-type: none"> <li>• Perform an examination relevant to the presentation and risk factors that is valid, targeted and time efficient</li> <li>• Perform valid examination in more challenging situations (e.g. distracting environment)</li> <li>• Assess mood and cognitive function as appropriate and apply this to interpretation of history</li> <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</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> <li>• All trainees should be able to perform and demonstrate a GALS (Gait Arms Legs Spine) screening examination</li> <li>• All trainees should be able to perform and demonstrate a regional musculoskeletal examination (REMS)</li> </ul>	<ul style="list-style-type: none"> <li>• Respect a patient's dignity and cultural background and other beliefs</li> <li>• <input type="checkbox"/> Recognise importance of patient consent in context of examination</li> <li>• Demonstrate willingness and ability to teach junior and health worker colleagues sound examination technique</li> </ul>		<p>mini-CEX, MSF</p>
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## 2. History Taking & Clinical Examination: Regional Musculoskeletal Examination - Identifying and Interpreting Abnormalities

### Shoulder Pathology:

The trainee should be able to identify:

- Rotator cuff lesions
- Glenohumeral/capsular pathology
- Muscle wasting, proximal myopathy (deltoid)
- S/C joint pathology - synovitis
- A/C joint pathology – synovitis
- Shoulder pain due to pain referred from viscera or neck

### Elbow Pathology:

The trainee should be able to identify:

- Olecranon bursitis
- Elbow joint pathology
- Radio-ulnar joint pathology
- Medial or lateral epicondylitis
- Ulnar nerve entrapment

### Hand & Wrist Pathology:

The trainee should be able to identify:

- Radiocarpal joint pathology
- Distal radio-ulnar joint pathology
- MCP or IP joint pathology
- Hand deformities
- Muscle wasting
- Flexor or extensor tenosynovitis or tendon nodules
- Rupture or attenuation of flexor or extensor tendons of fingers or thumb
- De Quervain's tenosynovitis
- Carpal tunnel syndrome

### Hip/Pelvic Pathology:

The trainee should be able to identify:

- Trochanteric, iliopsoas, gluteal bursitis

- Hip joint pathology including dysplasia
- Real & apparent leg length inequality
- SI joint pathology
- Muscle wasting, proximal myopathy, Trendelenberg sign
- Deformities of the hip, Thomas' test
- Pathology of symphysis pubis
- Pathology of pelvis - fractures
- Hip pain due to pain referred from lumbar region
- Lesions of tendons and enthuses

#### **Knee Pathology:**

The trainee should be able to identify:

- Knee joint pathology, including internal derangements
- Deformities
- Muscle wasting, myopathy
- Prepatellar, anserine bursitis
- Popliteal cyst
- Damage to collateral ligaments
- Knee pain due to pain referred from hip or lumbar spine
- Lesions of tendons and entheses
- Osgood-Schlatter's disease
- Adolescent anterior knee pain/Patello-femoral syndrome

#### **Ankle & Foot Pathology:**

The trainee should be able to identify:

- Ankle (tibiotalar) pathology
- Subtalar/ midtarsal joint pathology
- MTP & IP joint pathology
- Lesions of the Achilles tendon, entheses and retrocalcaneal bursa
- Deformities of the ankle and foot
- Foot pain due to pain referred from lumbar spine
- Plantar fasciitis

- Tenosynovitis of tibialis posterior and peroneal tendons
- Rupture of tibialis posterior or Achilles tendon
- Lesions of bone (e.g. stress fracture)

**Spinal Pathology:**

The trainee should be able to identify:

- Cervical spine pathology
- Thoracic spine pathology
- Lumbar spine pathology
- Spinal nerve root entrapment syndromes
- Spinal deformities including adolescent scoliosis

**Extra-Articular Pathology:**

The trainee should be able to identify:

- Raynaud's phenomenon
- Vasculitic skin lesions
- Rheumatoid nodules
- Rash – psoriasis, pustular psoriasis, onycholysis, balanitis, lupus rashes, erythema nodosum, calcinosis
- Nail lesions – pitting, onycholysis, splinter haemorrhages, nailfold infarcts
- Scleritis, episcleritis, conjunctivitis, iritis
- Scerodactyly
- Tophi
- Other medical complications of rheumatic disease affecting internal organs

**3. For Each of the Following Presentations, the Trainee Will Demonstrate the Skills and Behaviours 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
- Unexplained musculoskeletal pain
- Rheumatological emergencies

<b>Skills</b>	<b>Behaviours</b>	<b>GMP</b>	<b>Assessment/Evidence of Competence</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	1,3,4	CbD, mini-CEX
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	1,3,4	CbD, mini-CEX
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	1,2,3,4	CbD, mini-CEX
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	3,4	mini-CEX, MSF
Involves and refers to the members of the multi-	Values the skills and knowledge of	1,3	CbD, mini-CEX



disciplinary team and other specialists appropriately	colleagues		
Makes appropriate arrangements for follow up and monitoring of the patient	Maintains the patient's interests as paramount; values optimal resource allocation	1,2	CbD, mini-CEX, 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	1,3,4	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
- A spinal musculoskeletal pain problem
- Osteoarthritis
- A crystal arthropathy
- Rheumatoid arthritis
- A spondyloarthropathy
- An autoimmune connective tissue disease
- A bone disorder
- A rheumatological manifestation of a metabolic or endocrine disorder
- An arthritis or rheumatological condition secondary to infection, including septic arthritis
- One of the miscellaneous disorders identified on page 10

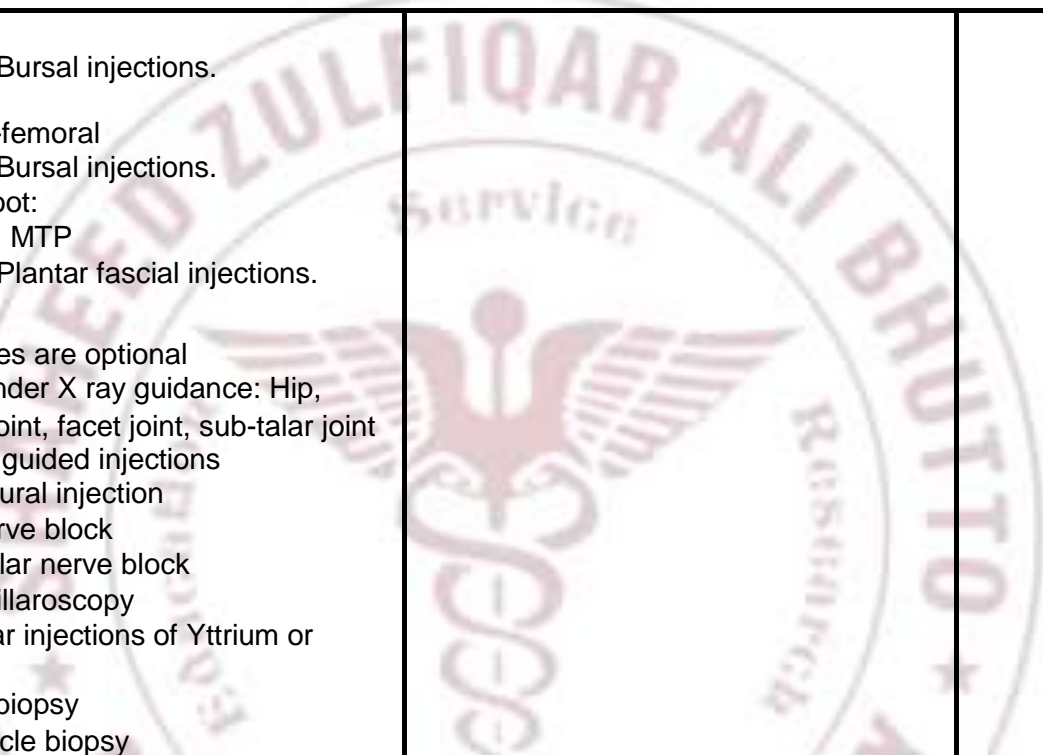
Skills	Behaviours	GMP	Assessment/Evidence of Competence
Communicates to the patient the diagnosis, prognosis and treatment options, using patient literature and other media, as appropriate	Respects patients. Appreciates the importance of effective communication by all appropriate means	3,4	CbD, mini-CEX, MSF
Identifies and discusses, the patient's views on causation and management of the patient's condition	Values the patient's perspective	3,4	
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	2,3	
Refers to, and communicates with, other members of the multi-disciplinary team, as appropriate	Respects other members of the team and the need to communicate professionally with them	1,3	
Selects and makes, 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	1,2	

