Chapter 8
Patient Assessment

Objectives

- Describe the six phases of patient assessment
- Identify potential scene hazards that may confront the EMT-I or the patient
- Describe the self-protection measures required for body substance isolation precautions

Objectives

- Describe the problems an EMT-I might encounter in a hostile situation and suggest mechanisms of management
- Describe the initial assessment and what areas are critical to evaluate
- Describe the need for and methods of cervical spine immobilization throughout the phases of patient assessment
Objectives

- Define a priority patient and discuss several illnesses or suspected injuries that would lead you to classify a patient in this fashion.
- Describe the components of the focused assessment for both the medical and the trauma patient.
- Describe the components of the detailed assessment and discuss various conditions that determine whether or not the EMT-I must perform this phase of patient assessment.

Objectives

- Describe techniques for evaluating the effectiveness of ventilation.
- Describe the mechanism of evaluating the effectiveness of perfusion including pulse and skin color.
- Describe the need for ongoing assessment; list the components and discuss the frequency of this part of the patient evaluation.

Objectives

- Discuss factors that must be considered when determining to which hospital a patient should be transported.
- Describe the need for communication with either medical direction or the receiving facility when transporting a patient.
- Discuss the benefits of accurate documentation.
**Introduction**

- **Patient assessment**
  - Structured method of evaluation
  - Process that continues until transfer of care
  - Team process
  - Mastered by practice and experience

- **Symptom**
  - Subjective (e.g., chest pain)

- **Sign**
  - Objective (e.g., deformed arm)

- **Phases of patient assessment**
  - Scene size-up
  - Initial assessment
  - Resuscitation
  - Focused history/physical examination
  - Detailed assessment
  - Ongoing field assessment
Scene Size-Up
- First phase of patient assessment
  - Dispatch information
  - Previous knowledge
  - On-scene observations
  - Is scene safe?
  - Body substance isolation
  - Medical or trauma patient
    - How many?
  - Additional help required?

Scene Size-Up—Body Substance Isolation Precautions
- Wear latex or vinyl gloves

Scene Size-Up—Body Substance Isolation Precautions
- Wear protective eyewear or masks
Scene Size-Up—
Body Substance Isolation Precautions

- Wash hands thoroughly
- Avoid recapping needles

Personal Protection

- Potential danger signs and key rules
  - May not be obvious
    - "Gut feeling": do not enter
  - Patient violent
    - Move to safe area
  - Any sex, race, age, etc. has potential
    - Do not get caught off guard
  - Avoid being judgmental
    - Not all violent behavior because of alcohol or drug abuse

Scene Size-Up

- Potential danger signs and key rules
  - Scene and patient secured
    - Provide care
    - Documentation important
  - Body armor
Initial Assessment
- Quick evaluation to determine immediate life-threatening emergencies
- Rapid, organized, and systematic

Initial Assessment—Assessment of Effective Ventilation
- Rise in chest wall
- Auscultation of lungs
- Skin color
- Heart rate
- Pulse oximetry

Initial Assessment—Effectiveness of Perfusion
- Check radial pulse
- Check skin
  - Color
  - Temperature
  - Moisture
Initial Assessment—Effectiveness of Perfusion
- Carotid
- Femoral
- Radial
- Brachial

Initial Assessment—Effectiveness of Perfusion
- Capillary refill

Initial Assessment
- Priority patient (unstable)
  - Poor general impression
  - Unresponsive
  - Responsive but unable to follow commands
Initial Assessment

- Priority patient (unstable)
  - Difficulty breathing
  - Shock
  - Complicated childbirth
  - Chest pain—BP<100 systolic
  - Hypoxia
  - Multiple trauma
  - Severe hypertension
  - Uncontrolled bleeding
  - Severe pain

Focused History and Physical Examination

- In-depth examination
- Hands-on examination
- History gathering

Focused History and Physical Examination

- Rapid trauma assessment

  - DCAP-BTLS
    - D = Deformity
    - C = Contusions
    - A = Abrasions
    - P = Punctures/penetration
    - B = Burns
    - T = Tenderness
    - L = Lacerations
    - S = Swelling
Focused History and Physical Examination

- Assess for obvious blunt trauma

Focused History and Physical Examination

- Assess for neck vein distention

Focused History and Physical Examination

- Assess for cervical spine tenderness
Focused History and Physical Examination

- Consider cervical spine immobilization

Focused History and Physical Examination

- Assess for obvious major injuries

Focused History and Physical Examination

- Normal chest structures
Focused History and Physical Examination

Paradoxical respirations result from damage to ribs.

Focused History and Physical Examination

A puncture wound can lead to a collapsed lung and build-up of blood.

Focused History and Physical Examination

A medical professional administers CPR.

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Focused History and Physical Examination

- Palpating abdomen
Focused History and Physical Examination

- Cyanosis

Focused History and Physical Examination

- Common breathing patterns

Focused History and Physical Examination

- Blood pressure
  - Systole
  - Diastole
  - Normotension
  - Hypertension
  - Hypotension
  - Orthostatic hypotension
Focused History and Physical Examination

- Pulse oximeter
  - Atrial saturation

Focused History and Physical Examination

- Temperature

Focused History and Physical Examination

<table>
<thead>
<tr>
<th>AGE</th>
<th>SYSTOLIC BP</th>
<th>PULSE</th>
<th>RESPIRATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newborn to 2 yrs</td>
<td>&lt;60</td>
<td>&lt;80, &gt;180</td>
<td>&lt;15 or &gt;40</td>
</tr>
<tr>
<td>2 to 5 yrs</td>
<td>&lt;70</td>
<td>&lt;90, &gt;160</td>
<td>&lt;10 or &gt;30</td>
</tr>
<tr>
<td>Older than 5 yrs</td>
<td>&lt;90</td>
<td>&lt;50, &gt;120</td>
<td>&lt;15 or &gt;25</td>
</tr>
</tbody>
</table>
Focused History and Physical Examination

