



Recommended Curriculum Guidelines for Family Practice Residents

HIV Infection/AIDS

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

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

Physicians' ultimate concern is the welfare of the patient. The patient's age, background or illness may call for different approaches to care, but appropriate history and physical examination skills, as well as the social and psychologic aspects of care are integral parts of physician training.

The pandemic of human immunodeficiency virus (HIV) infection is of vital concern to family physicians, and the diverse population served by family physicians provides a unique opportunity for patient education and prevention. Family physicians are well suited to counsel patients about prevention of HIV infection and to care for those who are infected. The basic tenets of family medicine emphasize a compassionate, whole-person approach to patient care, the application of specific knowledge and skills to a wide variety of disease entities, and a comprehensive and continuous commitment to patients and their families. Drawing on these core tenets, family physicians have an important role to play in the care of HIV-infected individuals. Family physicians should be knowledgeable about the multiple issues related to the care of patients who have HIV disease and the acquired immunodeficiency syndrome (AIDS), and must develop skills to stay abreast of new developments in the treatment of patients who have HIV infection.

These guidelines are intended to assist in the development of an HIV/AIDS curriculum for family medicine residencies. Because the knowledge base and technology related to HIV/AIDS are rapidly changing, family physicians must also be aware of the resources available to maintain updated information and skills.

Competencies

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

- Recognize risk factors and early symptoms of HIV to actively counsel patients regarding prevention, testing, diagnosis, treatment and management. (Medical knowledge)
- Synthesize an appropriate diagnosis and management plan for conditions associated with HIV infection/AIDS. (Patient care & Medical knowledge)
- Optimize treatment plans based on knowledge of local HIV care resources that include local, state and federal agencies. (Medical knowledge)
- Communicate effectively with patients to ensure clear understanding of diagnosis and plan of care. (Interpersonal communications)
- Recognize own practice limitations; seek consultation with other health care providers and resources to provide optimal patient care. (Professionalism, systems-based care)
- Understand the legal, ethical and social context of HIV, and its impact on the care of special populations (Professionalism)

Attitudes

The resident should develop attitudes that encompass:

- An awareness of the importance of the physician's own attitudes toward sexuality, intravenous drug abuse, cultural differences, communicable diseases and death.
- The willingness to obtain sexual and drug histories from patients that are appropriate to their medical care needs.
- An understanding of the importance of quality-of-life issues.
- Compassion and objectivity when dealing with patients who have a chronic and potentially life-threatening illness.
- Recognition of the physician's abilities and need for further consultation.
- A willingness to function in the role of coordinator of medical and non-medical services.
- Recognition of the importance of support from family members and others.
- Acceptance of the physician's continuing responsibility to support the patient and family throughout all stages of the illness.
- An awareness of the importance of setting a positive example for other health care providers and the community.
- An awareness of community and cultural attitudes toward the illness and the need for confidentiality

Knowledge

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

A. General considerations

1. Scientific background
 - a. HIV virology and pathophysiology
 - b. Immunodeficiency manifestations and complications
 - c. Epidemiology
 - i. Local, regional, global prevalence and incidence
 - ii. Disproportionate prevalence in minorities, adolescents and women in the U.S. epidemic
 - iii. National shift toward heterosexual contact-driven epidemic
 - d. Modes of transmission
 - i. Unprotected sexual contact
 - ii. Intravenous drug use
 - iii. Vertical transmission from mother to child (e.g., intrauterine, intrapartum, postpartum, breast-feeding)
 - iv. Other exposure to human body fluids (e.g., blood and blood products, needlesticks, etc., including transmission in the health care setting)

2. Definitions

- a. Centers for Disease Control and Prevention (CDC) HIV classification
- b. World Health Organization (WHO) HIV classification

3. Laboratory testing

a. Type of test

- i. ELISA (enzyme-linked immunosorbent assay) and rapid testing (bloodspot and oral swab)
- ii. Confirmatory tests: Western blot, HIV RNA PCR
- iii. CD4 + lymphocyte counts
- iv. Viral load (HIV RNA PCR)
- v. Resistance testing
 - 1). Genotype analysis
 - 2). Phenotype analysis
 - 3). Virtual phenotype

b. Indications for testing

- i. Risk assessment and recommendations for voluntary testing
 - 1). Universal prenatal testing recommendations
 - 2). Universal testing recommendations for high-risk patients
- ii. Clinical assessment
 - 1). Acute retroviral syndrome
 - 2). Asymptomatic chronic HIV infection
 - 3). Symptomatic chronic HIV infection
 - 4). Non-life threatening infections and symptoms suggestive of HIV infection
 - 5). AIDS-defining illnesses
- iii. Public health surveillance
- iv. Mandatory testing regulations

c. Test results and counseling

- i. CDC recommendations for universal “opt-out” consent policy
- ii. Appropriate pre- and post-test counseling
- iii. Confidentiality issues
- iv. Public health case reporting
- v. Mandatory reporting regulations
- vi. Partner notification

B. Clinical manifestations

1. Opportunistic infections: candidiasis; pneumocystis jirovecii pneumonia (PCP); cryptococcosis; cryptosporidiosis; histoplasmosis; cytomegalovirus infections; herpes simplex and herpes zoster; Mycobacterium avium complex, Mycobacterium kansasii ; Mycobacterium tuberculosis; toxoplasmosis
2. Associated malignancies: (e.g., Kaposi's sarcoma and lymphoma)
3. Other HIV syndromes: progressive multifocal leukoencephalopathy (PML), HIV encephalopathy, HIV-associated dementia, HIV wasting syndrome, hypogonadism, peripheral neuropathy, lipodystrophy, lipoatrophy.

