



AMERICAN ACADEMY OF FAMILY PHYSICIANS

AAFP Reprint No. 285

Recommended Curriculum Guidelines for Family Medicine Residents

Urgent and Emergent Care

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. 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.

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 are the most broadly trained specialists in health care. There is considerable overlap in the patient populations served by family physicians and the emergency physician, as well as the competencies, knowledge, skills, and attitudes necessary to succeed in each setting. This guideline seeks to identify the unique and critical elements that might not be adequately addressed in other curricular areas (e.g., general medicine, pediatrics, surgery, obstetrics, orthopedics, ophthalmology). Management of acute emergent conditions in each required specialty rotation should be adequately addressed within those curricula. Residents' future practice settings (e.g., solo emergency practice, rural/remote settings that require significant stabilization for distant transport) will determine the need for additional knowledge, procedural skills, and mastery of these elements.

Prompt assessment, intervention, and disposition are critical elements of the emergency medicine experience and are frequently performed in the face of multiple simultaneous patient encounters. Residents will need to become comfortable leading and participating as a member of a health care team that treats patients in urgent and emergent situations, as well as learning the appropriate use of consultants in patient care.

Competencies

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

- Demonstrate an ability to rapidly gather and assess information pertinent to the care of patients in an urgent and/or emergent situation; develop treatment plans appropriate to the stabilization and disposition of these patients and how these integrate into the patient's continuity-based health care (Patient Care, Medical Knowledge)
- Recognize and provide life-saving treatments for immediately life-threatening conditions common to emergency medicine settings (Medical Knowledge, Patient Care)
- Identify the indication and perform procedures as appropriate for the stabilization of the patient in an urgent and/or emergent care setting (Patient Care, Medical Knowledge, Practice-based Learning and Improvement)
- Acquire the requisite skills in appropriate utilization of the resources available in the urgent and/or emergent care setting, including laboratory, radiology, ancillary services, and consultations with specialists (including transfer to a higher level of care) (Systems-based Practice)
- Demonstrate an ability to learn from experience, perform self-analysis of practice patterns, and participate in peer review of practice patterns (Practice-based Learning and Improvement)
- Use a professional and caring manner and sensitivity to cultural and ethnic diversity to appropriately inform and educate the patient and family, and to elicit their participation in medical decision making (Professionalism, Interpersonal and Communication Skills)

Attitudes

The resident should demonstrate attitudes that encompass:

- Ability to communicate effectively and compassionately with patients and families
- Ability to communicate effectively with physicians and other health care professionals and to work effectively in a team, especially in facilitating transitions of care
- Effectively and appropriately consult and refer in the emergency setting
- Effectively and efficiently assess the patient according to the urgency of the patient's problem
- Awareness of the importance of cost containment and the need to appropriately utilize medical resources
- Awareness of the role of the emergency department in disaster planning for a community
- Understanding of the role of the family physician in disaster planning, training, and integration into the various government and private agencies responding to natural and man-made disasters
- Awareness of the role of pre-hospital care in emergency department outcomes and disposition
- Understanding of resources available outside of the emergency department to allow for more continuity-based health care

Knowledge

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

1. The principles of care through the continuum of medical management, including:
 - a. Pre-hospital emergency care and its importance in the initial stabilization of patients, including:
 - i. Emergency medical services (EMS)
 - ii. Communication systems and protocols (including appropriate implementation on a community- and system-wide basis)
 - b. Prioritization and triage
 - c. Resuscitation and stabilization
 - d. Reassessment and monitoring
 - e. Understanding key differences between pediatric and adult patients
 - f. Consultation
 - g. Referral
 - h. Disposition
 - i. Mass casualty, disaster planning, and coordination of care with appropriate government and private agencies

