

**SECTION:** Adult General Medical Emergencies

**PROTOCOL TITLE:** General – Universal Patient Care/Initial Patient Contact

*(Medical Patient Assessment)*

**REVISED:** 06/2015

## **OVERVIEW:**

The ability to perform an accurate assessment is one of the most important skills in EMS. The information gained during the assessment is used to make decisions regarding emergency interventions, such as the need for immediate airway management and ventilation; to formulate a differential field diagnosis; and to provide continued and advanced pre-hospital care enroute to a receiving facility. Since this information is used in clinical decision-making, it is important that the assessment findings are interpreted correctly and efficiently.

## **SCENE SURVEY:**

Scene evaluation is one of the most important parts of pre-hospital EMS. Maintaining you and your crew's safety is paramount, and begins from the moment of dispatch to a call. The communications center begins obtaining information with each 911 call about possible problems and circumstances the pre-hospital provider may confront. The general rule is to never compromise the rescuers to aid the victim.

### Summary of Scene Survey and Management

- Obtain overview and evaluate situation / scene for potential safety hazards.
- Wear personal protective equipment (PPE) appropriate to hazards of the scene and / or patient.
- Gain access to the patient.
- Determine the number of patients and additional resources needed.
- Provide life-sustaining care to the patient.
- Prepare and remove the patient from the incident scene.
- Prepare the patient for transport to the hospital.
- Provide the patient with treatment enroute.
- Notify the intended receiving facility in a timely manner to prepare for patient arrival.

Upon entering a scene, a general impression should be formed, typically prior to any physical contact with the patient. Patients are usually categorized as either medical or trauma during the scene survey and general impression. At times, a patient may be both, as one may have led to the other. Until the condition is identified or the possibility of spine injury is ruled out, manual in-line spinal stabilization must be established and maintained.

## **PRIMARY ASSESSMENT:**

The primary assessment is based on assessment of the patient's airway, breathing, circulation, neurologic disability, and exposure. During the primary assessment, as patient problems are identified, critical interventions are initiated. The basic steps remain the same, whether at a scene or during an inter-facility transport.

## **AIRWAY:**

The patient's airway should be assessed to determine whether it is patent, maintainable, or not maintainable. For any patient who may have a traumatic injury, cervical spine precautions should be utilized while the airway is evaluated. Assessment of the patient's

level of consciousness, in conjunction with assessment of the airway status, provides an impression of the effectiveness of the patient's current airway status. If an airway problem is identified, the appropriate intervention should be initiated. The decision to use a particular intervention depends on the nature of the patient's problem and the potential for complications during transport. The ability of patient to speak with a clear unobstructed voice is strong evidence of both airway patency and protection. However, if the patient that has lost protective airway reflexes, the assessment stops, and immediate action should be taken to establish airway patency. Supplemental oxygen, per assessment, should be given to all patients before transport. Specific equipment, such as a pulse oximeter or CO<sub>2</sub> detector, help provide continuous airway evaluation during transport.

### Summary of Primary Airway Assessment

- Airway: Patent, maintainable, un-maintainable
- Level of consciousness
- Skin appearance: Ashen, pale, gray, cyanotic, or mottled
- Preferred posture to maintain airway
- Airway clearance
- Sounds of obstruction

### **BREATHING:**

The assessment of ventilation begins with noting whether the patient is breathing. If the patient is either apneic or in severe respiratory distress, immediate interventions are required. If the patient has any difficulty with ventilation, the problem must be identified and the appropriate intervention initiated. Emergent interventions may include manual ventilation of the patient via bag valve mask, endotracheal intubation, and / or needle thoracentesis.

### Summary of Primary Breathing Assessment

- Rate and depth of respirations
- Cyanosis
- Position of the trachea
- Presence of obvious injury or deformity
- Work of breathing
- Use of accessory muscles
- Flaring of nostrils
- Presence of bilateral breath sounds
- Presence of adventitious breath sounds
- Asymmetric chest movements
- Palpation of crepitus
- Integrity of chest wall
- Oxygen saturation measured with pulse oximetry

**CIRCULATION:**

Palpation of both the peripheral and the central pulse provides information about the patient's circulatory status. The quality, location, and rate of the patient's pulses should be noted along with the temperature of the patient's skin being assessed while obtaining the pulses. Observation of the patient's level of consciousness may also help evaluate the patient's perfusion status initially.

Active bleeding should be quickly controlled with direct pressure and/ or tourniquet per assessment. The patient should also be observed for indications of circulatory compromise. Skin color and temperature, diaphoresis, and capillary refill are all indicators of circulatory compromise during an assessment.

Intravenous access should be obtained for administration of fluid, blood, or medications per assessment. Depending on the patient's location and the accessibility veins, peripheral, central, or intraosseous access may be used as necessary. Regardless of type of access, fluid resuscitation must always be guided by the patient's response.

**Summary of Primary Circulation Assessment**

- Pulse rate and quality
- Skin appearance: Color
- Peripheral pulses
- Skin temperature
- Level of consciousness
- Urinary output
- Blood Pressure
- Cardiac monitor
- Invasive monitor

**DISABILITY:**

The basic, primary neurological assessment includes assessment of the level of consciousness; the size, shape, and response of the pupils; and motor sensory function. The simple method of AVPU should be used to evaluate the patient's overall level of consciousness.

The Glasgow Coma Scale (GCS) provides assessment of the patient's level of consciousness and motor function and may serve as a predictor of morbidity and mortality after brain injury.

If the patient has an altered mental status, it must be determined whether the patient has ingested any toxic substances, such as alcohol or other drugs, or may be hypoxic because of illness or injury. A patient with an altered mental status may pose a safety problem during transport. Use of chemical sedation, or physical restraint, may be necessary to ensure safe transport of the patient and EMS providers.

## Summary of Primary Disability (Neurological) Assessment

A.V.P.U.	Glasgow Coma Scale (GCS)		
<b>A - Alert</b> <b>V - Responds to verbal stimuli</b> <b>P - Responds to painful stimuli</b> <b>U - Unresponsive</b>	Eye Opening:	Spontaneous	4
		To voice	3
		To pain	2
		No response	1
	Verbal Response:	Oriented	5
		Confused	4
		Inappropriate words	3
		Incomprehensible	2
		No response	1
	Motor Response:	Obeys commands	6
		Localizes (pain)	5
		Withdraws (pain)	4
Flexion (pain)		3	
Extension (pain)		2	
No response		1	

### EXPOSURE:

As much of the patient's body as possible should be exposed for examination, depending on complaint. Keep in mind the effects of the environment on the patient. Discovery of hidden problems before the patient is loaded for transport may allow time to intervene and avoid disastrous complications. Although exposure for examination is emphasized most frequently in care of the trauma patient, it is equally important in the primary assessment of the patient with a medical illness.

The pre-hospital provider should always look under dressings or clothing, which may hide complications or potential problems. Clothing may hide bleeding that occurs as a result of thrombolytic therapy or rashes that may indicate potentially contagious conditions. During inter-facility transport, intravenous access can be wrongly assumed underneath a bulky cover. Once patient assessment has been completed, keep in mind that the patient must be kept warm. Hypothermia can cause cardiac arrhythmias, increased stress response, and hypoxia.

## Summary of Primary Exposure Assessment

- Identification of injury, active bleeding, or indication of a serious illness.
- Appropriate tube placement: Endotracheal tubes, chest tubes, feeding tubes, naso-gastric or oro-gastric tubes, and urinary catheters.
- Intravenous access: Peripheral, central, and intraosseous.

**SECONDARY (FOCUSED) ASSESSMENT:**

The secondary (focused) assessment is performed after the primary assessment is completed and involves evaluation of the patient from head to toe. Illness specific information is collected by means of inspection, palpation, and auscultation during the secondary assessment. Whether the patient has had an injury or is critically ill, the pre-hospital provider should observe, and listen to the patient.

The secondary (focused) assessment begins with an evaluation of the patient's general appearance. The pre-hospital provider should observe the surrounding environment and evaluate its effects on the patient. Is the patient aware of the environment? Is there appropriate interaction between the patient and the environment?

Determination of the amount of pain the patient has as a result of illness or injury is also an important component of the patient assessment. Baseline information should be obtained about the pain the patient has so that the effectiveness of interventions can be assessed during transport. Pain relief is one of the most important interventions for pre-hospital patient care providers.

**Assessment Acronyms:**

<b>S.A.M.P.L.E.</b>		<b>O.P.Q.R.S.T.</b>	
<b>S</b>	<b>Signs and Symptoms</b>	<b>O</b>	<b>Onset:</b> <i>(When did the problem / pain begin?)</i>
<b>A</b>	<b>Allergies</b>	<b>P</b>	<b>Provocation:</b> <i>(What makes the problem / pain worse?)</i>
<b>M</b>	<b>Medications</b>	<b>Q</b>	<b>Quality:</b> <i>(Can you describe the problem / pain?)</i>
<b>P</b>	<b>Pertinent past medical history</b>	<b>R</b>	<b>Radiation:</b> <i>(Does the pain move anywhere?)</i>
<b>L</b>	<b>Last oral intake</b>	<b>S</b>	<b>Severity:</b> <i>(On a scale of 1-10, how bad is the pain?)</i>
<b>E</b>	<b>Events leading up to the event</b>	<b>T</b>	<b>Time:</b> <i>(Does the condition come and go? Duration?)</i>

## MEDICAL ASSESSMENT

### Summary of Secondary Assessment

Skin	<ul style="list-style-type: none"> <li>• Presence of petechia, purpura, abrasions, bruises, scars, or birthmarks</li> <li>• Bite / Sting marks</li> <li>• Rashes</li> <li>• Abnormal skin turgor</li> <li>• Temperature</li> <li>• Color: Jaundice, pallor, etc.</li> </ul>
Head and Neck	<ul style="list-style-type: none"> <li>• Pupillary reflex / Size of pupils</li> <li>• Gross visual examination</li> <li>• Abnormal extra-ocular movements</li> <li>• Assessment of mental status / Short &amp; Long term memory assessment</li> <li>• Neck veins</li> <li>• Swallowing difficulties</li> <li>• Nuchal rigidity</li> <li>• Presence of lymphadenopathy or neck masses</li> <li>• Scars</li> </ul>
Ears, Nose, and Throat	<ul style="list-style-type: none"> <li>• Hemorrhage</li> <li>• Drainage</li> <li>• Sunken eyes</li> <li>• Gross assessment of the hearing</li> <li>• Obstruction</li> <li>• Foreign body</li> </ul>
Mouth and Throat	<ul style="list-style-type: none"> <li>• Mucous membranes</li> <li>• Drooling</li> <li>• Breath odor</li> <li>• Drainage</li> <li>• Inspection of tongue (i.e., laceration / bite marks indicate possible seizure activity)</li> <li>• Airway obstruction</li> <li>• Scars</li> </ul>
Thorax, Lungs, and Cardiovascular System	<ul style="list-style-type: none"> <li>• Breath sounds</li> <li>• Heart Sounds</li> <li>• Peripheral vs. Central Pulse Comparison</li> <li>• Scars</li> </ul>
Abdomen	<ul style="list-style-type: none"> <li>• Shape and size</li> <li>• Bowel sounds</li> <li>• Tenderness / Rigidity / Guarding</li> <li>• Masses (i.e., suprapubic masses)</li> <li>• Pelvic tenderness, crepitus, or instability</li> <li>• Scars</li> </ul>

Genitourinary	<ul style="list-style-type: none"><li>• Rectal bleeding</li><li>• Color of urine</li><li>• Frequency / Urgency of urination</li><li>• Stools – Normal / Color</li></ul>
Extremities and Back	<ul style="list-style-type: none"><li>• Gross motor and sensory function</li><li>• Peripheral pulses</li><li>• Lack of use of an extremity</li><li>• Deformity, angulation</li><li>• Wounds, abrasions</li><li>• Vertebral column, flank, buttocks</li></ul>

Protocol

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**MEDICAL ASSESSMENT**

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