- SAMPLE history
  - S = Signs and symptoms
  - A = Allergies
  - M = Medications
  - P = Past pertinent medical history
  - L = Last oral intake
  - E = Events leading to event

Focused History and Physical Examination

- OPQRST (medical patient)
  - O = Onset
  - P = Provocation
  - Q = Quality
  - R = Radiation
  - S = Severity
  - T = Time

Head-to-Toe Examination

- Head
  - Look for obvious
  - Gently palpate
Head-to-Toe Examination

- **Eyes**
  - Look for obvious
  - Raccoon eyes
  - Pupillary reactivity

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Head-to-Toe Examination

- **Eyes**
  - Pupillary reactivity

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Head-to-Toe Examination

- **Eyes**
  - PERRIL
    - P = Pupils
    - E = Equal
    - R = Round
    - R = React
    - L = Light
Head-to-Toe Examination

- Ears
  - Cerebrospinal fluid
  - "Halo test"
  - Battle’s sign

- Nose
  - Deformities
  - Lacerations
  - Airway

- Mouth and throat
  - Foreign material
  - Soft-tissue injuries
  - Bleeding
  - Breath odor
  - Compromised airway
  - Spinal injury
Head-to-Toe Examination

- Face
  - Obvious deformities
  - Gently palpate

- Neck
  - Gently palpate
  - Observe for:
    - Neck vein distention
    - Ecchymosis
    - Subcutaneous emphysema

- Chest
  - Observe
  - Palpate
  - Auscultate:
    - Wheezes
    - Rhonchi
    - Rales
Head-to-Toe Examination

- Abdomen
  - Obvious injury
  - Ecchymosis
  - Swelling
  - Palpate quadrants
  - Observe patient's face
  - Rigidity
  - Costovertebral angle

Head-to-Toe Examination

- Pelvis
  - Gentle palpation
  - "Priority"

Head-to-Toe Examination

- Extremities
  - Start with lower extremities
  - Deformities
  - Discoloration
  - Soft-tissue injuries
  - Distal pulse
  - Capillary refill
Head-to-Toe Examination
- Back
  - Soft-tissue injuries
  - Skeletal injuries
  - Deformities
  - Pain
  - Minimize movement

Head-to-Toe Examination
- Neurologic assessment
  - Level of responsiveness
    - Best indicator
    - Note changes

Head-to-Toe Examination
- Glasgow Coma Scale
  - Neurologic assessment
  - Three main areas
    - Eye opening
    - Verbal response
    - Motor response
  - Maximum score 15; minimum score 3
On-Going Assessment, Field Management, and Transportation

- On-going assessment
  - Stable patient—every 15 minutes
  - Unstable patient—every 5 minutes

On-Going Assessment, Field Management, and Transportation

- On-going assessment includes:
  - Mental status
  - Airway
  - Breathing
  - Pulse
  - Skin
  - Patient priorities
  - Vital signs
  - Focused examination regarding complaint
  - Efficacy of interventions

On-Going Assessment, Field Management, and Transportation

- Transportation
  - Depends on:
    - Patient condition
    - Available facilities
    - Available transport modes
  - Transported to most appropriate facility
On-Going Assessment, Field Management, and Transportation

- Communication
  - Once transport is begun
  - During resuscitation phase
  - "Need to know" information
  - Certain skills require permission
  - Accurate documentation
    - Essential for proper transfer to receiving facility
    - Defense of patient care

Summary

- Patient assessment
  - Structured method of evaluating patient's physical condition

- Six phases of patient assessment
  - Scene size-up (scene assessment)
  - Initial assessment (primary survey)
  - Resuscitation
  - Focused history and physical exam
  - Detailed assessment (secondary survey)
  - On-going assessment (including definitive field management and transport)

Summary

- During scene size-up
  - Evaluate the "whole picture"
  - Ensure safe environment

- Five critical decisions to make on arrival
  - Scene safe
  - How many patients
  - Additional help
  - Medical or trauma patient
  - Need for body substance isolation precautions
Summary

- Initial assessment includes:
  - Form general impression of patient
  - Identify and treat life-threatening conditions
  - Evaluate level of consciousness
  - Assess and open airway as needed
  - Assess and manage ventilation
  - Assess and manage circulation
  - Identify priority (unstable) patients who require advanced level care

Summary

- During resuscitation phase
  - Perform life-saving procedures as needed
  - Focused history and physical examination evaluates patient's suspected condition

Summary

- For trauma patients
  - Consider mechanism of injury and transport decision
  - Perform rapid trauma assessment (DCAP-BTLS)
  - Obtain baseline vital signs
  - Take SAMPLE history
Summary

- Let patient's illness or injury guide decision to perform detailed assessment

- Parts of detailed assessment:
  - Chief complaint
  - Patient history
  - Patient condition

Summary

- On-going assessment is continued during definitive field management and transport
  - Reassess mental status, airway, breathing, pulse, skin, and vital signs
  - Monitor treatment priorities as needed
  - Repeat focused exam as necessary
  - Monitor effects of any treatment
  - Package patient for transport to definitive care

Summary

- Follow local protocols regarding choice of medical facilities
- Contact medical direction and/or receiving facility per protocol
- Clearly document all care given on appropriate run report