

Introduction (1 of 3)

- Patient assessment is very important.
- EMTs must master the patient assessment process.
- Patient assessment is used, to some degree, in every patient encounter.

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Introduction (2 of 3)

- Five main parts:
 - Scene size-up
 - Primary assessment
 - History taking
 - Secondary assessment
 - Reassessment

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Introduction (3 of 3)

- Rarely does one sign or symptom reveal the patient's status.
 - Symptom: subjective condition the patient feels and tells you about
 - Sign: objective condition you can observe about the patient

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Scene Size-up (1 of 2)

- How you prepare for a specific situation
- Begins with the dispatcher's basic information
- Is combined with an inspection of the scene

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Scene Size-up (2 of 2)

- Steps
 - Ensure scene safety.
 - Determine the mechanism of injury/nature of illness.
 - Take standard precautions.
 - Determine the number of patients.
 - Consider additional/specialized resources.

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Ensure Scene Safety (1 of 6)

- The prehospital setting is not a controlled and isolated scene.
- It is:
 - Unpredictable
 - Dangerous
 - Unforgiving

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Ensure Scene Safety (2 of 6)

- Ensure your own safety first and your patient's second.
- Wear a public safety vest.
- Look for possible dangers as you approach the scene.
- Typically the way you enter an area is the way you will leave.

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Ensure Scene Safety (3 of 6)

- Consider difficult terrain.
- Consider traffic safety issues.
- Consider environmental conditions.



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Ensure Scene Safety (4 of 6)

- If appropriate, help protect bystanders from becoming patients.
- Forms of hazards:
 - Chemical and biologic
 - Electricity from downed lines or lightning
 - Water hazards, fires, explosions
 - Potentially toxic environments

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Ensure Scene Safety (5 of 6)

- Forms of hazards (cont'd):
 - Hazards found at every motor vehicle collision scene



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Ensure Scene Safety (6 of 6)

- Occasionally, you will not be able to enter a scene safely.
 - If the scene is unsafe, make it safe.
 - If this is not possible, do not enter.
 - Request law enforcement or other assistance.
 - Beware of scenes with potential for violence.

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Determine Mechanism of Injury/Nature of Illness (1 of 7)

- To care for trauma patients, you must understand the mechanism of injury (MOI).
- Fragile and easily injured areas include:
 - Brain
 - Spinal cord
 - Eyes

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Determine Mechanism of Injury/Nature of Illness (2 of 7)

- You can use the MOI as a guide to predict the potential for a serious injury.
- Evaluate three factors:
 - Amount of force applied to the body
 - Length of time the force was applied
 - Areas of the body that are involved

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Determine Mechanism of Injury/Nature of Illness (3 of 7)

- Blunt trauma
 - The force occurs over a broad area.
 - Skin is usually not broken.
 - Tissues and organs below the area of impact may be damaged.

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Determine Mechanism of Injury/Nature of Illness (4 of 7)

- Penetrating trauma
 - The force of the injury occurs at a small point of contact between the skin and the object.
 - Open wound with high potential for infection

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Determine Mechanism of Injury/Nature of Illness (5 of 7)

- Penetrating trauma (cont'd)
 - The severity of the injury depends on:
 - The characteristics of the penetrating object
 - The amount of force or energy
 - The part of the body affected

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Determine Mechanism of Injury/Nature of Illness (6 of 7)

- For medical patients, determine the nature of illness (NOI).
- Similarities between MOI and NOI
 - Both require you to search for clues.
- Talk with the patient, family, or bystanders.
- Use your senses to check for clues.

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Determine Mechanism of Injury/Nature of Illness (7 of 7)

- Be aware of scenes with more than one patient with similar signs or symptoms.
 - Example: carbon monoxide poisoning
 - Could be an unhealthy situation for the EMT as well

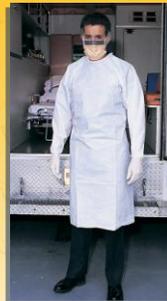
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Importance of MOI and NOI

- Considering the MOI or NOI early can be of value in preparing to care for the patient.
- You may be tempted to categorize the patient immediately as either trauma or medical.
 - Fundamentals of good patient assessment are the same.

