

# VIRAL BRONCHIOLITIS (NON-HIGH FLOW NASAL CANNULA)

# **Protocol Exclusion Criteria**

- > 24 months of age
- Primary diagnosis other than bronchiolitis or viral pneumonia
- Apnea or bradycardia requiring intervention
- Co-morbid conditions:
  - Air leak/pneumothorax
  - o Anatomic or acquired airway defects (i.e. croup, stenosis)
  - Neuromuscular disease
  - o Chronic lung disease with chronic O2 need
  - Immunodeficiency
  - Abnormal respiratory status at baseline
  - Hemodynamically significant cardiac condition (e.g. unrepaired VSD, need cardiac meds, complex congenital heart disease)

#### NOT ROUTINELY RECOMMENDED IN BRONCHIOLITIS

- Chest x-ray
- Blood labs
- Albuterol
- Racemic epinephrine

- Steroids
- Hypertonic saline
- Antibiotics
- Chest physiotherapy

# **CRITERIA for ADMINISTERING ALBUTEROL**

- Consider a ONE-TIME albuterol trial with pre- and post- RAC if:
  - o RAC severe AND
  - Wheezing AND one of the following:
    - History of recurrent wheeze OR
    - History of atopy OR
    - Strong family history of atopy or asthma
- RT should document pre- and post-albuterol RAC score in a progress note
- Order additional albuterol PRN ONLY if RAC improves with trial

## RESPIRATORY ASSSESSMENT CLASSIFICATION (RAC)

Can be used on patients on and off HFNC. If patient requires suctioning, use post-suctioning classification. Preferably classify when the child is calm unless child is inconsolable.

ASSESSMENT COMPONENTS		CLASSIFICATION		
		Mild	Moderate	Severe
AGE-BASED RR	≤3 months	≤ 60	61-69	≥ 70
	4 – 12 months	<u>≤</u> 50	51-59	≥ 60
	> 12 months	<u>≤</u> 40	41-44	≥ 45
WORK OF BREATHING		Normal OR mild retractions	Moderate retractions	Severe retractions, head bobbing, OR grunting
MENTAL STATUS		Baseline	Fussy, anxious, OR sleepy	Lethargic (not just sleepy), OR inconsolable

The HIGHEST score for any component determines the patient's classification. A severe rating in any component would indicate a SEVERE classification. A mix of mild and moderate ratings would indicate a MODERATE classification. When in doubt, err on the side classifying a patient as more severe.

## RT or RN ASSESSMENT TIMELINE per RESPIRATORY CLASSIFICATION

- Can be assessed more frequently
  - Moderate or Severe RAC every 2 hours (RN/RT shared responsibility)
  - Mild RAC every 4 hours

## Nutrition Considerations (Goal to start within 6 hrs)

- Oral feeds for all of the following:
  - RR < 70 for age < 3 mo</li>
  - o RR < 60 for 4-12 mo
  - o RR < 50 for age > 12 mo
  - HFNC < 2 L/kg/min or per MD discretion
  - RAC mild or moderate or MD discretion
- Consider continuous/bolus NG feeds if:

- o Poor PO intake
- Concerns for aspiration
- Trial ND if not tolerating continuous NG

## **ED Management Pathway:**

#### Initial assessment:

- Perform Respiratory Assessment Classification (RAC), suction, then RAC
- Supplemental O2 to keep saturation ≥90% while awake, >88% while asleep
- Place in contact + droplet isolation

#### **Pre-suction RAC Mild:**

- If mild/moderate dehydration and meets criteria per Nutrition Guidelines, attempt PO feeds
- If severe dehydration, consider IV fluids
- Re-evaluate with RAC, suction, and repeat RAC at least q2h with vitals and prn while in ED

#### **Pre-suction RAC Moderate:**

- If mild/moderate dehydration and meets criteria per Nutrition Guidelines, attempt PO feeds
- If severe dehydration, consider IV fluids
- Re-evaluate with RAC, suction, and repeat RAC at least q1h and prn

#### **Pre-suction RAC Severe:**

- Consider supplemental NG or IV fluids
- Consider high flow nasal cannula (see separate HFNC pathway)
- May consider albuterol trial if meets guidelines (see left)
- Re-evaluate with RAC, suction, and repeat RAC at least q30min and prn

Decision to
Admit vs
Discharge

Initiate HFNC for patients with severe RAC and consider HFNC for those with moderate RAC despite maximal supportive care (suctioning, hydration, antipyretics). Refer to HFNC pathway for initiation.

