CHAPTER 9
EMERGENCY PROCEDURES AND FIRST AID

Overview

Medical assisting students are introduced to various types of potential emergency situations. Even though medical assistants may not encounter every emergency in an ambulatory setting, students learn that as responsible health care professionals, medical assistants must develop a functional base of knowledge about emergency situations. In obtaining this knowledge, medical assistants possess the information necessary to screen and manage emergency situations with confidence, speed, accuracy, and understanding until the physician takes over care or emergency medical service personnel arrive. All students are reminded that health care professionals provide emergency care only within the scope of their training and knowledge. Health care professionals provide emergency care under the direction of the provider as outlined in their facility's emergency policies and procedures manual. Students must be certified to provider level in CPR (cardiopulmonary resuscitation) and have first-aid training. Medical assistants should update their skills regularly by taking refresher courses to maintain CPR certification through the American Red Cross, the American Heart Association, the American Safety and Health Institute, or the National Safety Council.

Lesson Plan

I. LEARNING OUTCOMES	ABHES	CAAHEP
A. Define, spell, and pronounce the key terms as presented in the glossary.		
B. Learn to recognize, prepare for, and respond to emergencies in the ambulatory care setting.	9. e.	I. C. 8. XI. C. 5. XI. C. 6. XI. C. 11. XI. C. 13.
C. Describe basic principles of first aid and demonstrate first aid procedures.		
D. Understand the legal and ethical considerations of providing emergency care.	4. 9. e.	IX. C. 1.
E. Demonstrate appropriate interventions to prevent disease transmission considerations in emergency situations.	9. e., i.	III. C 3., 4., 12. XI. 5., 6., 11.
F. Perform the primary assessment in emergency situations.		
G. Identify and care for different types of wounds.		
H. Understand the basics of bandage application.		
I. Discriminate among first-, second-, and third-degree burns.		
J. Assess injuries to muscles, bones, and joints.		
K. Describe heat- and cold-related illnesses.		
L. Describe how poisons may enter the body.		
M. List the symptoms of a poisonous snake bite.		
N. Recall six types of shock.		
O. Define a cerebral vascular accident.		
P. Describe the signs and symptoms of a heart attack.		
Q. Discuss potential role(s) of the medical assistant in emergency preparedness.		
R. Analyze the professionalism questions and apply them to this chapter's content.		

II. PROFESSIONALISM QUESTIONS
- A. Communication
  1. Did you demonstrate empathy in communicating with patients, family, and staff?
- B. Presentation
  1. Did you display a calm, professional, and caring manner?
- C. Competency
  1. Did you display sound judgment?
  2. Did you remain calm in a crisis?
  3. Were you knowledgeable and accountable?
  4. Did you apply critical thinking skills in performing patient assessment and care?
  5. Did you recognize the importance of local, state, and federal legislation and regulations in the practice setting?
  6. Did you recognize the effect of stress on all persons involved in emergency situations?
  7. Did you demonstrate self-awareness in responding to emergency situations?
- D. Initiative
  1. Did you seek out opportunities to expand your knowledge base?
  2. Did you direct the patient to other resources when necessary or helpful, with the approval of the provider?
- E. Integrity
  1. Did you work within your scope of practice?
  2. Did you demonstrate sensitivity to patient's rights?
  3. Did you protect and maintain confidentiality?

III. REFERENCES
- A. Lindh, Wilburta Q., Pooler, Marilyn S., Tamparo, Carol D., Dahl, Barbara M., & Morris, Julie A. *Delmar's Comprehensive Medical Assisting: Administrative and Clinical Competencies* 5e
- B. Text Chapter 9, References/Bibliography
- C. Any other teacher-preferred reference material

IV. VISUAL AIDS
- A. Computer access to identified Internet resources
- B. Any other teacher-preferred visual aids (PowerPoints, etc.)
- C. CPR handbook published by the American Heart Association

V. EQUIPMENT AND MATERIALS
- A. Computer, TV monitor, and Internet access
- B. Handouts on emergency procedures
- C. See IV: Visual Aids

VI. SAFETY
- A. Basic classroom procedures
- B. Follow OSHA and CLIA regulations
- C. Follow Standard Precautions
- D. Attend to patient

VII. PREPARATION
- A. Arrange for visual aids equipment.
- B. Collect materials.
- C. Review Chapter 9 in the text, the Study Guide, the Competency Manual, and the Instructor's Manual.

