

Croup Care Map

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How to Use Reference Icons

When accessing a document, please use the browser return arrow (upper left-hand corner) to return to the Care Map

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Care Map Symbols

Links to more information or returns to a previous page.

Start of a Care Map Segment

Decision Point

Stop and Evaluate

Care Map Step
Blue underlined text is a hyperlink

Progression of care – Patient Improving



Source Reference



Education Module



Hospital Policy



Hospital Reference



Provider Information



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Croup Care Map

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[Croup Clinical Features Overview](#)

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Suggested Inclusion Criteria for Croup

- Clinical symptoms of croup age > than 6 months or < than 6 years.



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Potential Reasons to Avoid Croup Care Map

Age < than 6 months or > than 6
years



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Emergency Department Care: Chief Complaint Stridor



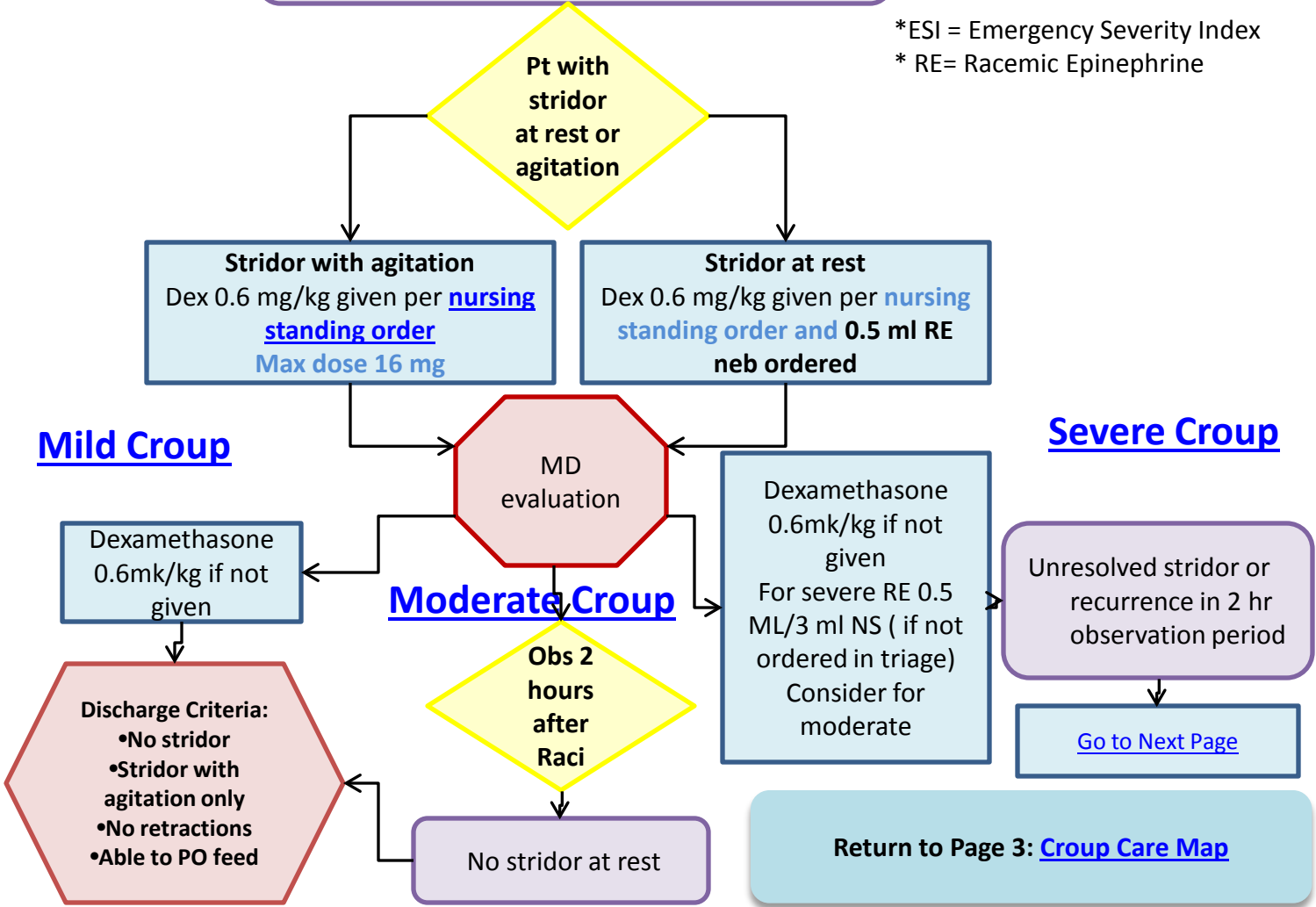
Diagnostic testing & therapies not routinely recommended:
[Cool Mist](#)
[XRAYS\(CXR , Soft tissue neck, or CT of neck\)](#)
[Viral Testing](#)

Discharge Home
[Family education complete](#)

Triage

- Nurse performs initial assessment and assigns ESI* level.