#### Admit

#### Discharge Criteria: (All of the following)

Discharge

- · No to mild work of breathing
- Room air SpO2 ≥90% while awake or ≥88% while asleep
- Caregivers can adequately suction with bulb or nasal aspirator
- No apnea
- Adequate PO to maintain hydration
- Caregiver teaching complete
- Able to return to healthcare provider for followup

### Caregiver teaching:

- Viral illness, treated by hydration and suction
- · Signs of respiratory distress
- How and when to suction
- Frequent feeds, signs of dehydration
- · Cough may last 2-4 weeks.
- · Avoid OTC cough/cold meds and tobacco smoke
- Advise follow-up within 1-2 days

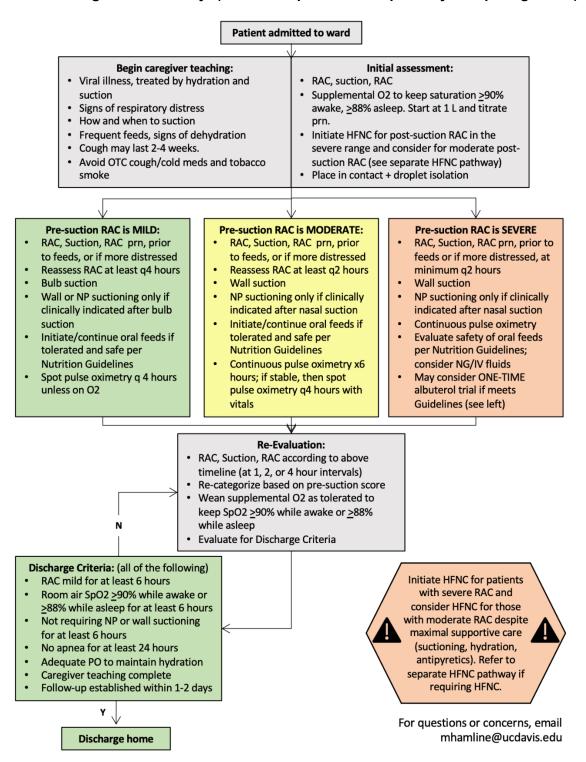
# **Pediatric WARD Admission Criteria:**

- Sustained hypoxemia (SpO2 < 90%) requiring O2</li>
- See Bronchiolitis HFNC pathway for ward admission criteria on HFNC
- Apnea not meeting ICU criteria
- Thick secretions requiring wall suctioning
- Dehydration requiring ongoing IV or NG fluids
- Or, expected progression in clinical course to meet these criteria

#### **Pediatric ICU Admission Criteria:**

- See Bronchiolitis HFNC algorithm for PICU admission criteria on HFNC
- · Intubated or initiated on CPAP
- · Altered mental status from baseline
- Apnea > 20 seconds with associated bradycardia/desaturation requiring intervention
- Requiring suctioning more frequently than q1h

# Ward Management Pathway: (Refer to separate HFNC pathway if requiring HFNC)



## **Medical Legal Disclaimer:**

Welcome to the UC Davis Health, Department of Pediatrics, Clinical Practice Guidelines Website. All health and health-related information contained within the Site is intended chiefly for use as a resource by the Department's clinical staff and trainees in the course and scope of their approved functions/activities (although it may be accessible by others via the internet). This Site is not intended to be used as a substitute for the exercise of independent professional judgment. These clinical pathways are intended to be a guide for practitioners and may need to be adapted for each specific patient based on the practitioner's professional judgment, consideration of any unique circumstances, the needs of each patient and their family, and/or the availability of various resources at the health care institution where the patient is located. Efforts are made to ensure that the material within this Site is accurate and timely but is provided without warranty for quality or accuracy. The Regents of the University of California; University of California, Davis; University of California, Davis, Health nor any other contributing author is responsible for any errors or omissions in any information provided or the results obtained from the use of such information. Some pages within this Site, for the convenience of users, are linked to or may refer to websites not managed by UC Davis Health. UC Davis Health does not control or take responsibility for the content of these websites, and the views and opinions of the documents in this Site do not imply endorsement or credibility of the service, information or product offered through the linked sites by UC Davis Health. UC Davis Health provides limited personal permission to use the Site. This Site is limited in that you may not:

- Use, download or print material from this site for commercial use such as selling, creating course packets, or posting information on another website.
- Change or delete propriety notices from material downloaded or printed from it. · Post
  or transmit any unlawful, threatening, libelous, defamatory, obscene, scandalous,
  inflammatory, pornographic, or profane material, any propriety information belonging
  to others or any material that could be deemed as or encourage criminal activity, give
  rise to civil liability, or otherwise violate the law.
- Use the Site in a manner contrary to any applicable law.

You should assume that everything you see or read on this Site is copyrighted by University of California or others unless otherwise noted. You may download information from this Site as long as it is not used for commercial purposes, and you retain the proprietary notices. You may not use, modify, make multiple copies, or distribute or transmit the contents of this Site for public or commercial purposes without the express consent of UC Davis Health.