VIII. INTRODUCTORY REMARKS/ACTIONS
- A. Read Learning Outcomes in the text with students to introduce the chapter.
- B. Display first aid kit to gain the interest of the class and for discussion.
- C. Ask students to share with the class any home- or work-related emergencies with which they have helped.

IX. PRESENTATION
- A. Recognizing an Emergency
  1. Define Emergency—any instance in which an individual becomes suddenly ill and requires immediate attention

2. Signs of emergencies—unusual sounds, strange behavior
3. Define first aid—rendering immediate and temporary emergency care to persons injured or otherwise disabled before the arrival of a health care practitioner or transport to a hospital or other health care emergency
4. First aid designed to render immediate care to persons injured prior to arrival of provider
5. List types of injuries emergencies can include
6. Responding to an Emergency
   a. Act quickly
   b. Screen the situation
   c. Assess the patient
   d. Check for universal emergency medical identification
7. Primary Survey (ABCs)
   a. Circulation—check for pulse (usually carotid)
   b. Airway—open the airway by head tilt or jaw thrust (for suspected neck injury) method
   c. Breathing—look and listen for respirations
   d. If necessary, prepare for rescue breathing or CPR
8. Using the 911 or Emergency Medical Services System
9. Good Samaritan Laws
   a. Provide some degree of legal protection to the health care professional who offers first aid
   b. Generally protect off-duty health care professionals
10. Blood, Body Fluids, and Disease Transmission
    a. List guidelines to follow during emergency care
    b. Follow Standard Precautions

B. Preparing for an Emergency
   1. Develop an in-office handbook of policies and procedures
   2. Keep telephone numbers for the local EMS and poison control center posted
   3. All personnel should be trained in the basics of first aid and CPR. Medical assistants must be provider-level certified
   4. Keep proper documentation of all emergencies
   5. Keep office environment safe
      a. Keep floors and corridors clean
   6. The Medical Crash Tray or Cart
      a. Supplies on tray should be carefully inventoried
      b. List some common supplies found on most trays and carts
      c. Discuss the use of medication and supplies found on a crash cart

C. Common Emergencies

D. Shock
   1. Define shock—a condition in which the circulatory system is not providing enough blood to all parts of the body, causing the body's organs to fail to function properly
   2. Always life-threatening
   3. Activate EMS
   4. List other problems that can occur because of shock
   5. Signs and symptoms of shock
   6. Types of shock
   7. Treatment for shock
      a. Call EMS, then give immediate attention
      b. Shock is progressive
      c. Describe how to care for shock

E. Wounds
   1. Closed wounds
      a. Have no break in skin
      b. Do not usually present an emergency situation
      c. RICE procedures: rest, ice, compression, elevation; or MICE procedures: movement, ice, compression, elevation, according to provider's preference
      d. Some may cause internal bleeding

2. Open wounds
   a. Minor tears in skin or more serious breaks (see Procedure 9-1 in the text)
   b. All represent opportunity for infection
   c. Tetanus injection may be needed
   d. Types of open wounds
      (1) Abrasion
      (2) Avulsion
      (3) Incision
      (4) Laceration
      (5) Puncture

F. Dressings and bandages
   1. Necessary to dress and bandage open wound to curtail infection
   2. Dressings—sterile pads
   3. Bandages—nonsterile wraps placed over dressings
   4. Bandage application
      a. Depends on injury and injury site
      b. Avoid too tight or too loose a wrap
      c. Open or closed spiral bandages
      d. Figure-eight bandage
      e. Tubular gauze bandage
      f. Commercial arm slings

