AMERICAN ACADEMY OF FAMILY PHYSICIANS

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Recommended Curriculum Guidelines for Family Medicine Residents

Rheumatic Conditions

This document is endorsed by the American Academy of Family Physicians (AAFP).

Introduction

This Curriculum Guideline defines a recommended training strategy for family medicine residents. Attitudes, behaviors, knowledge, and skills that are critical to family medicine should be attained through longitudinal experience that promotes educational competencies defined by the Accreditation Council for Graduate Medical Education (ACGME), www.acgme.org. The family medicine curriculum must include structured experience in several specified areas. Much of the resident's knowledge will be gained by caring for ambulatory patients who visit the family medicine center, although additional experience gained in various other settings (e.g., an inpatient setting, a patient's home, a long-term care facility, the emergency department, the community) is critical for well-rounded residency training. The residents should be able to develop a skillset and apply their skills appropriately to all patient care settings.

Structured didactic lectures, conferences, journal clubs, and workshops must be included in the curriculum to supplement experiential learning, with an emphasis on outcomes-oriented, evidence-based studies that delineate common diseases affecting patients of all ages. Patient-centered care, and targeted techniques of health promotion and disease prevention are hallmarks of family medicine and should be integrated in all settings. Appropriate referral patterns, transitions of care, and the provision of cost-effective care should also be part of the curriculum.

Program requirements specific to family medicine residencies may be found on the ACGME website. Current AAFP Curriculum Guidelines may be found online at www.aafp.org/cg. These guidelines are periodically updated and endorsed by the AAFP and, in many instances, other specialty societies, as indicated on each guideline.

Please note that the term “manage” occurs frequently in AAFP Curriculum Guidelines. “Manage” is used in a broad sense to indicate that the family physician takes responsibility for ensuring that optimal, complete care is provided to the patient. This does not necessarily mean that all aspects of care need to be directly delivered personally by the family physician. Management may include appropriate referral to other health care providers, including other specialists, for evaluation and treatment.

Each residency program is responsible for its own curriculum. **This guideline provides a useful strategy to help residency programs form their curricula for educating family physicians.**

Preamble

Rheumatic conditions result in numerous hospitalizations and millions of lost workdays annually. Each family medicine resident will encounter a significant number of rheumatic problems and should be aware of the impact of this group of diseases on patients and their families. The resident should be able to perform an appropriate history and physical examination, laboratory tests, and basic diagnostic procedures, as well as initiate a management and therapy plan for a patient who has a rheumatic condition.

In all settings, family physicians play a very important role in the care of patients who have rheumatic conditions and should be competent in the evaluation and management of common rheumatic conditions, providing both independent management and coordinated care with specialty trained rheumatologists. Family physicians should be competent in assessing patient understanding of the disease and in guiding patients to use self-management skills to participate in their treatment plan.

Family medicine is a comprehensive specialty, and family physicians should continually update their clinical knowledge to learn about advances in rheumatic diagnoses and treatments. They should help guide patients in the use of appropriate disease-modifying agents and identify when physical, occupational, and rehabilitative therapies are necessary.

Competencies

At the completion of residency training, a family medicine resident should be able to:

- Perform diagnostic examination and manage therapeutic and rehabilitative treatment of the patient who has a rheumatic condition (Medical Knowledge, Patient Care)
- Optimize treatment plans in consultation with the rheumatologist and arthritis resources of local, state, and federal agencies (Systems-based Practice, Practice-based Learning and Improvement)

- Demonstrate comprehensive, culturally competent communication with each patient and his or her family to ensure clear understanding of the diagnosis, treatment, and rehabilitation (Interpersonal and Communication Skills, Patient Care)
- Recognize when a multidisciplinary approach is needed to treat rheumatic diseases and, when necessary, utilize urgent referral or consultation to optimize patient care and decrease disability (Medical Knowledge, Systems-based Practice, Practice-based Learning and Improvement)
- Practice a collaborative use of mental health professionals, physical therapy, and patient self-management skills in treating rheumatic disease (Medical Knowledge, Systems-based Practice)
- Recognize the importance of preventive medicine and physical activity to decrease the disability attributable to rheumatic disease (Interpersonal and Communication Skills, Practice-based Learning and Improvement, Systems-based Practice)
- Practice lifelong learning that incorporates diagnostic and therapeutic skills (Medical Knowledge)

Attitudes and Behaviors

The resident should develop attitudes and behaviors that encompass:

- Recognition of the increased health care utilization and potential disability of patients who have a rheumatic condition
- Support for each patient to reach his or her maximum function with minimal disability
- Consideration of the direct and indirect costs of rheumatic diseases (including treatment, supportive care, and burden for the patient's family)
- Recognition of how family, psychological, and environmental variables impact health status
- Endorsement of a multidisciplinary approach for the control of rheumatic disease and promotion of function
- Recognition that each patient's cultural background can impact proposed treatment plans and future disability
- Consistent and reliable self-directed lifelong learning

