

**Introduction:**

This two month rotation consists of combination ambulatory rheumatology clinic, inpatient consults. At the discretion of the attending (supervising) rheumatologist residents are scheduled to spend equal amount of time rotating between outpatient clinic and inpatient consult service. In the outpatient clinic, they will see both new patient referrals and follow-up patients. All patients are presented to the Attending and a management plan is discussed. They are encouraged to follow patients they have seen in clinic whenever possible. Inpatient consults are presented and reviewed with attending. Inpatient consults are followed daily until discharge or the team signs off. The resident is expected to attend the monthly Rheumatology grand rounds, which are part of general medicine morning report, on Tuesday morning and is expected to present at these rounds on at least one occasion.

For Rheumatology rotations, residents may be assigned at Mubarak Al-Kabeer Hospital, Al-Amiri Hospital, or Al-Adan Hospital.

**Rotation Structure and Schedule:**

On the consult service, it is expected that resident sees an average of 2 new cases per day, and follow up on an average of 5 cases/day. Residents are not expected to work on weekends or take after hour calls on the Rheumatology rotation.

The resident will initially perform all new consults; this will usually require 1 hour per consult, including approximately 20-30 minutes of reading time on a topic pertinent to the consult. The patient is subsequently seen jointly by the resident/student and the attending. Consultations will not be placed on the chart until signed by the attending. Emphasis is placed upon a pertinent history and physical with review of laboratory/autoimmune markers findings and radiographic studies. This information is used to answer a question (if stated in the consult request) or to formulate a differential diagnosis which then becomes a starting point for teaching/discussing evaluation and management points of the current and similar clinical situations.

In the Rheumatology ambulatory clinic, the resident is expected to work with preceptor on a one to one basis seeing and evaluating patients.

**Sample Daily Schedule On Inpatient Consult Service:**

7:30 am to 8:00 am: Resident attends morning report. Residents must maintain 70% mandatory attendance.

8:00 am to 9:00 am: Didactic lectures.

9:00 am to 12:30 pm: Resident follows up on old patients and work up new consults.

12:30 pm to 2:00 pm: Team gather and round on all new and old patients.

**On-call Schedule:**

There is no assigned call or weekend coverage on Rheumatology rotation. Hence, the Internal Medicine resident must take general medicine call, as assigned by the internal medicine program director.

## Rheumatology Rotation Curriculum

### **Teaching Rounds:**

Each new consult/patient encounter seen by the resident will form the basis for teaching rounds. The new consult is presented by the resident to the entire Rheumatology consult team. The team will then see the patient as a group and review relevant history and/or obtain additional history from the patient and patient record. Pertinent physical findings (positive and negative) will be reviewed at the bedside. This component will be followed by formulation of a differential diagnosis and the development of diagnostic and therapeutic plans. Additional discussion may include pathophysiology, epidemiology, natural history and complications of the disease process in question. In the event that there are no new consults on a given day, the resident/student is assigned to see patients for follow-up visits with ensuing presentation, review and discussion at the bedside.

### **Additional Instruction:**

The resident are expected to present "interesting cases" from the consult service at the morning medicine conference in great detail, and will be asked to review the literature and discuss certain aspects of the case.

### **Supervision:**

All cases are supervised by the attending physician board certified Rheumatologist.

### **Educational Resources to be used and Reading Lists:**

A reading list compiled from current journal articles will be provided at the beginning of each rotation. Residents are referred to standard textbook of Internal Medicine (i.e. Harrison's Principles of Internal Medicine) along with board review material for quick references (MKSAP rheumatology or Med study Rheumatology) and are expected to independently research topics related to patients that they have encountered during the rotation. Residents are encouraged to submit valuable articles they encounter for inclusion in the reading list. Residents are highly encouraged to write up cases encountered on rotation. Publication of cases encountered on rotation is highly encouraged for those interested in pursuing fellowships in Rheumatology.

### **Objectives and Core Competency:**

Residents are evaluated monthly based on CAN med core competency: (1) Medical expert; (2) Communicator; (3) Collaborator; (4) Leader; (5) Health advocate; (6) Scholar; and (7) Professional.

