AMERICAN ACADEMY OF FAMILY PHYSICIANS

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Recommended Curriculum Guidelines for Family Medicine Residents

Rheumatic Conditions

This document was endorsed by the American Academy of Family Physicians (AAFP), the American College of Rheumatology (ACR), the Association of Departments of Family Medicine (ADFM), the Association of Family Medicine Residency Directors (AFMRD) and the Society of Teachers of Family Medicine (STFM) and was developed in cooperation with the Harbor-UCLA Family Medicine Residency Program.

Introduction

This Curriculum Guideline defines a recommended training strategy for family medicine residents. Attitudes, 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) http://www.acgme.org. The curriculum must include structured experience in several specified areas. Most of the resident's knowledge will be gained by caring for ambulatory patients who visit the family medicine center. Structured didactic lectures, conferences, journal clubs and workshops must be included in the curriculum with an emphasis on outcomes-oriented, evidence-based studies that delineate common and chronic diseases affecting patients of all ages. Targeted techniques of health promotion and disease prevention are hallmarks of family medicine. Appropriate referral patterns and 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 Web site. Current AAFP Curriculum Guidelines may be found online at http://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.

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

Family physicians encounter a significant number of rheumatologic problems in the course of practice. Millions of work days are lost per year due to osteoarthritis and rheumatoid arthritis. The morbidity of arthropathies results in numerous hospitalizations annually.

Each family medicine resident should be aware of the impact of this group of diseases on the patient and the family and be capable of performing a history and physical examination with special attention to the musculoskeletal system. The resident should be able to perform appropriate laboratory tests and basic diagnostic procedures and to initiate a management and therapeutic plan for patients who have these diseases.

Rheumatologic diseases represent a growing health crisis and now affect 46.4 million people according to the National Health Interview Survey. In addition, 17.4 million people are disabled because of arthritic diseases. Given the number of patients, primary care physicians cannot rely on referral to rheumatologists to identify, diagnose and manage this growing health need. The family medicine physician is an integral part of the health care team that needs to recognize the importance of early diagnosis, treatment and holistic care of the rheumatologic patient. As part of a comprehensive treatment plan, family medicine physicians need competency in assessing patient understanding of the disease and how to participate in the treatment plan through self-management skills.

Family medicine physicians need to continually update their clinical knowledge given the new advances in rheumatologic diagnosis and treatments. The rheumatologic patient requires full-spectrum care that emphasizes the use of appropriate disease modifying agents and identifying when physical, occupational and rehabilitative therapy are necessary. Because family medicine physicians focus on comprehensive treatment, they have the unique skills to meet the demands of rheumatologic patients.

Competencies

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

- Competently perform diagnostic, therapeutic and rehabilitative examination and treatment of the rheumatologic patient. (Medical Knowledge, Patient Care)
- Optimize treatment plans with consultation of the local rheumatologist and arthritis resources that include local, state and federal agencies. (Systems-based Practice, Practice-based Learning)
- Demonstrate comprehensive, culturally competent communication with each patient and his or her family in order to ensure clear understanding of the diagnosis, treatment and rehabilitation. (Interpersonal Skills, Communications, Patient Care)
- Recognize that the treatment of rheumatologic diseases requires a multidisciplinary approach and when necessary, may also require urgent referral and consultation to provide optimal patient care and decrease disability. (Medical Knowledge, Systems-based Practice, Practice-based Learning)

- Practice a multidisciplinary approach for rheumatologic patients that emphasize the collaborative use of mental health professionals, physical therapist and patient self-management skills. (Medical Knowledge, Systems-based Practice)
- Recognize and emphasize the importance of preventative medicine and physical activity prescriptions that ultimately decrease the disability attributable to rheumatologic disease. (Interpersonal Skills, Communication, Practice-based Learning, Systems-based Practice)
- Practice lifelong learning that incorporates diagnostic and therapeutic skills. (Medical Knowledge)

Attitudes

The resident should demonstrate attitudes that encompass:

- The recognition of the increased health care utilization and potential disability of rheumatic diseases.
- Support of each patient to reach his or her maximum function with minimal disability.
- Taking into account the direct and indirect costs of rheumatic diseases (including treatment, supportive care and burden for patient's family).
- The recognition of how family, psychological and environmental variables impact health status.
- Endorsement of the multidisciplinary approach for the control of rheumatic disease and promotion of function.
- The recognition that each patient's cultural background can impact proposed treatment plans and future disability.

