



AMERICAN ACADEMY OF
FAMILY PHYSICIANS

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Recommended Curriculum Guidelines for Family Medicine Residents

Conditions of the Eye

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

Introduction

This Curriculum Guideline defines a recommended training strategy for family medicine residents. Topic competencies, 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), 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 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.

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 help patients and their family members adjust to acute or chronic illnesses that may significantly affect daily life and family function. Ocular dysfunction presents unique challenges to patients. Family medicine residents must learn to maximize visual function through the control of environmental factors, the management of disease, and preventive care. Deterioration of function can be minimized through initiation of appropriate treatment, including rapid referral when necessary. The family medicine resident must also learn when social and/or psychological intervention is appropriate in patients who have ocular dysfunction.

Competencies

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

- Display an understanding of eye anatomy, common causes and treatment of acute and chronic visual loss, indications for screening examinations in the general population and in patients with systemic disease, and the ability to perform basic vision screening (Medical Knowledge, Patient Care, Practice-based Learning)
- Demonstrate an understanding of the impact of ocular illness and dysfunction on patients and their families (Patient Care, Professionalism)
- Demonstrate an understanding of the ophthalmic consultant's role, including the different responsibilities of ophthalmologists, optometrists, and opticians (Professionalism, Systems-based Practice)
- Recognize his or her own practice limitations and seek consultation with other health care providers when necessary to provide optimal patient care (Professionalism, Systems-based Practice, Interpersonal and Communication Skills)

Attitudes

The resident should demonstrate attitudes that encompass:

- A supportive and compassionate approach to the care of patients who have ocular disease, especially in cases of deteriorating vision
- Recognition of the effects of loss of visual function
- The importance of support systems in the health of patients who have ocular disease
- An understanding of the ophthalmic consultant's role, including the different responsibilities of ophthalmologists, optometrists, and opticians

Knowledge

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

1. Normal anatomy, physiology, and aging of the eye and ocular function (see also the AAFP Curriculum Guideline *Care of Older Adults* [Reprint No. 264])
2. Psychological and adaptive needs of patients with chronic ocular deterioration
3. Effects of drugs and toxins on ocular function and disease
4. Effects of ocular drugs on systemic function
5. Ocular manifestations of systemic disease
6. Understanding of ocular disability in elderly patients and the importance of regular assessment and maintenance of functional capacity (see also the AAFP Curriculum Guideline *Care of Older Adults* [Reprint No. 264])
7. Ocular complications of systemic illness
8. Guidelines for appropriate vision evaluation (including recommended time between evaluations) from birth to senescence
9. Initial diagnosis, management, and appropriate referral criteria for common eye problems
 - a. Refractive errors
 - i. Nearsightedness (myopia)
 - ii. Farsightedness (hyperopia)
 - iii. Presbyopia
 - iv. Astigmatism
 - b. Skin and adnexal disorders
 - i. Infections
 - 1). Hordeolum
 - 2). Preseptal cellulitis
 - 3). Orbital cellulitis
 - 4). Dacryocystitis
 - ii. Inflammation
 - 1). Graves disease
 - 2). Chalazion
 - iii. Eyelid disorders
 - 1). Entropion and ectropion
 - 2). Ptosis
 - 3). Blepharitis

- iv. Benign tumors
 - 1). Milia
 - 2). Papilloma
 - 3). Keratoacanthoma
 - 4). Nevus
 - 5). Dermoid
 - 6). Xanthelasma
- v. Malignant tumors
 - 1). Basal cell carcinoma
 - 2). Squamous cell carcinoma
 - 3). Lymphoma
 - 4). Malignant melanoma
 - 5). Retinoblastoma
- c. Conjunctival disorders
 - i. Conjunctivitis
 - 1). Viral conjunctivitis
 - 2). Herpes simplex conjunctivitis
 - 3). Herpes zoster conjunctivitis and keratitis
 - 4). Bacterial conjunctivitis
 - 5). Allergic conjunctivitis
 - ii. Conjunctival nevus
 - 1). Pterygium
 - 2). Pinguecula
 - iii. Conjunctival tumors
- d. Corneal diseases
 - i. Superficial trauma and infection
 - 1). Corneal abrasion (including those caused by contact lenses)
 - 2). Keratitis
 - 3). Corneal ulcers
 - ii. Dry eye and associated diseases
- e. Iritis
 - i. Unequal pupils
 - ii. Afferent pupillary defect
 - iii. Adie syndrome
 - iv. Horner syndrome
- f. Cataracts
- g. Glaucoma
 - i. Acute angle-closure glaucoma
 - ii. Open-angle glaucoma