Knowledge

In the appropriate setting, the resident should demonstrate the ability to apply knowledge of the following:

1. Anatomy and physiology of the normal musculoskeletal system and the immunologic processes that contribute to the pathogenesis of rheumatic disease

2. A focused history for joint and soft tissue symptoms, a complete musculoskeletal examination, and functional assessment

3. The use of laboratory and imaging modalities, including:
    a. Indications for and interpretation of arthrocentesis
    b. Indications for and interpretation of tissue biopsy results
    c. Indications for arthroscopy

4. The clinical presentation, diagnostic criteria, and initial treatment for various rheumatic conditions, with special emphasis on common conditions such as:
    a. Arthralgia/arthritis
        i. Osteoarthritis (OA), including primary and secondary
        ii. Rheumatoid arthritis (RA) with manifestations of articular, extra-articular, and juvenile forms
        iii. Spondyloarthritis
            1) Ankylosing spondylitis
            2) Reiter syndrome
            3) Psoriatic arthritis
            4) Arthritis associated with inflammatory bowel disease
        iv. Infections that cause direct and indirect forms of arthritis
            1) Acute rheumatic fever
            2) Subacute bacterial endocarditis
            3) Post-dysenteric
        v. Crystal-induced arthropathies
            1) Gout
            2) Corticosteroid injection-induced crystal arthropathy
            3) Pseudogout (calcium pyrophosphate dihydrate)
            4) Hydroxyapatite deposition
        vi. Neoplasms that cause arthropathies
        vii. Drug-induced
    b. Connective tissue disorders
        i. Lupus erythematosus (LE) with various presentations (including systemic, discoid, and drug-induced)
        ii. Scleroderma with various presentations (including localized, systemic, and drug-/toxin-induced)
        iii. Polymyositis and dermatomyositis and their relationship to connective tissue disorders, as distinguished from drug-induced myositis
        iv. Sjögren syndrome (primary and secondary)
        v. Polymyalgia rheumatica
        vi. Antiphospholipid syndrome
    c. Vasculitis
        i. Polyarteritis nodosa
        ii. Microscopic polyangiitis
        iii. Hypersensitivity angiitis

1) Serum sickness
2) Henoch-Schönlein purpura

iv. Granulomatous arteritis
1) Wegener granulomatosis
2) Giant cell (temporal) arteritis

v. Kawasaki disease
vi. Behçet disease

d. Regional rheumatic pain syndromes
i. Bursitis
ii. Tendinitis and tendinosis
iii. Low back pain
iv. Costochondritis
v. Chondromalacia patellae
vi. Compression
1) Peripheral entrapment (e.g., carpal tunnel)
2) Radiculitis and radiculopathy
3) Spinal stenosis

vii. Raynaud phenomenon
viii. Complex regional pain syndrome

e. Common pediatric rheumatic conditions
i. Juvenile rheumatoid arthritis
ii. Kawasaki disease
iii. Henoch-Schönlein purpura

f. Other
i. Osteopenia and osteoporosis
ii. Osteomalacia and rickets
iii. Paget disease
iv. Avascular necrosis
v. Relapsing panniculitis (Weber-Christian disease)
vi. Erythema nodosum
vii. Sarcoidosis
viii. Adult Still disease
ix. Fibromyalgia and chronic fatigue syndrome

5. The indications, contraindications, potential side effects, and laboratory monitoring parameters of various pharmacologic classes used:

a. Analgesic medications (including nonsteroidal anti-inflammatory drugs [NSAIDs], acetaminophen, specific COX-2 inhibitors, tramadol, and narcotics)

b. Disease-modifying agents (including antimalarials, sulfasalazine, minocycline, and gold salts)

c. Immunosuppressive agents (including penicillamine, cytotoxic agents such as methotrexate, and biologic agents such as anti-tumor necrosis factor and interleukin-1 (IL-1) receptor antagonists)

d. Corticosteroids, both local and systemic

e. Uricosuric agents for prevention of gouty attacks and the use of abortive agents in acute attacks

f. Antibiotics in the treatment of rheumatic conditions

g. Various medications used in the prevention and treatment of osteoporosis

6. The use of rehabilitation services for joint mobilization and physical conditioning, and modalities for different stages of rheumatic conditions to promote function and prevent physical disability

7. A multidisciplinary approach that utilizes expert resources (including a rheumatologist, a physiatrist, a physical and occupational therapist, an orthopedic surgeon, and a mental health care professional) for optimal patient care

8. Alternative therapies and modalities available for rheumatic conditions (including supplements, manipulation therapy, and acupuncture)

