

Appendix 1: Goals & Objectives for Rheumatology Training Program

Overview

Patients of varying age, ethnic background, and economic status with a wide diversity of rheumatic and metabolic bone diseases are managed in rheumatology. Referrals come from in- and outpatient services and providers within the Midsouth. Learning is patient-based and requires extensive reading on the diseases encountered. The outlined educational competencies should be achieved by completion of the training program.

Goals (by Year of Training)

By the End of Year 1

1. Gather essential and accurate information from patients, family members, and past medical records, and demonstrate understanding of the importance of primary information, physical examination, pertinent laboratory studies, and cost-effective ancillary studies;
2. Develop a knowledge base required to systematically approach the consultative management of patients hospitalized for acute and chronic medical conditions. Demonstrate competence in the immediate care of the unstable patient, diagnosis and problem definition, selection and prioritization of appropriate diagnostic studies, discharge planning including education of the patient's family and/or preparation for rehabilitative care or other long-term care placement;
3. Demonstrate competence in the long-term care of the chronically ill patient, diagnosis and problem definition, selection and prioritization of appropriate diagnostic studies, long-term therapeutic monitoring, long-term planning including education of the patient's family and/or preparation for rehabilitative care;
4. Assume the role of consultant under careful supervision of supervising residents and faculty, and as such, 1st year fellows will be expected to maintain excellent communication with patients, their family members and members of the healthcare team in order to optimize the care that is provided;
5. Explain and employ the use of pharmacologic and therapeutic agents in rheumatologic patient care;
6. Participate in a Patient Safety/Quality Improvement project.

By the End of Year 2

1. Provide leadership in creating an environment which emphasizes quality patient care, and understanding continuity of care through inpatient to outpatient consultative care in the management of chronic diseases;
2. Describe the importance of nutrition in chronic diseases, human values and ethics in prior arrangement, death and dying, and the differences of geriatric medicine in the hospital;
3. Refine the knowledge of diseases requiring hospital management and share this knowledge base with other healthcare team members;
4. Comprehend and apply medical economics, i.e., charges, fees, and cost containment in patient care;
5. Collaborate and coordinate care with other healthcare providers during hospitalization;
6. Directly supervise and educate healthcare students and trainees in the delivery of high quality medical care;
7. Design and implement a Patient Safety/Quality Improvement Project;
8. Participate in an active research project supervised by a qualified faculty member;
9. Submit at least one publication to a peer-reviewed journal *or* present an abstract at a national specialty meeting.

By the End of Years 3-5

1. Demonstrate mastery of the rheumatologic knowledge base, technical skills, problem-solving skills, and clinical judgment to be prepared to practice independently;
2. Provide leadership in creating an environment which emphasizes quality patient care, and understanding continuity of care through inpatient to outpatient consultative care in the management of chronic diseases;
3. Participate in an active research project supervised by a qualified faculty member;
4. Submit at least one publication to a peer-reviewed journal annually *or* present an abstract at a national specialty meeting annually.

In general, rheumatology residents are expected to meet or exceed the core competencies at a level appropriate to their training level:

COMPETENCY & GOAL	OBJECTIVES
<p><i>Patient care:</i> Residents are expected to provide patient care that is compassionate, appropriate and effective for the promotion of health, prevention of illness, treatment of disease and at the end of life.</p>	<ul style="list-style-type: none"> • Gather accurate, essential information from all sources, including medical interviews, physical examinations, medical records and diagnostic/therapeutic procedures • Make informed recommendations about preventive, diagnostic and therapeutic options and interventions that are based on clinical judgment, scientific evidence, and patient preference • Develop, negotiate and implement effective patient management plans and integration of patient care • Perform competently the diagnostic and therapeutic procedures considered essential to the practice of rheumatology
<p><i>Medical knowledge:</i> Residents are expected to demonstrate knowledge of established and evolving biomedical, clinical and social sciences, and the application of their knowledge to patient care and the education of others.</p>	<ul style="list-style-type: none"> • Apply an open-minded, analytical approach to acquiring new knowledge • Access and critically evaluate current medical information and scientific evidence • Develop clinically applicable knowledge of the basic and clinical sciences that underlie the practice of rheumatology • Apply this knowledge to clinical problem-solving, clinical decision-making, and critical thinking
<p><i>Practice-based learning & improvement:</i> Residents are expected to be able to use scientific evidence and methods to investigate, evaluate, and improve patient care practices; and appraise and assimilate scientific evidence to improve patient care.</p>	<ul style="list-style-type: none"> • Identify areas for improvement and implement strategies to enhance knowledge, skills, attitudes and processes of care • Analyze and evaluate practice experiences and implement strategies to continually improve the quality of patient practice • Develop and maintain a willingness to learn from errors and use errors to improve the system or processes of care • Use information technology or other available methodologies to access and manage information, support patient care decisions and enhance both patient and physician education
<p><i>Interpersonal & Communication skills:</i> Residents are expected to demonstrate interpersonal and communication skills</p>	<ul style="list-style-type: none"> • Provide effective and professional consultation to other physicians and health care professionals and sustain therapeutic and ethically sound professional

<p>that enable them to establish and maintain professional relationships with patients, families, and other members of health care teams.</p>	<p>relationships with patients, their families, and colleagues.</p> <ul style="list-style-type: none"> • Use effective listening, nonverbal, questioning, and narrative skills to communicate with patients and families • Interact with referring physicians, consultants, and other healthcare team members in a respectful, appropriate manner • Maintain comprehensive, timely, and legible medical records
<p><i>Professionalism:</i> Residents are expected to demonstrate behaviors that reflect a commitment to continuous professional development, ethical practice, an understanding and sensitivity to diversity and a responsible attitude toward their patients, their profession, and society.</p>	<ul style="list-style-type: none"> • Demonstrate respect, compassion, integrity, and altruism in relationships with patients, families, and colleagues • Demonstrate sensitivity and responsiveness to the gender, age, culture, religion, sexual preference, socioeconomic status, beliefs, behaviors and disabilities of patients and professional colleagues • Adhere to principles of confidentiality, scientific/academic integrity, and informed consent • Recognize and identify deficiencies in peer performance
<p><i>Systems-based practice:</i> Residents are expected to demonstrate both an awareness of and understanding of the larger context and system in which health care is provided, and the ability call effectively on other resources in the system to provide optimal health care.</p>	<ul style="list-style-type: none"> • Understand, access and utilize the resources, providers and systems necessary to provide optimal care • Understand the limitations and opportunities inherent in various practice types and delivery systems, and develop strategies to optimize care for the individual patient • Apply evidence-based, cost-conscious strategies to prevention, diagnosis, and disease management • Collaborate with other members of the health care team to assist patients in dealing effectively with complex systems and to improve systematic processes of care

Assessment Tools

Core Competency	Procedure Log	Record Review (6-8 records)	Patient Partner Assessment	MCQ (ABIM, MKSAP)	Mini-CEX	Performance Evaluation (Supervising Rheumatologists)	Per Ratin Staff,
Patient care	X	X	X		X	X	
Medical Knowledge		X		X	X	X	
Practice-based learning & improvement							
Interpersonal & communication skills		X	X		X	X	
Professionalism		X			X	X	
Systems-based practice		X					

Specific Objectives by Rotation

Rotation: Rheumatology Inpatient Consultation Service (VA Medical Center, The Regional Medical Center, Methodist University Hospital; Elective: LeBonheur Children's Medical Center)

Objectives:

1. Obtain an appropriate history and perform physical examination to enable the detection of the following illnesses: rheumatoid arthritis, systemic lupus erythematosus, scleroderma/systemic sclerosis, polymyositis, spondyloarthropathies, vasculitis, crystal-induced synovitis, osteoarthritis, regional musculoskeletal pain syndromes acute and chronic musculoskeletal pain syndromes, nonarticular rheumatic diseases including fibromyalgia, nonsurgical exercise-related (sports) injury, systemic diseases with rheumatic manifestations, metabolic bone diseases, osteoporosis, infection of joints and soft tissues, Sjogren's Syndrome, and pediatric rheumatic disease;
2. Develop competence in
 - a. Examination, to include a specific examination of structure and function of all joints, both axial and peripheral, as well as periarticular structure and muscle units;
 - b. Diagnostic aspiration and analysis by light and compensated polarized light microscopy of synovial fluid;
 - c. Therapeutic injection of diarthrodial joints, bursae, tenosynovial structures, and entheses;
 - d. Use of nonsteroidal anti-inflammatory drugs, analgesics, disease-modifying drugs, biologic response modifiers, glucocorticoids, cytotoxic drugs, antihyperuricemic drugs, pharmacologic bone agents, and antibiotic therapy for septic joints;
 - e. Indications for, and performance or interpretation of biopsies of tissues relevant to diagnosis of rheumatic diseases, bone and joint imaging techniques, bone density measurements, controlled trials in rheumatic diseases, indications for arthroscopy, and electromyograms, nerve conduction studies, and muscle/nerve biopsy;
3. Describe the indications for surgical and orthopedic consultation;
4. Identify the geriatric and aging influences on care of the rheumatologic patient;
5. Recognize the principles of physical medicine and rehabilitation in patients with rheumatic disorders
6. Describe the scientific basis of the methodology, indications, and interpretations of laboratory tests and imaging procedures used in diagnosis and management of rheumatic and metabolic bone diseases;
7. Identify the pharmacology and pharmacokinetics, including drug metabolism, adverse effects, interactions, and relative costs of therapy used in rheumatic and metabolic bone disorders.

Rotation: Ambulatory Rheumatology (VA Medical Center, Medplex, LeBonheur Children's Medical Center; Electives: UT Medical Group, Arlington Developmental Center)

Objectives:

1. Obtain an appropriate history and perform physical examination to enable the detection of the following illnesses: rheumatoid arthritis, systemic lupus erythematosus, scleroderma/systemic sclerosis, polymyositis, spondyloarthropathies, vasculitis, crystal-induced synovitis, osteoarthritis, regional musculoskeletal pain syndromes acute and chronic musculoskeletal pain syndromes, nonarticular rheumatic diseases including fibromyalgia, nonsurgical exercise-related (sports) injury, systemic diseases with rheumatic manifestations, metabolic bone diseases, osteoporosis, infection of joints and soft tissues, Sjogren's Syndrome, and pediatric rheumatic disease;
2. Develop competence in
 - a. Examination, to include a specific examination of structure and function of all joints, both axial and peripheral, as well as periarticular structure and muscle units;
 - b. Diagnostic aspiration and analysis by light and compensated polarized light microscopy of synovial fluid;
 - c. Therapeutic injection of diarthrodial joints, bursae, tenosynovial structures, and entheses;
 - d. Use of nonsteroidal anti-inflammatory drugs, analgesics, disease-modifying drugs, biologic response modifiers, glucocorticoids, cytotoxic drugs, antihyperuricemic drugs, pharmacologic bone agents, and antibiotic therapy for septic joints;
 - e. Indications for, and performance or interpretation of biopsies of tissues relevant to diagnosis of rheumatic diseases, bone and joint imaging techniques, bone density

- measurements, controlled trials in rheumatic diseases, indications for arthroscopy, and electromyograms, nerve conduction studies, and muscle/nerve biopsy;
3. Describe the indications for surgical and orthopedic consultation;
 4. Identify the geriatric and aging influences on care of the rheumatologic patient;
 5. Describe the evaluation, management and rehabilitation of exercise-related (sports) illnesses;
 6. Recognize the principles of physical medicine and rehabilitation in patients with rheumatic disorders
 7. Describe the scientific basis of the methodology, indications, and interpretations of laboratory tests and imaging procedures used in diagnosis and management of rheumatic and metabolic bone diseases;
 8. Identify the pharmacology and pharmacokinetics, including drug metabolism, adverse effects, interactions, and relative costs of therapy used in rheumatic and metabolic bone disorders.