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	1,2
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	1,3
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	1,3,4
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	2,3

**5. Practical Procedures:**

Skills	GMP	Assessment/ Evidence of Competence
<p>To be able to:</p> <ul style="list-style-type: none"> <li>• 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>• Aspirate and inject joints competently using the appropriate techniques</li> <li>• Recognise the macroscopic appearance of normal and abnormal synovial fluid (non-inflammatory, inflammatory, haemorrhagic and septic)</li> <li>• Identify synovial fluid crystals on polarised microscopy</li> <li>• Competency is required in all of the following core procedures:               <ul style="list-style-type: none"> <li>○ Hand and wrist:                   <ul style="list-style-type: none"> <li>Joint: PIP, MCP, wrist intra-articular injections.</li> <li>Soft tissue: Carpal tunnel, flexor and extensor tendon sheath soft tissue injections</li> </ul> </li> <li>○ Elbow:                   <ul style="list-style-type: none"> <li>Joint: Elbow.</li> <li>Soft tissue: Entheses, olecranon bursa .</li> </ul> </li> <li>○ Shoulder:                   <ul style="list-style-type: none"> <li>Joint: Glenohumeral joint, ACJ .</li> <li>Soft tissue: Sub-acromial bursa.</li> </ul> </li> </ul> </li> </ul>	<p>1,2,3</p>	<p>DOPS</p>



<ul style="list-style-type: none"> <li>○ Hip: Soft tissue: Bursal injections.</li> <li>○ Knee: Joint: Tibio-femoral Soft tissue: Bursal injections.</li> <li>○ Ankle and foot: Joint: Ankle, MTP Soft tissue: Plantar fascial injections.</li> </ul> <ul style="list-style-type: none"> <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>		
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## 6. Therapeutics and Safe Prescribing:

Skills	Behaviours	GMP	Assessment/Evidence of Competence
<ul style="list-style-type: none"> <li>• Recall range of adverse drug reactions to commonly used drugs, including complementary medicines</li> <li>• Recall drugs requiring therapeutic drug monitoring and interpret results</li> <li>• Outline tools to promote patient safety and prescribing, including IT systems</li> <li>• Undertake regular review of long term medications</li> <li>• Predict and avoid drug interactions, including complementary medicines</li> <li>• Make appropriate dose adjustments following therapeutic drug monitoring, or physiological change (e.g. deteriorating renal function)</li> <li>• Use IT prescribing tools to improve safety</li> <li>• Employ appropriate methods to improve patient concordance with medication</li> <li>• Provide effective explanation for the role of medicines</li> </ul>	<ul style="list-style-type: none"> <li>• Recognise the benefit of minimising number of medications taken by a patient</li> <li>• Appreciate the role of non-medical prescribers</li> <li>• Remain open to advice from other health professionals on medication issues</li> <li>• Recognise the importance of resources when prescribing, including the role of a Drug Formulary and local prescribing guidelines</li> <li>• Ensure prescribing information is shared promptly and accurately between a patient's health providers, including between primary and secondary care</li> <li>• Remain up to date with therapeutic alerts, and respond appropriately</li> </ul>	1,3,4	CbD, mini-CEX, MSF

## 7. Information Management:

Skills	Behaviours	GMP	Assessment/Evidence of Competence
<ul style="list-style-type: none"> <li>• Outline the local process for clinical coding and the role of coding in health funding</li> <li>• Outline the local systems for information retrieval, including IT systems</li> <li>• Define the provisions of the Data Protection Act and the Freedom of Information Act within the context of patient information</li> <li>• Demonstrate good information management to others</li> <li>• Share written information of a patient's care appropriately by following local procedure</li> <li>• Retrieve investigation results in a timely manner and act upon result appropriately</li> <li>• Use local IT systems appropriately within the context of the data protection act</li> </ul>	<ul style="list-style-type: none"> <li>• Provide leadership for note keeping, referrals, letters and timely discharge summaries written by members of team</li> <li>• Recognise the patient safety and medico-legal impact of poor note keeping</li> </ul>	1,3,4	CbD, mini-CEX, MSF

## 8. Time Management:

Skills	Behaviours	GMP	Assessment/Evidence of Competence
<ul style="list-style-type: none"><li>• Outline techniques for improving time management</li><li>• Recall how time is of use in patient diagnosis and management</li><li>• Delegate appropriately to ensure critical situations are addressed promptly</li><li>• Prioritise and re-prioritise own work load and that of members of healthcare team</li></ul>	<ul style="list-style-type: none"><li>• Recognise when you or others are falling behind and take steps to rectify the situation</li></ul>	1,3,4	CbD, mini-CEX, MSF



## 9. Decision Making and Clinical Reasoning

Skills	Behaviours	GMP	Assessment/Evidence of Competence
<ul style="list-style-type: none"> <li>• List the drawbacks of commonly used guidelines</li> <li>• Recognise limitations of clinical outcome measures when used in clinical practice</li> <li>• Contribute to the construction, review and updating of local (and national) guidelines of good practice using the principles of evidence based medicine</li> <li>• Appraise retrieved evidence to address a clinical question</li> <li>• Define the steps of diagnostic reasoning:</li> <li>• Develop problem list and action plan</li> <li>• Define the concepts of disease natural history and assessment of risk</li> <li>• Recall methods and associated problems of quantifying risk e.g. cohort studies</li> <li>• Outline the concepts and drawbacks of quantitative assessment of risk or benefit e.g. numbers needed to treat</li> <li>• Describe commonly used statistical methodology</li> <li>• Interpret clinical features and interpret their reliability and relevance to clinical scenario</li> <li>• Generate plausible hypothesis(es) following patient assessment</li> <li>• Construct a concise and applicable problem list using available information</li> </ul>	<ul style="list-style-type: none"> <li>• Keep up to date with national reviews and guidelines of practice (e.g. NICE and SIGN)</li> <li>• Aim for best clinical practice (clinical effectiveness) at all times</li> <li>• Recognise the occasional need to practise outside clinical guidelines</li> <li>• Encourage discussion amongst colleagues on evidence-based practice</li> <li>• Recognise the difficulties in predicting occurrence of future events</li> <li>• Show willingness to discuss intelligibly with a patient the notion and difficulties of prediction of future events, and benefit/risk balance of therapeutic intervention</li> <li>• Be willing to facilitate patient choice</li> <li>• Show willingness to search for evidence to support clinical decision making</li> <li>• Demonstrate ability to identify one's own biases and inconsistencies in clinical reasoning</li> </ul>	1,3,4	CbD, mini-CEX, MSF Evidence of participation in guideline production, evaluation or amendment