- h. Retinal disease
 - i. Associated with visual loss
 - 1). Central retinal vein occlusion
 - 2). Branch retinal vein occlusion
 - 3). Central retinal artery occlusion
 - 4). Retinal detachment and vitreous hemorrhage
 - ii. Associated with medical conditions
 - 1). Hypertension
 - 2). Diabetes mellitus
 - 3). Migraine headache
 - iii. Macular degeneration
 - iv. Age-related changes
 - i. Optic nerve disorder
 - j. External muscular disorders
 - i. Cranial nerve palsies
 - k. Trauma
 - i. Blunt
 - ii. Penetrating
10. Appropriate indications for special procedures in ophthalmology and ophthalmoradiology
- a. Fluorescein angiography
 - b. Ocular ultrasound
 - c. Visual field testing
 - d. Magnetic resonance imaging (MRI) and computed tomography (CT) of the eye
11. Indications, contraindications, limitations, and follow-up care of elective eye procedures, including the spectrum of refractive surgery, cosmetic surgery, and procedures (including the procedures of lens transplant and laser keratotomy).
12. Prevention of eye injury and vision loss

Skills

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

1. Evaluation

- a. Perform specific procedures and interpret results
 - i. Tests of visual acuity, visual fields, and ocular motility
 - ii. Direct ophthalmoscopy
 - iii. Flashlight examinations
 - iv. Fluorescein staining of the cornea
 - v. Tonometry
 - vi. Slit-lamp examination
- b. Perform physical examination in patients of all ages, with emphasis on understanding normal neurologic and motor responses, as well as appearance
- c. Localize the problem and generate a differential diagnosis and management plan
- d. Formulate a rational plan for investigation and management, including assessment of severity and the need for immediate expert assistance

2. Management

- a. Formulate a plan for management, investigation, and acquisition of expert advice, with an awareness of the potential risks, costs, and value of information that can be obtained
- b. Manage and recognize the prevalent and treatable diseases listed in the "Knowledge" section of this guideline, with consultation as appropriate
- c. Manage and coordinate psychosocial and family issues, including long-term care of debilitating ocular conditions, necessary environmental adaptation, and use of community resources
- d. Manage appropriate medications
- e. Use appropriate diagnostic tests and medications
 - i. Mydriatics
 - ii. Topical anesthetics
 - iii. Corticosteroids
 - iv. Antibiotics
 - v. Glaucoma agents

Implementation

Implementation of this core curriculum is best achieved within the capabilities of the particular residency program and at the discretion of the residency director. Family medicine residents should have the opportunity to provide direct patient care under supervision, with emphasis on common treatable problems, prevention of deterioration, and ocular emergencies. Some portion of this training should be attained in the ophthalmology outpatient setting. Family medicine residents planning to provide care in communities where consultation resources are not readily available may need additional training with the assistance of a specialist.

Resources

Beard JM, Dresden GM, Hsu-Dresden IS. *Eye Care Update*. FP Essentials™, Edition No. 350, AAFP Home Study. Leawood, KS: American Academy of Family Physicians; July 2008.

Berson FG. *Basic Ophthalmology for Medical Students and Primary Care Residents*. San Francisco, CA: American Academy of Ophthalmology; 1999.

Chawle HB. *Ophthalmology: A Symptom-based Approach*. Woburn, MA: Butterworth-Heinemann; 1999.

Trobe JD. *The Physician's Guide to Eye Care*. San Francisco, CA: American Academy of Ophthalmology; 2000.

Vaughan D, Asbury T, Riordan-Eva P. *General Ophthalmology*. Stamford, CT: Appleton & Lange; 1999.

Wu G. *Ophthalmology for Primary Care*. Philadelphia, PA: Saunders; 1997.

Website Resources

American Family Physician by Topic: Eye and Vision Disorders. (Multiple articles)
www.aafp.org/afp/topicModules/viewTopicModule.htm?topicModuleId=66

American Academy of Ophthalmology. www.aao.org

EyeNet Magazine. www.aao.org/publications/eyenet

National Eye Institute: www.nei.nih.gov

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