Chapter 10

Patient Assessment

Unit Summary

After students complete this chapter presentation and the related course work, they will understand the scope and sequence of patient assessment for medical and trauma patients and all the phases and components of patient assessment. Please note that this chapter is divided into five sections: scene size-up, primary assessment, history taking, secondary assessment, and reassessment. These divisions will help facilitate the instructor’s approach for teaching this skill as a whole concept.

National EMS Education Standard Competencies

Assessment

Applies scene information and patient assessment findings (scene size-up, primary and secondary assessment, patient history, and reassessment) to guide emergency management.

Scene Size-up

• Scene safety (pp 344–345)

• Scene management

* Impact of the environment on patient care (pp 344–345)
* Addressing hazards (p 345)
* Violence (p 345)
* Need for additional or specialized resources (p 349)
* Standard precautions (pp 347–348)
* Multiple patient situations (pp 348–349)

Primary Assessment

• Primary assessment for all patient situations (pp 350–351)

* Level of consciousness (pp 352–353)
* ABCs (pp 354–361)
* Identifying life threats (pp 352–353, 357–358)
* Assessment of vital functions (pp 352–353, 357–358)
* Initial general impression (p 351)

• Begin interventions needed to preserve life (pp 353–354, 360–363)

• Integration of treatment/procedures needed to preserve life (pp 363–365)

History Taking

• Determining the chief complaint (pp 366–368)

• Mechanism of injury/nature of illness (pp 345–347)

• Associated signs and symptoms (pp 366–369)

• Investigation of the chief complaint (pp 367–369)

• Past medical history (pp 366–369)

• Pertinent negatives (p 369)

Secondary Assessment

• Performing a rapid full-body scan (pp 377–379)

• Focused assessment of pain (pp 377–379, 383-401)

• Assessment of vital signs (pp 383–392, 401–404)

• Techniques of physical examination:

* Respiratory system (pp 383–387)
	+ Presence of breath sounds (pp 385–387)
* Cardiovascular system (pp 387–394)
* Neurologic system (pp 394–398)
* Musculoskeletal system (pp 399–401)
* All anatomic regions (pp 398–401)

Monitoring Devices

• Obtaining and using information from patient monitoring devices including (but not limited to)

* Pulse oximetry (pp 401–402)
* Noninvasive blood pressure (p 404)

Reassessment

• How and when to reassess patients (p 405)

• How and when to perform a reassessment for all patient situations (pp 405–406)

Knowledge Objectives

1. Identify the components of the patient assessment process. (p 342)
2. Explain how the different causes and presentations of emergencies will affect how EMTs perform each step of the patient assessment process. (p 342)

3. Discuss some of the possible environmental, chemical, and biologic hazards that may be present at an emergency scene, ways to recognize them, and precautions to protect personal safety. (pp 343–345)

4. Discuss the steps EMTs should take to survey a scene for signs of violence and to protect themselves and bystanders from real or potential danger. (pp 343–345)

5. Describe how to determine the mechanism of injury (MOI) or nature of illness (NOI) at an emergency and the importance of differentiating trauma patients from medical patients. (pp 345–347)

6. List the minimum standard precautions that should be followed and personal protective equipment (PPE) that should be worn at an emergency scene, including examples of when additional precautions would be appropriate. (pp 347–348)

7. Explain why it is important for EMTs to identify the total number of patients at an emergency scene and how this evaluation relates to determining the need for additional or specialized resources, implementation of the incident command system (ICS), and triage. (pp 348–349)

8. Describe the principal goals of the primary assessment process, including how to identify and treat life threats and determine if immediate transport is required. (pp 350–351)

9. Explain the process of forming a general impression of a patient as part of primary assessment and the reasons why this step is critical to patient management. (p 351)

10. Explain the importance of assessing a patient’s level of consciousness (LOC) to determine altered mental status, and include examples of different methods used to assess alertness, responsiveness, and orientation. (pp 352–353)

11. Describe the assessment of airway status in patients who are both responsive and unresponsive, including examples of possible signs and causes of airway obstruction in each case as well as the appropriate EMT response. (pp 354–355)

12. Describe the assessment of a patient’s breathing status, including the key information EMTs must obtain during this process and the care required for patients who have both adequate and inadequate breathing. (pp 355–357)

13. List the signs of respiratory distress and respiratory failure. (p 357)

14. Describe the assessment of a patient’s circulatory status, including the different methods for obtaining a pulse and appropriate management depending on the patient’s status. (pp 357–358)

15. Explain the variations required to obtain a pulse in infant and child patients compared with adult patients. (pp 357–358)

16. Describe the assessment of a patient’s skin color, temperature, and condition, including examples of both normal and abnormal findings and the information this provides related to the patient’s status. (pp 358–360)