- Define the relevance of an estimated risk of a future event to an individual patient
- Use risk calculators appropriately
- Apply quantitative data of risks and benefits of therapeutic intervention to an individual patient
- Search and comprehend medical literature to guide reasoning



## 10. Lifelong Learning:

Objective: To inculcate the habit of life long learning

Subject	Knowledge	Skills	Behaviours	GMP	Assessment/Evidence of Competence
Life-long learning	Define the principles of Continuing Professional Development	<ul style="list-style-type: none"> <li>Recognise and use learning opportunities.</li> <li>Use the potential of study leave to keep oneself up to date</li> <li>Identify gaps in knowledge and plan actions to fill them</li> <li>Translate knowledge and new learning into practice</li> <li>Maintain a portfolio of Continuing Professional Development (CPD)</li> <li>Model and promote CPD within the multi-disciplinary team</li> </ul>	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> Strive to enhance professional competence with active involvement in CPD activities Recognise the moral and professional obligation to maintain competence and be accountable Reflect on all aspects of practice	1	CbD, mini-CEX

#### 4.1 Good Quality Care and Patient Safety

##### 1. The Patient as the Central Focus of Care:

Skills	Behaviours	GMP	Assessment/Evidence of Competence
<ul style="list-style-type: none"><li>• Give adequate time for patients to express ideas, concerns and expectations</li><li>• Respond to questions honestly and seek advice if unable to answer</li><li>• Encourage the health care team to respect the philosophy of patient focused care</li><li>• Develop a self-management plan with the patient</li><li>• Encourage patients to voice their preferences and personal choices about their care</li></ul>	<ul style="list-style-type: none"><li>• Support patient self-management</li><li>• Recognise the duty of the medical professional to act as patient advocate</li></ul>	1,3,4	CbD, mini-CEX, MSF, PS



## 2. Prioritisation of Patient Safety in Clinical Practice:

Skills	Behaviours	GMP	Assessment/Evidence of Competence
<ul style="list-style-type: none"> <li>• Recall principles of risk management</li> <li>• Recall side effects and contraindications of medications prescribed</li> <li>• Outline the hazards of medical equipment in common use</li> <li>• Recognise when a patient is not responding to treatment, reassess the situation, and encourage others to do so</li> <li>• Recognise and respond to the manifestations of a patient's deterioration (symptoms, signs, observations, and laboratory results) and support other members of the team to act similarly</li> <li>• Sensitively counsel a colleague following a significant event, or near incident, to encourage improvement in practice of individual and unit</li> <li>• Improve patients' and colleagues' understanding of the side effects and contraindications of therapeutic intervention</li> <li>• Ensure the correct and safe use of medical equipment, ensuring faulty equipment is reported appropriately</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to maintain a high level of safety awareness and consciousness at all times</li> <li>• Encourage feedback from all members of the team on safety issues</li> <li>• Show willingness to take action when concerns are raised about performance of members of the healthcare team, and act appropriately when these concerns are voiced to you by others</li> <li>• Continue to be aware of one's own limitations, and operate within them competently</li> <li>• Continue to strive for improved practice and patient safety</li> </ul>	1,3,4	CbD, mini-CEX, MSF, PS

### 3. Principles of Quality and Safety Improvement

Knowledge and Skills	Behaviours	GMP	Assessment/Evidence of Competence
<ul style="list-style-type: none"> <li>• Define local and national significant event reporting systems</li> <li>• Outline local health and safety protocols (fire, manual handling etc)</li> <li>• Outline the use of patient early warning systems to detect clinical deterioration</li> <li>• Keep abreast of national patient safety initiatives.</li> </ul>	<ul style="list-style-type: none"> <li>• Contribute to quality improvement processes (e.g. unit mortality meetings)</li> <li>• Show willingness to participate in safety improvement strategies</li> </ul>	1,3,4	CbD, mini-CEX, MSF

#### 4. Infection Control

Knowledge and Skills	Behaviours	GMP	Assessment/Evidence of Competence
<ul style="list-style-type: none"> <li>• Outline the principles of infection control defined by the GMC</li> <li>• Outline the principles of infection prevention in high risk groups (e.g. antibiotic use and Clostridium difficile) including antibiotics prescribing policy</li> <li>• List the principle notifiable diseases in the country</li> <li>• Outline the role of the Consultant in Communicative Disease Control (CCDC)</li> <li>• Counsel patients on matters of infection control</li> <li>• Actively engage in local infection control methods</li> <li>• Prescribe antibiotics according to local antibiotic guidelines</li> </ul>	<ul style="list-style-type: none"> <li>• Encourage other staff to observe infection control principles</li> </ul>	1,3,4	CbD, mini-CEX, MSF

## 4.2 Team working

Skills	Behaviours	GMP	Assessment/Evidence of Competence
<ul style="list-style-type: none"> <li>• Outline the components of effective collaboration</li> <li>• Describe the roles and responsibilities of members of the healthcare team</li> <li>• Demonstrate leadership and management in the following areas:</li> <li>• Education and training</li> <li>• Deteriorating performance of colleagues (e.g. stress, fatigue)</li> <li>• High quality care</li> <li>• Effective handover of care between shifts and teams</li> <li>• Participate in interdisciplinary team meetings</li> <li>• Provide appropriate supervision to less experienced colleagues</li> </ul>	<ul style="list-style-type: none"> <li>• Encourage an open environment to foster concerns and issues about the functioning and safety of team working</li> <li>• Recognise and respect the request for a second opinion</li> <li>• Recognise the importance of induction for new members of a team</li> <li>• Recognise the importance of prompt and accurate information sharing with Primary Care team following hospital discharge</li> </ul>	1,3,4	CbD, mini-CEX, MSF



### 4.3 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	Behaviours	GMP	Assessment/Evidence of Competence
(i) Continuity of care	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>	2,3	CbD, mini-CEX, MSF
(ii) Doctor-patient relationship	Define the concept of modern medical professionalism  Understand all aspects of a professional relationship such as the need to: <ul style="list-style-type: none"> <li>Deal with inappropriate patient and family behaviour e.g. aggression, violence, racism and sexual harassment.</li> <li>Respect the rights of children, elderly, people with physical, mental,</li> <li>learning or</li> </ul>	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, e.g. aggression, violence, sexual harassment	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	3,4	mini-CEX, MSF, PS

	<p>communication difficulties</p> <ul style="list-style-type: none"> <li>• Adopt a non-discriminatory approach</li> <li>• Place needs of patients above own convenience</li> <li>• Behave with honesty and probity</li> <li>• Act with honesty and sensitivity in a non-confrontational manner</li> </ul> <p>Establish the limiting boundaries surrounding the consultation.</p>				
(iii) Recognises own limitations	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.	1	CbD, mini-CEX
(iv) Stress	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.	2	
(v) Relevance of outside bodies	Have an understanding of the relevance to professional life of: The College of Physicians & Surgeons Pakistan PM&DC Postgraduate Dean Academic Council	Recognise situations when appropriate to involve these bodies/individuals.	Be open to constructive criticism. Accept professional regulation. Respect the views of patient representation groups.	2	CbD, mini-CEX, SCE