- j. Legal requirements specific to emergency department care and services
2. Assessment and management of conditions in the following content areas:
- a. Trauma
 - i. Primary and secondary assessment of the traumatically injured patient
 - 1) By mechanism of injury
 - a. Blunt trauma (e.g., heart, lung, intra-abdominal organ rupture)
 - b. Penetrating trauma (e.g., gunshot, stab wounds)
 - 2) By site of injury
 - a. Head and neck
 - b. Spine and spinal cord
 - c. Face and special organs
 - d. Soft tissue
 - e. Chest
 - f. Abdomen
 - g. Extremities
 - h. Genitourinary
 - b. Psychiatric emergencies
 - i. Mood disorders
 - ii. Homicidal ideation
 - iii. Suicidal ideation and attempt
 - iv. Acute mania
 - v. Acute anxiety and panic disorders
 - vi. Hysterical conversion
 - vii. Addictive disorders, overdose syndromes, and drug-seeking behaviors
 - viii. Pain management guidelines, including acute pain management in chronic pain patients and the role of the emergency physician in limiting prescription drug diversion
 - ix. Delirium and altered mental status
 - x. Risk assessment and involuntary commitment
 - xi. Management of the combative patient
 - xii. Acute alcohol and drug intoxication and withdrawal
 - xiii. Utilization of mental health services in the emergent setting
 - c. Environmental disorders
 - i. Burns (e.g., chemical, thermal, electrical)
 - ii. Electrocution and lightning injuries
 - iii. Bites (human and animal) and stings
 - iv. Poisonous plants
 - v. Hypersensitivity reactions and anaphylaxis
 - d. Obstetric and gynecologic emergencies
 - i. Sexual assault and rape
 - ii. Acute pelvic pain
 - iii. Ectopic pregnancy
 - iv. Threatened or spontaneous abortion
 - v. Precipitous delivery
 - vi. Acute medical complications of pregnancy, (e.g., preeclampsia, eclampsia, placenta previa, placental abruption, preterm labor, etc.)

- vii. Vaginal bleeding
 - viii. Emergency contraception
- e. Victims of violence
- i. Child abuse
 - ii. Partner/spousal abuse
 - iii. Elder abuse
 - iv. Other forms of assault
3. Recognition and management of acute life-threatening conditions in the following organ systems:
- a. Acute neurologic disorders
- i. Altered level of consciousness and coma
 - ii. Acute cerebrovascular accidents (CVA)
 - 1) Hemorrhagic
 - 2) Embolic and understanding the indications and management of thrombolysis in acute embolic CVA
 - 3) Transient ischemic attack (TIA)
 - iii. Acute infections of the nervous system, meningitis, and encephalitis
 - iv. Seizures
 - v. Acute headache management
 - vi. Acute spinal cord compression
 - vii. Closed head injury (e.g., concussion, contusion)
 - viii. Syncope
- b. Acute respiratory disorders
- i. Acute respiratory distress and failure
 - ii. Pulmonary embolism
 - iii. Pulmonary infections
 - iv. Pneumothorax
 - v. Exacerbation of obstructive and restrictive lung disease (e.g., asthma, chronic obstructive pulmonary disease [COPD])
 - vi. Respiratory distress in neonates and infants
 - vii. Severe pneumonia, flu, and other respiratory conditions
- c. Acute cardiovascular disorders
- i. Acute chest pain
 - ii. Cardiac arrest
 - iii. Life-threatening dysrhythmias
 - iv. Acute coronary syndrome (e.g., unstable angina, non-ST segment elevation myocardial infarction [NSTEMI], STEMI)
 - v. Heart failure (acute and exacerbation of chronic heart failure)
 - vi. Pericardial effusion, pericarditis, and cardiac tamponade
 - vii. Thoracic and abdominal aortic aneurysm dissection and rupture
 - viii. Thrombolytic therapy
 - ix. Hypertensive urgencies and emergencies
 - x. Acute vascular obstruction
- d. Acute endocrine disorders
- i. Diabetic ketoacidosis and hyperosmotic nonketotic state
 - ii. Thyroid emergencies (thyroid storm and myxedema coma)

