



POLICY: 552.57
TITLE: Air Ambulance Provider Optional Scope of Practice – Pediatric Intubation

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SUPERCEDES:

APPROVAL SIGNATURES ON FILE IN EMS OFFICE

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Air Ambulance Provider Optional Scope of Practice – Pediatric Intubation

I. AUTHORITY

Health and Safety Code, Division 2.5, California Code of Regulations, Title 22, Division 9

II. PURPOSE

To serve as a patient treatment standard for Air Ambulance Provider Paramedics.

III. POLICY

DO NOT MISS

- Only Qualified paramedics meeting the requirements for this optional scope under the definitions may utilize this protocol
- Preparation
 - Ensure equipment is ready and functioning including suction
 - Maintain oxygenation during the apneic period of intubation utilizing High Flow Nasal Cannula O₂ at 1 liter/kg, max-15 liters prior to initiating the procedure
 - Establish an open airway – place as needed an NPA for conscious patients and/or OPA for unconscious patients
 - Place a nasogastric or orogastric tube as needed
 - Establish a contingency plan if intubation is unsuccessful

POLICY:

1. **Function:** To secure a pediatric airway with orotracheal intubation when indicated.
2. **Circumstances under which Paramedics under optional scope may perform function:**
 - A. Setting: Qualified Transport Program Paramedic with Qualified Transport Program Nurse
3. **Indications:**
 - A. Respiratory failure (e.g., apnea or hypoventilation)
 - B. Hypoxia despite supplemental oxygen
 - C. Combative with traumatic brain injury and GCS ≤ 8

- D. Inability to protect airway
 - E. Anticipated imminent airway failure
- 4. Contraindications:**
- A. Complete airway obstruction (utilize obstructed airway policy)
 - B. Complete distortion of oropharyngeal anatomy such as landmarks for performing intubation are not present
- 5. Cautions**
- A. Predicted difficult airway
 - B. Adequate/functioning less invasive device in place (and no need for definitive airway protection)
- 6. Size Selection:**
- A. Utilize a length or weight-based tape or application to select ETT size. Have a ½ size larger and smaller ETT also ready. Cuffed tubes are preferred excluding neonates.
 - B. Confirm laryngoscope size with a length or weight-based tape or application. A Miller (straight) blade may be required for smaller patients and video laryngoscopy (VL) should be utilized whenever possible.
- 7. Equipment:**
- A. PPE
 - B. Monitors
 - C. Premedication's (including high flow nasal canula O₂ per protocol)
 - D. Appropriate RSI Medications given Age/Weight/Diagnosis
 - E. Suction
 - F. Endotracheal tubes (Note: deflate the cuff prior to insertion)
 - G. Intubating Stylet (Pediatric Bougie)
 - H. Laryngoscope
 - I. Lubricant
 - J. SGA backup
 - K. BVM
 - L. Securing device
 - M. Confirmation devices including capnography
 - N. Postintubation medications
- 8. Procedure:**
- A. Pre-oxygenate using a non-rebreather mask or BVM with a FiO₂ of 100% for at least 2-3 minutes; or 8 vital capacity breaths if patient is able.
 - 1) If pulse oximetry of less than 95%, initiate ventilatory assistance with a BVM.
 - 2) When using a BVM during pre-oxygenation, ventilate at a rate only to maintain oxygen saturation at 95%, and avoid hyperventilation.
 - 3) Utilize passive oxygenation via NC at 1liter/kg/min up to max 15 liters/min during apnea and intubation attempts

- B. Position patient. Apply in-line cervical spine stabilization (not traction) if indicated or sniffing if allowable.
- C. **Consider fluid bolus 20ml/kg if hypovolemic, asthmatic, COPD, or in shock.**
- D. **D. TIME OUT !!!!!!! TIME OUT !!!!!!! TIME OUT !!!!**
Ensure:
- **All equipment is ready**
 - **All practitioners are ready**
 - **What is the next step if this step fails**
 - **At what point will we stop and BVM the patient**
 - **If any questions remain regarding readiness, do not proceed until everyone and everything is ready**
- E. Administer premedication as indicated, 3-5 minutes prior if possible.
- RSI medications: etomidate (0.3 mg/kg IV) or ketamine (2 mg/kg slow IV push over 2 minutes), then rocuronium (1mg/kg IV) – allow 60 seconds before placing laryngoscope).
- F. Position head appropriately given age and diagnosis (no extension in trauma)
- G. Suction oropharynx as required.
- H. Perform intubation, preferable with VL (DL and/or bougie if indicated)
- 1) Do not “lever” the blade
 - 2) Visualize of the epiglottis/cords
 - 3) Pass the ETT to appropriate depth – note “tip to lip”
 - 4) Fill the cuff – Do not overfill!
 - 5) **Verify placement of endotracheal intubation using a minimum of 4 methods:**
 - Equal lung sounds bilaterally, chest rise and fall
 - Mist present in ETT with exhalation
 - Presence of ETCO₂ wave form (ETCO₂ capnography is the standard however in rare circumstances where ETCO₂ not available may use appropriate color change on colorimetric ETCO₂ device.
 - Normal SpO₂ reading
 - 6) Secure the ETT with tape or a compatible commercial device.
 - 7) Monitor placement continuously:
 - Monitor ETCO₂ and SpO₂ continuously.
 - Reconfirm placement using a minimum of 4 methods (chest rise, lung sounds, appropriate ETCO₂ reading, appropriate SpO₂ reading, mist in tube, tube depth based @ lip line) after every patient move
 - 8) To facilitate ventilation and avoid regurgitation, place an OG or NG tube
 - 9) Perform post-intubation management
- I. Document full procedure note

- 1) Procedural Time Out
- 2) Appropriate times for intubation
- 3) DL and ETT size and depth
- 4) Document frequency of assisted ventilations and patient's respiratory rate (will be the same or higher if over-breathing).
- 5) Document VS, SpO₂, ETCO₂ and ETT placement confirmation at transfer of care.