	Pakistan Society for Rheumatology (PSR) Patient representation groups				
(vi) Personal health	Know about occupational health services. Know about one's responsibilities to the public. Know not to treat oneself or one's family.	Recognise when personal health takes priority over work pressures and to be able to take the necessary time off.	Recognise personal health as an important issue.	2	

#### 4.4 Medical 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	Behaviours	GMP	Assessment/Evidence of Competence
(i) Informed consent	<p>Recall the principles of informed consent</p> <p>Outline the guidance given by the PM&amp;DC on consent</p> <p>Outline the principles of who is able to obtain consent</p> <p>Outline the situation of providing care without consent in an emergency</p> <p>Recall the concept of capacity including:</p> <ul style="list-style-type: none"> <li>o Principles of consent where capacity is fluctuating</li> <li>o Proceeding with treatment in the event of mental incapacity, including the role of the courts and the relevant mental health legislation</li> </ul> <p>Outline the principles of advance directives</p>	<p>Appropriate use of written material</p> <p>Seek a formal assessment of decision making capacity when appropriate</p> <p>Present all information to patients in a format they understand, allowing time for reflection on the decision to give consent</p> <p>Provide a balanced view of care options</p> <p>Obtain a second opinion on treatment options and explanations to patients when appropriate</p> <p>Inform a patient and seek alternative care where personal, moral or religious belief prevents a usual professional action</p>	<p>Respect a patient's rights of autonomy, even in situations where their decision might put themselves at risk of harm</p> <p>Avoid exceeding the scope of authority given by a patient</p> <p>Avoid withholding information relevant to proposed care or treatment in a competent adult</p> <p>Respect a patient's withdrawal of consent</p> <p>Show willingness to seek advance directives</p> <p>Show willingness to obtain a second opinion, senior opinion, and legal advice in difficult situations of consent or capacity</p>	3,4	mini-CEX, MSF, PS

	<p>List the factors to be considered when acting in a patient's 'best interests', including previous expression of preferences by the patient and views of patient's wishes provided by a third party</p> <p>List situations in which consent for treatment is not needed under common law</p> <p>List the factors that must be considered when obtaining consent for screening</p> <p>Understand process of consent for tissue/sample storage and use.</p> <p>How to gain consent for a research project</p> <p>Outline situations where patient consent, while desirable, is not required for disclosure e.g. communicable diseases, public interest</p>			
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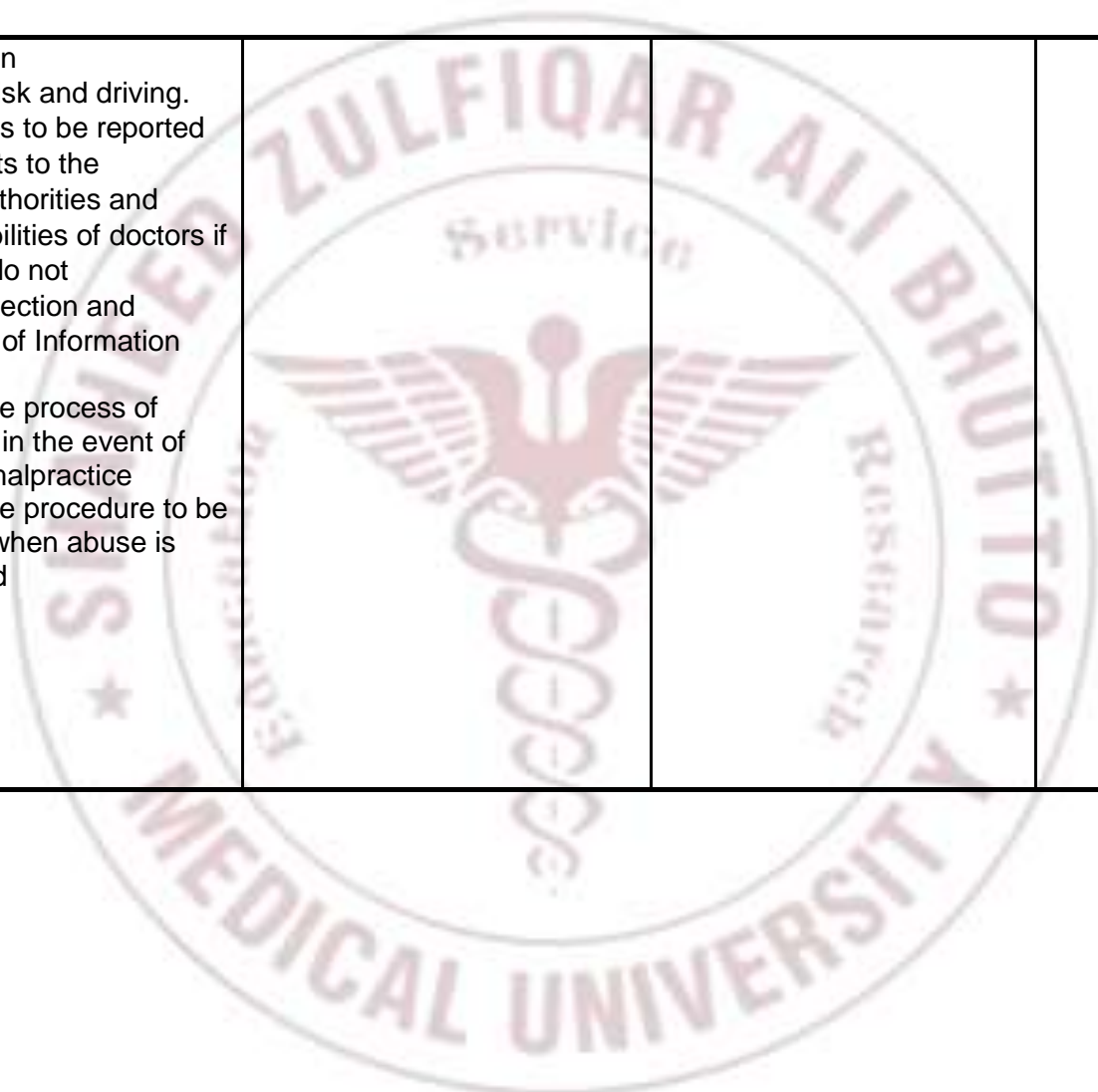
(ii) Confidentiality	Outline and follow the guidance given by the PM&DC on confidentiality	Use and share all information appropriately Avoid discussing one patient in front of another Be prepared to seek patients wishes before disclosing information	Respect the right to confidentiality. Respect patients' requests for information not to be shared, unless this puts the patients or others at risk of harm	4	CbD, MSF, PS
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	<p>Outline the procedures for seeking a patient's consent for disclosure of identifiable information</p> <p>Recall the obligations for confidentiality following a patient's death</p> <p>Be aware of relevant strategies to ensure confidentiality.</p> <p>Be aware of situations when confidentiality might be broken</p>		<p>Show willingness to share information about their care with patients, unless they have expressed a wish not to receive such information</p>		
(iii) Legal issues relating to criminal matters	<p>Know where to seek advice relating to responsibilities in serious criminal matters.</p>	<p>Be able to obtain suitable evidence or know whom to consult if in doubt.</p>	<p>Recognize the importance of legal issues in medical practice and always be ready to seek advice.</p>	1	CbD, SCE
iv) Ethical issues	<p>Demonstrate a knowledge of the principles of medical ethics</p> <p>Be aware of professional guidelines published by the bodies related to clinical rheumatology</p>	<p>Recognize the factors influencing ethical decision making: religion, moral beliefs, cultural practices</p> <p>Be able to communicate ethical issues with patients, colleagues and the public, surrounding:</p> <ul style="list-style-type: none"> <li>Confidentiality</li> <li>Informed consent</li> </ul>	<p>Encourage ethical reflection in others</p> <p>Show willingness to seek advice of peers, legal bodies, and the PM&amp;DC in the event of ethical dilemmas over disclosure and confidentiality</p> <p>Respect opinions of patients.</p> <p>Respect the opinion of colleagues.</p> <p>Be willing to refer on to a</p>	1,4	MSF, PS, SCE