- iii. Acute adrenal insufficiency
 - e. Acute gastrointestinal disorders
 - i. Acute abdomen and its initial surgical evaluation
 - ii. Alimentary - gastrointestinal bleeding, diverticulitis, ischemic bowel disease, bowel obstruction, appendicitis
 - iii. Hepatobiliary and pancreatic - cholecystitis, cholangitis, pancreatitis, hepatitis and jaundice
 - f. Acute genitourinary system disorders
 - i. Sexually transmitted infections
 - ii. Acute testicular pain (e.g., testicular torsion, epididymitis)
 - iii. Renal colic and nephrolithiasis
 - iv. Acute pyelonephritis
 - v. Acute urinary retention
 - vi. Priapism
 - vii. Genital trauma
 - g. Acute musculoskeletal disorders
 - i. Initial fracture management, including basic splinting and casting
 - ii. Reduction of acutely dislocated joints
 - iii. Acute joint sprains and strains
 - iv. Compartment syndromes
- 4. Recognition and management in the following areas:
 - a. Toxicologic emergencies, toxidromes, and their treatment
 - i. Acute overdose and pharmacokinetics
 - ii. Accidental poisonings and ingestion
 - iii. Treatments and antidotes
 - iv. Access to databases and poison control
 - b. Mass casualty
 - i. Bioterrorism
 - ii. Environmental/natural disaster
 - iii. Nuclear
 - iv. Biological and infectious
 - v. Chemical
 - c. Shock and initial resuscitative measures required for each unique condition
 - i. Distributive shock
 - ii. Cardiogenic shock
 - iii. Hypovolemic shock
 - iv. Obstructive shock
 - d. Acute infectious emergencies
 - i. Systemic inflammatory response syndrome (SIRS), sepsis, severe sepsis, septic shock
 - e. Special circumstances
 - i. Resuscitations (e.g., coordination, communication, recording)
 - ii. Drowning and near-drowning
 - iii. Sudden infant death syndrome (SIDS)

- v. Metabolic disorders, electrolyte disorders and acid-base imbalance
- vi. Temperature irregularities
 - 1) Acute heat exhaustion and heat stroke
 - 2) Cold exposure injuries (e.g., hypothermia, frostbite)
- vii. Acute ophthalmologic emergencies
 - 1) Acute painful red eye
- viii. Acute hematological and oncological emergencies
 - 1) Sickle cell disease crises (pain, vaso-occlusive, acute chest)
 - 2) Acute symptomatic anemia
 - 3) Acute febrile neutropenia and infection
 - 4) Acute hypercalcemia
 - 5) Tumor lysis syndrome
- f. Indications and interpretation of diagnostic tests pertinent to the urgent and emergent setting
 - i. Electrocardiograms
 - ii. Blood laboratory chemistry and hematologic studies
 - iii. Urinalysis
 - iv. Interpretation of joint fluid analysis
 - v. Radiologic imaging of:
 - 1) Acute head and cervical spine injuries
 - 2) Chest pathology
 - 3) Acute abdominal conditions
 - 4) Pelvis and extremity injuries
- g. Medicolegal issues
 - i. Informed consent and competency
 - ii. Code status and guardianship
 - iii. Withholding and termination of treatment
 - iv. Laws (e.g., commitment, Good Samaritan, reportable conditions, Emergency Medical Treatment and Labor Act [EMTALA])
 - v. Liability (e.g., duty to treat, negligence and standard of care, risk management)
- h. Social and other special issues
 - i. The homeless patient
 - ii. The under/uninsured patient
 - iii. Antibiotic stewardship
- g. Disease prevention
 - i. Active and passive immunization
 - ii. Antibiotic prophylaxis