G. Burns
   1. Caused by heat, chemicals, explosions, or electricity
   2. Critical burns can be life-threatening
   3. Describe symptoms of critical burns
   4. Degrees of burns
      a. First degree—superficial; top layer of skin
      b. Second degree—reddened skin, with blisters appearing
      c. Third degree—affects all layers of skin plus fat, muscles, bones, and nerves under skin
   5. Caring for burns
      a. Describe treatment for burns
      b. Describe what to avoid
   6. Special kinds of burns
      a. Chemical
      b. Electrical
      c. Solar radiation

H. Musculoskeletal Injuries
   1. Painful and can be disabling
   2. Types of injuries
      a. Sprains involve tearing of the ligaments (signs and symptoms of sprains)
      b. Strains are injuries to soft tissue between joints that involve tearing of muscles or tendons (signs and symptoms of strains)
      c. Dislocations involve separation of bone from normal position (signs and symptoms of dislocations)
      d. Fractures involve a break in a bone (see signs and symptoms of fractures in the text)
         (1) Incomplete or greenstick
         (2) Simple
         (3) Compound
         (4) Impacted
         (5) Comminuted
         (6) Spiral
         (7) Depressed
         (8) Colles
   3. Assessing injuries to muscles, bones, and joints
      a. Note extent of bruising and swelling
      b. Pain is a signal of injury
      c. Deformity to bone or joint is noticeable

   d. Use of injured area is limited
   e. Talk to patient
4. Caring for muscle, bone, and joint injuries

I. Heat- and Cold-Related Illnesses
1. Describe who is especially vulnerable to exposures
2. Heat-related illnesses
   a. Heat cramps (least serious)
   b. Heat exhaustion (more serious)
   c. Heat stroke (least common, most serious)
3. Cold-related illnesses
   a. Frostbite
   b. Hypothermia

J. Poisoning
1. Can enter body in four ways
   a. Ingestion
   b. Inhalation
   c. Absorption
   d. Injection
2. Call poison control center or local emergency number
3. Treatment depends on source of poisoning
4. Activated charcoal may be prescribed
5. Insect stings
   a. May cause swelling
      (1) Remove stinger by scraping with something rigid (e.g., a credit card)
   b. May cause allergic reaction or hypersensitivity
   c. Epinephrine (EpiPen) may be prescribed to patients with known allergic reactions
6. Snake bite

K. Sudden Illness
1. Fainting
   a. Also known as syncope
   b. Involves loss of consciousness caused by insufficient supply of blood to brain
   c. If patient feels faint, have her lie down or sit with head level with knees
   d. If patient faints, lower him to flat surface, loosen tight clothing, and check breathing
   e. May indicate a complex medical condition
2. Seizures or convulsions
   a. Occur when normal brain functioning is disrupted
   b. Caused by fever, diabetes, infection, brain injury, epilepsy, and other conditions and diseases
   c. Treat patient with empathy
   d. Protect patient from injury
   e. Describe when an EMS should be called
3. Diabetes
   a. Inability of body to properly convert sugar from food into energy
   b. Describe two types of diabetes
   c. Diabetic coma and insulin shock or reaction may occur
4. Hemorrhage
   a. External bleeding includes capillary, venous, and arterial bleeding
   b. Epistaxis (nosebleeds)
      (1) Describe causes
      (2) Describe treatment
   c. Internal bleeding
      (1) Describe symptoms
      (2) Stay with patient and have someone call EMS

L. Cerebral Vascular Accident (CVA)
1. Common term is stroke
2. Result of ruptured blood vessel in brain
3. Can be caused by occlusion of blood vessel or by a clot
4. Describe symptoms
5. Describe treatment