			colleague if conflict exists between personal values and those of the patient.		
v) Do not resuscitate	Define the standards of practice defined by the PM&DC when deciding to withhold or withdraw life-prolonging treatment	Counsel patients, family, carers and advocates tactfully and effectively when making decisions about resuscitation status, and withholding or withdrawing treatment	Show willingness to seek the opinion of others when making decisions about resuscitation status, and withholding or withdrawing treatment	1,4	CbD, MSF, SCE
vi) Legal framework for practice	Outline the principles of the following medico-legal areas: Child protection relevant to adolescent and adult practice Mental health legislation: the powers to detain a patient and giving emergency treatment against patient's will under common law Death certification and role of coroner / procurator fiscal Advance directives and living wills Surrogate decision making such as Power of Attorney Organ donation and retention and awareness of local procedures Communicable disease	Prepare a medico-legal statement for submission to the Coroner's Court and other legal proceedings  Incorporate legal principles into day to day practice  Practise and promote accurate documentation within clinical practice	Show willingness to seek advice from the Healthcare Trust, legal bodies (including defence unions), and the PM&DC on medico- legal matters  Promote reflection on legal issues by members of the team	1,4	CbD, MSF, SCE

	<p>notification          Medical risk and driving.          Conditions to be reported by patients to the Traffic authorities and responsibilities of doctors if patients do not          Data Protection and Freedom of Information Acts          Outline the process of discipline in the event of medical malpractice          Outline the procedure to be followed when abuse is suspected</p>			
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#### 4.5 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.

Subject	Knowledge	Skills	Behaviours	GMP	Assessment/ Evidence of Competence
(i) Educating patients about: Disease Investigations Management	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: Further information Patient support groups	1,3	mini-CEX, MSF, PS, SCE
(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	1,3	Cbd, mini-CEX, SCE



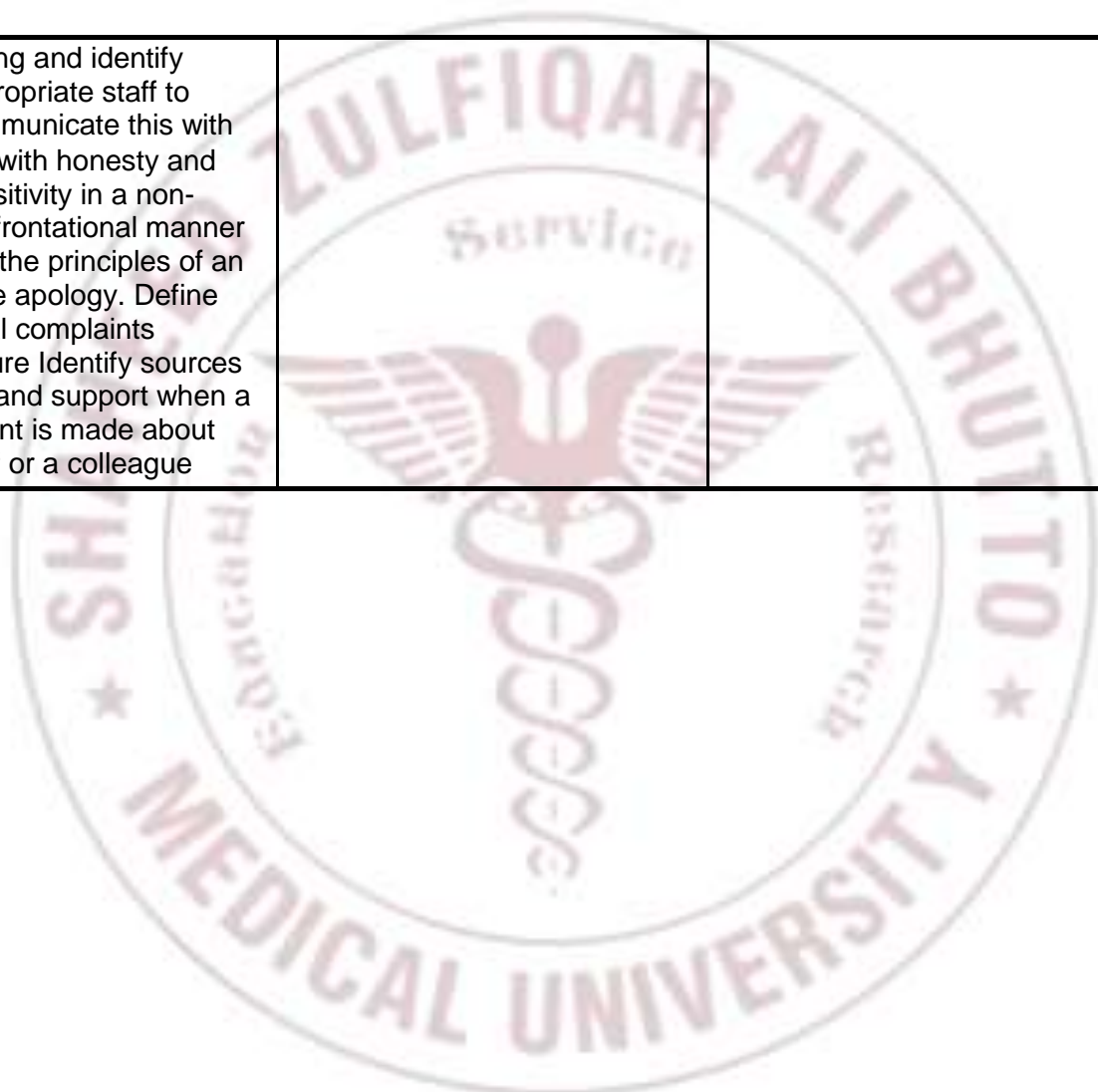
(iii) Epidemiology & screening	<p>Know the methods of data collection and their limitations.</p> <p>Know principles of 1<sup>o</sup> &amp; 2<sup>o</sup> prevention &amp; screening. Outline current Pakistan screening programmes</p>	<p>Assess an individual patient's risk factors.</p> <p>Encourage participation in appropriate disease prevention or screening programmes.</p>	<p>Encourage appropriate screening to facilitate early intervention</p> <p>Encourage effective team working in health promotion</p> <p>Show willingness to remain well briefed in local or national outbreaks</p> <p>Consider the: positive &amp; negative aspects of prevention importance of patient confidentiality Respect patient choice.</p>	1,4	mini-CEX, PS, SCE
(iv)	<p>Outline the concept of patient self-care</p>	<p>Develop and agree a management plan with the patient ensuring comprehension to maximise self-care</p> <p>Provide effective patient education, with support of the multi-disciplinary team</p> <p>Promote and encourage involvement of patients in appropriate support networks, both to receive support and to give support to others</p> <p>Encourage and support patients in accessing appropriate information</p>	<p>Show willingness to facilitate access to the appropriate training and skills in order to develop the patient's confidence and competence to self care</p> <p>Ensure appropriate equipment and devices are discussed:</p> <ul style="list-style-type: none"> <li>o Put patients in touch with the relevant agency from where they can procure the items as appropriate</li> <li>o Provide the relevant tools and devices when possible</li> </ul>		