Knowledge

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

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

2. The appropriate focused history for joint and soft tissue symptoms, screening, a complete musculoskeletal examination, functional assessment and use of laboratory and imaging modalities:
    a. Indications for and interpretation of arthrocentesis
    b. Indications for and interpretation of tissue biopsy results
    c. Indications for arthroscopy

3. The clinical presentation, diagnostic criteria and initial treatment for various rheumatologic conditions with special emphasis on osteoarthritis, gout, rheumatoid arthritis, Lupus erythematosus and polymyalgia rheumatica:
    a. Arthralgia

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's disease
    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). Acquired
    3). Calcium pyrophosphate dihydrate (pseudogout)
    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's 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's granulomatosis
        2). Giant Cell (temporal) arteritis
    v. Kawasaki disease
    vi. Behcet's 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's phenomenon
viii. Complex regional pain syndrome

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

4. The indications, laboratory and exam monitoring, potential side effects and contraindications of pharmacologic agents for analgesia, disease modification, immunosuppression and anti-inflammation
   a. Define the mechanism of action of different analgesic medications (including acetaminophen, COX 2 inhibitors, tramadol and narcotics)
   b. List the mechanisms of the different disease modifying agents (including antimalarials, sulfasalazine, minocycline and gold salts)
   c. List the mechanism of action of different immunosuppressive agents including penicillamine, cytotoxic agents such as methotrexate, and biologic agents such as anti-tumor necrosis factor and IL-1 receptor antagonists)
   d. List the indications for use of local and systemic preparations of corticosteroids in different rheumatic conditions
   e. Describe the use of uricosuric agents for prevention of gouty attacks and the use of abortive agents in acute attacks
   f. Describe the role of antibiotics in the treatment of rheumatic conditions
   g. List the various medications and special circumstance for each agent in the treatment of osteoporosis

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

6. A multidisciplinary approach to the treatment of rheumatologic conditions that utilizes expertise resources (including a rheumatologist, physiatrist, physical and occupational therapist, orthopedic surgeon and mental health provider) for optimal patient care

7. Complementary therapies and modalities available to rheumatic conditions (including supplements, chiropractic and acupuncture)

8. Disability prevention in rheumatologic conditions which includes appropriate general health maintenance with attention to necessary vaccinations, appropriate weight

maintenance with nutrition and exercise counseling, and attention to controlling other co-morbid medical conditions.

Skills

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

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, non-symmetrical 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 affect on social and psychological status of the patient.

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

8. Treatment of rheumatologic conditions and the monitoring of the laboratory, physical exam and potential side effects in consultation with a rheumatologist.

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

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

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

12. A focused history, musculoskeletal exam and laboratory evaluation to evaluate disease progression.

13. The inclusion of a multidisciplinary approach to the treatment of rheumatologic conditions and appropriate referral to orthopedic surgeons, rheumatologists,

physiatrists, psychologist or psychiatrists, nutritionists and physical and occupational therapists.

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 that cover topics in these educational guidelines. The curriculum guidelines should be integrated into the schedule of conferences and other teaching modalities, such as monographs, films and consultations. 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 the management of this group of diseases which emphasizes disability prevention and patient self-management skills.

Resources

Rodinelli RD, Genovese E, Brigham CR. Guides to the Evaluation of Permanent Impairment. 6th ed. Chicago, Ill.: American Medical Association, 2008.

Guidelines for the Management of Rheumatoid Arthritis. Arthritis and Rheumatism. 2002, 46(2):328-46.

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

Harris ED, Kelley WN. Kelley's Textbook of Rheumatology. 7th ed. Vols 1 and 2. Philadelphia, Pa.: Saunders Elsevier, 2005.

Klippel JH. Primer on the rheumatic diseases. 13th ed. Atlanta, Ga.: Arthritis Foundation, 2008.

Stuart MR, Lieberman JA. The Fifteen Minute Hour: Practical Therapeutic Interventions in Primary Care. 3rd ed. Philadelphia, Pa.: Saunders, 2002.

Koopman WJ, Moreland LW. Arthritis and Allied Conditions: A Textbook of Rheumatology. 15th ed. Philadelphia, Pa.: Lippincott Williams & Wilkins, 2005.

Hochberg MC. Rheumatology. Vols 1 and 2. 4th ed. Philadelphia, Pa.: Mosby/Elsevier, 2008.

Web Sites

National Arthritis Foundation
http://www.arthritis.org

The Centers for Disease Control and Prevention
http://www.cdc.gov/arthritis

California HealthCare Foundation
www.chcf.org/topics/chronicdisease/index.cfm?subtopic=CL613

National Institute of Arthritis and Musculoskeletal and Skin Disease
http://www.niams.nih.gov

American College of Rheumatology
http://www.rheumatology.org

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