#### **24. Medical Expert:**

##### **■ R1-R2 residents:**

By the end of the rotation, the resident will be able to:

5. Obtain a complete and accurate Rheumatologic History in patients with
  - h. Arthritis
  - i. Multi-system inflammatory illness
  - j. Other MSK complaint
  - k. Reduced bone density and osteoporosis

6. Conduct a detailed MSK examination including a screening and detailed examination of the joints, including measure of arthritic disease activity; measure of arthritic damage and deformity; detection of Extra-articular Complications; functional Assessment; pain amplification; assessment of spinal disease; and assessment of Regional Pain Syndrome
7. Formulate an appropriate differential diagnosis and management strategy based on the above
8. Assess functional status and disability in Rheumatology
9. Describe the common signs and symptoms of the following rheumatic conditions: Infectious diseases involving the musculoskeletal system (MSK), Diffuse inflammatory connective tissue disorders (including lupus, scleroderma, inflammatory arthritis, vasculitis, myositis, and Sjogren's), Crystal related arthritis, Degenerative diseases of the MSK system (including osteoarthritis), Metabolic bone disease, Regional pain syndromes and Fibromyalgia.
10. Develop a basic knowledge about laboratory and radiological investigations used in the rheumatic diseases.
11. Identify the most current pharmacological and non-pharmacological therapeutic interventions used in the treatment of rheumatic diseases and the side effects and risks of therapy
12. Perform joint aspiration and therapeutic injection.

■ **R3-R4 residents:**

By the end of the rotation, the resident will be able to:

9. Meet competency stated for R1-R2 residents.
10. The resident will demonstrate the ability to describe the etiology, epidemiology, pathophysiology, clinical features, relevant laboratory knowledge, and the therapeutic options for major Rheumatological disease entities. This will include Rheumatoid Arthritis; Juvenile Chronic Arthritis (JCA); Juvenile Rheumatoid Arthritis (JRA); Juvenile Idiopathic Arthropathy (JIA); Osteoarthritis; Osteoporosis and metabolic bone disease; Systemic Lupus Erythematosus (SLE) and related syndromes; Sjogren's Syndrome; Systemic Sclerosis and related syndrome(s); HLA-B27 related arthropathies; Fibromyalgia; Chronic Fatigue Syndrome; Crystal Arthritis; Infectious Arthritis; Infection-related arthropathies; Myositis & myopathy; Fasciitis; Vasculitides; Antiphospholipid Antibody Syndromes; Intermittent Arthritis Syndromes; Extra-articular Manifestations of Rheumatic Disease; Systemic Disorders with Rheumatological Manifestations; Other bone disorders — Paget's, Diffuse Idiopathic Skeletal Hyperostosis (DISH), hypertrophic osteopathy, renal bone disease, reflex sympathetic dystrophy, dysplasia; and Physical musculoskeletal syndromes.
11. Demonstrate in-depth understanding of laboratory tests, and diagnostic imaging techniques in diagnosis and assessment of rheumatic diseases
12. Demonstrate understanding of indications/contraindications, administration, monitoring and complications of common Disease-Modifying Antirheumatic Drugs (DMARD) and common biologic Agents used in treatment of Rheumatological diseases.

■ **R5 resident:**

By the end of the rotation, the resident will be able to develop proficiency and competency in the following areas:

17. Ability to undertake a critical appraisal of the literature
18. Synthesize data to derive the most likely diagnosis (es) and differential diagnosis (es).

19. Apply knowledge and expertise to performance of technical skills relevant to Rheumatology including joint and soft tissue aspiration and injections and synovial fluid analysis with minimal supervision.
20. Independently choose appropriate management and therapeutic plan.
21. Demonstrate effective consultation skills in the provision of timely well-documented assessments and recommendations in written and/or verbal forms.
22. Demonstrate the attitudes and skills necessary to collaborate with other health care professionals necessary to the care of the patient.
23. Access, retrieve, critically evaluate, and apply information from all sources in maintaining the highest standard of patient evaluation, care, and management.
24. Demonstrate medical expertise in situations other than those involving direct patient care (e.g. medical presentations, patient and referring physician education, and medico-legal opinions).
25. Demonstrate insight into his/her own limitations of expertise by self-assessment

2. Communicator:

By the end of this rotation, the resident at all levels will be able to perform the following:

13. Establish a therapeutic relationship with patients and their families, emphasizing active listening, understanding, trust, empathy, and confidentiality.
14. Demonstrate an appreciation of the patients' perception of health, concerns, and expectations and the impact of the rheumatologic disease on the patient and the family while considering factors such as the patient's age, gender, cultural, and socioeconomic background and spiritual values.
15. Demonstrate ability to provide appropriate support and counsel to a patient and family with chronic rheumatologic, connective tissue or musculoskeletal disorders.
16. Discuss appropriate information with the patient, his/her family, and other healthcare providers (hospitalists, intensivists, other physician requesting consultation, nursing staff, and other health professionals) to facilitate the optimal management plan for the care of the patient.
17. Articulate in writing a sound and detailed information about the patient's history, pathogenesis of his/her infectious illness, and appropriate evidence-based treatment plan.
18. Communicate verbally a succinct assessment and management plan to Attending Staff and to other physicians requesting consultation.

3. Collaborator:

By the end of this rotation, the resident at all levels will be able to perform the following:

7. Residents will collaborate with other specialists, particularly those working in a discipline most often associated with Rheumatology such as: orthopedics, physiatry, primary care providers, hospitalists, dermatology, physical therapy and infectious diseases specialists, to optimize management of patient with rheumatological disease.
8. Residents will collaborate with pharmacologists to ensure appropriate DMARD and Biologic dosing and schedule is administered.

**4. Leader:**

By the end of this rotation, the resident at all levels will be able to perform the following:

7. Residents will demonstrate timeliness in completing assignments & performing consultations (which should typically be completed and reviewed on the day received), and progress notes.
8. Residents will demonstrate the ability to prioritize and perform necessary follow-up
9. Residents will demonstrate the use of cost/benefit ratios of diagnostic and interventions for rheumatologic disorders as well as cost containment, efficacy, and efficiency as they relate to decision making and quality assurance.

**5. Health Advocate:**

By the end of this rotation, the resident at all levels will be able to perform the following:

7. Residents will identify the important determinants of health affecting patients, particularly those contributing to the burden of illness and disability from chronic arthritic and connective tissue disorders, chronic musculoskeletal pain disorders and chronic metabolic bone disorders such as osteoporosis.
8. Advocate on behalf of patients and parents for improved and timely access to specialist, and allied health care, necessary surgery, beneficial medications and therapies, and community based support services.

**6. Scholar:**

By the end of this rotation, the resident at all levels will be able to perform the following:

10. Demonstrate evidence of teaching/educating consulting services and team members
11. Search and critically appraise current Rheumatological literature, and apply new knowledge based on appropriate evidence
12. Demonstrate effective oral presentation of case reports, journal club, or rounds with sound synthesis of pertinent information
13. Facilitate education of patients, housestaff, students and other professionals in formal and informal educational settings regarding rheumatology, connective tissue disease, and the burden of chronic musculoskeletal disorders.
14. Contribute to development of new knowledge in rheumatology and the connective tissue disorders

**7. Professional:**

By the end of this rotation, the resident at all levels will be able to perform the following:

15. Demonstrate appropriate professional behavior during interactions with other team members including, pharmacists, nurses and secretarial and clerical staff members.
16. Demonstrate a willingness to accept peer and supervisor reviews of professional competence.
17. Demonstrate recognition of personal limitations of professional competence and demonstrate a willingness to call upon others with special expertise.
18. Appropriate attendance and punctuality at clinical rounds, and clinics
19. Deliver highest quality care with integrity, honesty, and compassion

20. Demonstrate appropriate interpersonal and professional behavior
21. Practice medicine ethically consistent with the obligations of a physician
22. Be aware of the ethical and legal aspects of patient care
23. Show recognition of personal limits through appropriate consultation (with staff supervisors, other physicians, and other health professionals) and show appropriate respect for those consulted
24. Demonstrate empathy, professionalism and respect in discussing care management with the patient and their families.
25. Recognize potential conflict in patient care situations, professional relationships, and value systems, and demonstrate the ability to discuss and resolve differences of opinion. Additionally, be able to accept constructive feedback and criticism and implement appropriate advice.
26. Strive for a balance between personal and professional roles and responsibilities.

**Evaluations:**

Evaluations should be done on an ongoing basis and residents should ensure they receive and provide verbal mid-rotation feedback to discuss strengths & weaknesses and ensure objectives are being met. At the end of the rotation, a written evaluation will be completed by the attending, with whom the resident spent the majority of their rotation. It is also expected that the residents will complete evaluations on all attendings with whom they have worked.