17. Discuss the process of assessing for and methods for controlling external bleeding. (pp 360–361)

18. Discuss the steps used to identify and subsequently treat life-threatening conditions that endanger a patient during an emergency. (pp 361–363)

19. List the steps EMTs should follow during the primary assessment of a trauma patient, including examples of abnormal signs and appropriate related actions. (pp 362–363)

20. Explain the process for determining the priority of patient care and transport at an emergency scene and include examples of conditions that necessitate immediate transport. (pp 363–365)

21. Discuss the importance of protecting a trauma patient’s spine and identifying fractured extremities during patient packaging for transport. (pp 363–365)

22. Discuss the process of taking a focused history, its key components, and its relationship to the primary assessment process. (p 366)

23. Describe examples of different techniques EMTs may use to obtain information from patients during the history-taking process. (pp 368–376)

24. Discuss different challenges EMTs may face when taking a patient history on sensitive topics and strategies they may use to facilitate each situation. (pp 370–372)

25. Describe the purpose of a secondary assessment and a physical exam; include how to determine which aspects of the physical exam to use, and the steps. (pp 377–378)

26. Explain situations in which patients may receive a focused assessment, including examples by body system of what each focused assessment should include based on a patient’s chief complaint. (pp 379–404)

27. List normal blood pressure ranges for adults, children, and infants. (p 394)

28. Explain the importance of performing a reassessment of the patient and the steps in this process. (pp 405–406)

Skills Objectives

1. Demonstrate how to use the AVPU scale to test for patient responsiveness. (p 352)

2. Demonstrate how to evaluate a patient’s orientation and document his or her status correctly. (pp 352–353)

3. Demonstrate the techniques for assessing a patient’s airway and correctly obtaining information related to respiratory rate, rhythm, quality/character of breathing, and depth of breathing. (pp 354–357)

4. Demonstrate how to assess a radial pulse in a responsive patient and an unresponsive patient. (pp 357–358)

5. Demonstrate how to assess a carotid pulse in an unresponsive patient. (pp 357–358)

6. Demonstrate how to palpate a brachial pulse in a child who is younger than 1 year. (pp 357–358)

7. Demonstrate how to obtain a pulse rate in a patient. (pp 357–358)

8. Demonstrate how to assess capillary refill in an adult or child older than 6 years. (p 360)

9. Demonstrate how to assess capillary refill in an infant or child younger than 6 years; include variations that would be required when assessing a newborn. (p 360)

10. Demonstrate how to perform a rapid exam during primary assessment of a patient. (pp 361–363, Skill Drill 10-1)

11. Demonstrate how to perform a secondary assessment. (pp 379–383, Skill Drill 10-2)

12. Demonstrate how to measure blood pressure by auscultation. (p 391, Skill Drill 10-3)

13. Demonstrate how to measure blood pressure by palpation. (p 393, Skill Drill 10-4)

14. Demonstrate how to test pupil reaction in response to light in a patient and how to document his or her status correctly. (pp 394–396)

15. Demonstrate the assessment of neurovascular status. (pp 396–397, Skill Drill 10-5)

16. Demonstrate the use of a pulse oximetry device to evaluate the effectiveness of oxygenation in the patient. (pp 401–402)

17. Demonstrate the use of electronic devices to assist in determining the patient’s blood pressure in the field. (p 404)

18. Demonstrate how to assess a patient’s blood glucose level. (p 403, Skill Drill 10-6)

Readings and Preparation

Review all instructional materials including ***Emergency Care and Transportation of the Sick and Injured***, **Twelfth Edition**, Chapter 10, and all related presentation support materials.

Support Materials

• Lecture PowerPoint presentation

• Case Study PowerPoint presentation

• Skill Drill PowerPoint presentations

* Skill Drill 10-1, Performing a Rapid Exam to Identify Life Threats PowerPoint presentation
* Skill Drill 10-2, Performing the Secondary Assessment PowerPoint presentation
* Skill Drill 10-3, Obtaining Blood Pressure by Auscultation PowerPoint presentation
* Skill Drill 10-4, Obtaining Blood Pressure by Palpation PowerPoint presentation
* Skill Drill 10-5, Assessing Neurovascular Status PowerPoint presentation
* Skill Drill 10-6, Assessing Blood Glucose Level PowerPoint presentation

• Equipment needed to perform the psychomotor skills presented in this chapter.

• Patient assessment template from the beginning of Chapter 10 of the text (several copies)

• Skill Evaluation Sheets

* Skill Drill 10-1, Performing a Rapid Exam to Identify Life Threats
* Skill Drill 10-2, Performing the Secondary Assessment
* Skill Drill 10-3, Obtaining Blood Pressure by Auscultation
* Skill Drill 10-4, Obtaining Blood Pressure by Palpation
* Skill Drill 10-5, Assessing Neurovascular Status
* Skill Drill 10-6, Assessing Blood Glucose Level

Enhancements

• Direct students to visit Navigate.