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Take Standard Precautions (1 of 3)



- Wear personal protective equipment (PPE).
 - Should be adapted to the prehospital task at hand

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Take Standard Precautions (2 of 3)

- Standard precautions have been developed for use in dealing with:
 - Objects
 - Blood
 - Body fluids
 - Other potential exposure risks of communicable disease

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Take Standard Precautions (3 of 3)

- When you step out of the EMS vehicle, standard precautions must have been taken or initiated.
 - At a minimum, gloves must be in place.
 - Consider glasses and a mask.

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Determine Number of Patients (1 of 2)

- During scene size-up, accurately identify the total number of patients.
 - Critical in determining the need for additional resources
- When there are multiple patients, use the incident command system, call for additional units, then begin triage.

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Determine Number of Patients (2 of 2)



Source: © Peter Willard, The St. Augustine Record/AP Photos

- Triage is the process of sorting patients based on the severity of each patient's condition.

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Consider Additional/Specialized Resources (1 of 4)



- Some situations may require:
 - More ambulances
 - Specialized resources

Source: Courtesy of Tempe Fire Department

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Consider Additional/Specialized Resources (2 of 4)

- Specialized resources include:
 - Advanced life support (ALS)
 - Air medical support
 - Fire departments, who may handle high-angle rescue, hazardous materials, water rescue
 - Search and rescue teams

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Consider Additional/Specialized Resources (3 of 4)

- To determine if you require additional resources, ask yourself:
 - How many patient's are there?
 - What is the nature of their condition?
 - Who contacted EMS?
 - Does the scene pose a threat to me, my patient, or others?

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Consider Additional/Specialized Resources (4 of 4)



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Primary Assessment

- Begins when you greet your patient
- The goal is to identify and initiate treatment of immediate or potential life threats.
- The patient's vital signs will determine the extent of your treatment.



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Form a General Impression (1 of 3)

- Formed to determine the priority of care
- Based on your immediate assessment
- Make a note of the person's:
 - Age, sex, and race
 - Level of distress
 - Overall appearance



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Form a General Impression (2 of 3)

- Position yourself lower than the patient.
- Introduce yourself.
- Address the patient by name.
- Ask about the chief complaint.



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Form a General Impression (3 of 3)

- Assess the patient's skin color and condition.
- Determine if the patient's condition is:
 - Stable
 - Stable but potentially unstable
 - Unstable



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Assess Level of Consciousness (1 of 9)

- The level of consciousness (LOC) is considered a vital sign.
 - Tells a lot about a patient's neurologic and physiologic status

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Assess Level of Consciousness (2 of 9)

- Categories:
 - Conscious with an unaltered LOC
 - Conscious with an altered LOC
 - Unconscious

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Assess Level of Consciousness (3 of 9)

- Conscious with an altered LOC may be due to inadequate perfusion.
 - Perfusion is the circulation of blood within an organ or tissue.
- Could also be caused by medications, drugs, alcohol, or poisoning

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Assess Level of Consciousness (4 of 9)

- Assessment of an unconscious patient focuses on airway, breathing, and circulation.
 - Sustained unconsciousness should warn you of a critical respiratory, circulatory, or central nervous system problem.
 - Package the patient and provide rapid transport.

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Assess Level of Consciousness (5 of 9)

- To assess for responsiveness, use the mnemonic AVPU:
 - Awake and alert
 - Responsive to Verbal stimuli
 - Responsive to Pain
 - Unresponsive

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Assess Level of Consciousness (6 of 9)

Test responsiveness to painful stimuli



Pinch earlobe



Press down on bone above eye



Pinch neck muscles

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Assess Level of Consciousness (7 of 9)

- Orientation tests mental status.
- Evaluates a person's ability to remember:
 - Person
 - Place
 - Time
 - Event

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Assess Level of Consciousness (8 of 9)

- Evaluates long-term memory, intermediate-term memory, and short-term memory
- The Glasgow Coma Scale (GCS) score can be helpful in providing additional information on mental status changes.

