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

Scene Size-up (1 of 2)
• Rarely does one sign or symptom reveal the patient’s status.
  • Symptoms: subjective condition the patient feels and tells you about
  • Signs: objective condition you can observe about the patient

Scene Size-up (2 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 exposures risk 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.

Ensure Scene Safety (4 of 6)

- If appropriate, help protect bystanders from becoming patients.
- Forms of hazards:
  - Chemical and biological
  - 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.
- Be aware 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.

Consider Additional/Specialized Resources (1 of 4)

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

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
- (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 patient's:
  - Age, sex, and race
  - Level of distress
  - Overall appearance
- Anticipate different problems based on age, gender and race

(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.
  - Responses give you insight into LOC, airway patency, respiratory & circulatory status
  - Ask about the chief complaint.

(3 of 3)

- Assess the patient's skin color and condition.
- Determine if the patient's condition is:
  - C-critical
  - U-unstable
  - Potentially unstable
  - S-stable
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:
  - A - Awake and alert
  - V - Responsive to Verbal stimuli
  - P - Responsive to Pain
  - U - 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

Pupils (1 of 5)

- Diameter and reactivity to light reflect the status of the brain:
  - 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
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

PEARL is a useful assessment guide:
- Pupils
- Equal
- Accommodating
- Round
- Regular in size
- React to Light
- PERRLA, PEERL, PEARL