**Content connections:**

• Remind students that, as they progress through additional learning in the subsequent chapters, their ability to assess the patient will improve, but stress the importance of developing a strong foundation in patient assessment.

• Point out to students that the patient assessment skills will be used on every patient and in many later skills sessions. Medical conditions, trauma, and special populations will add to the complexity of later sessions on patient assessment.

**Cultural considerations:** Patient assessment techniques such as palpating and exposing may be uncomfortable for some students for cultural reasons. Allow students to discuss potential conflicts privately. Point out to students that each patient has his or her cultural beliefs and practices and some populations may regard some techniques, both physical and verbal, as inappropriate. Stress the importance of cultural sensitivity, and have students suggest possible ways to accommodate certain beliefs without compromising good patient care.

Teaching Tips

• Emphasize the different sections of the patient assessment using the flowcharts provided in the textbook. Help students see the skill from the whole perspective. Consider using the color codes shown to create larger diagrams to display in the classroom. Students may want to add their own signs and symptoms to these larger flow charts using color-coded index cards to help in organizing new information as it is learned.

Unit Activities

**Writing assignments:** Distribute a patient assessment template to each student and assign him or her a specific medical condition or trauma scenario. Students will then need to research the assigned condition and fill out the assessment with appropriate findings one could expect from such a patient. Collect completed templates, review them, and use them for the activity described in the Group Activities section.

**Student presentations:** As an alternative to the written assignment, distribute completed assessment scenarios, one to each student group, allowing each group a few minutes to discuss roles and approach. Each group will then take turns presenting their scenario to the class. The observing students will use blank templates to evaluate the thoroughness of the assessment of each presenting group. Stress the importance of constructive comments only, and ask them to hold all comments until the completion of the scenario.

**Group activities:**

• Each student in a group (no more than four per group) is assigned a specific role: patient, family member or bystander, EMT, and EMT supervisor. The patient and family member are given one of the completed patient assessment templates from the previous assignment and must role-play the scenario. The EMT may request help from the on-scene supervisor in a log roll or other necessary skills, but otherwise must complete the assessment alone. The on-scene supervisor will have a blank template and will check off each segment of the assessment as it is verbalized or performed by the EMT. The entire scenario should be performed in less than 10 minutes, reminding students of the importance of the “Platinum 10 Minutes” of the Golden Hour. Skills instructors who may be facilitating at each station should use a blank template to assess and critique the skill upon completion, making note of the start and finish times.

• Prepare several manikins (one for each group) ahead of time by dressing them in old (unwanted) clothing *after* securing various index cards to the body indicating injuries and/or assessment findings. Write each finding on a separate card, fold it, number it in order of required discovery, and tape it in place. Dress the manikin, covering as many of the cards as is reasonable. Students must “discover” each symptom or sign as they perform the assessment. Students may not take clues out of order even if they are visualized. Students may not take clues without completing that part of the assessment in which the findings would be expected to be discovered. For example, if the student does not verbalize or perform auscultation of lung sounds, he or she should not be allowed to take the index card indicating findings. Be sure to place cards on body parts that would necessitate log roll or exposure in order to find them.

**Medical terminology review:** Prepare a patient assessment narrative ahead of time using longer descriptive definitions in place of correct medical terminology. Distribute the narrative to student groups for a timed exercise in which they need to replace the definitions with correct medical terminology. For example, the assessment narrative may state, “While examining the patient, a grinding, grating sensation was palpated over the proximal tibia.” Or, “The delicate membrane that lines the patient’s eyelids was found to be very pale.”Underlined words must be replaced with the correct terminology (ie, *crepitus* and *conjunctiva,* respectively).

**Visual thinking:**

• Have students create a life-size “patient” by outlining a team member using several large pieces of poster paper. Assign a disease or trauma scenario to each group, and have the team display the picture of their patient on the wall. Each group then labels their patient’s signs and symptoms in the proper body location. Students can add to these posters as they learn more about each condition in subsequent lessons.

Pre-Lecture

### You are the Provider

“You are the Provider” is a progressive case study that encourages critical thinking skills.

### Instructor Directions

**1.** Direct students to read the “You are the Provider” scenario found throughout Chapter 10.

**2.** You may wish to assign students to a partner or a group. Direct them to review the discussion questions at the end of the scenario and prepare a response to each question. Facilitate a class dialogue centered on the discussion questions and the Patient Care Report.

**3.** You may also use this as an individual activity and ask students to turn in their comments on a separate piece of paper.

