Recommended Curriculum Guidelines for Family Medicine Residents

Urgent and Emergent Care

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. 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) 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

The family physician is the most broadly trained specialist in the health care profession. There is considerable overlap in the patient populations served by the family physician and emergency physician, with a natural overlap in the competencies, knowledge, skills, and attitudes necessary to succeed in this setting. This guideline seeks to identify the unique and critical elements that might not be adequately addressed in other curricular areas (e.g., medicine, pediatrics, surgery, obstetrics, orthopedics, ophthalmology). It is assumed that management of acute emergent conditions in each required specialty rotation is adequately addressed within those curricula. Future unique practice settings (e.g., solo emergency practice, rural/remote settings requiring 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. The resident will need to become more comfortable in managing these patients as a member of a health care team and learn the appropriate use of consultants in their management.

Competencies

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

- Demonstrate an ability to rapidly assess and gather information pertinent to the care of patients in an urgent and emergent situation and develop treatment plans appropriate to the stabilization and disposition of these patients. (Patient Care, Medical Knowledge)

- Be able to identify the indication and perform procedures appropriately for the stabilization of the patient in an urgent and 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 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)

- Appropriately inform, educate, and elicit patient and family participation in medical-decision making in a professional and caring manner with sensitivity to cultural and ethnic diversity. (Professionalism, Interpersonal and Communication Skills)
Attitudes

The resident should demonstrate attitudes that encompass:

- An ability to communicate effectively and compassionately with patients and families.
- An ability to effectively communicate with physicians and other health professionals and to work effectively in a team.
- A capacity to work effectively and efficiently to assess the patient according to the urgency of the patient’s problem.
- An awareness of the importance of cost-containment and the need to appropriately utilize medical resources.
- An awareness of the role of the emergency department in disaster planning for a community.
- An 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.

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
   a. Pre-hospital emergency care and its importance to the initial stabilization of patients
      i. Emergency medical systems (EMS)
      ii. Communication systems and protocols (including appropriate implementation on a community-wide and system basis)
   b. Prioritization and triage
   c. Resuscitation and stabilization
   d. Reassessment and monitoring
   e. Consultation
   f. Disposition
   g. Mass casualty and disaster planning and coordination of care with appropriate government and private agencies
2. Assessment and management of conditions in the following content areas:

a. Trauma
   i. Primary and secondary assessment of the traumatically injured patient
   ii. By mechanism of injury
      1). Blunt trauma (e.g. heart, lung, intra-abdominal organ rupture)
      2). Penetrating trauma (e.g. gunshot, stab wounds)
   iii. By site of injury
      1). Head and neck
      2). Spine and spinal cord
      3). Facial
      4). Soft tissue
      5). Chest
      6). Abdomen
      7). Extremities
      8). Genital and urinary

b. Psychiatric emergencies
   i. Mood disorders
   ii. Homicidal ideation, suicidal ideation and attempt..
   iii. Acute mania
   iv. Acute anxiety and panic disorders
   v. Hysterical conversion
   vi. Addictive disorders, overdose syndromes and drug-seeking behaviors
   vii. Delirium and altered mental status
   viii. Risk assessment and involuntary commitment
   ix. Management of the combative patient
   x. Acute alcohol withdrawal
   xi. Utilization of mental health services in the emergent setting

c. Environmental disorders
   i. Burns (e.g. chemical, thermal, electrical)
   ii. Electrocution and lightening injuries
   iii. Heat and cold injuries
   iv. Bites (human and animal) and stings
   v. Poisonous plants
   vi. Hypersensitivity reactions and anaphylaxis

d. Obstetric and gynecological emergencies
   i. Sexual assault and rape
   ii. Acute pelvic pain
   iii. Ectopic pregnancy
   iv. Threatened or spontaneous abortion
   v. Precipitous delivery, pre-eclampsia and eclampsia
   vi. Vaginal bleeding
   vii. Emergency contraception
e. Victims of violence
   i. Child abuse
   ii. Partner/spousal abuse
   iii. Elder abuse

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)

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, COPD)

c. Acute cardiovascular disorders
   i. Acute chest pain
   ii. Cardiac arrest
   iii. Life-threatening dysrhythmias
   iv. Acute coronary syndrome (e.g. unstable angina, NSTEMI, STEMI)
   v. Heart failure (acute and exacerbation of chronic heart failure)
   vi. Thoracic and abdominal aortic aneurysm dissection and rupture
   vii. Thrombolytic therapy
   viii. Hypertensive urgencies and emergencies
   ix. Acute vascular obstruction
   x. Thromboembolism (pulmonary embolism and deep vein thrombosis)

d. Acute endocrine disorders
   i. Diabetic ketoacidosis and hyperosmotic non-ketotic state
   ii. Thyroid emergencies (thyroid storm and myxedema coma)
   iii. Acute adrenal insufficiency
g. Acute gastrointestinal disorders
   i. Acute gastrointestinal bleeding
   ii. Acute abdomen and its initial surgical evaluation
   iii. Acute cholecystitis
   iv. Acute appendicitis
   v. Acute pancreatitis
   vi. Acute diverticulitis
   vii. Acute bowel obstruction
   viii. Ischemic bowel disease

h. 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

i. Acute musculoskeletal disorders
   i. Initial fracture management
   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. Special circumstances
      i. Resuscitations (e.g., coordination, communication, recording)
      ii. Drowning and near-drowning
      iii. Sudden infant death syndrome (SIDS)
      iv. Metabolic disorders and acid/base imbalance
      v. Shock and initial resuscitative measures required for each unique condition
         1. Hypovolemia and dehydration
         2. Acute heat exhaustion and heat stroke
         3. Septic shock
      vi. Acute infectious emergencies
d. Indications and interpretation of diagnostic tests pertinent to the urgent and emergent setting
   i. Electrocardiograms
   ii. Blood laboratory chemistry and hematologic studies
   iii. Radiologic imaging of:
       1). Acute head and cervical spine injuries
       2). Chest pathology
       3). Acute abdominal conditions
       4). Pelvis and extremity injuries

e. Medico-legal issues
   i. Informed consent and competency
   ii. Withholding and termination of treatment
   iii. Laws [e.g. commitment, Good Samaritan, reportable conditions, EMTALA (Emergency Medical Treatment and Labor Act)]
   iv. Liability (e.g. duty to treat, negligence and standard-of-care, risk management)

f. 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-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
   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. Arterial catheter insertion and blood gas sampling
   b. Central venous access (e.g. jugular, femoral, subclavian)
   c. Venous cut-down
   d. 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. Fracture and dislocation reduction techniques
   d. 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. Grief and loss counseling
   g. Critical incident stress debriefing
   h. Management of acute cardiorespiratory arrest in all age groups and
      implementation of the skills of ACLS (Advanced Cardiac Life Support) to lead a
      team resuscitative effort
Implementation

A significant portion of management of emergencies will be obtained from services other than the emergency department. Although much of the content of these guidelines may be fulfilled while the resident is working in the emergency department, additional off-site experiences (e.g. helicopter or ground-transport exposure) may be of educational value. Incorporating urgent care experiences into the overall educational plan may provide significant adjunctive learning, as increasing number of Family Physicians now work in Urgent Care centers.

Residents should have the opportunity to concentrate 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, advanced cardiac life support (ACLS), advanced life support in obstetrics (ALSO), advanced trauma life support (ATLS), pediatric advanced life support (PALS) and other such courses.

Resources


Websites


