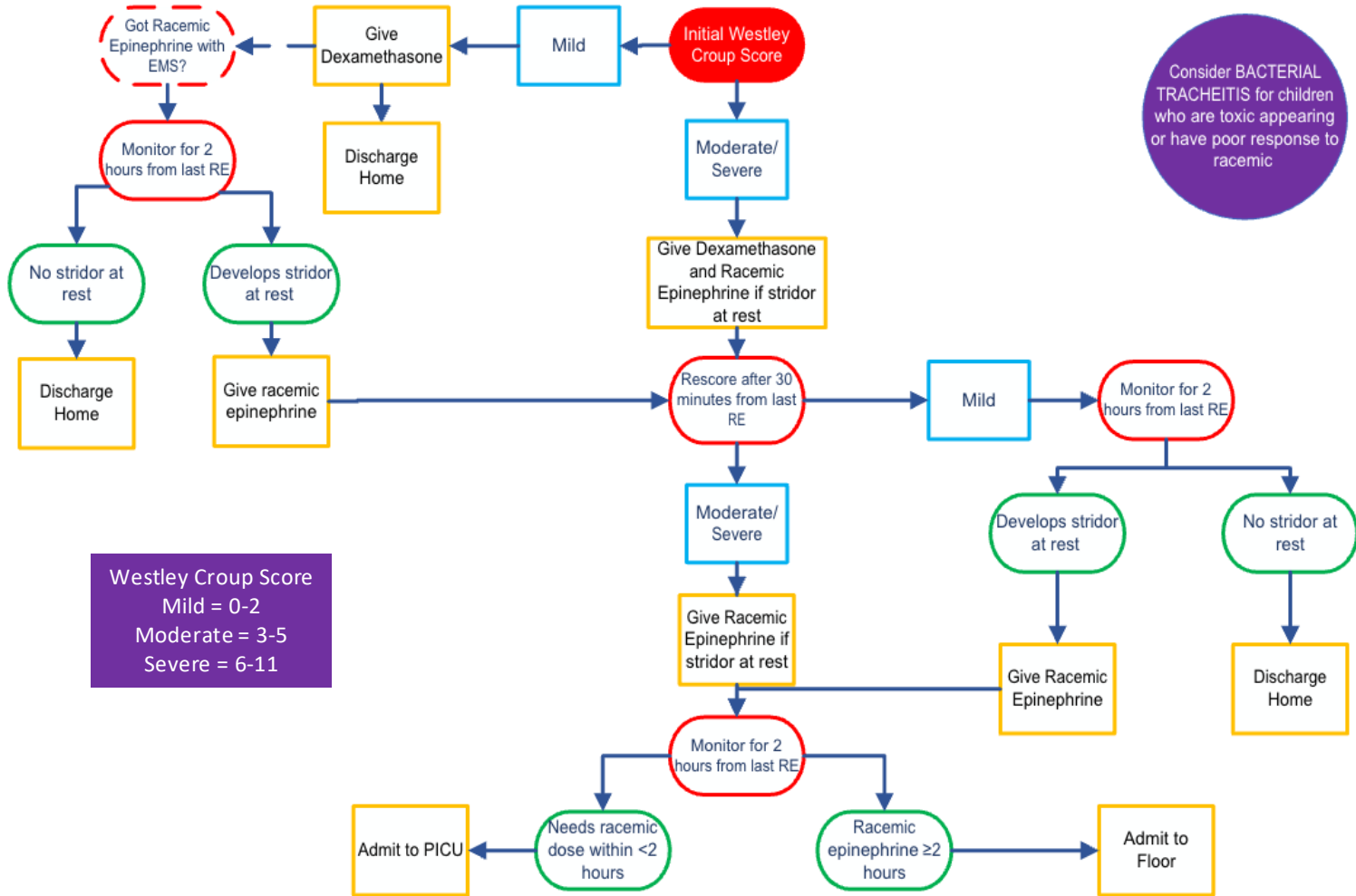




University of Missouri Pediatric Service Line

Pediatric Emergency • Clinical Practice Guidelines

Croup Management



Westley Score			
Stridor	Score	Cyanosis	Score
None	0	None	0
Audible with stethoscope (at rest)	1	With agitation	4
Audible without stethoscope (at rest)	2	At rest	5
Retractions	Score	Level of Consciousness	Score
None	0	Normal	0
Mild	1	Altered	5
Moderate	2	Croup Severity	Total Score
Severe	3		
Air Entry	Score	Mild Croup	≤2
Normal	0	Moderate Croup	3-5
Decreased	1	Severe Croup	6-11
Severely Decreased	2	Impending respiratory failure	12+

•Dexamethasone dosing:

- One time dose of 0.6mg/kg
- Maximum dose 10mg
- Recommended to give IV formulation via PO (higher concentration = less volume)
- 0.15 mg/kg has been found to be equally effective and could be considered in mild croup

Racemic Epinephrine (RE) dosing:

- Administer via high flow nebulizer; 2.25%, 0.5mL in 2.5mL saline
- Maximum frequency q20min

Inclusion Criteria:

- 6 months – 6 years old
- Otherwise well appearing
- Clinical diagnosis of croup

Exclusion Criteria:

- Known upper airway deformity or recent intubation/instrumentation of upper airway
- Toxic appearing
- Immunocompromised / Unvaccinated
- Asymmetric lung exam
- Congenital heart disease, neuromuscular disease, chronic lung disease



University of Missouri Pediatric Service Line

Pediatric Emergency • Clinical Practice Guidelines

References:

Westley Croup Scoring:

- Westley CR, Cotton EK, Brooks JG. Nebulized racemic epinephrine by IPPB for the treatment of croup: a double-blind study. *Am J Dis Child.* 1978 May;132(5):484-7. doi: 10.1001/archpedi.1978.02120300044008. PMID: 347921.
- Yang W-C, Lee J, Chen C-Y, Chang Y-J, Wu H-P. Westley score and clinical factors in predicting the outcome of croup in the pediatric emergency department. *Pediatr Pulmonol.* 2017;52(10):1329–1334

Dexamethasone Dosing:

- Chub-Uppakarn S, Sangsupawanich P. A randomized comparison of dexamethasone 0.15 mg/kg versus 0.6 mg/kg for the treatment of moderate to severe croup. *Int J Pediatr Otorhinolaryngol.* 2007 Mar;71(3):473-7. doi: 10.1016/j.ijporl.2006.11.016. Epub 2007 Jan 8. PMID: 17208307.
- Geelhoed GC, Macdonald WB. Oral dexamethasone in the treatment of croup: 0.15 mg/kg versus 0.3 mg/kg versus 0.6 mg/kg. *Pediatr Pulmonol.* 1995 Dec;20(6):362-8. doi: 10.1002/ppul.1950200605. PMID: 8649915.

Racemic Epinephrine Dosing:

- Kelley PB, Simon JE. Racemic epinephrine use in croup and disposition. *Am J Emerg Med.* 1992 May;10(3):181-3. doi: 10.1016/0735-6757(92)90204-B. PMID: 1375027.
- Ledwith CA, Shea LM, Mauro RD. Safety and efficacy of nebulized racemic epinephrine in conjunction with oral dexamethasone and mist in the outpatient treatment of croup. *Ann Emerg Med.* 1995 Mar;25(3):331-7. doi: 10.1016/s0196-0644(95)70290-3. PMID: 7864472.