Lecture

I. Introduction

A. The importance of patient assessment cannot be overemphasized.

B. The assessment process is divided into five main parts:

1. Scene size-up

2. Primary assessment

3. History taking

4. Secondary assessment

5. Reassessment

a. The order in which the steps are performed depends on the patient’s condition and the environment in which the patient is found.

b. It be may necessary to change the order of some of the steps after scene size-up based on your findings and the need to prioritize the care of certain conditions.

C. Rarely does one sign or symptom show you the patient’s status or underlying problem.

1. A symptom is a subjective condition the patient feels and tells you about.

2. A sign is an objective condition you can observe or measure about the patient.

II. Scene Size-up

A. Refers to your evaluation of the conditions in which you will be operating

1. Situational awareness is necessary throughout the entire call to ensure safety.

2. Dispatch provides basic information about the request for assistance.

a. Scene size-up combines information and observations to help ensure safe and effective operations.

i. An understanding of the situation and conditions prior to responding

ii. The dispatcher’s information

iii. An observation of the scene

B. Ensure scene safety.

1. Issues that you may encounter in the prehospital setting can range from minor difficulties to major dangers.

2. If a scene is not safe for you and your team to enter the scene and approach and manage the patient, do what you can to make it safe or call for additional resources.

3. Consider traffic safety issues and issues related to scene safety if you must approach a patient on a working roadway.

4. Consider environmental conditions at the scene.

5. If appropriate, help protect bystanders from becoming patients as well.

6. Some forms of hazards:

a. Environmental

b. Physical (sharp metal, broken glass, slip-and-fall hazards)

c. Chemical (hazardous materials)

d. Electrical

e. Water

f. Fire

g. Explosions

h. Physical violence

7. Be aware of scenes that have the potential for violence.

a. Violent patients

b. Distraught family members

c. Angry bystanders

d. Gangs

e. Unruly crowds

8. An emergency scene is a dynamically changing environment.

C. Determine mechanism of injury (MOI)/nature of illness (NOI).

1. Calls for assistance to which you may respond can be categorized as medical conditions, traumatic injuries, or both.

2. Traumatic injuries are the result of physical forces applied to the outside of the body, usually from an object striking the body or the body striking an object.

3. For patients who have experienced traumatic injuries, determine the mechanism of injury (MOI).

a. Terms commonly associated with MOI include blunt trauma and penetrating trauma.

4. For medical patients, determine the nature of illness or NOI.

5. Be aware of scenes with multiple patients who are exhibiting similar signs or symptoms as it could indicate an unsafe scene.

D. The importance of the MOI and NOI

1. Considering the MOI or NOI early can be of value in preparing to care for your patient.

E. Take standard precautions.

1. Standard precautions and personal protective equipment (PPE) need to be considered and adapted to the prehospital task at hand.

2. Standard precautions are protective measures that have traditionally been recommended by the Centers for Disease Control and Prevention for use in dealing with:

a. Objects

b. Blood

c. Body fluids

d. Other potential exposure risks of communicable disease

3. The concept of standard precautions assumes that all blood, body fluids (except sweat), nonintact skin, and mucous membranes may pose a substantial risk of infection.

4. When you step out of the EMS vehicle and before actual patient contact, standard precautions must have been taken or initiated.

a. At a minimum, gloves must be in place before any patient contact.

b. Also consider glasses and a mask.

F. Determine number of patients.

1. During scene size-up, accurately identifying the total number of patients will help you determine the need for additional resources.

2. When there are multiple patients, you should use the incident command system, identify the number of patients, and then begin triage.

a. Triageis the process of sorting patients based on the severity of each patient’s condition.

G. Consider additional/specialized resources.

1. Specialized resources include:

a. Advanced life support (ALS)

b. Air medical support

c. Fire departments may handle hazardous materials management and technical rescue services, including complex extrication from motor vehicle crashes, wilderness search and rescue, high-angle rope rescue, or water rescue.

d. Law enforcement personnel

2. Questions to ask when determining the need for additional resources:

a. Does the scene pose a threat to you, your patient, or others?

b. How many patients are there?

c. Do we have the resources to respond to their conditions?

III. Primary Assessment

A. Patient assessment begins when you greet your patient.

1. The single, all-important goal of the primary assessment is to identify and begin treatment of immediate or imminent life threats.

2. Physically examine the patient and assess level of consciousness (LOC) and airway, breathing, and circulation (ABCs).

B. Form a general impression.

1. Formed to determine the priority of care, it is the first part of your primary assessment.

2. Includes making a note of the person’s:

a. Age

b. Sex

c. Race

d. Level of distress

e. Overall appearance

3. As you approach, make sure the patient sees you coming.

a. Note the patient’s position and whether the patient is moving or still.

b. Avoid standing over the patient, if possible.

c. Address the patient by name.

d. Introduce yourself to the patient.

e. Ask about the chief complaint.

f. The patient’s response can give insight into the LOC, air patency, respiratory status, and overall circulatory status.

g. Life-threatening problems should be treated immediately.

