

INCLUSION CRITERIA

Pts 1mo-<2year presenting with viral lower respiratory tract infection with/without rhinitis and cough, tachypnea, wheezing, rales, use of accessory muscles or nasal flaring

EXCLUSION CRITERIA

- Complex medical history
- History of asthma or chronic pulmonary disease
- Cardiac disease
- Neuromuscular disease
- Abnormal airway
- Immunodeficiency

MEASURES

- Use of respiratory score

NOT ROUTINELY RECOMMENDED

- Deep suction; only recommended for airway obstruction causing significant respiratory distress
- Respiratory viral testing
- Covid/Flu/RSV, *unless required for hospital admission*
- CXR
- Albuterol
- Steroids
- Hypertonic saline
- Racemic epinephrine
- Antibiotics

CXR Criteria-

Hypoxia <90%, persistent focal abnormalities on repeat examinations, prolonged course of illness, severe respiratory distress scoring >8.

Apnea - Cessation of breathing for 20 seconds or longer, or as a briefer episode associated with bradycardia, cyanosis, or pallor (AAP)

DISCHARGE CRITERIA

- Resp Score 1-6 with retractions to only 1 area or mild tachypnea
- | | |
|----------|----------|
| <2 mo | RR 61-69 |
| 2-12 mo | RR 51-59 |
| 13-24 mo | RR 41-44 |
- Tolerating PO by hx or observation
 - Sats $\geq 90\%$ > 4 hours
 - Off High Flow >4 hours
 - No apnea within 24 hours
 - PCP f/u 24-72 hours

INITIAL ASSESMENT

- RN/RT documents respiratory score
- RN/RT suctions patient as needed
- Utilize Bronchiolitis Order Set
- Obtain vital signs, including spot pulse ox
- Treat fever PRN
- Encourage PO intake if scoring mild or moderate (1-8)
- Record 2nd score when patient is calm

Mild (1-4)

Treatment

- RN Spot check pulse ox Q4 unless on O2
- RN/RT Repeat resp score every 4 hours or PRN with clinical change
- Assess need to suction before feeds or every 4 hours
- Prepare for discharge, prioritize family education
- RN notify provider if score ≤ 4 , not requiring respiratory support and tolerating PO for discharge

Discharge Patient

- Provide Education
 - Suctioning demonstrated
 - Signs of dehydration discussed
 - Signs of resp distress including tachypnea and retractions
 - Duration of illness (2-4wk)
 - Follow up recommendation (24-72 hours)

Moderate (5-8)

Treatment

- RN/RT resp score Q4 or PRN with clinical change
- RN assess need to suction (nasal aspirator) before feeds or every 4 hours
- RN Spot check pulse ox Q4 unless on O2 or HFNC
- Maintain O2 Sats $\geq 90\%$
 - Attempt to suction and reposition patient prior to applying oxygen
- Allow PO, consider need for IV/NG fluids if PO intake inadequate
- **HFNC is only initiated for scores ≥ 9**

Reassess

- RN/RT repeat Resp Score and assess need to suction Q4 or with clinical change
- **Attempt High Flow Holiday at least every 12 hours**^{page2}
- Wean low flow nasal cannula to off as tolerated

Severe (≥ 9)

Treatment

- Initiate/Increase HFNC^{page2}
- Titrate FiO2 to maintain SpO2 $\geq 90\%$
- Ensure patent IV
- RN apply continuous pulse ox
- NPO until score <9 on HFNC

Resp Score ≥ 9 ?

No

Yes

Next Step

- Titrate HFNC per resp score to max settings^{page2}

Resp Score ≥ 9 ?