#### 4.6 Relationships with Patients and Communication:

Subject	Knowledge	Skills	Behaviours	GMP	Assessment/ Evidence of Competence
(i) Within the consultation	<p>A comprehensive understanding of:</p> <ul style="list-style-type: none"> <li>• Interview structure</li> <li>• Effective listening</li> <li>• Need to clarify information given by patient</li> <li>• Use of comprehensible language tailored to patient</li> <li>• Use open and closed questions appropriately</li> <li>• Ability to gauge patients' ideas, concerns, expectations and comprehension</li> <li>• Appropriate use of written materials and interpreters</li> <li>• Importance of acting in a courteous, polite and professional manner</li> </ul>	<p>Demonstrate good communication skills to others in the team</p> <p>Manage patient follow-up effectively</p> <p>Accurately record details of discussions with the patient over care</p> <p>Identify and manage communication barriers while respecting confidentiality: language, cultural, hearing impairment, poor literacy etc</p>	<p>Show willingness to provide patients with a second opinion</p> <p>Show willingness to identify other sources of information for patients (printed literature, support societies etc)</p> <p>Ensure the patient is well informed and central to the decision making process</p> <p>Be aware of significant others and recognise their role in the management of the patient with a long term condition</p>	3	mini-CEX, MSF, PS
(ii) Breaking Bad News	<p>A thorough understanding of:</p> <ul style="list-style-type: none"> <li>• Interview structure</li> </ul>	<p>Demonstrate to others good practice in breaking bad news Counsel families on issues of:</p>	<p>Take leadership in breaking bad news</p>	3	mini-CEX, MSF, PS

	<ul style="list-style-type: none"> <li>• Normal bereavement process</li> <li>• Understand and respect cultural differences in end of life care and bereavement</li> <li>• Select appropriate setting</li> <li>• Encourage questioning and ensure comprehension</li> <li>• Avoid undue optimism or pessimism</li> <li>• Act with empathy, honesty and sensitivity</li> </ul>	<ul style="list-style-type: none"> <li>• Death and dying</li> <li>• Withdrawing and withholding life-prolonging treatment</li> <li>• Incapacity (such as follows disabling stroke)</li> <li>• <input type="radio"/> Transplantation</li> </ul>	Respect the different ways people react to bad news		
(iii) Complaints and Medical Error	<p>Develop comprehensive awareness of:</p> <ul style="list-style-type: none"> <li>• Local complaints procedure</li> <li>• Factors likely to lead to complaints (poor communication, dishonesty etc)</li> <li>• Need to adopt behaviour likely to prevent complaints</li> <li>• Ability to deal with dissatisfied patients or relatives</li> <li>• Need to recognise when something has gone</li> </ul>	<p>Contribute to processes whereby complaints are reviewed and learned from</p> <p>Explain comprehensibly to the patient the events leading up to a medical error</p> <p>Deliver an appropriate apology</p> <p>Distinguish between system and individual errors</p>	<p>Take leadership over complaint issues</p> <p>Recognise the impact of complaints and medical error on staff, patients, and the PM&amp;DC</p> <p>Contribute to a fair and transparent culture around complaints and errors</p> <p>Recognise the rights of patients, family members and carers to make a complaint</p>	3,4	CbD, mini-CEX, MSF, PS

	<p>wrong and identify appropriate staff to communicate this with</p> <ul style="list-style-type: none"> <li>• Act with honesty and sensitivity in a non-confrontational manner</li> </ul> <p>Outline the principles of an effective apology. Define the local complaints procedure Identify sources of help and support when a complaint is made about yourself or a colleague</p>				
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#### 4.7 Working with Colleagues:

Objective: to demonstrate good working relationships with colleagues

Subject	Knowledge	Skills	Behaviours	GMP	Assessment/ Evidence of Competence
<p>Interactions between:</p> <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>	<p>Know the roles and responsibilities of team members.</p> <p>Know how a team works effectively.</p> <p>Know the roles of other clinical specialties and their limitations.</p> <p>Know the role of multidisciplinary management in rheumatological disorders. Outline features of good team dynamics</p> <p>Outline the principles of effective inter-professional collaboration to optimise patient, or population, care</p>	<p>Establish effective communication with relevant teams by means appropriate to the urgency of a situation e.g. accurate written consultation letter</p> <p>Delegate to members of the medical team and members of the multi-disciplinary team whilst maintaining appropriate supervision</p> <p>Be able to communicate effectively.</p> <p>Handover safely.</p> <p>Seek advice if unsure.</p> <p>Recognise when input from another specialty is required for individual patients.</p>	<p>Show respect for others opinions.</p> <p>Be conscientious and work co-operatively.</p> <p>Recognise own limitations.</p> <p>Foster a supportive and respectful environment where there is open and transparent communication</p> <p>Respect opinions and encourage open communication with all members of the multidisciplinary team to improve learning and patient care</p> <p>Encourage an atmosphere of open communication within teams to improve patient</p>	3	CbD, MSF



		<p>Be able to work effectively with GPs, other medical and surgical specialists and other health care professionals.</p> <p>Employ collaborative negotiation to prevent and resolve conflict</p>	<p>care and learning</p> <p>Show willingness to participate in multi-disciplinary and multi-specialty team meetings</p>		
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#### 4.8 Team Working

Objective: To demonstrate the ability to work in clinical teams

Subject	Knowledge	Skills	Behaviours	GMP	Assessment/ Evidence of Competence
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.	3	CbD, MSF

#### 4.9 Leadership:

Subject	Knowledge	Skills	Behaviours	GMP	Assessment/ Evidence of Competence
<b>Persona l qualities</b>	Identify own strengths, limitations and the impact of their behaviour; is able to change their behaviour in light of feedback and reflection				
	Identify different methods of obtaining feedback Recognises the importance of best practice transparency and consistency	Maintain and routinely practice critical self awareness, including being able to discuss strengths and weaknesses with supervisor and recognising external influences and changing behaviour accordingly. Use assessment, appraisal, complaints and other feedback to discuss and develop an understanding of own development needs	Recognise and show respect for, diversity and differences in others Show commitment to continuing professional development which involves seeking training and self development opportunities, learning from colleagues and accepting criticism	3	MSF, PS
<b>Working with others</b>	Adopt a team approach, acknowledging and appreciating efforts, contributions and compromises. Continue to recognise the common purpose of the team and respect their decisions				
	Recognise a wide range of leadership styles and approaches and the applicability to different situations and people	Enable individuals, groups and agencies to implement plans and make decisions	Show recognition of a team approach, respecting colleagues, including non-medical professionals	3	MSF
<b>Managing services</b>	Support team members to develop their roles and responsibilities and continue to review performance of the team members to ensure that planned service outcomes are met				