4. Define whether your patient’s condition is stable, stable but potentially unstable, or unstable to direct further assessment and treatment.

C. Scan for signs of uncontrolled external bleeding.

1. Uncontrolled external bleeding takes priority over other assessments.

D. Assess level of consciousness (LOC).

1. The LOC can tell you a great deal about the patient’s neurologic and physiologic status.

2. Assessment of an unconscious patient focuses first on airway, breathing, and circulation (ABCs).

a. Sustained unconsciousness should warn you that a critical respiratory, circulatory, or central nervous system problem or deficit might exist.

3. Conscious with an altered LOC may be due to inadequate perfusion, medications, drugs alcohol, or poisoning.

4. The AVPU scale tests a patient’s responsiveness.

5. Stimulus tests determine whether a patient who does not respond to verbal stimuli will respond to a painful stimulus. These tests include:

a. Pinching the patient’s skin

i. Back of the upper arm

ii. Trapezius area

b. Applying upward pressure along the ridge of the orbital rim along the underside of the eyebrow

c. A patient who moans or withdraws is responding to the stimulus.

6. Orientation tests mental status by checking a patient’s memory and thinking ability.

a. Evaluates a patient’s ability to remember:

i. Person—remembers his or her name

ii. Place—identifies the current location

iii. Time—the current year, month, and approximate date

iv. Event—describes what happened

b. Any deviation from alert and oriented to person, place, time, and event, or from a patient’s normal baseline is considered an altered mental status.

D. Identify and treat life threats

1. A life-threatening condition can quickly lead to death.

a. Conditions that cause sudden death: airway obstruction, respiratory failure, respiratory arrest, shock, severe bleeding, and cardiac arrest.

2. In most cases, identifying and correcting life-threatening issues begins with the airway, followed by breathing and circulation (ABC).

a. In some cases, it is more appropriate to address life threats to circulation first, following a sequence of circulation, airway, and breathing (CAB).

E. Assess the airway.

1. As you move through the primary assessment, stay alert for signs of airway obstruction.

2. Ensure that the airway remains open (patent) and adequate.

3. Responsive patients

a. Patients of any age who are talking or crying have an open airway

b. A conscious patient who cannot speak or cry most likely has a severe airway obstruction.

c. If you identify an airway problem, stop the assessment process and work to clear the patient’s airway.

d. If your patient has signs of difficulty breathing or is not breathing, immediately take corrective actions.

4. Unresponsive patients

a. Immediately assess the patency of the airway.

b. If there is a potential for trauma, use the jaw-thrust maneuver to open the airway.

c. If the airway cannot be open using the jaw-thrust maneuver or if it can be confirmed that the patient did not experience a traumatic event, use the head tilt–chin lift maneuver.

5. Signs of obstruction in an unconscious patient:

a. Obvious trauma, blood, or other obstruction

b. Noisy breathing, such as snoring, bubbling, gurgling, crowing, stridor, or other abnormal sounds

c. Extremely shallow or absent breathing

E. Assess breathing.

1. Once you have made sure the patient’s airway is open, make sure the patient’s breathing is present and adequate.

2. Ask yourself the following questions:

a. Is the patient breathing?

b. Is the patient breathing adequately?

c. Is the patient hypoxic?

1. Positive pressure ventilations should be performed for patients who are not breathing or whose breathing is too slow or too shallow.
2. If the patient is breathing adequately but remains hypoxic, administer oxygen.

a. The goal for oxygenation for most patients is an oxygen saturation of approximately 94% to 99%.

1. If a patient seems to develop difficulty breathing after your primary assessment, you should immediately reevaluate the airway.

a. Consider providing positive pressure ventilations with an airway adjunct when:

i. Respirations exceed 28 breaths/min.

ii. Respirations are fewer than 8 breaths/min.

iii. Respirations are too shallow to provide adequate air exchange.

6. Shallow respirations can be identified by little movement of the chest wall (reduced tidal volume) or poor chest excursion.

7. Observe how much effort is required for the patient to breathe.

a. Presence of retractions

b. Use of accessory muscles

c. Nasal flaring

d. Two- to three-word dyspnea

e. Tripod position

f. Sniffing position

g. Labored breathing

8. Respiratory distress

a. Increased effort and rate

9. Respiratory failure

a. Occurs when the blood is inadequately oxygenated or ventilation is inadequate to meet the oxygen demands of the body

b. Respiratory arrest is the ultimate result of respiratory failure if it is not corrected.