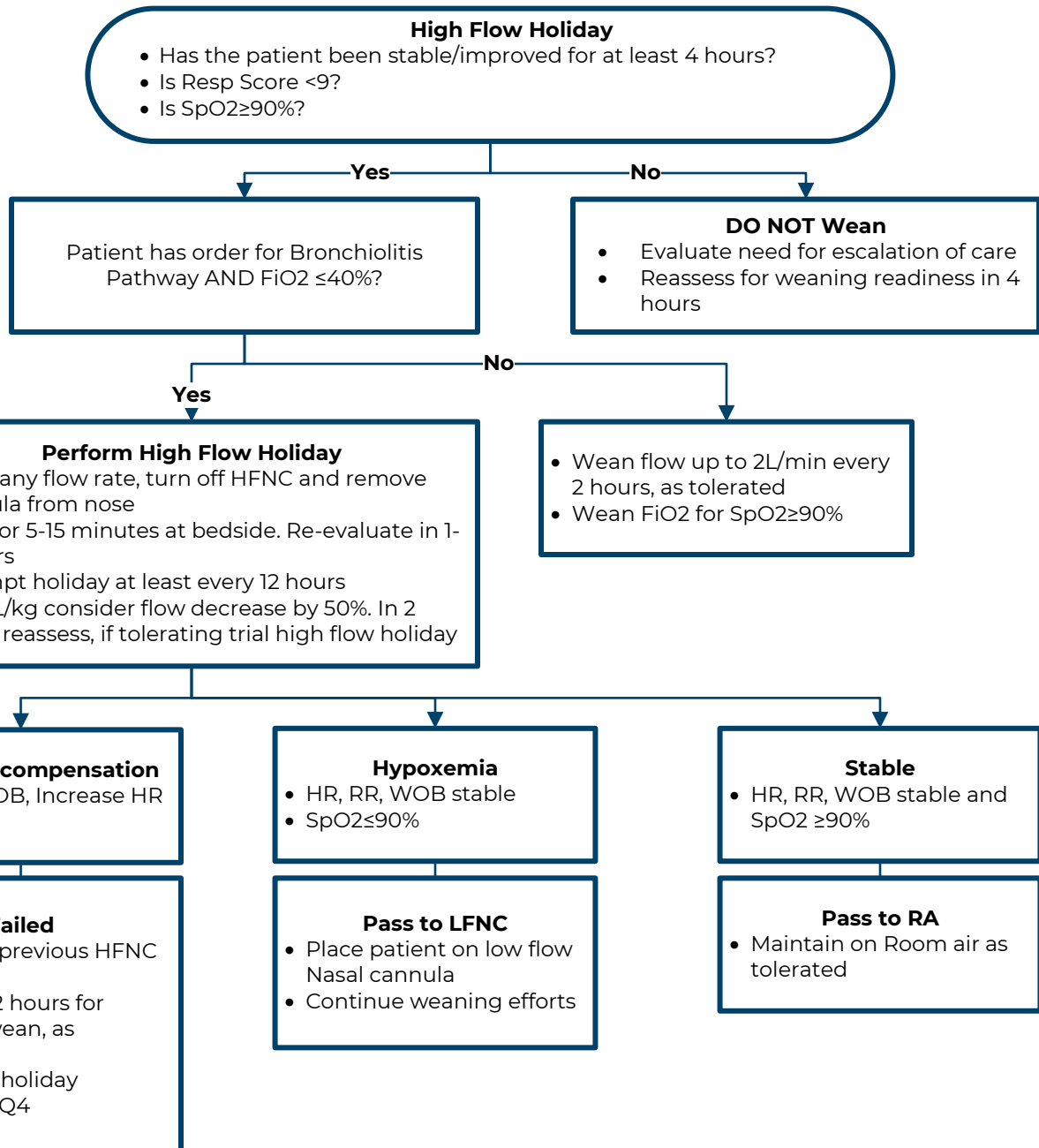
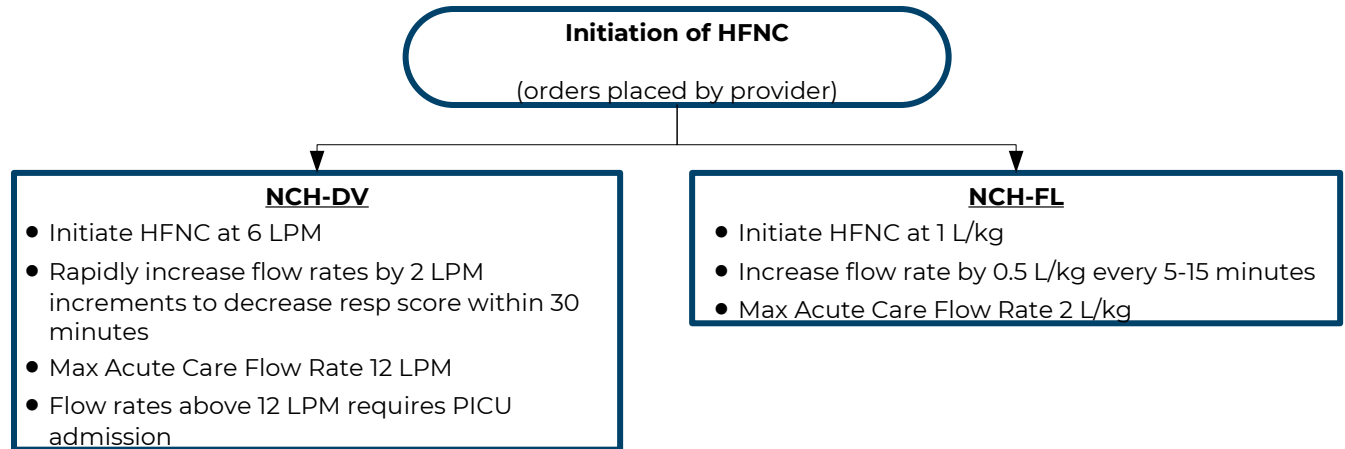
No

