

Acute Care Heated Humidified High Flow Nasal Cannula Respiratory Care Pathway

Consider initiation of HHHFNC in the **ACUTE CARE UNIT** for any of the following situations despite diligent nasopharyngeal (infant) or oropharyngeal (older child) suctioning and repositioning to optimize respiratory status:

- Substantially increased work of breathing (work of breathing score ≥ 5 for patients less than 5 years old)
- SpO₂ consistently $< 92\%$ despite administration of supplemental oxygen at 4 L/min via conventional nasal cannula (FiO₂ 1.0)
- Acute hypercarbia with a capillary blood gas pH ≤ 7.30

START HHHFNC 6 L/MIN WITH FiO₂ 0.5

- Consider a capillary blood gas if not already done
- Consider placing PIV and making patient NPO

WITHIN 60-90 MINUTES AFTER INITIATING HHHFNC

- Repeat capillary blood gas if one was obtained upon initiating HHHFNC
- MULTIDISCIPLINARY HUDDLE
 - Primary team
 - RCP
 - Bedside RN
 - Charge RN

IMPROVING WOB AND SPO₂ $\geq 92\%$ WITH FiO₂ ≤ 0.5

- Go to **WEANING PATHWAY**

WEANING PATHWAY

- Wean flow by 1 L/min to 2 L/min every 2 hours as tolerated
- Wean FiO₂ by 0.1 or more every 2 hours as tolerated to maintain SpO₂ $\geq 92\%$

LEAVING THE PATHWAY

If WOB is stable on 2 L/min flow AND SpO₂ $\geq 92\%$ on FiO₂ ≤ 0.5 for ≥ 4 hours, transition to 0.5-1 L/min conventional nasal cannula

Primary team may discontinue HHHFNC at any time at their discretion – must inform RCP & RN (MD enter discontinue order in EPIC)

Not Responding or Worsening WOB and/or SPO₂ $< 92\%$ WITH FiO₂ ≤ 0.5

- Initiate weight based pathway

<5 kg: 6-8 L/min
 5 to <10 kg: 8-10 L/min
 10 to <15 kg: 10-12 L/min
 ≥ 15 kg: 12-15 L/min

- Reassess every 2 hours
- If not improved after initial assessment place PIV
- If comorbidity present consider PICU consultation

IMPROVING WOB AND SPO₂ $\geq 92\%$ WITH FiO₂ ≤ 0.5

- Go to **WEANING PATHWAY**

WORSENING WOB AND/OR SPO₂ $< 92\%$ DESPITE FiO₂ 0.5

- Go to **CRITICAL ESCALATION PATHWAY**
- Consult PICU

UNCHANGED/WORSENING WOB and/or SPO₂ $< 92\%$ DESPITE FiO₂ 0.5

- **TRANSFER TO THE PICU AND LEAVE THE PATHWAY – FLOW RATE AND FiO₂ IN COLLABORATION WITH PICU TEAM WHILE AWAITING BED**

***CO-MORBIDITIES**

- Gestational age < 34 weeks (if < 6 m/o)
- Chronic lung disease
- Anatomic airway defect
- Prior intubation for respiratory failure
- Cardiac disease requiring medication
- Neuromuscular disease
- Immunodeficiency

Approvals:

 Medical Director Respiratory Care
 HHHFNC Committee 11/14/18

 Date