



**Respiratory - Airway  
CROUP  
Practice Guideline**

**Patient Care Goals:**

1. Alleviate respiratory distress
2. Promptly identify respiratory distress, failure, and/or arrest, and intervene for patients who require escalation of therapy
3. Deliver appropriate therapy by differentiating other causes of pediatric respiratory distress

**Patient Presentation:**

Inclusion Criteria

- History of stridor or barking cough in the setting of upper respiratory infection
- Age 12-36 months most common
- May be seen as young as 6 months and as old as 6-7 years
- Seen more in males than females

Exclusion Criteria

Presumed underlying cause that includes one of the following:

1. Anaphylaxis
2. Asthma
3. Bronchiolitis (wheezing <2 yrs of age)
4. Foreign body aspiration
5. Submersion/drowning

**Patient Management**

It is very important to keep the child calm; anxiety and discomfort exacerbate croup symptoms

Assess Modified Croup Score (p.2)

4 = moderate croup severity

**Medications**

**Epinephrine** 1mg/ml (1:1000)

- 2.5 mg nebulized over 15 minutes
- Repeat x 1 if no improvement
- Note: *nebulized epi is within paramedic scope of practice*

**Dexamethasone**

- 0.5 mg/kg IV/IO slow push, IM/IN/PO
- Max dose of 16 mg

Note: *Epi and Dex should both be administered*

**Normal saline bolus**

- 20 ml/kg IV/IO, repeat x 1 if no improvement

**Patient Safety Considerations**

Routine use of lights and sirens is not recommended during transport unless severe or refractory to EMS interventions

**Quality Improvement:**

Key Documentation Elements

1. Respiratory rate, breath sounds, SPO2, GCS, skin color
2. Use of accessory muscles, stridor
3. Croup Severity Score

Paramedic Working Assessment: Croup

Universal Care

Consider other causes, refer to appropriate guideline

Assess  
Croup Severity Score

Supplemental oxygen to keep saturation > 93%

Croup Severity Score ≥4

Nebulized Epinephrine  
-and-  
Dexamethasone  
Repeat Nebulized Epi x 1 if no improvement

Normal saline bolus if poor perfusion  
Repeat x 1 if no improvement

Monitor patient for respiratory failure  
Prepare for BVM assistance

**\*\*Croup Severity Score on next page\*\***



**Modified Croup Severity Score**  
**(4 = moderate severity)**

Croup Severity Score		
Level of consciousness	Normal (including sleep)	0
	Disoriented	5
Cyanosis	None	0
	Cyanosis at agitation	4
	Cyanosis at rest	5
Stridor	None	0
	When agitated	1
	At rest	2
Air Entry	Normal	0
	Decreased	1
	Markedly decreased	2
Retraction	None	0
	Mild	1
	Moderate	2
	Severe	3