Yes

- Consider Albuterol trial

Call Rapid Response if

- HFNC above Max Setting
- FiO2 >50%
- Persistent resp score ≥ 9
- Apnea
- Rapid decompensation



Clinical Decompensation

- Severe WOB, Increase HR and/or RR

Failed

- Return to previous HFNC setting
- Assess in 2 hours for possible wean, as tolerated
- Assess for holiday readiness Q4

Hypoxemia

- HR, RR, WOB stable
- SpO₂ ≤90%

Pass to LFNC

- Place patient on low flow Nasal cannula
- Continue weaning efforts

Stable

- HR, RR, WOB stable and SpO₂ ≥90%

Pass to RA

- Maintain on Room air as tolerated

Respiratory Score Guideline (Under 2) ORIGINAL

Variable	0 points	1 point	2 points	3 points
RR				
< 2 mo		<60	61-69	≥ 70
2-12 mo		≤50	51-59	≥ 60
1-2 yr		≤40	41-44	> 45
Retractions	None	Mild retractions: Subcostal or intercostal	Moderate retractions in 2 of the following: subcostal, intercostal, substernal, OR nasal flaring	Severe retractions in 3 of the following: subcostal, intercostal, substernal, suprasternal, supraclavicular, OR nasal flaring/head bobbing
Dyspnea <i>*Automatic score of 1 for enteric feeding device</i>	Normal feeding, vocalizations and play	1 of the following: difficulty feeding, decreased vocalization or agitation	2 of the following: difficulty feeding, decreased vocalization or agitated	Lethargic, inconsolable, refusing to take PO
Auscultation	No wheezing and/or clear breath sounds	End-expiratory wheeze only	Expiratory wheeze only (greater than end-expiratory wheeze)	Inspiratory/Expiratory wheeze OR diminished breath sounds OR both

Respiratory Score Guideline (Under 2) UPDATED

Variable	0 points	1 point	2 points	3 points
RR				
< 2 mo		<60	61-69	≥ 70
2-12 mo		≤50	51-59	≥ 60
1-2 yr		≤40	41-44	> 45
Retractions	None	Mild retractions: Subcostal or intercostal	Moderate retractions in 2 of the following: subcostal, intercostal, substernal, OR nasal flaring	Severe retractions in 3 of the following: subcostal, intercostal, substernal, suprasternal, supraclavicular, OR nasal flaring/head bobbing
Dyspnea	Normal feeding, vocalizations and activity	1 of the following: difficulty feeding, decreased vocalization or agitated	2 of the following: difficulty feeding, decreased vocalization or agitated	Stops feeding, no vocalization, drowsy or confused
Auscultation	No wheezing and/or clear breath sounds	End-expiratory wheeze only	Expiratory wheeze only (greater than end-expiratory wheeze)	Inspiratory/Expiratory wheeze OR diminished breath sounds OR both

Abbreviation			
Abbreviation	Terminology	Abbreviation	Terminology
CXR	Chest x-ray	PO	By mouth
FiO2	Fraction of inspired oxygen	PRN	As needed
HFNC	High-flow nasal cannula	pts	Patients
HLOS	Hypoxic Low Oxygen Saturation	Q4H	Every 4 hours
HR	Heart rate	RA	Room air
IV	Intravenous	RN	Registered Nurse
kg	Kilogram	RR	Respiratory rate
L	Liter	RT	Respiratory therapist
LFNC	Low flow nasal cannula	RSV	Respiratory Syncytial Virus
LPM	Liters per minute	resp	Respiratory
mo	Month	sats	Saturations
NG	Nasogastric	wk	Week
PCP	Primary Care Physician	WOB	Work of breathing
PICU	Pediatric Intensive Care Unit		

Disclaimer: The clinical pathways are based upon publicly available medical evidence and/or a consensus of medical practitioners at Nemours Children's Health ("Nemours") and are current at the time of publication. 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.

VERSION MANAGEMENT

- Version 1.0 (10/4/2022): Go Live.
- Version 2.0 (10/23/2025): Look back review completed.

Questions about this pathway should be directed to clinicalpathways@nemours.org.

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