

Chapter 8

Patient Assessment

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.

Introduction (2 of 3)

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

What is the difference?

- Between a
- **SIGN**
- And a
- **Symptom**

- 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

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

Scene Size-up (2 of 2)

- Steps
 - (B) Take standard precautions
 - (S) Ensure scene safety.
 - (M) Determine the mechanism of injury/nature of illness.
 - (A) Consider additional/specialized resources.
 - (N) Determine the number of patients.
 - (S) Consider need for spinal immobilization

Take Standard Precautions



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

Take Standard Precautions (2 of 3)

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



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.

Ensure Scene Safety (1 of 6)

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

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.

Ensure Scene Safety (3 of 6)

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



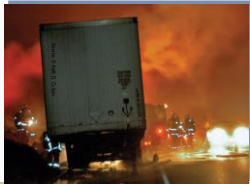
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Ensure Scene Safety (4 of 6)

- 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

Ensure Scene Safety (5 of 6)

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



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.



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



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



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.



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



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

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.

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



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.

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.

Determine Number of Patients (2 of 2)



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

Source: © Peter Wilson, The 24/7 Hospital Record/Photo

Consider Additional/Specialized Resources (1 of 4)



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

Source: Courtesy of Orange Fire Department

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, vehicle extrication
 - Search and rescue teams
 - Electrical utility
 - Natural gas utility

Consider Additional/Specialized Resources (3 of 4)

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

Consider Additional/Specialized Resources (4 of 4)

- How many patients are there?
- What is the nature of their conditions?
- Who contacted EMS?
- Does the scene pose a threat to you, your patient or others?

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.

Spinal Immobilization

- If the mechanism of injury is severe enough, consider telling your partner:

“Please hold manual c-spine stabilization in the neutral and in-line position”

First Patient Contact

- BSMANS – point in time from dispatch to arrival on scene
- **GMC – Doorway assessment of your pt.**
- (G) – General Impression
- (M) – Mentation
- (C) – Chief Complaint / Life Threats

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**
- Anticipate different problems based on age, gender and race

Form a General Impression (2 of 3)

- Assess as you walk in the door
 - Note patient's position and activity
- Position yourself lower than the patient.
- Introduce yourself.
- Address the patient by name.
 - Response gives you insight into LOC, airway patency, respiratory & circulatory status
- Ask about the chief complaint.

Form a General Impression (3 of 3)

- Assess the patient's skin color and condition.
- Determine if the patient's condition is:
 - C-critical
 - U-nstable
 - P-otentially unstable
 - S-table

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

Assess Level of Consciousness (2 of 9)

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

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 or trauma

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.

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

Assess Level of Consciousness (6 of 9)

Test responsiveness to painful stimuli



Pinch earlobe

Press down on
bone above eye

Pinch neck
muscles

Assess Level of Consciousness (7 of 9)

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

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.

Assess Level of Consciousness (9 of 9)

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

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 from pain 4
None 1	Incomprehensible sounds 2	Abnormal flexion 3
	None 1	Abnormal extension 2
		None 1

Score 15 = maximum level of consciousness, although it is the score a person with no neurological impairment would receive.
Score 14-10 may indicate moderate dysfunction.
Score 8 or less is indicative of severe dysfunction.

Pupils (1 of 5)

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

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.

Pupils (3 of 5)



Constricted



Dilated



Unequal

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

Pupils (5 of 5)

- PEARRL is a useful assessment guide:
 - Pupils
 - Equal
 - Accommodating
 - Round
 - Regular in size
 - React to Light
 - PERRLA, PERL, PERLA