*ESI = Emergency Severity Index
 * RE= Racemic Epinephrine

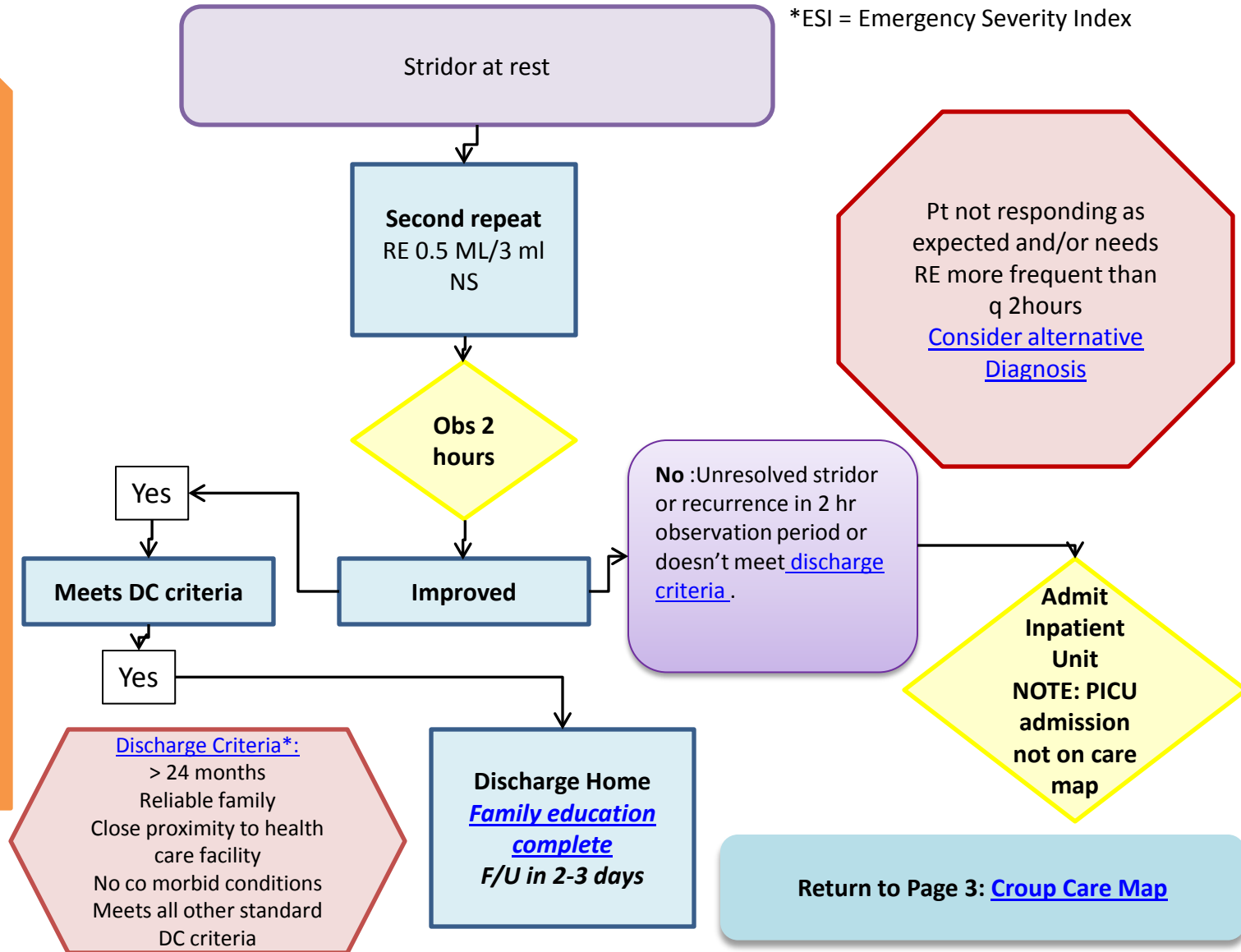


Emergency Department Care: Chief Complaint Stridor



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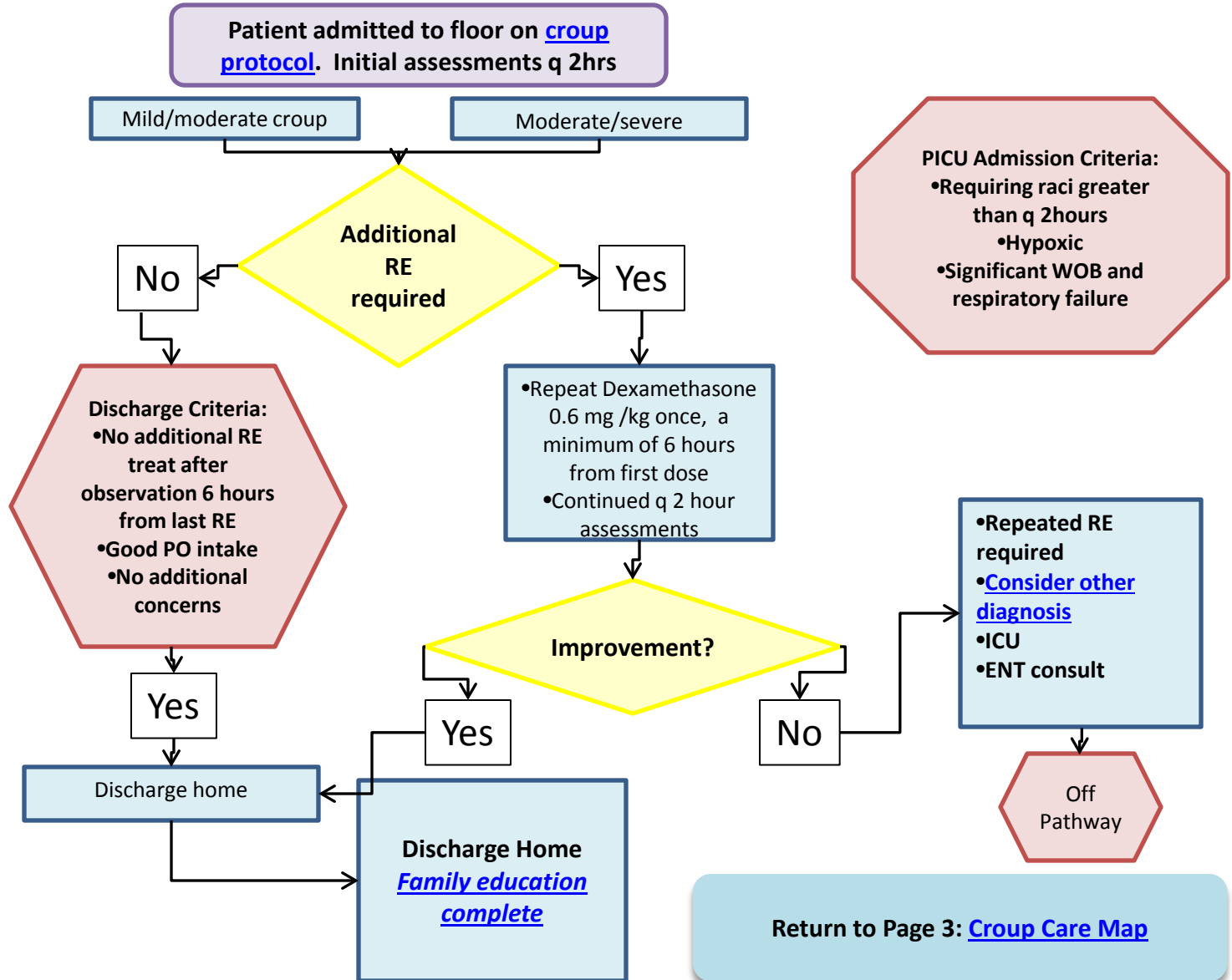
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Inpatient Care



Diagnostic testing & therapies not routinely recommended:

- [Cool Mist](#)
- [XRAYS\(CXR , Soft tissue neck, or CT of neck\)](#)
- [Viral Testing](#)



PICU Admission Criteria:

- Requiring raci greater than q 2hours
- Hypoxic
- Significant WOB and respiratory failure

Croup Severity

- Mild Croup:
 - Barky cough
 - No stridor at rest
 - No tachypnea
 - No retractions
 - No mental status changes
- Moderate croup
 - Stridor at rest
 - Moderate tachypnea
 - Moderate retractions
- Severe croup
 - Stridor at rest
 - Severe tachypnea
 - Severe retractions
 - Mental status changes
 - Hypoxia

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Consider Alternative Diagnosis

- < than 6 months or > than 6 years
- Poor responsiveness \ Duration of stridor > 4 days
- History of intubation in the past 6 months
- History of prolonged intubation
- Recurrent Croup
 - 2nd in 30 days
 - >3 in 12 months
- Toxic appearing
- Asymmetry of respiratory exam
- Drooling/difficulty swallowing/ severe anxiety

