

Memorandum

To: Peoria Area EMS Advanced Life Support Agencies

From: Dave Klings RN, PAEMS System Manager

Date: March 9, 2011

Re: Pediatric Prehospital Care Manual Updates

Dr. Colbenson has updated the Pediatric Pre-hospital Care Manual to include Advanced Airway Control of the Pediatric Patient. This protocol allows the intubation of **non-traumatic** pediatric patients from 8 to 16 years of age. Patients 16 years or older should be classified as an adult. With this change, Advance Life Support Ambulances will only be required to carry 6.0-8.5 cuffed ET Tubes.

The administration of medications via ET Tube for pediatric patients has also been removed from the Pediatric Pre-hospital Care Manual.

[Updated Pediatric Pre-Hospital Care Manual](#)

If you have any questions regarding the changes, please let me know.

Thanks,

Dave Klings

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**PEORIA AREA EMS SYSTEM
PEDIATRIC PREHOSPITAL CARE MANUAL**

**Advanced Airway Control of the
Pediatric Patient (ALS Only)**

Pediatric intubation is relatively uncommon. **If the paramedic does not feel confident in the procedure, the airway should be maintained by more basic measures.**

Intubation may be performed on Pediatrics 8 years old to 16 years old.

Advanced Airway Control Procedure

1. Endotracheal intubation may be attempted after assessing, opening and securing the airway in accordance with basic airway control procedures.
2. Select the appropriate equipment (based on patient size).
3. A **Miller (straight)** laryngoscope blade is recommended for pediatric intubation.
4. Have suction, BVM, stethoscope, end-tidal CO₂ detector and commercial ETT holder readily available.
5. Pick up the laryngoscope handle with your left hand and the appropriate blade with your right hand.
6. Holding the blade parallel to the handle, attach the blade to the handle by inserting the U-shaped indentation of the blade into the small bar at the end of the handle. When the indentation is aligned with the bar, press the blade forward and snap into place.
7. Lower the blade until it is at a right angle to the handle. The light should come on. If it does not, see if the bulb is tight and/or the batteries need to be replaced (*This should be done on a daily basis so you do not have to spend valuable time fixing it at the scene of a call*).
8. Suction as needed.
9. Hyperventilate the patient with high concentration oxygen prior to each intubation attempt.
10. After visualizing the glottic opening, grasp the ETT with your right hand and advance the tube from the right corner of the mouth. Insert the tube into the glottic opening between the vocal cords, just far enough to pass the tube past the opening.

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**Advanced Airway Control of the
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Advanced Airway Control Procedure (continued)

11. Verify proper position by ventilating the patient through the tube with a bag-valve device while listening to each side of the chest with a stethoscope to be sure air is entering both lungs.
12. Utilize a pediatric end-tidal CO₂ detector.
13. If breath sounds are heard on both sides of the chest and there is a positive color change with the ETCO₂ detector, secure the tube with a commercial ETT holder.
14. Apply a C-collar if possible to aid in stabilizing the head/neck to decrease potential for extubation.
15. Frequently reassess breath sounds to be sure that the ETT is still in place.
16. Ventilate the patient at a rate of 20-30 times per minute.

Critical Thinking Elements

- The greatest danger to the patient is wasting too much time attempting to intubate. Time is precious – if you cannot intubate in 2 attempts, use another method of airway control and do not delay transport.
- Intubation can cause arrhythmias produced by catecholamine release and from vagal stimulation, so monitor cardiac rhythm closely. If bradycardia develops, discontinue the attempt and immediately hyperventilate the patient.
- Verification of proper ETT placement is of vital importance. Utilize multiple methods of verifying placement including direct visualization of the ETT passing through the cords, auscultation of bilateral breath sounds and positive color change with an ETCO₂.
- Intubation of Pediatrics is for ages 8-16 years of age.
- Do not Intubate Pediatrics involved in Trauma.

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**Resuscitation of Pediatric
Pulseless Rhythms Protocol**

Pulseless Electrical Activity & Asystole (continued)

ALS Care (continued)

3. **Epinephrine 1:10,000**: 0.01mg/kg IV/IO (*Minimum dose* 0.1mg) (*Max single dose: 1mg*) and repeat every **3 to 5 minutes** as needed.
4. **Continue CPR** and re-evaluate patient/rhythm every 2 minutes.
5. **IV Fluid Therapy**: 20mL/kg fluid bolus for suspected hypovolemia.
6. **Dextrose**: if blood sugar is < 60mg/dL:
 - a) *0-1 month*: **D10**: 2mL/kg IV/IO
 - b) *1 month – 2 years*: **D25**: 2mL/kg IV/IO
 - c) *>2 years*: **D50**: 2mL/kg IV/IO
7. **Narcan**: 0.1mg/kg IV/IO (*Max single dose: 2mg*) if suspected narcotic overdose.
8. **Needle chest decompression** for a patient in *traumatic* cardiac arrest with suspected tension pneumothorax.
9. **Contact Medical Control** as soon as possible.
10. Transport as soon as possible.

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**Pediatric Bradycardia
Protocol**

ALS Care (continued)

4. **IV Fluid Therapy:** 20mL/kg bolus if hypovolemia is suspected.
5. **Contact Medical Control** as soon as possible.
6. **Epinephrine 1:10,000:** 0.01mg/kg IV/IO (*Minimum dose* 0.1mg) (*Max single dose: 1mg*) and repeat every *3 to 5 minutes* as needed.
7. **Atropine:** 0.02mg/kg IV/IO (*Minimum dose:* 0.1mg) (*Max single dose: 1 mg*) for children who are **greater than 6 months of age.**
8. **Immediate Transcutaneous Pacing:** If the patient remains bradycardic with continued signs of hypoperfusion.
 - **Contact Medical Control** for specific rate.
 - Current should be set at minimum to start and increased until capture is achieved.
 - Refer to the *Transcutaneous Pacing Procedure* for additional information.
9. **Midazolam (Versed):** 0.1mg/kg IV/IO (*Max single dose: 2mg*) for patient comfort after pacing is initiated. Re-check vital signs 5 minutes after administration. May repeat dose one time if systolic BP > 100mmHg and respiratory rate is > 10 rpm. Additional doses require **Medical Control order.**
10. Transport as soon as possible (*Transport can be initiated at any time during this sequence*).