F. Assess circulation.

1. Evaluated by assessing the patient’s mental status, pulse, and skin condition

2. Assess pulse.

a. To determine if a pulse is present, you will need to palpatethe pulse.

i. In responsive patients who are older than 1 year, you should palpate the radial pulse at the wrist.

ii. In unresponsive patients older than 1 year, you should palpate the carotid pulse in the neck.

iii. Palpate the brachial pulse, located at the medial area (inside) of the upper arm, in children younger than 1 year.

b. If you cannot palpate a pulse in an unresponsive patient, begin CPR.

3. Skin condition

a. Perfusion is assessed by evaluating a patient’s skin color, temperature, moisture, and capillary refill.

b. Skin color

i. Poor peripheral circulation will cause the skin to appear pale, white, ashen, or gray.

ii. High blood pressure may cause the skin to be abnormally flushed and red.

iii. When the blood is not properly saturated with oxygen, it appears blue.

c. Skin temperature

i. Normal skin temperature will be warm to the touch.

ii. Abnormal skin temperatures are hot, cool, cold, and clammy.

d. Skin moisture

i. Dry skin is normal.

ii. Skin that is wet, moist, or excessively dry and hot suggests a problem.

e. Capillary refill

i. Capillary refill is often evaluated in pediatric patients to assess the ability of the circulatory system to perfuse the capillary system in the fingers and toes.

4. Assess and control external bleeding.

a. Should occur before addressing airway or breathing concerns.

b. Bleeding from a large vein is characterized by a steady flow of blood.

c. Bleeding from an artery is characterized by a spurting flow of blood.

d. Controlling external bleeding is often very simple.

i. Apply direct pressure.

ii. If direct pressure is not quickly successful or if there is an obvious arterial hemorrhage of an extremity, apply a tourniquet.

G. Perform a rapid exam to identify life threats.

1. Identify injuries that must be managed or protected before the patient is transported.

a. Take 60 to 90 seconds to perform the rapid scan.

b. This is not a systematic or focused physical examination.

2. See **Skill Drill 10-1**.

H. Determine priority of patient care and transport.

1. High-priority patients include those with any of the following conditions:

a. Unresponsive

b. Difficulty breathing

c. Uncontrolled bleeding

d. Altered level of consciousness

e. Severe chest pain

f. Pale skin or other signs of poor perfusion

g. Complicated childbirth

h. Severe pain in any area of the body

2. The Golden Hour (Golden Period) is the time from injury to definitive care, during which treatment of shock and traumatic injuries must occur in order to maximize the patient’s chance of survival.

a. Immediate transport is one of the keys to survival of patients who need immediate care that the EMT cannot provide.

3. Transport decisions should be made at this point.

a. Transport decisions are based on:

i. Patient’s condition

ii. Availability of advanced care

iii. Distance of transport

iv. Local protocols

IV. History Taking

A. Provides detail about the patient’s chief complaint and an account of the patient’s signs and symptoms

B. Be sure to document the following information:

1. Date of the incident

2. Patient’s age

3. Patient’s gender

4. Patient’s race

5. Past medical history

6. Patient’s current health status

C. Investigate the chief complaint (history of present illness).

1. Begin by making introductions, make the patient feel comfortable, and obtain permission to treat.

a. Ask a few simple and direct questions.

b. Refer to the patient as Mr., Ms., or Mrs., using the patient’s last name.

c. Open-ended questions will help determine the chief complaint.

d. Use eye contact to encourage the patient to continue speaking and repeat statements back to show understanding.

2. If the patient is unresponsive, gather information from people present on-scene or clues from the patient’s surroundings.

3. Use the OPQRST mnemonic for gathering additional information about the patient’s present illness and current symptoms.

4. Identify pertinent negatives.

a. Pertinent negatives are negative findings that warrant no care or intervention.

D. Obtain SAMPLE history.

E. Critical thinking in assessment

1. Critical thinking is an essential component in assessing a patient and involves:

a. Gathering: seeking facts to help your clinical decision making and scene management

b. Evaluating: considering what the information gathered means

c. Synthesizing: putting together the information that you have gathered and validated and synthesizing it into a plan to manage the scene and/or care for the patient.

F. Taking history on sensitive topics

1. Alcohol and drugs

a. Signs may be confusing, hidden, or disguised

b. Many patients may deny having any problems.

c. The history gathered from a chemically dependent patient may be unreliable.

d. Do not judge the patient, and be professional in your approach.

2. Physical abuse or violence

a. Report all physical abuse or domestic violence to the appropriate authorities.

b. Follow state laws and local protocols.

c. Do not accuse; instead, immediately involve law enforcement.