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Alternative Diagnosis

- Bacterial Tracheitis
 - URI symptoms have been present > 24 hours
 - Fever may/may not be present
 - Symptoms do not respond or show incomplete response
 - CRP and WBC are not predictive for or against bacterial tracheitis
- Epiglottitis
- Retropharyngeal abscess
- Foreign body
- Allergic reaction

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Criteria for Discharge from ED After Two Raci

- Current data does not clearly identify admission criteria for moderate croup patients who have no stridor after 2 racemic epi treatments.
- Recommendations are based on literature search and data from internal chart review to suggest safe criteria for discharge.
- Well appearing mild/moderate croup with onset of symptoms in the evening/night and transportation to a health care facility is available.

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Therapies Not Indicated in Croup

- **Cool Mist**: Humidified air is frequently used in the treatment of croup, although a meta-analysis of three trials evaluating the use of humidified air in croup found only marginal improvement in croup scores [26]. Mist therapy may provide a sense of comfort and reassurance to both the child and family; however, if the child is instead agitated by the mist, it should be discontinued.
- **Viral FA**: Confirmation of etiologic diagnosis is not necessary for most children with croup, since croup is a self-limited illness that usually requires only symptomatic therapy.
- **Radiographs**: Radiographic confirmation of acute laryngotracheitis is not required in the vast majority of children with croup. Radiographic evaluation of the chest and/or upper trachea is indicated if the diagnosis is in question, the course is atypical, an inhaled or swallowed foreign body is suspected (although the majority are not radio-opaque), croup is recurrent, and/or there is a failure to respond as expected to therapeutic interventions.

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Name: bobbie test
Acct Num: E000009464
Med Rec Num: M000000723
Location: 2nd Floor East - Med...
Primary Provider: Lightyear,Buzz
Date: 05/05/17

Patient Education

Croup

The Basics

Written by the doctors and editors at UpToDate

What is croup? - "Croup" is the term doctors use for a group of infections that affect the trachea, the main airway through which we breathe (figure 1). Croup is common in children between 6 months and 3 years of age. It causes a cough that sounds like a seal barking. In most children, croup goes away on its own. But some children with croup need to be seen by a doctor or nurse.

Order Sets: Croup Admission

Adm - Croup
 **Warning: Medication doses may calculate to a greater amount than the maximum dose, depending ...

Croup

Admit to

Inpatient

Observation

Outpatient

Please document additional diagnoses and modifiers within the problem list.

Isolation

Per Policy

* Type of Isolation Today Now

Per Policy

Condition

Condition

Critical

Fair

Good

Serious

Stable

Activity

Activity

Ambulate TID

Bedrest

Out of bed for activities

Up ad lib

Up to chair

Diet

Diet For Age (Provider Only)

Yes

NPO (Provider Only)

NPO after midnight

NPO Only

Clear Liquid Non-Anes/Sed(Provider Only)

Advance as tolerated

Advance to Soft Diet

Sugar Free

IV

Crystalloid

NS

D5 1/2 NS + 10 mEq KCl/Liter (Premix)

D5 1/2 NS + 20 mEq KCl/Liter (Premix)

Nursing

Vital Signs

Routine

N/R Q2H

N/R Q30min

N/R Q4H

Education by Nurse

Yes

* Topic Today Now

Croup Instructions Other

Notify Provider

Yes

Additional Orders

Yes

Additional Orders

Yes

INT IV fluids once drinking well, no vomiting, stool less than once every 4 hours and adequate UOP...

Respiratory

Protocol (Croup)

Do not wean Today Now

Wean per protocol Today Now

* Beginning frequency of assessments (hr) 2

Comment

Yes Today Now

Notify Provider

Yes Today Now

* Comment Today Now

If patient has not had a racemic epinephrine in 6 hours after the last racemic epinephrine treatment(May wait until AM if meets parameters in middle of night)

Order SCH Start/Stop View

Notify Provider

Yes Today Now

* Comment If the patient is requiring raci epi treatments more frequently than every 2 hours or they have not required a raci epi treatment in >8 hours

If the patient is requiring raci epi treatments more frequently than every 2 hours

Pulse Oximeter

Continuous the first 24 hours Today Now

Continuous Today Now

Spot check Today Now

Oxygen

Yes Today Now

Comment/special instructions Oxygen to keep sats>90%

Medications

Analgesics

Acetaminophen [Tylenol Liquid (160 mg/5 ml)]

DOSE mg PO Q4HPRN liquid 15 mg/kg Q4HPRN (160 mg/5 ml) PRN Today Now

For patients < 43 kg

Acetaminophen [Tylenol Liquid (160 mg/5 ml)]

650 mg PO Q4HPRN liquid 10 mg/kg Q6HPRN (100 mg/5 ml) PRN Today Now

For patients > 43 kg

Per ETCH P&T Committee: The maximum single dose for oral or rectal acetaminophen is 650 mg pe...