	Be aware of relevant legislation and HR policies, including the duties, rights and responsibilities of an employer and co-worker. Describe individual performance review	Continue to contribute towards staff development and training, including mentoring, supervision and appraisal	Demonstrate commitment to good communication whilst also inspiring confidence and trust	3	MSF, SCE
<b>Improving services</b>	Ensure patient safety at all times, continue to encourage innovation and facilitate transformation			2, 3	
	Identify how healthcare governance influences patient care. Recognise a variety of methodologies for developing creative solutions to improving services	Monitor the quality of equipment and safety of the environment relevant to the specialty. Question existing practice in order to improve the services	Seek advice and/or assistance whenever concerned about patient safety Support colleagues to voice new ideas and be open minded to new thoughts.		MSF, PS
<b>Setting direction</b>	Is able to identify the contexts for change and is able to make decisions			3	
	Identify the functions and responsibilities of national bodies, College and faculties, representatives, regulatory bodies. recognises effective communication strategies within organisations	Can discuss the local, national and Pakistan health priorities and how they impact on the delivery of health care relevant to the specialty Can contribute to committee meetings and work collegiately and collaboratively with a wide range of people outside the immediate clinical setting	Is willing to articulate strategic ideas and use effective influencing skills Is willing to participate in decision making processes beyond the immediate clinical care setting		MSF, SCE



#### 4.10 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	Behaviours	GMP	Assessment/Evidence of Competence
(i) To have the skills, attitudes and practices of a competent teacher	<p>The goals and objectives of undergraduate medical education as set out by the PM&amp;DC.</p> <p>Identify adult learning principles.</p> <p>Identify learner needs.</p> <p>Identify learning styles.</p> <p>Structure teaching activities for large audiences, small groups and clinic based teaching.</p> <p>Principles of evaluation.</p> <p>Outline the workplace-based assessments in use</p> <p>Outline the appropriate local course of action to assist the failing trainee</p>	<p>Facilitate learning process.</p> <p>Identify learning outcomes.</p> <p>Construct educational objectives.</p> <p>Communicate effectively with the learners.</p> <p>Use effective questioning techniques.</p> <p>Teach large and small groups effectively.</p> <p>Select and use appropriate teaching resources.</p> <p>Evaluate programmes and events</p> <p>Be able to chair an educational event.</p> <p>Vary teaching format and stimulus, appropriate to situation and subject</p> <p>Provide effective feedback after teaching, and promote learner reflection</p> <p>Design and deliver effective lecture, presentation, small</p>	<p>Demonstrate a willingness, enthusiasm and commitment to teach.</p> <p>Show respect for the learner.</p> <p>Demonstrate a professional attitude towards teaching.</p> <p>Demonstrate a learner centred approach to teaching.</p> <p>Seek feedback and demonstrate a willingness to change methods in response to constructive feedback.</p> <p>Recognise the importance of the role of the physician as an educator</p> <p>Encourage discussions in the clinical settings to colleagues to share knowledge and understanding</p> <p>Show willingness to participate in workplace-</p>	1	MSF, TO, Formal qualifications (e.g. Cert Med Ed)



		group and bed side teaching sessions Provide appropriate career advice, or refer trainee to an alternative effective source of career information Participate in strategies aimed at improving patient education e.g. talking at support group meetings Recognise the failing trainee	based assessments Show willingness to take up formal tuition in medical education Recognise the importance of personal development as a role model to guide trainees in aspects of good professional behaviour		
(ii) Assessment	Know the principles of assessment Know different assessment methods Define formative and summative assessment	Use appropriate assessment methods Give constructive, effective feedback	Maintain honesty and objectivity during appraisal and assessment	1	MSF, TO
(iii) Appraisal	Know the principles of appraisal Know the structure of the appraisal interview	Participate in effective appraisal	Show respect for those participating in appraisal.	1,2	MSF

## 4.11 Research

### GMP 1,2,4

#### **Understanding rheumatology research.**

Trainees should become generally conversant with several of the scientific methods which are used in rheumatological research.

These 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.

## 4.12 Conducting Rheumatology Research

Section 5.4 below defines requirements for participation in research

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.

Subject	Knowledge	Skills	Behaviours	GMP	Assessment/ Evidence of Competence
To be able to plan and analyse a research project.	Be able to set up a hypothesis and test it. Know how to design a research study. Know how to use appropriate statistical methods. Know the principles of research ethics and the role of research ethics committees Know how to write a scientific paper. How to identify sources of research funding.	Develop critical appraisal skills and apply these when reading literature Ability to frame questions to be answered by a research project. Develop protocols and methods for research. Obtain ethical committee approval for a research proposal. Participate in collaborative research with clinical/scientific colleagues. Be able to use databases. Be able to accurately analyse data. Write and submit a case report or scientific paper. Have good written and verbal presentation skills.	Demonstrate curiosity and a critical spirit of enquiry. Demonstrate the persistence needed to follow a project from inception to completion. . Humility and the acknowledgement of the contribution of others.	1,4	Completed audits. Completed projects. Research proposals and grant applications. Formal qualifications.
Participation in clinical research	Outline the PM&DC guidance on good practice in	Demonstrate the ability to write a scientific paper	Ensure patient confidentiality. Demonstrate knowledge of the	1,4	mini-CEX, PS

	<p>research11  Outline the differences between audit and research  Describe how clinical guidelines are produced  Demonstrate a knowledge of research principles  Outline the principles of formulating a research question and designing a project  Comprehend principal qualitative, quantitative, bio-statistical and epidemiological research methods  Outline sources of research funding  Describe a patient's rights with respect to participation in a research study, informed consent, patient confidentiality, data protection.</p>	<p>Apply for appropriate ethical research approval  Demonstrate the use of literature databases  Demonstrate good verbal and written presentations skills  Explain a clinical research study to a potential patient participant  Take informed consent  Assess patients for the efficacy (response and side effects) of interventions in terms of current clinical practice</p>	<p>importance of ethical approval and patient consent for clinical research  Recognise the ethical responsibilities to conduct research with honesty and integrity, safeguarding the interests of the patient and obtaining ethical approval when appropriate  Follow guidelines on ethical conduct in research and consent for research12,13  Show willingness to the promotion of involvement in research</p>		
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### 4.13 Clinical Governance

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

Subject	Knowledge	Skills	Behaviours	GMP	Assessment/Evidence of Competence
<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>	<p>Define the important aspects of Clinical Governance. Explain medical and clinical audit. Research and Development. Integrated care pathways. Evidenced based practice. Clinical effectiveness. Clinical risk systems. To define the procedures and the effective action when things go wrong in own practice or that of others. Complaints procedures.</p>	<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</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>	<p>1,2,4</p>	<p>SCE Audit Assessment tool. Evidence of effective participation in governance procedures, audit designs and implementation</p>



		<p>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>		
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(ii) Risk management	Knowledge of such matters as H&S policy, policies on needle stick injuries, note keeping, communications and staffing numbers. Knowledge of risk assessment, perception and relative risk Know the complications and side effects of treatments.	Confidently and authoritatively discuss risks with patients and to obtain informed consent. Able to balance risks and benefits with patients.	Willingness to respect and accept patients views and choices Willingness to be truthful and to admit error to patients, relatives and colleagues.	1,2,3	CbD, PS, SCE
(iii) Evidence	Know & understand: the principles of evidence based medicine the types of evidence	Able to critically appraise evidence. Ability to be competent in the use of databases, libraries and the internet. Able to discuss the relevance of evidence with individual patients	Display a keenness to use evidence in the support of patient care and own decisions therein.	1	
(iv) Audit	Recall the role of audit (developing patient care, risk management etc) Recall the steps involved in completing the audit cycle	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 - <ul style="list-style-type: none"> <li>Specify an appropriate standard of practice for auditing,</li> </ul>	Consider the relevance of audit to: benefit patient care clinical governance	1,2,4	Audit Assessment. Evidence of effective participation in governance procedures, audit designs