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Assess Level of Consciousness (9 of 9)

- Uses parameters that test a patient's eye opening, best verbal response, and best motor response

Table 8-1 Glasgow Coma Scale

Eye Opening	Best Verbal Response	Best Motor Response
Spontaneous 4	Oriented conversation 5	Obeys commands 6
In response to speech 3	Confused conversation 4	Localizes pain 5
In response to pain 2	Inappropriate words 3	Withdraws to pain 4
None 1	Incomprehensible sounds 2	Abnormal flexion 3
	None 1	Abnormal extension 2
		None 1

Score 13-15 may indicate mild dysfunction, although 15 is the score a person with no neurologic disabilities would receive.
Score 9-12 may indicate moderate dysfunction.
Score 8 or less is indicative of severe dysfunction.

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Pupils (1 of 5)

- Diameter and reactivity to light reflect the status of the brain's:
 - Perfusion
 - Oxygenation
 - Condition

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Pupils (2 of 5)

- The pupil is a circular opening in the center of the pigmented iris of the eye.
 - The pupils are normally round and of approximately equal size.
 - In the absence of any light, the pupils will become fully relaxed and dilated.

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Pupils (3 of 5)



Constricted



Dilated



Unequal

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Pupils (4 of 5)

- A small number of the population exhibit unequal pupils (anisocoria).
- Causes of depressed brain function:
 - Injury of the brain or brain stem
 - Trauma or stroke
 - Brain tumor
 - Inadequate oxygenation or perfusion
 - Drugs or toxins

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Pupils (5 of 5)

- PEARRL is a useful assessment guide:
 - Pupils
 - Equal
 - And
 - Round
 - Regular in size
 - React to Light

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Assess the Airway (1 of 4)

- Moving through the primary assessment, always be alert for signs of airway obstruction.
- Determine if the airway is open (patent) and adequate.

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Assess the Airway (2 of 4)

- Responsive patients
 - Patients who are talking or crying have an open airway.
 - Watch and listen to how patients speak.
 - If you identify an airway problem, stop the assessment and obtain a patent airway.

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Assess the Airway (3 of 4)

- Unresponsive patients
 - Immediately assess the airway.
 - Use the modified jaw-thrust technique when necessary.
 - Use the head tilt–chin lift technique when necessary.
 - Relaxation of the tongue muscles is a cause of airway obstruction.

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Assess the Airway (4 of 4)

- Signs of obstruction in an unconscious patient:
 - Obvious trauma, blood, or obstruction
 - Noisy breathing (snoring, bubbling, gurgling, crowing, abnormal sounds)
 - Extremely shallow or absent breathing

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Assess Breathing (1 of 13)

- Make sure the patient's breathing is present and adequate.
- Assess breathing by:
 - Watching the chest rise and fall
 - Feeling for air through the mouth and nose
 - Listening to breath sounds with a stethoscope over each lung

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Assess Breathing (2 of 13)

- Obtain the following information:
 - Respiratory rate
 - Rhythm—regular or irregular
 - Quality/character of breathing
 - Depth of breathing

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Assess Breathing (3 of 13)

- Ask yourself these questions:
 - Does the patient appear to be choking?
 - Is the respiratory rate too fast or too slow?
 - Are the patient's respirations shallow or deep?
 - Is the patient cyanotic (blue)?

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Assess Breathing (4 of 13)



- Ask yourself these questions (cont'd):
 - Do I hear abnormal sounds when listening to the lungs?
 - Is the patient moving air into and out of the lungs on both sides?

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Assess Breathing (5 of 13)

- Administer supplemental oxygen if:
 - Respirations are too fast (more than 20 breaths/min)
 - Respirations are too shallow
 - Respirations are too slow (fewer than 12 breaths/min)



Assess Breathing (6 of 13)

- Consider providing positive-pressure ventilations with an airway adjunct when:
 - Respirations exceed 24 breaths/min
 - Respirations are fewer than 8 breaths/min



Assess Breathing (7 of 13)

- Respiratory rate
 - A normal rate in adults ranges from 12 to 20 breaths/min.
 - Children breathe at even faster rates.
 - Count the number of breaths in a 30-second period and multiply by two.