Rotation: Rheumatology Grand Rounds, Core Curriculum Conference, Clinical and Research Division Conferences, Metabolic Bone Conference, Radiology Conference

Objectives:

1. Conduct an appropriate differential diagnosis for the following illnesses: rheumatoid arthritis, systemic lupus erythematosus, scleroderma/systemic sclerosis, polymyositis, spondyloarthropathies, vasculitis, crystal-induced synovitis, osteoarthritis, regional musculoskeletal pain syndromes acute and chronic musculoskeletal pain syndromes, nonarticular rheumatic diseases including fibromyalgia, nonsurgical exercise-related (sports) injury, systemic diseases with rheumatic manifestations, metabolic bone diseases, osteoporosis, infection of joints and soft tissues, Sjogren's Syndrome, and pediatric rheumatic disease;
2. Develop competence in
 - a. Examination, to include a specific examination of structure and function of all joints, both axial and peripheral, as well as periarticular structure and muscle units;
 - b. Diagnostic aspiration and analysis by light and compensated polarized light microscopy of synovial fluid;
 - c. Therapeutic injection of diarthrodial joints, bursae, tenosynovial structures, and entheses;
 - d. Use of nonsteroidal anti-inflammatory drugs, disease-modifying drugs, biologic response modifiers, glucocorticoids, cytotoxic drugs, antihyperuricemic drugs, and antibiotic therapy for septic joints;
 - e. Indications for, and performance or interpretation of biopsies of tissues relevant to diagnosis of rheumatic diseases, bone and joint imaging techniques, bone density measurements, controlled trials in rheumatic diseases, indications for arthroscopy, and electromyograms, nerve conduction studies, and muscle/nerve biopsy;
3. Describe the indications for surgical and orthopedic consultation;
4. Identify the geriatric and aging influences on care of the rheumatologic patient;
5. Describe the evaluation, management and rehabilitation of exercise-related (sports) illnesses;
6. Recognize the principles of physical medicine and rehabilitation in patients with rheumatic disorders
7. Explain the anatomy, pathology, genetics, immunology, biochemistry and physiology of connective tissue, bone, muscle, and purine metabolism;
8. Describe the scientific basis of the methodology, indications, and interpretations of laboratory tests and imaging procedures used in diagnosis and management of rheumatic and metabolic bone diseases;
9. Identify the pharmacology and pharmacokinetics, including drug metabolism, adverse effects, interactions, and relative costs of therapy used in rheumatic and metabolic bone disorders.

Rotation: Journal Club, Journal Watch

Objectives:

1. Describe the scientific basis of the methodology, indications, and interpretations of laboratory tests and imaging procedures used in diagnosis and management of rheumatic and metabolic bone diseases;
2. Critically analyze the rheumatologic and metabolic bone literature

3. Appraise statistical analysis in the literature

Rotation: Electives (Orthopaedics, Sports Medicine, Neuromuscular, Physical Medicine & Rehabilitation, Metabolic Bone Clinic)

Objectives:

1. Obtain an appropriate history and perform physical examination to enable the detection of nonsurgical exercise-related (sports) injury, metabolic bone diseases, and osteoporosis;
2. Develop competence in indications for, and performance or interpretation of bone density measurements, indications for arthroscopy, and electromyograms, nerve conduction studies, and muscle/nerve biopsy;
3. Describe the indications for surgical and orthopedic consultation;
4. Identify the geriatric and aging influences on care of the rheumatologic patient;
5. Describe the evaluation, management and rehabilitation of exercise-related (sports) illnesses;
6. Recognize the principles of physical medicine and rehabilitation in patients with rheumatic disorders