

PEDIATRIC CROUP

HPI	Signs & Symptoms	Differential Diagnosis
<ul style="list-style-type: none"> • Infant/toddler • Possibility of foreign body • Medical history • Fever, respiratory • Other sick siblings 	<ul style="list-style-type: none"> • Low grade fever • Barking cough • Hoarseness • Stridor 	<ul style="list-style-type: none"> • Asthma • Aspiration • Foreign body • Infection • Pneumonia

	EMR	EMT	PM
1. Provide Pediatric Routine Medical Care - treat life threatening problems with airway, breathing circulation and disability.	•	•	•
2. Keep patient calm - DO NOT AGITATE	•	•	•
3. Provide emotional support and allow position of comfort	•	•	•

UNSTABLE: Resting stridor, respiratory distress

4. Ventilate with BVM on 100% OXYGEN with airway adjuncts, 1 breath every 2-3 sec.	•	•	•
5. Consider Pediatric Drug Assisted Advanced Airway			•
6. NEBULIZED EPINEPHRINE 1mg/mL: 0.5 mg/kg NEB, may repeat, max total dose 5 mg (5 mL)			•

STABLE: GCS 15, No cyanosis, good air exchange

4. Administer humidified OXYGEN by placing 6 mL NORMAL SALINE in nebulizer, deliver by mask or blow by	•	•	•
5. If no improvement, contact OLMC	•	•	•

PEARLS:

1. Foreign bodies can mimic croup, it is important to ask about a possible choking event.
2. Impending respiratory failure is indicated by change in mental status such as fatigue and listlessness, pallor, dusky appearance, decreased retractions, decreased breath sounds with decreasing stridor

PEDIATRIC DOSING CHART:

	3kg	4kg	5kg	6kg	7kg	8kg	9kg	≥ 10kg
			dose	vol.	dose	vol.	dose	vol.
1:1 Epinephrine	Contact		3mg	3mL	4mg	4mL	5mg	5mL
Normal Saline	OLMC		2mL		1mL		0mL	

PEDIATRIC AIRWAY MANAGEMENT

DRUG ASSISTED ADVANCED AIRWAY

Signs & Symptoms		Differential Diagnosis
<u>Respiratory Distress</u> <ul style="list-style-type: none"> Increased work of breathing Increased respiratory Nasal flaring Use of accessory muscles Effectively compensating 	<u>Respiratory Failure</u> <ul style="list-style-type: none"> Exhausted energy reserves Decreased respiratory rate Decreased effort Agitation or lethargy Cyanosis Fail oxygenate/ventilate 	<ul style="list-style-type: none"> Anaphylaxis Asthma Airway obstruction OD/Poisoning Pneumonia Croup, epiglottitis Trauma

	EMR	EMT	PM
1. Provide Pediatric Routine Medical Care - treat life threatening problems with airway, breathing, circulation and disability.	•	•	•
2. Obtain ECG, monitor Capnography.		•	•

UNSTABLE: Respiratory failure, failure to oxygenate/ventilate, expected clinical course

3. Ventilate with a BVM for 100% OXYGEN with airway adjuncts & padding under shoulders, 1 breath/2-3 sec., for ≥ 3 min.	•	•	•
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Indications for Drug Assisted Advanced Airway Placement:

- Cannot ventilate with BVM, potential impaired airway
- Increased WOB (retractions, nasal flaring, grunting) leading to failure
- Ventilatory failure (apnea, marked bradypnea or tachypnea, labored, hypoxia despite maximum oxygen delivery)

4. Assess for positive gag reflex	•	•
5. If less invasive methods are ineffective or inappropriate: Call OLMC for orders to perform drug assisted advanced airway placement. KETAMINE: 1mg/kg IVP/IO, slowly over 1 min., max. 300mg		•
6. After 1 min., reassess gag reflex for therapeutic effects of Ketamine. If inadequate sedation KETAMINE: 0.5 mg/kg IVP/IO, slowly over 1 min., max. total dose 450mg		•
7. Place i-Gel. Verify placement with Capnography (continue to monitor throughout)	•	•
8. As needed, for post-intubation sedation, 15 min. following induction of sedation: KETAMINE: 0.5mg/kg IVP/IO, slowly over 1 min., NO REPEAT DOSING		•

UNSTABLE: Respiratory failure due to burns, inhalation injury, anaphylaxis

3. Ventilate with a BVM for 100% OXYGEN with airway adjuncts & padding under shoulders, 1 breath/2-3 sec., for ≥ 3 min.	•	•	•
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Indications for Drug Assisted Advanced Intubation:

- Same as above and glottic or supraglottic swelling

4. Assess for positive gag reflex	•	•
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5. If less invasive methods are ineffective or inappropriate: Call OLMC for orders to perform drug assisted advanced airway placement. KETAMINE: 1mg/kg IVP/IO, slowly over 1 min., max. 300mg	•
6. After 1 min., reassess gag reflex for therapeutic effects of Ketamine. If inadequate sedation KETAMINE: 0.5 mg/kg IVP/IO, slowly over 1 min., max. total dose 450mg	•
7. Place endotracheal tube. Verify placement with Capnography (continue to monitor throughout)	•
8. As needed, for post-intubation sedation, 15 min. following induction of sedation: KETAMINE: 0.5mg/kg IVP/IO, slowly over 1 min., NO REPEAT DOSING	•

STABLE: Respiratory distress, effectively compensating

3. Administer supplemental OXYGEN	•	•	•
4. Support head in neutral position	•	•	•
5. Keep child calm, allow caregiver access to child	•	•	•