Assess Breathing (8 of 13)

- Respiratory rate (cont'd)
 - While counting respirations, also note the rhythm.

Age	Range (breaths/min)
Adults and adolescents	12 to 20
Children (1 to 12 years)	15 to 30
Infants	25 to 50

Note: Ranges presented in other courses may vary.



Assess Breathing (9 of 13)

- Quality of breathing
 - Listen to breath sounds on each side of the chest.
 - Normal breathing is silent.
 - You can always hear a patient's breath sounds better from the patient's back.



Assess Breathing (10 of 13)



Assess Breathing (11 of 13)

- What are you listening for?
 - Normal breath sounds
 - Wheezing breath sounds
 - Rales
 - Rhonchi
 - Stridor



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Assess Breathing (12 of 13)

- Depth of breathing
 - Amount of air the patient exchanges depends on the rate and tidal volume
 - Nasal flaring and seesaw breathing in pediatric patients indicate inadequate breathing.



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Assess Breathing (13 of 13)



Source: Courtesy of Health Resources and Services Administration, Maternal and Child Health Bureau, Emergency Medical Service for Children Program

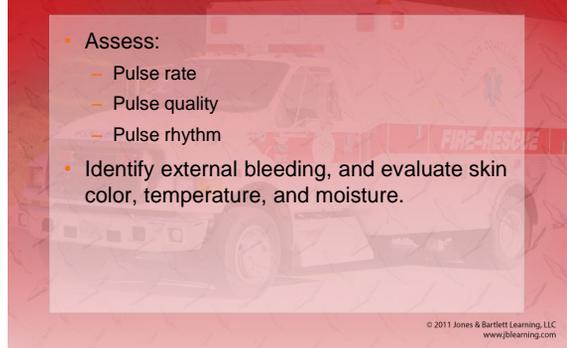
- Depth of breathing
 - Normal breathing is an effortless process that does not affect speech, posture, or positioning.
 - Tripod position
 - Sniffing position



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Assess Circulation (1 of 16)

- Assess:
 - Pulse rate
 - Pulse quality
 - Pulse rhythm
- Identify external bleeding, and evaluate skin color, temperature, and moisture.



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Assess Circulation (2 of 16)

- Assess pulse
 - The pulse is the pressure wave that occurs as each heartbeat causes a surge in the blood circulating through the arteries.
 - Palpate (feel) the pulse.
 - If you cannot palpate a pulse in an unresponsive patient, begin CPR.

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Assess Circulation (3 of 16)

Table 8-5 Normal Ranges for Pulse Rate

Age	Range (beats/min)
Infant: 1 month to 1 year	100 to 160
Toddler: 1 to 3 years	90 to 150
Preschool age: 3 to 6 years	80 to 140
School age: 6 to 12 years	70 to 120
Adolescent: 12 to 18 years	60 to 100
Adult	60 to 100

- Pulse rate
 - Normal resting pulse for an adult is between 60 and 100 beats/min.
 - The younger the patient, the faster the pulse.

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Assess Circulation (4 of 16)

- Pulse quality
 - Describe a stronger than normal pulse as “bounding.”
 - A pulse that is weak and difficult to feel is described as “weak” or “thready.”

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Assess Circulation (5 of 16)

- Pulse rhythm
 - Determine whether it is regular or irregular.
 - When the interval between each ventricular contraction is short, the pulse is rapid.
 - When the interval is longer, the pulse is slower.

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Assess Circulation (6 of 16)

- The skin
 - A normally functioning circulatory system perfuses the skin with oxygenated blood.
 - Evaluate the patient’s skin color, temperature, moisture, and capillary refill.

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Assess Circulation (7 of 16)

- Skin color
 - Determined by the blood circulating through vessels and the amount and type of pigment present in the skin
 - Poor circulation will cause the skin to appear pale, white, ashen, or gray.

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Assess Circulation (8 of 16)



Source: © St. Bartholomew's Hospital, London/Photo Researchers, Inc.

- Skin color (cont'd)
 - When blood is not properly saturated with oxygen, it appears bluish.
 - Changes in skin color may result from chronic illness.