3. Sexual history

a. Consider all female patients of childbearing age who report lower abdominal pain to be pregnant unless ruled out by history or other information.

b. Ask about the patient’s last menstrual period.

c. Inquire about urinary symptoms with male patients.

d. When appropriate, ask about the potential for sexually transmitted diseases in all patients

G. Special challenges in obtaining patient history include:

1. Silence

a. Patience is extremely important when dealing with patients and their emergency crises.

b. Using a closed-ended question that requires a simple yes or no answer may work best.

c. Consider whether the silence is a clue to the patient’s chief complaint.

2. Overly talkative

a. Reasons why a patient may be overly talkative:

i. Excessive caffeine consumption

ii. Nervousness

iii. Ingestion of cocaine, crack, or methamphetamines

iv. Underlying psychological issue

3. Multiple symptoms

a. Prioritize the patient’s complaints as you would in triage; start with the most serious and end with the least serious.

4. Anxiety

a. Consider the context of the situation and recognize that the observed anxiety may be a sign of a serious underlying medical condition.

b. Frequently, anxious patients can be observed in emergency scenes that involve a large number of patients, such as during a disaster.

c. Some anxious patients show signs of psychological shock, such as:

i. Pallor

ii. Diaphoresis

iii. Shortness of breath

iv. Numbness in the hands and feet

v. Dizziness or light-headedness

vi. Loss of consciousness

d. Anxiety can be an early indicator of:

i. Low blood glucose level

ii. Shock

iii. Hypoxia

5. Anger and hostility

a. Friends, family, or bystanders may direct their anger and rage toward you.

b. Remain calm, reassuring, and gentle.

c. If the scene is not safe or secured, retreat until it is secured.

6. Intoxication

a. Do not put an intoxicated patient in a position where he or she feels threatened and has no way out.

i. The potential for violence and a physical confrontation is high when a patient is intoxicated.

b. Alcohol dulls a patient’s senses.

7. Crying

a. A patient who cries may be sad, in pain, or emotionally overwhelmed.

b. Remain calm and be patient, reassuring, and confident, and maintain a soft voice.

8. Depression

a. Depression is among the leading causes of disability worldwide.

b. Symptoms include:

i. Sadness

ii. A feeling of hopelessness

iii. Restlessness

iv. Irritability

v. Sleeping and eating disorders

vi. A decreased energy level

c. The most effective treatment in handling a patient’s depression is being a good listener.

9. Confusing behavior or history

a. Conditions such as hypoxia, stroke, diabetes, trauma, medication use, and other drug use could alter a patient’s explanation of events.

i. Hypoxia is the most common cause of confusion.

b. In older patients, it is not uncommon to encounter a patient who has dementia, delirium, or Alzheimer disease.

10. Limited cognitive abilities

a. Keep your questions simple, and limit the use of medical terms.

b. Be alert for partial answers, and keep asking questions.

c. In cases of patients with severely limited cognitive function, rely on the presence of family, caregivers, and friends to supply answers to your questions.

11. Cultural challenges

a. Do not use medical language.

b. Patients from some cultures may prefer to speak only with health care providers of the same gender.

c. Gain the assistance of the patient’s friends or family members and enlist the help of health care providers of the same culture or background, if possible.

12. Language barriers

a. Find an interpreter, if possible.

b. If not, determine whether the patient understands who you are.

c. Keep questions straightforward and brief, and use hand gestures.

d. Be aware of the language diversity in your community.

13. Hearing problems

a. Ask questions slowly and clearly.

b. Use a stethoscope to function as a hearing aid for the patient.

c. Learning simple sign language during your career will help in the communication process.

d. Use a pencil and paper.

14. Visual impairments

a. Identify yourself verbally when entering the scene.

b. It is important that you put any items that have been moved back into their previous position.

c. During the assessment and history-taking process, explain each step in the vital signs assessment.

d. Notify the patient before preparing to lift the patient and move him or her on the stretcher.

V. Secondary Assessment

A. If the patient is in stable condition and has an isolated complaint, you may choose to perform the secondary assessment at the scene.

B. If the secondary assessment is not performed at the scene, it is performed in the back of the ambulance en route to the hospital.

C. However, there will be situations where you may not have time to perform the secondary assessment.

1. You may have to continue to manage life threats identified during the primary assessment en route to the hospital.

D. The purpose is to perform a systematic physical examination of the patient.

1. An assessment that focuses on a certain area or system of the body, often determined through the chief complaint (a focused assessment)

2. How and what to assess during a physical examination:

a. Inspection—Look at the patient for abnormalities.

b. Palpation—Touch or feel the patient for abnormalities.

c. Auscultation—Listen to the sounds a body makes by using a stethoscope.