		<ul style="list-style-type: none"> <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 Support audit within the multi-disciplinary team</p>			and implementation
(v) Guidelines	<p>Know the advantages and disadvantages of guidelines Methods of determining best practice</p>	<p>Ability to utilise guidelines Be involved in guideline generation, evaluation and review</p>	<p>Show regard for individual patient needs when using guidelines Willingness to use guidelines as appropriate</p>		

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

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

Subject	Knowledge	Skills	Behaviours	GMP	Assessment/Evidence of Competence
To demonstrate good use of information technology for patient care and for own personal development.	Define how to retrieve and utilize data recorded in clinical systems. Define main local and national projects and initiatives in information technology relevant to clinical rheumatology.	Demonstrate competent use of database, word processing and statistics programmes. Undertake effective literature searches. Access relevant web sites and specialist databases to undertake searches. To appraise available software. To apply the principles of confidentiality and their implementation in terms of clinical practice in the context of information technology. Produce effective computer assisted presentations.	Demonstrate the acquisition of new attitudes in patient consultations in order to make maximum use of information technology. Be willing to offer advice to lay person on access to appropriate Internet sources and support groups. Adopt proactive and enquiring attitude to new technology.	1,2	CbD, Presentations

## **5 Teaching and Learning**

### **5.1 The Training Programme**

The organisation and delivery of postgraduate training is the statutory responsibility of SZABMU, the PM&DC and the Higher Education Commission of Pakistan.

The sequence of training should ensure appropriate progression in experience and responsibility. The training to be provided is to ensure that, during the programme, the entire curriculum is covered and also that unnecessary duplication and educationally unrewarding experiences are avoided.

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. Key to the success of the work-based learning will be appropriate clinical and educational supervision. This will be overseen by the named 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 workplace-based assessments. Trainees will keep a log of their activities.

The formal education programme will allow the opportunity for collaborative learning between trainees and trainers. Such sessions will be mapped to the rheumatology curriculum. 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 Pakistan Society for Rheumatology annual meetings) as well as relevant education courses. 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.

### **5.2 Clinical Placements**

The programme may allow the trainee to be placed according to a road map and in other specialties and departments which are considered important in the training such as accident and emergency, rehabilitation, physiotherapy, immunology, radiology, pathology, orthopedics etc, whatever found necessary.

### **5.3 Teaching and Learning Methods**

The curriculum will be delivered through a variety of learning experiences. Trainees will learn from practice, clinical skills appropriate to their level of training and to their attachment within the department.

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. 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-direct 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 may be undertaken.
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 Pakistan Society for Rheumatology (PSR) courses.
3. Formal training in communication skills and in teaching skills.

#### **E. Personal Study**

1. Personal study including computer-based learning.
2. Practice 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 during their training period.
2. Guideline generation/review.

### **5.4 Research**

Full time research is strongly encouraged. The rules and regulations will be the same as advised and amended by the SZABMU for all other MD programmes.

## 6 Assessment

Assessment methods will be according to the principles as advised and amended by the SZABMU for all other MD programmes. However one proposed assessment system is as follows:

### 6.1 Assessment System

The purpose of the assessment system is to:

- enhance learning by providing formative assessment, enabling trainees to receive immediate feedback, measure their own performance and identify areas for development;
- drive learning and enhance the training process by making it clear what is required of trainees and motivating them to ensure they receive suitable training and experience;
- provide robust, summative evidence that trainees are meeting the curriculum standards during the training programme;
- ensure trainees are acquiring competencies within the domains of Good Medical Practice;
- assess trainees' actual performance in the workplace;
- ensure that trainees possess the essential underlying knowledge required for their specialty;
- identify trainees who should be advised to consider changes of career direction.

### 6.2 Assessment Methods

#### Examinations

- Assessment methods will be according to the principles as advised and amended by the SZABMU for all other MD programmes

#### Workplace-Based Assessments

- Multi-Source Feedback (MSF)
- mini-Clinical Evaluation Exercise (mini-CEX)
- Direct Observation of Procedural Skills (DOPS)
- Case-Based Discussion (CbD)
- Patient Survey (PS)
- Audit Assessment (AA)
- Teaching Observation (TO)

These methods are described briefly below.



**Multisource Feedback (MSF)**

This tool is a method of assessing generic skills such as communication, leadership, team working, reliability etc, across the domains of Good Medical Practice. This provides objective systematic collection and feedback of performance data on a trainee, derived from a number of colleagues. 'Raters' are individuals with whom the trainee works, and includes doctors, administration staff, and other allied professionals. The trainee will not see the individual responses by raters, feedback is given to the trainee by the Educational Supervisor.

**Mini-Clinical Evaluation Exercise (mini-CEX)**

This tool evaluates a clinical encounter with a patient to provide an indication of competence in skills essential for good clinical care such as history taking, examination and clinical reasoning. The trainee receives immediate feedback to aid learning. The mini-CEX can be used at any time and in any setting when there is a trainee and patient interaction and an assessor is available.

**Direct Observation of Procedural Skills (DOPS)**

A DOPS is an assessment tool designed to assess the performance of a trainee in undertaking a practical procedure, against a structured checklist. The trainee receives immediate feedback to identify strengths and areas for development.

**Case based Discussion (CbD)**

The CbD assesses the performance of a trainee in their management of a patient to provide an indication of competence in areas such as clinical reasoning, decision-making and application of medical knowledge in relation to patient care. It also serves as a method to document conversations about, and presentations of, cases by trainees. The CbD should include discussion about a written record (such as written case notes, out-patient prescription, letter, discharge summary). A typical encounter might be when presenting newly referred patients in the out-patient department.

**Patient Survey (PS)**

Patient Survey address issues, including behaviour of the doctor and effectiveness of the consultation, which are important to patients. It is intended to assess the trainee's performance in areas such as interpersonal skills, communication skills and professionalism by concentrating solely on their performance during one consultation.

**Audit Assessment Tool (AA)**

The Audit Assessment Tool is designed to assess a trainee's competence in completing an audit. The Audit Assessment can be based on review of audit documentation OR on a presentation of the audit at a meeting. If possible the trainee should be assessed on the same audit by more than one assessor.

**Teaching Observation (TO)**

The Teaching Observation form is designed to provide structured, formative feedback to trainees on their competence at teaching. The Teaching Observation can be based on any instance of formalised teaching by the trainee which has been observed by the assessor. The process should be trainee-led (identifying appropriate teaching sessions and assessors).

## **7 Supervision and Feedback**

Trainees will at all times have a named Supervisor, responsible for overseeing their education.

Opportunities for feedback to trainees about their performance will arise through the use of the workplace-based assessments, regular appraisal meetings with supervisors, other meetings and discussions with supervisors and colleagues, and feedback from Deans of relevant faculty.

Clinical supervision in rheumatology involves discussion about referrals, 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 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 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.

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.

## **8 Curriculum Review and Updating**

The specialty curriculum will be reviewed and updated with minor changes on an annual basis. The curriculum should be regarded as a fluid, living document and the education committee of SZABMU will ensure to respond swiftly to new clinical and service developments. In addition, the curriculum will be subject to formal review as and when considered appropriate by the University, HEC, PM&DC.