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Assess Circulation (9 of 16)

- Skin temperature
 - Normal skin will be warm to the touch (98.6°F).
 - Abnormal skin temperatures are hot, cool, cold, and clammy.

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Assess Circulation (10 of 16)

- Skin moisture
 - Dry skin is normal.
 - Skin that is wet, moist, or excessively dry and hot suggests a problem.

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Assess Circulation (11 of 16)

- Capillary refill
 - Evaluated to assess the ability of the circulatory system to restore blood to the capillary system
 - Press on the patient's fingernail.
 - Remove the pressure.
 - The nail bed should restore to its normal pink color.

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Assess Circulation (12 of 16)

- Capillary refill (cont'd)
 - Should be restored to normal within 2 seconds



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Assess Circulation (13 of 16)

- Assess and control external bleeding.
 - Bleeding from a large vein is characterized by a steady flow of blood.
 - Bleeding from an artery is characterized by a spurting flow of blood.

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Assess Circulation (14 of 16)

- Controlling external bleeding can be simple.
 - Apply direct pressure.
 - If bleeding from the arms or legs, elevate the extremity.
 - When direct pressure and elevation are unsuccessful, apply a tourniquet.

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Assess Circulation (15 of 16)

- Identify and treat life threats.
 - You must determine the life threat and quickly address it.
 - There will be a loss of meaningful communication between you and the patient.
 - Loss of consciousness occurs.

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Assess Circulation (16 of 16)

- Identify and treat life threats (cont'd)
 - The jaw muscles become slack, leading to airway obstruction.
 - The patient stops breathing.
 - The heart cannot function without oxygen.
 - Brain cells become damaged.

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Perform a Rapid Scan (1 of 2)

- Scan the body to identify injuries that must be managed or protected immediately.
 - Take 60 to 90 seconds to perform.
 - Not a focused physical examination

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Perform a Rapid Scan (2 of 2)



- Follow the steps in **Skill Drill 8-1**.
- Determine if there is spinal injury during this stage of the assessment process.

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Determine Priority of Patient Care and Transport (1 of 6)

- Rapid scan assists in determining transport priority.
- High-priority patients include those with any of the following conditions:
 - Difficulty breathing
 - Poor general impression
 - Unresponsive with no gag or cough reflex

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Determine Priority of Patient Care and Transport (2 of 6)

- High-priority patients (cont'd):
 - Severe chest pain
 - Pale skin or other signs of poor perfusion
 - Complicated childbirth
 - Uncontrolled bleeding

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Determine Priority of Patient Care and Transport (3 of 6)

- High-priority patients (cont'd):
 - Responsive but unable to follow commands
 - Severe pain in any area of the body
 - Inability to move any part of the body

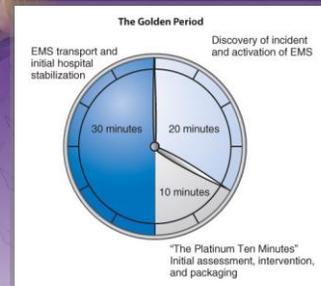
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Determine Priority of Patient Care and Transport (4 of 6)

- The Golden Period is the time from injury to definitive care.
 - Treatment of shock and traumatic injuries should occur.
 - Aim to assess, stabilize, package, and begin transport within 10 minutes (“Platinum 10”).

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Determine Priority of Patient Care and Transport (5 of 6)



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Determine Priority of Patient Care and Transport (6 of 6)

- Transport decisions should be made at this point, based on:
 - Patient's condition
 - Availability of advanced care
 - Distance of transport
 - Local protocols

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History Taking (1 of 3)

- Provides detail about the chief complaint and signs and symptoms
- Includes demographic information:
 - Date of the incident
 - Times of assessments and interventions
 - Patient's age, sex, race, past medical history, and current health status

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History Taking (2 of 3)

- Investigate the chief complaint.
 - Make introductions, make the patient feel comfortable, and obtain permission to treat.
 - Ask a few simple, open-ended questions.
 - Refer to the patient as Mr., Ms., or Mrs., using the patient's last name.