4. Special presentations in children: failure to thrive, abnormal milestones
5. Special presentations in pregnant and nonpregnant women: cervical cancer, cervical and vulvar/vaginal dysplasia, vaginal fungal infections
6. Hepatitis B and C
7. Anal dysplasia and neoplasia
8. Other sexually transmitted infections (STIs)

C. Treatment and patient-care issues

1. Pharmacologic management
 - a. When to initiate antiretroviral therapy
 - b. Compliance
 - c. Antiretroviral drug categories
 - d. First-line regimens
 - e. Monitoring effectiveness of regimen
 - f. Assessing side effects
 - g. Antiretroviral drug interactions
 - h. Defining treatment failure
 - i. Selecting alternative regimens
 - j. Assessing adherence
 - k. Pharmaceutical resistance
2. Knowledge of the range and limitations of services available both in ambulatory and inpatient care
3. Characteristics of rehabilitation; long-term and alternative care; housing needs
4. Collaboration with consultants
5. Availability of experimental treatments and clinical trials
6. Health care maintenance and immunizations
7. Prophylaxis against common opportunistic infections; discontinuation of prophylactic therapy
8. Treatment options during pregnancy; peripartum treatment recommendations

D. Psychosocial and ethical issues

1. Physician responsibility and patient abandonment
2. Death and dying

3. "Do not resuscitate" (DNR) orders
4. Individual rights versus society rights
5. Confidentiality and record keeping
6. Concurrent polysubstance abuse
7. Sexual practices and orientation; gender identification
8. Patient competence determination, conservatorship and durable power of attorney
9. Family resources and family contributions
10. Impact on family

E. Legal issues

1. Confidentiality of medical records
2. Disclosure of status
3. Occupational Safety and Health Administration (OSHA), U.S. Department of Health and Human Services (DHHS) requirements
4. Federal requirements
5. Local laws
6. Testing by employers and health insurers

F. Financial considerations

1. Eligibility criteria for Medicare, Medicaid and Social Security
2. Available funding for health care and medications
 - a. Ryan White title funding
 - b. AIDS Drug Assistance Program (ADAP)

G. Special considerations for health care providers

1. Occupational risks and prevention strategies
2. Specific psychosocial and ethical issues
3. Impairment and work-related disability
4. Post-exposure prophylactic treatment protocol and recommendations

Skills

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

1. Evaluate
 - a. Take patient's sexual and substance use history and perform risk factor assessment
 - b. Perform a comprehensive physical examination
 - c. Select appropriate diagnostic procedures
 - d. Interpret the results of HIV testing
 - e. Set appropriate priorities for investigation with patient, family and friends
 - f. Investigate common symptoms (fever, cough, diarrhea)
 - g. Recognize life-threatening conditions (e.g., severe hypoxia, cytomegalovirus retinitis, drug overdose)
 - h. Know when to order or refer for laboratory evaluations and screening tests (e.g., PPD, HBV and HAV titers, toxoplasmosis, syphilis, Pap smears, chest x-rays, appropriate laboratory analyses for acid-fast bacterial infections, common bacterial infections, viral and fungal infections, lipid profiles, metabolic analyses, blood count analyses, routine primary care prevention measures, etc.)
2. Prevent
 - a. Provide health education and preventive counseling
 - b. Counsel HIV-positive individuals and contacts regarding risk of virus transmission
 - c. Consult with community groups and lead group discussions about risks of HIV transmission
 - d. Perform prenatal testing and counseling in high-risk groups
 - e. Be informed about and comply with institutional protocols for the protection of employees
3. Manage
 - a. Formulate a problem list and prioritize a management plan
 - b. Provide antiretroviral therapy
 - c. Utilize and coordinate multiple consultants and resources
 - d. Coordinate ambulatory, inpatient and long-term care
 - e. Counsel patients and significant others appropriately about testing and test results, therapeutic modalities and prognosis
 - f. Provide competent terminal care
 - g. Manage HIV exposure in the work environment

4. Community involvement
 - a. Interact with and assume leadership in medical, social and political communities
 - b. Provide education about HIV infection and AIDS in medical, social and political settings
5. Use online and Internet resources to obtain current protocol guidelines

Implementation

Within the capabilities of the residency program, the implementation of these curriculum guidelines is best achieved with the use of outside resources, when necessary. Residents should have basic knowledge and skills to care appropriately for their own patients and to serve as a community resource for information about HIV-related issues. Any training efforts must also strive to maintain an up-to-date curriculum that includes recent medical advances.

Precise details of implementation may vary among residency programs, depending on interest levels and the frequency of contact with HIV-positive patients.

Resources

National AIDS Information Clearinghouse

Sponsored by the Centers for Disease Control and Prevention, this Clearinghouse is a comprehensive information source for those involved in AIDS education. Information is available on more than 6,000 programs, projects and organizations providing AIDS-related services.

800-458-5231

Monday-Friday, 9 a.m. - 6 p.m. EDT

National HIV Telephone Consultation Service (Warmline)

Sponsored by the U.S. Health Resources and Services Administration (HRSA) and the AAFP, this service provides clinicians with information and case consultation for HIV/AIDS management

800-933-3413

Monday-Friday, 10:30 a.m. - 8 p.m. EDT

Web Sites

AIDSinfo (a service of the U.S. Department of Health and Human Services [DHHS]):
<http://www.aidsinfo.nih.gov/>

American Academy of Family Physicians: <http://www.aafp.org>

American Medical Association: <http://www.ama-assn.org>

Centers for Disease Control and Prevention: <http://www.cdc.gov>

National Prevention Information Network, HIV/AIDS Introduction:
<http://www.cdcnpin.org/scripts/hiv/>

University of California, San Francisco, National HIV/AIDS Clinician's Consultation
Center: <http://www.ucsf.edu/hivcntr/Warmline/>

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