ENDOTRACHEAL INTUBATION – ADULT

In the absence of a protected airway, BVM ventilation may result in the generation of pharyngeal pressure high enough to cause gastric distention. In addition, gastric distension promotes regurgitation and increases the potential for aspiration of gastric contents.

A. Assessment/Treatment Indicators:
1. Inability of patient to protect the airway (coma, decreased level of consciousness without gag reflex).
2. Inability to ventilate or oxygenate the patient using BLS airways and BVM.
3. Cardiac arrest. Adhere to sequence as specified in EMS Policy No. 5710 ALS Medical Cardiac Arrest.
4. Agonal or failing respirations, respiratory arrest.
5. Base Hospital Physician Order.

B. Relative Contraindications:
1. Intubation may be contraindicated for patients that are known diabetics or narcotics overdoses, prior to the administration of Dextrose or Narcan.

C. Potential Complications:
1. Esophageal Intubation
2. Mainstem Intubation
3. Perforation or laceration of upper esophagus, vocal cords, larynx
4. Laryngospasm or bronchospasm
5. Dental and soft-tissue trauma
6. Aspiration of oral or gastric contents
7. Dysrhythmias
8. Hypertension/Hypotension

Equipment:
1. Laryngoscope with appropriate size blade
2. Endotracheal tube & King Airway
3. Water soluble lubricating jelly
4. 10 ml syringe
5. Endotracheal tube inducer (ETTI)
6. Oxygen
7. Magill forceps
8. Battery powered suction unit
9. Yankauer Tonsil Tip suction catheter
10. Appropriate size suction catheter
11. ET tube holder
12. End tidal CO2
13. Disposable bag valve device – BVM

Performance Criteria		**Pass**	**Fail**
1.	Use universal precautions.		
2.	States: two (2) person procedure		

Approved: Signature on File
Medical Director

Signature on File
EMS Administrator

Performance Criteria		**Pass**	**Fail**
3.	Assures an adequate BLS airway.		
4.	States: Will ventilate with 100% oxygen for a minimum of (15) fifteen seconds prior to intubation attempt (unless transitioning to an advanced airway per EMS Agency Policy No. 5710 ALS Medical Cardiac Arrest).		
5.	States: Indications and contraindications.		
6.	States: Each attempt should last no longer than thirty (30) seconds. If during any attempt patient desaturates below 90%, immediately cease and reventilate to increase saturation.		
7.	Ensures that all required equipment is present & quickly accessible as listed above.		
8.	Ensures suction is available and working.		
9.	Checks light source, ensures a bright, tight, white light.		
10.	Select appropriate size ET tube and King Airway.		
11.	Checks tube cuffs for leaks by injecting air into cuff with syringe and deflates cuff.		
12.	Position patient in the “ear to sternal notch position.”		
13.	Places right hand on patient larynx to prepare for bimanual laryngoscopy (external laryngeal manipulation [ELM]).		
14.	Prepares to insert tube.		
15.	Gently inserts laryngoscope blade into mouth and applies upward traction with left hand to visualize the vocal cords. Does not use teeth as a fulcrum.		
16.	Asks for assistance to use the ETTI.		
17.	If patient has a Cormack-Lehane grade of three (3) or four (4) (epiglottis is not or is barely visible), does not attempt the insertion of an endotracheal tube; reinserts a BLS airway and provides respirations via BVM. Provides the patient with a King Airway as described in Agency policy No. 2552 King Airway.		
18.	The paramedic introduces the ETTI into the patient's mouth, and gently advances it through the glottic opening. **HINT:** The Coude tip is felt bouncing off the tracheal rings in 65-90% of cases, and it stops advancing at 24-40 cm because of the narrowing airways. Occasionally, the tip will impinge on a tracheal ring and stop; slight clockwise rotation rotates the tip off of the trachea ring permitting insertion. The ETTI should rest midline in the trachea and should not be advanced past 35 cm or the black line on the ETTI should not pass the lips. Does not preload ET on ETTI.		

Performance Criteria		**Pass**	**Fail**
19.	Assistant places ET over ETTI and gently rotates down toward mouth.		
20.	Paramedic takes over tube and rotates it in a counter clockwise motion, until the tube is placed in the trachea. If resistance is felt, the tube is rotated 90˚ clockwise and advanced.		
21.	The paramedic continues to visualize the cords until the tube is placed. **HINT:** the average tube placement for females is 21 cm and for males 24 cm.		
22.	Once the tube is in place, the assistant removes the ETTI while stabilizing tube manually.		
23.	Inflates cuff with 10 ml of air and detaches syringe.		
24.	Simultaneously maintains tube position, ventilates patient and confirms tube placement and: a. Notes capnography readings. PPV at the appropriate CO2 level as well as respiratory rate. b. Observes bilateral rise and fall of chest wall. c. Auscultates bilateral breath sounds with absence of sounds over abdomen. d. Confirms placement with end tidal CO2 device.		
25.	If initial attempt at intubation fails, reattempts after ventilating the patient for a period of 30 seconds by BVM.		
26.	If air was heard on the right side only, what would you do? (States: would deflate the cuff, pull tube back slightly -1 cm, re-inflate the cuff, and auscultate for bilateral air entry).		
27.	Secures tube using commercially approved tube holder.		
28.	Notes tube markers at front teeth, secures tube, and places oral airway.		
29.	Provides ventilations at 8 - 10 per minute. Does not hyperventilate.		
30.	Successfully intubates in no more than two (2) attempts per patient with ventilations between attempts. If unsuccessful after two (2) attempts, verbalizes the other airways that can be used.		