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History Taking (3 of 3)

- If the patient is unresponsive, clues about the incident may be obtained from:
 - Family members present
 - A person who may have witnessed the situation
 - Medical alert jewelry

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Obtain a SAMPLE History (1 of 5)

- Use the mnemonic SAMPLE to obtain the following information:
 - Signs and symptoms
 - Allergies
 - Medications
 - Pertinent past medical history
 - Last oral intake
 - Events leading up to the injury/illness

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Obtain a SAMPLE History (2 of 5)

- Use the OPQRST mnemonic to assess pain.
 - Onset
 - Provocation or palliation
 - Quality
 - Region/radiation
 - Severity
 - Timing

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Obtain a SAMPLE History (3 of 5)

- Document pertinent negatives.
 - Negative findings that warrant no care or intervention
- Taking history on sensitive topics
 - Alcohol and drugs
 - Signs may be confusing, hidden, or disguised.
 - History may be unreliable.

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Obtain a SAMPLE History (4 of 5)

- Physical abuse or violence
 - Report all physical abuse or domestic violence to the appropriate authorities.
 - Follow local protocols.
 - Do not accuse; instead, immediately involve law enforcement.

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Obtain a SAMPLE History (5 of 5)

- Sexual history
 - Consider all female patients of childbearing age who report lower abdominal pain to be pregnant.
 - Inquire about urinary symptoms with male patients.
 - Ask all patients about the potential for sexually transmitted diseases.

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Special Challenges in Obtaining Patient History (1 of 13)

- Silence
 - Patience is extremely important.
 - Use a close-ended question that requires a simple yes or no answer.
 - Consider whether the silence is a clue to the patient's chief complaint.

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Special Challenges in Obtaining Patient History (2 of 13)

- Overly talkative
 - Reasons why a patient may be overly talkative:
 - Excessive caffeine consumption
 - Nervousness
 - Ingestion of cocaine, crack, or methamphetamines

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Special Challenges in Obtaining Patient History (3 of 13)

- Multiple symptoms
 - Expect multiple symptoms in the geriatric group.
 - Prioritize the patient's complaints as you would in triage.
 - Start with the most serious and end with the least serious.

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Special Challenges in Obtaining Patient History (4 of 13)

- Anxiety
 - Expect anxious patients to show signs of psychological shock:
 - Pallor
 - Diaphoresis
 - Shortness of breath
 - Numbness in the hands and feet
 - Dizziness or light-headedness

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Special Challenges in Obtaining Patient History (5 of 13)

- Anger and hostility
 - Friends, family, or bystanders may direct their anger and rage toward you.
 - Remain calm, reassuring, and gentle.
 - If the scene is not safe or secured, get it secured.

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Special Challenges in Obtaining Patient History (6 of 13)

- Intoxication
 - Do not put an intoxicated patient in a position where he or she feels threatened.
 - Potential for violence and a physical confrontation is high.
 - Alcohol dulls a patient's senses.

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Special Challenges in Obtaining Patient History (7 of 13)

- Crying
 - A patient who cries may be sad, in pain, or emotionally overwhelmed.
 - Remain calm and be patient, reassuring, and confident, and maintain a soft voice.

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Special Challenges in Obtaining Patient History (8 of 13)

- Depression
 - Among the leading causes of disability worldwide
 - Symptoms include sadness, hopelessness, restlessness, irritability, sleeping and eating disorders, and a decreased energy level.
 - Be a good listener.

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Special Challenges in Obtaining Patient History (9 of 13)

- Confusing behavior or history
 - Conditions such as hypoxia, stroke, diabetes, trauma, medications, and other drugs could alter a patient's explanation of events.
 - Geriatric patients could have dementia, delirium, or Alzheimer disease.

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Special Challenges in Obtaining Patient History (10 of 13)

- Limited cognitive abilities
 - These patients are considered developmentally handicapped.
 - Keep your questions simple, and limit the use of medical terms.
 - Rely on the presence of family, caregivers, and friends to supply answers.