M. Heart Attack
   1. Also known as myocardial infarction
   2. Usually caused by blockage of coronary arteries
   3. Describe symptoms
   4. Describe treatment

N. Procedures for breathing emergencies and cardiac arrest in medical clinic
   1. Rescue Breathing
      a. Also called mouth-to-mouth resuscitation or rescue breathing
      b. Provides oxygen to patient until emergency personnel arrive
      c. Resuscitation mouthpieces recommended
      d. Methods differ for adults, children, and infants
   2. Cardiopulmonary Resuscitation (CPR)
      a. Combination of rescue breathing and chest compressions
      b. Represents preliminary care until advanced medical help is available
      c. Describe when CPR may be discontinued
      d. Methods differ for adults, children, and infants
   3. Describe automated external defibrillators (AEDs)

O. Discuss personal protective equipment use during emergencies

X. APPLICATION
   A. Use the Learning Outcomes at the beginning of Chapter 9 in the text as the basis for questions to assess comprehension.
   B. See the Classroom Activities section below for numerous application activities.
   C. Assign students to complete Chapter 9 in the Study Guide.
   D. Complete the Procedures in Chapter 9, using the Competency Manual to evaluate.
   E. Show and critique media.

XI. EVALUATION
   A. Evaluate any assigned application activities.
   B. Evaluate student participation during presentation.
   C. Grade responses to Chapter 9 in the Study Guide.
   D. Evaluate student performance on Chapter 9 Procedures.

Classroom Activities

1. Supply students with a cross-sectional image of skin and have them label the structures. Then indicate which layers are involved in first-, second-, and third-degree burns.
2. Describe the anatomy and terminology related to a procedure as it is demonstrated.
3. Assign wound areas such as the internal aspect of the calf for students to cleanse or bandage.
4. Arrange for an emergency medical technician to come in and speak to the class. Have students prepare questions related to first aid treatment of burns, shock, wounds, stroke, and heart attack. Follow up by having students write a report on the visit.
5. Group project with each group assigned a different emergency situation. The group is to develop flashcards with treatment for each situation. Share the results with each student.

Answers to Critical Thinking Boxes

1. Your practice has just received Poison Help Stickers to distribute to the parents of pediatric patients. Create an educational flyer regarding poison prevention.

Answers will vary but could include:

Using access to MicroSoft Word, Publisher or Power Point, create a flyer that includes the following information:
Poison control toll free number
Common sources of household poisoning
Information about taking medications safely
Consider English and Spanish versions

Answers to Case Studies

Case Study 9-1

Refer to the scenario at the beginning of the chapter.

1. Why is it essential to activate EMS even though Mr. Edwards is being seen in an ambulatory care setting?

Chest pain is always an emergent situation. Mr. Edwards requires a higher level of care to diagnose and treat his chest pain.

2. What would be the next steps after assessing the patient if the chest pain continued and the patient lost consciousness prior to the arrival of EMS?

Initiate CPR if required.

3. Phyllis Cosper, RMA, is screening patients the morning Mr. Edwards enters the clinic with a complaint of chest pain? What questions should she ask Mr. Edwards?

She needs to begin to collect History of Present Illness to include time of onset, quality and duration of pain, exacerbating symptoms, relieving symptoms.

4. Because Mr. Edwards is obviously is having a cardiac event, what are the first measures to be taken?

Notify the provider, active EMS, initiate first aid measures. Apply oxygen, obtain an electrocardiogram, monitor status until EMS arrives. Initiate CPR when required.

Case Study 9-2

Annette Samuels, a regular patient at Inner City Health Care, is walking her dog one morning, stops to rest on a grassy knoll, and notices a wasp on her arm. She brushes it away, unthinking, and then realizes it has stung her. She receives two more stings and suddenly notices she is at a nest site. Annette is now a half-hour walk from home but is not really concerned because she has never had an allergic reaction to a wasp sting. However, a few minutes into her walk, her palms become itchy, her ears start to burn, and she feels lightheaded. She is not having difficulty breathing. She is determined to get home and she does, at which point she notices she is covered with hives. She calls Inner City Health Care to ask: Should she come in?

