Adult, Failed Airway

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.

Unable to Ventilate and Oxygenate ≥ 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 (EtCO2) monitoring is mandatory following placement of an endotracheal tube.**
- **EtCO2 monitoring is mandatory following placement of a BIAD once available on scene.**

Failed Airway ↔ Call for additional resources if available

BVM
Adjunctive Airway NP / OP
Maintains
Oxygen Saturation ≥ 90 %
Preferably ≥ 94 %

YES → Continue BVM
Supplemental Oxygen

Exit to
Appropriate Protocol(s)

NO

B	Attempt Airway Blind Insertion Airway Device Procedure
A	Airway Video Laryngoscopy Device Procedure ***if available*** ***Optional***
P	Airway Cricothyrotomy Surgical Procedure
	Supplemental oxygen BVM with Airway Adjuncts Maintain Oxygen Saturation ≥ 90 % Preferably ≥ 94 %
	Post-intubation BIAD Management Protocol AR 8

Notify Destination or Contact Medical Control

Adult, Failed Airway

Pearls

- **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 ≥ 90%, it is acceptable to continue with basic airway measures.**
- **Ventilation rate should be 8-10 per minute to maintain a EtCO2 of 35-45. Avoid hyperventilation.**
- **Anticipating the Difficult Airway and Airway Assessment:**
  - **Difficult BVM Ventilation (MOANS): M**ask seal difficulty (hair, secretions, trauma); **O**bese, obstruction, OB – 2d and 3d trimesters; **A**ge ≥ 55; **N**o teeth; **S**tiff lungs or neck
  - **Difficult Laryngoscopy (LEON): L**ook externally for anatomical problems; **E**valuate 3-3-2 (Mouth opening should equal 3 of patients 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 patients finger's width); **O**bese, obstruction, OB – 2d and 3d trimesters; **N**eck mobility limited.
  - **Difficulty BIAD (RODS): R**estricted mouth opening; **O**bese, obstruction, OB – 2d and 3d trimesters; **D**istorted or disrupted airway; **S**tiff lungs or neck
  - **Difficulty Cricothyrotomy / Surgical Airway (SMART): S**urgery scars**; M**ass or hematoma**, A**ccess or anatomical problems**;** **R**adiation treatment to face, neck, or chest; **T**umor.
- **Capnography Monitoring (EtCO2):**
  - **Continuous Waveform or Quantitative 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.**
- **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.
- Gastric tube placement should be considered in all intubated patients if available or time allows.
- 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: D**isplaced tracheostomy tube / ETT, **O**bstructed tracheostomy tube / ETT, **P**neumothorax and **E**quipment failure.