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Special Challenges in Obtaining Patient History (11 of 13)

- Language barriers
 - Find an interpreter, if possible.
 - If not, determine if the patient understands who you are.
 - Keep questions straightforward and brief.
 - Use hand gestures.
 - Be aware of the language diversity in your community.

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Special Challenges in Obtaining Patient History (12 of 13)

- Hearing problems
 - Ask questions slowly and clearly.
 - Use a stethoscope to function as a hearing aid.
 - Learn simple sign language during your career.
 - Use a pencil and paper.

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Special Challenges in Obtaining Patient History (13 of 13)

- Visual impairments
 - Identify yourself verbally when you enter the scene.
 - Return any items that have been moved to their previous positions.
 - Explain to the patient what is happening in each step of the assessment and history-taking process.

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Secondary Assessment (1 of 3)

- Performed at the scene, in the back of the ambulance en route to the hospital, or not at all
- Purpose is to perform a systematic physical examination of the patient
- May be a full-body scan or an assessment that focuses on a certain area of the body

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Secondary Assessment (2 of 3)

- How and what to assess:
 - Inspection—Look at the patient for abnormalities.
 - Palpation—Touch or feel the patient for abnormalities.
 - Auscultation—Listen to the sounds a body makes by using a stethoscope.

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Secondary Assessment (3 of 3)

- Use the mnemonic DCAP-BTLS.
 - Deformities
 - Contusions
 - Abrasions
 - Punctures/penetration
 - Burns
 - Tenderness
 - Lacerations
 - Swelling

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Assess Vital Signs (1 of 6)

- Use the appropriate monitoring devices.
 - These devices should never replace your comprehensive assessment of the patient.
- Pulse oximetry
 - A newer assessment tool to evaluate oxygenation



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Assess Vital Signs (2 of 6)

- Pulse oximetry (cont'd)
 - Measures the oxygen saturation of hemoglobin in the capillary beds
 - Patients with difficulty breathing should receive oxygen regardless of their pulse oximetry value.

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Assess Vital Signs (3 of 6)

- Noninvasive blood pressure measurement
 - The sphygmomanometer (blood pressure cuff) is used to measure blood pressure.



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Assess Vital Signs (4 of 6)



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Assess Vital Signs (5 of 6)

- End-tidal carbon dioxide
 - Carbon dioxide is the by-product of aerobic cellular metabolism and reflects the amount of oxygen being consumed.
 - Capnography is a noninvasive method.
 - End-tidal CO₂ is the partial pressure or maximal concentration of CO₂ at the end of an exhaled breath.

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Assess Vital Signs (6 of 6)

- End-tidal carbon dioxide (cont'd)
 - The normal range is 35 to 45 mm Hg, or 5% to 6% CO₂.
 - Colorimetric devices provide continuous end-tidal monitoring.
 - Capnometry and capnography provide a digital reading and waveform.

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Full-Body Scan

- Systematic head-to-toe examination
- Goal is to identify injuries or causes missed during the primary assessment's rapid scan.
- Follow the steps in **Skill Drill 8-2** to perform a full-body scan on a patient with no spinal injuries.

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Focused Assessment (1 of 16)

- Performed on patients who have sustained nonsignificant MOIs or on responsive medical patients
- Based on the chief complaint
- Goal is to focus your attention on the immediate problem

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Focused Assessment (2 of 16)

- Respiratory system
 - Expose the patient's chest.
 - Look for signs of airway obstruction.
 - Inspect for symmetry.
 - Listen to breath sounds.
 - Measure the respiratory rate.
 - Reevaluate pulse rate and skin and blood pressure.

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Focused Assessment (3 of 16)

- Cardiovascular system
 - Look for trauma to the chest.
 - Reevaluate pulse, respiratory rate, and blood pressure.
 - Reevaluate the skin.
 - Check and compare distal pulses.
 - Consider auscultation for abnormal heart sounds.

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Focused Assessment (4 of 16)

- Blood pressure
 - Pressure of circulating blood against the walls of the arteries
 - A drop in blood pressure indicates:
 - A loss of blood
 - A loss of vascular tone
 - A cardiac pumping problem

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Focused Assessment (5 of 16)

- Blood pressure (cont'd)
 - Decreased blood pressure is a late sign of shock.
 - High blood pressure may result in a rupture or other critical damage in the arterial system.