9. Disability prevention, including appropriate general health maintenance (vaccinations, weight management, nutrition and exercise counseling), with attention to managing other comorbid medical conditions

10. Self-management and education for pediatric and special needs patients about treatment and follow-up with health care professionals

Skills

In the appropriate setting, the resident should demonstrate the ability to independently perform or appropriately refer the following:

1. The basic elements of a rheumatic assessment (including a targeted history, musculoskeletal examination, and functional assessment)

2. Development of a differential diagnosis based on the pattern of joint and soft tissue involvement, such as symmetrical small joints, nonsymmetrical large joints, and axial skeleton

3. The ordering of appropriate laboratory tests based on initial evaluation and interpretation of the results

4. Joint and bursal aspirations and interpretation of results for crystal, inflammatory, or infectious causes

5. The ordering of appropriate radiographic views of involved joints and interpretation of results, with emphasis on soft tissue changes and early erosive changes

6. Evaluation of limitations in activities of daily living and the effect on social and psychological status of the patient

7. Recognition of urgent joint conditions, such as the “red hot joint,” and performance of appropriate synovial fluid aspiration and analysis

8. The use of many modalities for pain control (including oral pharmacologic agents, physical therapy, acupuncture, and intra-articular and soft tissue aspirations and injections)

9. Treatment and monitoring of the laboratory and potential side effects of pharmacologic agents

10. The utilization of traditional treatment modalities (including physical therapy, splinting devices, and assistive or offloading devices)

11. Communication with the patient and family and education regarding the proposed investigation, treatment, and community resources to promote understanding and compliance for optimal patient care

12. Continuous evaluation of disease progression

13. Multidisciplinary approach and appropriate referral to utilize expert resources (including orthopedic surgeons, rheumatologists, physiatrists, psychologists or psychiatrists, nutritionists, and physical and occupational therapists), when necessary

Implementation

The implementation of this Curriculum Guideline should be longitudinal throughout the resident's experience and may include block experiences in specialty offices that focus on rheumatic conditions. The residency library should be continually updated with reference materials. The Curriculum Guidelines should be integrated into the schedule of conferences and other teaching modalities. Assessment should be made of a resident’s competency with diagnostic and therapeutic procedures. The resident should gain hands-on experience by being involved in management of this group of diseases, emphasizing disability prevention and patient self-management skills.

Resources

Firestein GS, Budd RC, Gabriel SE, McInnes IB, O’Dell JR, eds. *Kelley & Firestein’s Textbook of Rheumatology*. 10th ed. Philadelphia, Pa.: Elsevier; 2016.

Hochberg MC*. Rheumatology*. 6th ed. Philadelphia, Pa.: Mosby; 2014.

Klippel JH*. Primer on the Rheumatic Diseases*. 13th ed. New York, NY: Springer; 2008.

Koopman WJ, Boulware DW, Heudebert GR. *Clinical Primer of Rheumatology*. Philadelphia, Pa.: Lippincott Williams & Wilkins; 2003.

Koopman WJ, Moreland LW, eds. *Arthritis and Allied Conditions: A Textbook of Rheumatology.* 15th ed. Philadelphia, Pa.: Lippincott Williams & Wilkins; 2004.

Muller D. *Connective Tissue Diseases*. FP Essentials™, Edition No. 383. Leawood, Ks.: American Academy of Family Physicians; April 2011.

Rondinelli RD. *Guides to the Evaluation of Permanent Impairment*. 6th ed. Chicago, Ill.: American Medical Association; 2008.

Sing JA, Saag KG, Bridges SL Jr, et al. 2015 American College of Rheumatology guideline for the treatment of rheumatoid arthritis. *Arthritis Rheumatol.* 2016;68(1):1-26.

Stuart MR, Lieberman JA. *The Fifteen Minute Hour: Therapeutic Talk in Primary Care*. 5th ed. Abingdon, UK: Radcliffe; 2015.

Website Resources

American Family Physician (*AFP*) by Topic: Arthritis and Joint Pain. (Multiple articles) www.aafp.org/afp/topicModules/viewTopicModule.htm?topicModuleId=77

Centers for Disease Control and Prevention. Arthritis. www.cdc.gov/arthritis/

Organizations

Arthritis Foundation. www.arthritis.org

National Institute of Arthritis and Musculoskeletal and Skin Diseases. www.niams.nih.gov

Mobile Apps

RheumaHelper (Modra Jagoda). www.rheumaHelper.com

RAVE Mobile (DKBmed LLC). https://itunes.apple.com/us/app/rave-mobile/id505074662?mt=8

Rheumatologic Diseases @Point of Care (@Point of Care™). https://itunes.apple.com/us/app/rheumatoid-arthritis-ra-point/id434218930?mt=8

@Hand: Treatment Strategies in Rheumatology 1.0 (Medical Wizards). http://www.medicalwizards.com/products/view/id/263

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