1. Linda Ludemann, CMAA is screening calls the morning Annette is stung. What questions should she ask Annette?

Linda must first ascertain whether Annette is having trouble breathing. If she is, Linda must direct her—and if necessary assist Annette—to receive immediate medical attention at the nearest hospital. If Annette says she is not having any breathing difficulty, Linda should ask:

- What are your symptoms?
- Have you ever experienced an allergic reaction to an insect sting (specifically from a wasp) before?
- Do you have hives?
- Are you experiencing any lightheadedness?
- Do you have any itching either at the site of the sting or in other body locations?

From these questions, Linda needs to determine whether Annette is having a localized reaction, which can result in swelling, itching, and tenderness at the site of the sting, or a generalized reaction, which can be frightening for the patient and dangerous if it involves impairment of breathing functions.

2. Because Annette obviously is having a hypersensitive or an allergic reaction, she is advised to seek emergency care immediately. What first-aid measures might be taken?

If a patient is allergic to an insect sting, it is possible that anaphylactic shock may ensue, which can lead to death. The patient must be directed to receive emergency care immediately, which will usually consist of the administration of epinephrine. If Annette must wait for EMS personnel, Linda should stay with her over the telephone and calm her until EMS personnel arrive. For individuals who present at the ambulatory care setting with an apparent allergic reaction to a sting, the provider will prescribe epinephrine and Benadryl. Attempt to allay patient apprehension and monitor vital signs while waiting for EMS personnel to arrive. Prepare to administer oxygen and AED if the provider orders it.

3. To prevent reactions to stings in the future, what patient teaching might be appropriate for Ms. Samuels?

Once Annette has received emergency treatment, Linda can advise her to take certain precautions should she have another, and possibly more severe, reaction to an insect sting. For individuals with a known allergic reaction, the provider will prescribe epinephrine. These individuals should carry the epinephrine with them and self-inject should they not be able to get immediate emergency care. The patient should then seek immediate emergency treatment. Advise all patients with known allergic reactions to be particularly careful when working or playing outdoors. Insects are not usually aggressive until their nests are approached; however, often these nests are not easy to detect and an individual may approach one without being aware of its presence. Patients with allergies to insects should always wear shoes outdoors and light-colored clothing, preferably with long sleeves and pant legs, should look before taking a sip from a beverage when outdoors, and should inspect lawn areas, shrubbery, and building walls periodically for evidence of nests of stinging insects. Patients may also be directed to an allergist for desensitization.

Case Study 9-3

Bryan Mountjoy is a 32-year-old patient of Dr. Osborne. He has been working in the yard throughout the day even though the temperature was over 100°F. Being so focused on the job at hand, Mr. Mountjoy has not taken in enough fluids over the course of the day. He calls out to his wife that he is feeling faint. She finds him with reddened, dry, hot skin, shallow, fast breathing, and a weak pulse. Ms. Mountjoy calls the office seeking medical advice.

1. What immediate questions should you ask Ms. Mountjoy?

Inquire if Mr. Mountjoy has come in out of the heat. Is Mr. Mountjoy alert and oriented? Ask questions related to the History of Present Illness; Time of onset? Symptoms? Severity of symptoms? Modifying factors?

2. What would you advise Ms. Mountjoy to do in order to assure the most appropriate level of care?

Activate EMS by dialing 911.

Answers to Certification Review

1. c. require that all individuals providing assistance act within the scope of their knowledge and training
2. a. The skin is torn off and bleeding is profuse.
3. b. affect only the top layer of skin
4. b. Breathing, compressions, airway
5. b. compound fracture
6. c. tilt the patient's head forward
7. d. myocardial infarction
8. d. 2 inches to 2.5 inches
9. d. both a. and c
10. b. overwhelming infection

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