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Focused Assessment (6 of 16)

- A blood pressure cuff contains the following components:
 - A wide outer cuff
 - An inflatable wide bladder
 - A ball-pump with a one-way valve
 - A pressure gauge

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Focused Assessment (7 of 16)



- Follow the steps in **Skill Drill 8-3** to measure blood pressure by auscultation.
- The palpation (feeling) method can also be used.

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Focused Assessment (8 of 16)

- Normal blood pressure
 - Hypotension: Blood pressure is lower than normal.
 - Hypertension: Blood pressure is higher than normal.

Table 8-6 Normal Range for Blood Pressure

Age	Range, mm Hg
Adults	90 to 140 (systolic)
Children (ages 1 to 8 years)	80 to 110 (systolic)
Infants (newborn to age 1 year)	50 to 95 (systolic)

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Focused Assessment (9 of 16)

- Neurologic system
 - Should be performed with any patient who has:
 - Changes in mental status
 - A possible head injury
 - Stupor
 - Dizziness/drowsiness
 - Syncope

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Focused Assessment (10 of 16)

- Neurologic system (cont'd)
 - Evaluate the level of consciousness and orientation.
 - Assess the patient's thought process.
 - Inspect the head for trauma.
 - Check for bilateral muscle strength and weaknesses.

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Focused Assessment (11 of 16)

- Musculoskeletal system
 - Assess for posture and look at joints.
 - Always compare the right side with the left.
 - Look for trauma to the abdomen and for distention.
 - Palpate the abdomen for tenderness, rigidity, and patient guarding.

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Focused Assessment (12 of 16)

- Pelvis
 - Inspect for symmetry and any obvious signs of injury, bleeding, and deformity.
- Extremities
 - Inspect for symmetry, cuts, bruises, swelling, obvious injuries, and bleeding.
 - Palpate for deformities.
 - Check pulse and motor and sensory functions.

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Focused Assessment (13 of 16)

- Posterior body
 - Inspect the back for tenderness, deformity, symmetry, and open wounds.
 - Palpate the spine from the neck to the pelvis for tenderness and deformity.

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Focused Assessment (14 of 16)

- Anatomic regions
- Head, neck, and cervical spine
 - Palpate the scalp and skull.
 - Check the patient's eyes.
 - Check the color of the sclera.
 - Assess the patient's cheekbones.
 - Check the patient's ears and nose for fluid.

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Focused Assessment (15 of 16)

- Head, neck, and cervical spine (cont'd)
 - Check the upper (maxillae) and lower (mandible) jaw.
 - Open the patient's mouth and look for any broken or missing teeth.
 - Note any unusual odors in the mouth.

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Focused Assessment (16 of 16)

- Chest
- Abdomen
 - Palpate the front and back of the abdomen.
 - Four quadrants:
 - Left upper quadrant (LUQ)
 - Left lower quadrant (LLQ)
 - Right upper quadrant (RUQ)
 - Right lower quadrant (RLQ)

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Reassessment (1 of 4)

- Perform at regular intervals during the assessment process
- Repeat the primary assessment.
- Reassess vital signs.
 - Compare the baseline vital signs obtained during the primary assessment.
 - Look for trends.

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Reassessment (2 of 4)

- Reassess the chief complaint.
 - Ask and answer the following questions:
 - Is the current treatment improving the patient's condition?
 - Has an already identified problem gotten better?
 - Has an already identified problem gotten worse?
 - What is the nature of any newly identified problems?

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Reassessment (3 of 4)

- Recheck interventions.
 - Check all interventions.
 - Most important are the patient's ABCs.
 - Ensure management of bleeding.
 - Ensure adequacy of other interventions, and consider the need for new interventions.

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Reassessment (4 of 4)

- Identify and treat changes in the patient's condition.
 - Document any changes, whether positive or negative.
- Reassess the patient.
 - Unstable patients: every 5 minutes
 - Stable patients: every 15 minutes

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