HEATED HIGH FLOW (HHF)

**Prior to HHF Initiation**
- Obtain respiratory score (RS), suction, repeat RS
- Call licensed provider to order

- