

# Adult, Failed Airway



## Definition of Failed Airway:

Unable to Ventilate and Oxygenate  $\geq 90\%$  during  
or after one (1) or more unsuccessful intubation attempts

and/or

Anatomy inconsistent with continued attempts

and/or

Three (3) unsuccessful attempts by most experienced Paramedic/AEMT.  
*Each attempt should include change in approach  
or equipment*

NO MORE THAN THREE (3) ATTEMPTS TOTAL

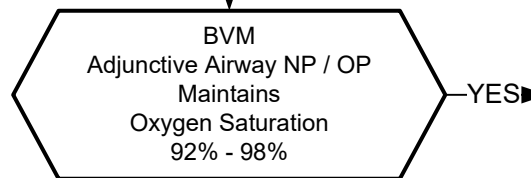
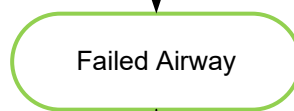
### Capnography Monitoring


- \* End-tidal (EtCO<sub>2</sub>) monitoring is mandatory following placement of an endotracheal tube.
- \* EtCO<sub>2</sub> monitoring is mandatory following placement of a BIAD once available on scene.


*Protocols AR 1, 2, and 3 should be utilized together (even if agency is not using Drug Assisted Airway as they contain useful information for airway management.*



Failed Airway

Call for additional  
resources if available



Continue BVM  
Supplemental Oxygen  
  
Exit to  
Appropriate Protocol(s)

<b>B</b>	Attempt Airway Blind Insertion Airway Device Procedure AP 2
<b>A</b>	Airway Video Laryngoscopy Device Procedure AP 8 <i>if available</i>
<b>P</b>	Airway Cricothyrotomy Surgical Procedure AP 5
	Supplemental oxygen BVM with Airway Adjuncts Maintain Oxygen Saturation 92% - 98%
	Post-intubation BIAD Management Protocol AR 8

 **Notify Destination or  
Contact Medical Control** 

# Adult, Failed Airway



## Pearls

- \* **Capnography Monitoring (EtCO<sub>2</sub>):**
  - Continuous Waveform Capnography and Pulse Oximetry are required for intubation verification and ongoing patient monitoring (Not validated and may prove impossible in the neonatal population - verification by two (2) other means is recommended in this population.)
  - Capnography verification and monitoring is required for BIAD verification and monitoring once available on scene.
- \* For the purposes of this protocol a secure airway is when the patient is receiving appropriate oxygenation and ventilation.
- \* If an effective airway is being maintained by BVM with continuous pulse oximetry values of  $\geq 90\%$ , it is acceptable to continue with basic airway measures.
- \* Ventilation rate should be 10 - 12 per minute to maintain a EtCO<sub>2</sub> of 35-45 and avoid hyperventilation.
- \* **Anticipating the Difficult Airway and Airway Assessment**
  - Difficult BVM Ventilation (ROMAN):** Radiation treatment/ Restriction; Obese/ Obstruction/ OB – 2d and 3d trimesters/ Obstructive sleep apnea; Mask seal difficulty (hair, secretions, trauma); Age  $\geq 55$ ; No teeth.
  - Difficult Laryngoscopy (LEON):** Look externally for anatomical problems; Evaluate 3-3-2 (Mouth opening should equal 3 of patient's finger's width, mental area to neck should equal 3 of patient's finger's width, base of chin to thyroid prominence should equal 2 of patient's finger's width); Obese, obstruction, OB – 2d and 3d trimesters; Neck mobility limited.
  - Difficulty BIAD (RODS):** Radiation treatment/ Restriction; Obese/ Obstruction/ OB – 2d and 3d trimesters/ Obstructive sleep apnea; Distorted or disrupted airway; Short thyromental distance/ Small mandible.
  - Difficulty Cricothyrotomy / Surgical Airway (SMART):** Surgery scars; Mass or hematoma, Access or anatomical problems; Radiation treatment to face, neck, or chest; Tumor
- \* Complete an Airway Evaluation Form with any BIAD or Intubation procedure where medications are used to facilitate.
- \* **Nasotracheal intubation:**
  - Procedure requires spontaneous breathing and may require considerable time, exposing patient to critical desaturation.
  - Contraindicated in combative, anatomically disrupted or distorted airways, increased ICP, severe facial trauma, basal skull fracture, and head injury. Orotracheal route is preferred.
- \* Intubation attempt defined as laryngoscope blade passing the teeth or endotracheal tube passed into the nostril.
- \* If first intubation attempt fails, make an adjustment and try again: (Consider change of provider in addition to equipment)
- \* AEMT and Paramedics should consider using a BIAD if oral-tracheal intubation is unsuccessful.
- \* During intubation attempts use External Laryngeal Manipulation to improve view of glottis.
- \* It is important to secure the endotracheal tube well to better maintain ETT placement. Manual stabilization of endotracheal tube should be used during all patient moves / transfers.
- \* **DOPE:** Displaced tracheostomy tube / ETT, Obstructed tracheostomy tube / ETT, Pneumothorax and Equipment failure.