3. The mnemonic DCAP-BTLS reminds you what to look for when inspecting and palpating various body regions.

4. Compare findings on one side of the body with the other side when possible.

D. Systematically assess the patient—secondary assessment.

1. The goal is to identify hidden injuries or identify causes that may not have been identified during the 60- to 90-second exam during the primary assessment.

2. See **Skill Drill 10-2**.

E. Systematically assess the patient—focused assessment.

1. Performed on patients who have sustained nonsignificant MOIs or on responsive medical patients

2. Typically based on the chief complaint

3. The goal is to focus your attention on the body part or systems affected by the priority problems.

4. Respiratory system

a. Expose the patient’s chest.

b. Look again for signs of airway obstruction, as well as trauma to the neck and/or chest.

c. Inspect the chest for overall symmetry.

d. Listen carefully to breath sounds, noting abnormalities.

e. Measure the respiratory rate, chest rise and fall (for tidal volume), and effort.

f. Look for retractions.

g. Look for increased work of breathing.

h. When assessing breathing, obtain the following information:

i. Respiratory rate

ii. Rhythm

iii. Quality of breathing

iv. Depth of breathing

i. Auscultating breath sounds

5. Cardiovascular system

a. Look for trauma to the chest and listen for breath sounds.

b. Consider the pulse and respiratory rate and the blood pressure.

c. Pay particular attention to rate, quality, and rhythm.

d. Consider your findings when assessing the skin.

e. Check and compare distal pulses to determine any right and left side differences.

f. Consider auscultation for abnormal heart sounds.

g. Pulse rate

h. Pulse quality

i. Pulse rhythm

j. Blood pressure

k. A blood pressure cuff with gauge (sphygmomanometer) contains the following components:

i. A wide outer cuff

ii. An inflatable wide bladder sewn into a portion of the cuff

iii. A ball-pump with a one-way valve

iv. A pressure gauge calibrated in millimeters of mercury

l. Auscultation is the most common means of measuring a patient’s blood pressure.

i. See **Skill Drill 10-3**.

m. The palpation (feeling) method does not depend on your ability to hear sounds and should be used in certain cases to obtain a patient’s blood pressure.

i. See **Skill Drill 10-4**.

n. Normal blood pressure

6. Neurologic system

a. A neurologic assessment should be performed any time you are confronted with a patient who has:

i. Changes in mental status

ii. A possible head injury

iii. Stupor

iv. Dizziness

v. Drowsiness

vi. Syncope

b. Evaluate the LOC and orientation to determine the patient’s ability to think.

i. Use the AVPU scale if appropriate to determine the patient’s mental status.

c. The Glasgow Coma Scale (GCS) score can be helpful in providing additional information on patients with mental status changes.

d. Pupils

i. Normally round and of approximately equal size and adjust their size depending on the available light.

ii. The diameter and reactivity to light of the patient’s pupils can reflect the status of the brain’s perfusion, oxygenation, and condition.

iii. In the absence of light, the pupils will become fully relaxed and dilated.

vi. A small number of the population exhibit unequal pupils (anisocoria).

v. Abnormal pupillary response can indicate altered brain function.

vi. The mnemonic PEARRL is a useful assessment guide:

(a) **P**upils

(b) **E**qual

(c) **A**nd

(d) **R**ound

(e) **R**egular in size

(f) React to **L**ight

7. Assessing neurovascular status

a. Perform a hands-on assessment to determine sensory and motor response.

b. Check for bilateral muscle strength and weaknesses.

c. Complete a thorough sensory assessment.

d. Test for pain, sensations, and position, and compare distal and proximal sensory and motor responses and one side with the other.

e. See **Skill Drill 10-5**.

8. Anatomic regions

a. Head, neck, and cervical spine

b. Chest

c. Abdomen

d. Pelvis

e. Extremities

f. Posterior body

F. Assess vital signs using the appropriate monitoring device.

1. These devices should never be used to replace your comprehensive assessment of your patient.

2. Pulse oximetry

3. Capnography

4. Blood glucometry

a. See **Skill Drill 9-6**.

5. Noninvasive blood pressure measurement

VI. Reassessment

A. Perform a reassessment at regular intervals during the assessment process.

1. The purpose of reassessment is to identify and treat changes in a patient’s condition.

B. Repeat the primary assessment.

C. Reassess vital signs.

1. Compare the baseline vitals obtained during the primary assessment with any and all subsequent vital signs.

2. Look for trends.

D. Reassess the chief complaint.

E. Recheck interventions.

F. Identify and treat changes in the patient’s condition.

G. Reassess patient.

1. A patient in unstable condition should be reassessed approximately every 5 minutes.

2. A patient in stable condition should be reassessed approximately every 15 minutes.

Post-Lecture

## Assessment in Action

**A. Assessment in Action is available in the Navigate course.**