High Flow Nasal Cannula Clinical Pathway: Bronchiolitis

**Initiation Pathway**

Prior to Initiation:
- Nasal suction then score
- Notify bedside RN, RT and MD
- Make NPO; offer breast pump if breastfeeding
- Consider PIV or NGT

- Initiate HFNC at following flow rates:
  - 4 lpm for <6 mos of age
  - 6 lpm for ≥ 6 mos of age
- Titrate FiO2 to maintain O2 sat ≥ 90%

In 15 minutes:
- obtain and document Respiratory Score, RR, pulse oximetry, HR and BP

Respiratory Score improves to ≤ 8?
- Yes
- Continue q15 min assessments as above for 1 hour
- HUDDLE 60 min post-initiation: Bedside RN, RT, MD

- No
- Increase flow rate q15min to a maximum of:
  - 8 lpm for < 6 mos of age
  - 10 lpm for ≥ 6 mos of age

Respiratory Score improves to ≤ 8?
- Yes
- Respiratory Score improves to ≤ 8?
- No
- Activate PMET to arrange PCCU transfer
- Place PIV if not done already
- May increase maximum flow rates/increase FiO2 while awaiting transfer, with ICU guidance

**Maintenance**

MONITORING:
- Continuous pulse oximetry,
- Suction then score q2h
- Document HR, RR, pulse oximetry q2h

FEEDING:
- May resume PO feeding if RR<60, with 1st feeding observed by staff
- If RR remains >60, consider continuous NG feeds

Consider proceeding to Weaning Pathway after 4 hours of Respiratory Score <5

**Weaning Pathway**

Clinically improving?
- RS≤5, RR/HR improved
- No apnea
- FiO2 ≤50%
- Normal mental status
- Adequate perfusion

- Wean FiO2 to maintain O2 sat ≥ 90%
- Wean flow by 1 lpm q2h
- Document HR, RR, pulse oximetry q2h
- Suction then score q2h

Respiratory Score 1-4
- Continue weaning as above
  - When stable at 2 lpm and <30%
  - FiO2 for 4h, trial on room air or low flow NC O2

Respiratory Score 5-8
- Return to Maintenance phase and continue current flow rate

Follow Inpatient Bronchiolitis Pathway

Respiratory Score 9-12
- Return to Initiation phase and increase flow rate q15min until RS≤ 8, to maximum rates

**Inclusion criteria:**
- Previously healthy children with bronchiolitis
  - Age 40 weeks CGA to 24 months
  - One of the following:
    1) Severe respiratory distress
    2) Significant hypoxemia (Requiring >2 lpm NCO2)
    3) RS persistently 9-12
  - HFNC from ER: stable ≥1 hr RS≤E; max flow 6L<6mos, 8L≥6mos;
    FiO2 ≤50%
  - HFNC from PICU: stable ≥4hrs, 4Lflow, FiO2 ≤50%

**Exclusion criteria:**
- ANY pre-existing medical condition, including BPD
- CGA <40 weeks
- Any apnea
- Altered mental status
- Poor perfusion

**Escalation:**
Activate PMET to arrange PCCU transfer if:
- Unchanged or worsening: RS remains ≥9 despite maximum flow (8 lpm <6 mos, 10 lpm ≥6 mos)
- Any apnea
- FiO2 requirement ≥50% to maintain O2 sat ≥90%
- Altered mental status
- Poor perfusion

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