Skills

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

- 1. Airway management
 - a. Heimlich maneuver

- b. Ensuring airway patency and the use of advanced airway techniques
 - i. Bag-valve mask ventilation
 - ii. Oral endotracheal intubation in children and adults, including rapid sequence intubation
 - iii. Laryngeal mask airway (LMA)
 - iv. Esophageal obturator airway
 - c. Needle thoracentesis and tube thoracostomy
 - d. Initiation of mechanical ventilation
 - e. Cricothyroidotomy
2. Anesthetic techniques, including appropriate assessment and monitoring of:
- a. Local and topical anesthesia
 - b. Regional and digital nerve blocks
 - c. Procedural sedation and analgesia, including intravenous and alternate routes
3. Hemodynamic techniques
- a. Intravenous access (including ultrasound-guided)
 - b. Arterial catheter insertion and blood-gas sampling
 - c. Central venous access (e.g., jugular, femoral, subclavian)
 - d. Peripherally inserted central catheter (PICC) insertion
 - e. Doppler and ultrasound-guided vascular access
 - f. Intraosseous infusion
4. Diagnostic and therapeutic procedures
- a. Control of epistaxis (anterior and posterior packing)
 - b. Peritoneal tap and lavage
 - c. Lumbar puncture
 - d. Arthrocentesis
 - e. Pericardiocentesis
 - f. Nasogastric intubation
 - g. Thoracentesis
5. Skeletal procedures
- a. Spine immobilization and traction techniques
 - b. Fracture and dislocation immobilization techniques
 - c. Role of stabilization techniques for injured body parts, including application of durable medical equipment or splinting
 - d. Fracture and dislocation reduction techniques

- e. Initial management of traumatic amputation
- 6. Other
 - a. Repair of skin lacerations (including plastic closure)
 - b. Management of wounds
 - c. Management of foreign bodies in the skin and body orifices
 - d. Mass casualty triage
 - e. Multiple patient management
 - f. Evaluation of ocular trauma
 - g. Grief and loss counseling
 - h. Critical incident stress debriefing
 - i. Management of acute cardiorespiratory arrest in all age groups and implementation of the skills of Advanced Cardiovascular Life Support (ACLS), Pediatric Advanced Life Support (PALS), the Neonatal Resuscitation Program (NRP), and Advanced Trauma Life Support (ATLS) to lead a team resuscitative effort

Implementation

A significant portion of the management of emergencies will be provided by services other than the emergency department. Although, much of the content of this guideline may be fulfilled while the resident is working in the emergency department or urgent care setting, as well as additional off-site experiences (e.g., helicopter or ground transport exposure). Incorporating urgent care experiences into the overall educational plan may provide significant adjunctive learning, as an increasing number of family physicians now work in urgent care centers.

Residents should have concentrated time spent in the emergency department on evaluation and management of patients who have presentations atypical of other outpatient experiences. Knowledge and skill acquisition may be supplemented through additional lecture series or course work, including Advanced Burn Life Support (ABLS), Advanced Cardiovascular Life Support (ACLS), Advanced Life Support in Obstetrics (ALSO), Advanced Trauma Life Support (ATLS), Pediatric Advanced Life Support (PALS), Neonatal Resuscitation Program (NRP), and other such courses.

Resources

Knoop KJ, Stack LB, Storrow AB, Thurman R. *The Atlas of Emergency Medicine*. 4th ed. New York, NY: McGraw-Hill; 2016.

Walls RM, Marx JA, Gausche-Hill M. *Rosen's Emergency Medicine: Concepts and Clinical Practice*. 9th ed. Philadelphia, Pa.: Saunders; 2018.

Pfenninger JL, Fowler GC. *Pfenninger & Fowler's Procedures for Primary Care*. 3rd ed. Waltham, Mass.: Saunders; 2019.

Roberts J. *Roberts & Hedges' Clinical Procedures in Emergency Medicine*. 6th ed. Philadelphia, Pa.; Saunders; 2013.

Tintinalli JE, Stapczynski J, Ma O, Yealy DM, Meckler GD, Cline DM. *Tintinalli's Emergency Medicine: A Comprehensive Study Guide*. 8th ed. New York, NY: McGraw-Hill; 2016.

Websites

American Board of Emergency Medicine. www.abem.org/public/

American College of Emergency Physicians. www.acep.org/

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

Centers for Disease Control and Prevention. Emergency Preparedness and Response. <http://emergency.cdc.gov/>

Developed 7/1995 by Doctors' Hospital of Michigan Family Medicine Residency Program

Published 7/1995

Revised 12/2001

Revised 1/2008

Revised 11/2009

Revised 06/2012 by Doctors' Hospital of Michigan

Revised 06/2014 by Southern Colorado Family Medicine Residency Program, Pueblo

Revised 07/2016 by Memorial Family Medicine Residency, Savannah, GA

Revised 07/2019 by Pontiac General Hospital Family Medicine Residency, Pontiac, MI