Airway, Drug Assisted

Indications for DAI
- Failure to protect the airway
- Unable to oxygenate
- Unable to ventilate
- Impending airway compromise
- Age ≥ 12 / Length > Broselow-Luten Tape

This procedure will remove patient’s protective airway reflexes and ability to ventilate.
You must be sure of your ability to intubate before beginning this procedure.
2 paramedics MUST be present for this procedure

Preoxygenate with 100% O2
IV / IO Procedure (preferably 2 sites)
Assemble Airway Equipment
- Suction equipment
- Alternative Airway Device

Hypoxic Or Hypotension Or Dangerously Combative?

Yes

Exit to Adult Airway or Adult Failed Airway Protocol(s) as indicated
Exit to Hypotension / Shock Protocol as indicated

No

Etomidate 0.3 mg/kg IV / IO
Or Ketamine 1.5 - 2 mg/kg IV / IO
May repeat x 1

Succinylcholine 1.5 mg / kg IV/ IO
Or Rocuronium 1 mg kg IV / IO
(if Succinylcholine contraindicated)
May repeat x 1

Video Laryngoscopy Procedure
Placement Must Be Verified with Continuous Capnography
Consider Physical Restraint Procedure
Gastric Tube Insertion Procedure

Awakening or Moving after intubation

Yes

Exit to Adult Failed Airway Protocol If indicated

No

Notify Destination or Contact Medical Control

Airway Management
Ketamine 1.5 - 2 mg/kg IV / IO

Airway Management + Dangerously Combative
Ketamine 300 – 400 mg IM
Ketamine 1.5 - 2 mg/kg IV / IO

Correct Hypoxia and / or Hypotension

Consider Sedation

SBP ≥ 90
Midazolam 2.5mg IV/IO
every 30 minutes as needed

AND
Fentanyl 1 mcg/kg IV/IO
every 30 minutes as needed

Consider long term paralytic
Vecuronium 10 mg (0.1 mg/kg) IV/O
if needed to control patient movement.

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

An Airway Evaluation Form must be completed on every patient who receives DAI.

Red Text are the key performance indicators used to evaluate protocol compliance.

Clinical Operating Guidelines AR-3
This protocol has been altered from the original NCCEP Protocol by the Durham County EMS Medical Director

Revised 5/2018
**Airway, Drug Assisted**

**Pearls**

*Do not delay transport to perform DAI if able to ventilate and oxygenate to maintain oxygen saturation ≥ 92% when transport time to destination facility is short.*

- In most circumstances DAI should not be attempted until the SBP ≥ 90 AND the SPO2 is greater than 92%.
- This protocol is only for use in patients with an Age ≥ 12 or patients longer than the Broselow-Luten Tape.
- **This procedure requires at least 2 Paramedics.** Divide the workload – ventilate, suction, cricoid pressure, drugs, intubation.
- Peri-apneic oxygenation must be provided using a nasal cannula at 6 LPM during the entire DAI procedure.
- During DAI you MUST follow the intubation checklist.
- Once a patient has been given a paralytic drug, YOU ARE RESPONSIBLE FOR VENTILATIONS if desaturation occurs.
- Continuous capnography (EtCO2) and pulse oximetry is mandatory for the monitoring of all patients being ventilated.
- Before administering any paralytic drug, screen for contraindications with a complete medical history (i.e. indications for hyperkalemia, burns, compartment syndrome) and thorough neurological exam.
- If first intubation attempt fails, make an adjustment and then consider:
  - Different ETT size.
  - Change cricoid pressure.
  - Cricoid pressure no longer routinely recommended and may worsen view
  - Apply BURP maneuver (Push trachea Back [posterior], Up, and to patient’s Right)
  - Change head positioning
- It is important to secure the endotracheal tube well. A cervical collar (in absence of trauma) must be applied to better maintain ETT placement.
- Protect the patient from self-extubation when the drugs wear off.
- Longer acting paralytics may be needed post-intubation.
- Consider naso or orogastric tube placement in all intubated patients to limit aspiration and decompress stomach if needed.

- **This procedure requires at least 2 Paramedics.** Divide the workload – ventilate, suction, cricoid pressure, drugs, intubation.
- Patients with hypoxia and/or hypotension are at risk of cardiac arrest when a sedative and paralytic medication are administered. Hypoxia and hypotension require resuscitation and correction prior to use of these combined agents. Ketamine allows time for appropriate resuscitation to occur during airway management.
- This protocol is only for use in patients who are longer than the Broselow-Luten Tape.
- Ketamine may be used during airway management of patients who FIT on the Broselow-Luten Tape with a DIRECT, ONLINE MEDICAL ORDER, by the system MEDICAL DIRECTOR OR ASSISTANT MEDICAL DIRECTOR ONLY.
- KETAMINE:
  - Ketamine may be used with and without a paralytic agent in conjunction with either a OP, NP, BIAD or endotracheal tube.
  - Ketamine may be used during the resuscitation of hypoxia or hypotension in conjunction with airway management. Once hypoxia and hypotension are corrected, use of a sedative and paralytic can proceed if indicated.
  - Ketamine may be used in the dangerously combative patient requiring airway management IM. IV / IO should be established as soon as possible.
  - Ketamine may NOT be used for purposes of sedation only – it must be used only during airway management procedures.
  - Continuous Waveform Capnography and Pulse Oximetry are required for intubation verification and ongoing patient monitoring, though this is not validated and may prove impossible in the neonatal population (verification by two (2) other means is recommended in this population.)
- Before administering any paralytic drug, screen for contraindications with a thorough neurologic exam.