Ibuprofen [Motrin Suspension]

DOSE mg PO Q6HPRN suspension 10 mg/kg Q6HPRN (100 mg/5 ml) PRN Today Now

Maximum dose of Ibuprofen should not exceed more than 800 mg every 6 hours. Use of Ibuprofen in children less than 6 months is not recommended.

Corticosteroids

UpToDate recommends that children with moderate to severe croup be treated with dexamethasone ...

Repeat dosing of dexamethasone is not routinely recommended. Consider if a repeat racemic epinep...

Dexamethasone [Decadron (1 mg/ml) Oral Solution]

DOSE mg PO ONCE solution ONE Today Now

Dexamethasone Sodium Phosphate [Decadron Injection]

DOSE mg IM ONCE injection 0.6 mg/kg ONCE (IM) ONE

DOSE mg IV ONCE injection 0.6 mg/kg ONCE (IV) ONE

Bronchodilators

Administer nebulized epinephrine treatments every 15-20 minutes as warranted by the clinical cours...

Racepinephrine 2.25%

0.25 ml INH RC Q2HPRN neb.soln PRN Today Now

0.5 ml INH RC Q2HPRN neb.soln PRN Today Now

Age < 6 months: 0.25 mL Age >= 6 months: 0.5 mL

Radiology

XR CHEST PA/AP AND LATERAL Today Now

Routine

Consultations

Physician Consult

Yes

Trach Team Consult

Yes

Croup Discharge Canned Text:

- You will be given a patient education brochure on Croup management at home
- Seek urgent care or go to the ER right away if your child has:
 - Trouble breathing, breathing too fast, cannot catch a breath
 - Dry mouth, cracked lips, cries without tears, or is dizzy
 - Problems waking up and is very weak
- Call your doctor if your child has:
 - Worsening signs of infection. These include a fever of 101 or higher, chills, very bad sore throat, ear pain, or increased cough
 - Will not drink or breastfeed
 - Passing urine less than normal
 - Health problem gets worse or does not improve in 2-3 days
 - You have other questions or concerns

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Care map metrics

Metric	AIM	Rationale
Process		
% of admissions that do not require an additional RE treatment	Decrease by 10%	Prevent unnecessary hospitalizations by safely identifying a subset of patients that can be managed at home
% patients after admission that receive both a second RE treatment and a second dose of dexamethasone	Increase by 10%	Decrease the variability in repeat steroid utilization after admission.
% patients after admission that do not receive a second RE treatment but do receive a second dose of dexamethasone	Decrease by 10%	
% of patients that receive soft tissue neck x-rays	Decrease by 10%	
Balancing		
ED to ED return rate with same diagnosis within 7 days	No change or decrease	
Inpatient /Observation readmit rate within 7 days	No change or decrease	
ED LOS	No change or decrease	
Inpatient/Obs LOS	No change or decrease	
Outcome		
% of patients that present to the ED and require admission	Decrease by 5%	Prevent unnecessary hospitalizations by safely identifying a subset of patients that can be managed at home

References

- Seattle Children's Clinical Pathway [Link](#)
- Children's Mercy Kansas City Clinical Pathway [Link](#)
- Viral Croup: Diagnosis and Treatment Algorithm: Pediatric Pulmonol. 2014 May;49(5):421-9. doi:10.1002/ppul.22993. Epub 2014 Mar 5. [Link](#)
- INPATIENT TREATMENT AFTER MULTI-DOSE RACEMIC EPINEPHRINE FOR CROUP IN THE EMERGENCY DEPARTMENT : The Journal of Emergency Medicine, Vol. 49, No. 4, pp. 408–414, 2015 [Link](#)
- Inpatient Hospitalizations for Croup : Hospital Pediatrics 2154, 2014 [Link](#)

Physician Disclaimers: Croup Care Map

Medical Disclaimer

Medicine is an ever-changing science. As new research and clinical experience broaden our knowledge, changes in treatment and drug therapy are required.

The authors of this Care Map have checked with sources believed to be the most current and reliable in their efforts to provide information that is complete and generally in accord with the standards accepted at the time of publication.

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Contact and Revisions Number

- **For questions concerning this care map, contact: CareMap@etch.com**
- **Last Update: 4/23/18**