7.01 Patient Assessment [BLS/ALS]

A. Assess the Situation

1. Is the scene safe?
   Consider the potential dangers to self and other rescuers (e.g., live loose power lines, HAZ-MAT, violent individuals, etc.) If danger exists, make a decision and action plan that will adequately protect as many people as possible.
2. How many patients are there?
   A rapid triage of patients is necessary to evaluate the needs of the situation. Complete the scene triage process prior to the initiation of patient care.
3. What help do I need?
   After answering the above questions, make an initial assessment of the situation and determine what other resources are needed. Make contact through OEC to request additional resources.

B. Primary Survey

Basic Life Support Sequence C-A-B: Evaluate the Circulation, Airway and Breathing, then neurologic Disability and Physical Exam. Priorities of management are established on a life threat basis. NOTE: In children < 8 years old, the priority is Airway-Breathing-Circulation.

1. Circulation: Assess the circulation / perfusion
   •Assess rate and quality of pulses – peripheral and central pulses.
   •No spontaneous pulses – begin chest compressions at an appropriate rate and depth.
   •Assess skin color, temperature, and capillary refill.
   •A patient who is unresponsive and has either no breathing or no normal breathing (only gasping) is presumed to be pulseless and CPR should be started immediately without a pulse check being performed.
2. Airway and C-Spine: Provide appropriate head/neck position, jaw thrust, oral airway, oxygen and bag-valve-mask or supraglottic airway as needed. Protect c-spine, if there is a potential for c-spine injury use the modified jaw thrust. If the airway is:
   •Patent – no intervention needed
   •Partially obstructed – if patient is conscious, allow the patient to cough forcefully to expel foreign body; if the patient is unconscious, see *Airway Foreign Body Removal* (*Ref. 7.02 G. Adult / 7.02 H. Pediatric*).
   •Obstructed – If the airway is completely obstructed attempt to clear airway (*Ref. 7.02 G. Adult / 7.02 H. Pediatric*). Paramedics should perform video laryngoscopy (or direct laryngoscopy if video unavailable) and use Magill forceps to remove foreign bodies.
3. Breathing: Assess respirations (rate, depth, and work of breathing, quality of breath sounds). Provide oxygen. If the respirations are:
   •Spontaneous – observe the chest rise and fall, auscultate breath sounds posteriorly first (beginning at the bases, moving superiorly), then anteriorly.
   •Labored – observe for signs of distress – use of secondary muscles, cyanosis, or tachypnea. Never withhold oxygen from a patient in distress.
   – Administer 100% oxygen via non-rebreather for all patients in respiratory distress.
   – Nasal cannula @ 2-4 L/min., titrating to an O_2 saturation of ≥ 94% for patients who will not tolerate a mask or as dictated by guideline (Chest Pain, Stroke).
   – Agonal breathing – BVM with 100% oxygen and advanced airway as indicated.
   •Absent – Ventilate with an appropriately sized supraglottic airway or insert an oral airway and bag-valve-mask ventilate and provide 100% oxygenation. Whenever possible, two persons should operate a bag-valve-mask; one to ensure a good mask-to-face seal and the other to perform proper ventilation technique.

   a. Equipment needed:
      •Oxygen sources – always check the supply and have a spare bottle.

•Oral airways (40, 60, 80, 90, 100 mm).
•Bag-valve-mask (BVM) with attached reservoir bag (adult/adolescent, infant/child, neonatal). Make sure the reservoir bag fills with oxygen and use a flow rate of 15 LPM.
•Supraglotic Airway device (multiple sizes)

b. Bag-valve-mask use without endotracheal intubation (*see Table 7-1*)
   •Each ventilation should be a one second ventilation which produces visible chest rise. This ensures against under-inflation and lack of oxygenation.
   •Avoid rapid or forceful breaths in order to minimize or eliminate insufflation of air into the stomach with possible vomiting and aspiration as the result.
   •Try to coordinate and synchronize the ventilation with CPR.

Table 7-1 : Bag-Valve-Mask Ventilation

Consider Potential C-Spine Injury (e.g., pool incident/accompanying fall/motor vehicle collision) and position accordingly (see "P" below)
Oral Airway (properly sized to push the tongue up and out of the way)
Position the Head (neutral position if there is a risk of c-spine injury; sniffing position if no suspicion of c-spine risk; do not hyperextend children's necks)
Elevate the jaw (usually with the tips of the fourth and fifth fingers, bilaterally, placed at the angle of the jaw, lifting it directly upward and perpendicularly to the ground)
Seal the Mask with Two Hands (forming two opposed "C-shaped clamps", by placing the thumbs on the bridge of the nose, and the index fingers over the chin
Squeeze (each ventilation delivered in 1 second with enough volume to produce visible chest rise)
Oxygen (delivered at a rate to maintain reservoir bag inflation)

c. Bag-valve use with endotracheal intubation:
   •In an adult patient, the 19-22 cm mark on the endotracheal (E.T.) tube should generally be at the front teeth.
   •In a pediatric patient, depth size varies. Consult the Pediatric Dosing Guidelines for recommended depth.
   •If the E.T. tube is moved, tell the paramedic immediately.
   •The paramedic should note the right depth when he/she intubates.

d. Tell the paramedic immediately if:
   •Air is blowing out of the patient's mouth; it probably means there is a "leak" or deflated E.T. tube cuff. It may also mean the tube is not in the trachea.
   •The patient's chest is not rising equally (right and left side).
   •The resuscitation bag becomes hard to squeeze.
   •Any problems are noticed during bagging with either a BVM or with the E.T. tube in place.

e. Ventilation Rate:
   •During Pediatric / Adolescent / Adult CPR, when the patient is pulseless, give synchronized ventilations along with chest compressions with enough volume to produce visible chest rise.
   •Once pulses are restored, ventilate according to guidelines below.
   – Neonate : 40 to 60 breaths per minute
   – Infant : 15 to 20 breaths per minute
   – Children : 15 to 20 breaths per minute

– Adolescents / Adults : 8 to 10 breaths per minute

4. Disability: Assess the neurological status. Immobilize the spinal column as indicated. Assess the patient's level of consciousness using the AVPU Method (*See Table 7-2*).

Table 7-2 : AVPU Mental Status Exam

A	Alert : Alert and oriented to person, place, time
V	Verbal : Responds to verbal stimulation, not oriented
P	Pain : Responds to painful stimulus only
U	Unresponsive : Does not respond to verbal or painful stimulus

5. Exam:
   - •Perform a rapid head to toe survey.
   - •Exsanguinating hemorrhage should be treated immediately.
   - •When assessing medical patients, quickly evaluate skin signs, central and peripheral pulses for rate and quality to identify immediate life threats.

Only interrupt a primary assessment for life threatening emergencies, cases of airway obstruction, a need for CPR or controlling exsanguinating hemorrhage.

C. Secondary Survey

1. Chief Complaint: The secondary survey begins with the patient's chief complaint (CC). The CC is what the patient states or believes is the primary problem. It is reported in the context of the patient's age, sex, CC, and its duration.
2. History of Present Illness (HPI)
   The HPI is a concise but complete description of the medical sequence of events, that led to the patient's request for help, i.e.:
   - •"OPQRST" questions (*see Table 7-3*)
   - •What was the patient doing when the symptoms began?
   - •When did the symptoms start?
   - •What has the patient done to relieve his or her symptoms?
   - •Have any of these efforts made the patient feel better?
   - •What other symptoms does the patient have?

Table 7-3 : OPQRST Questions

O	Onset
P	Provocation
Q	Quality
R	Region / Radiation
S	Severity
T	Timing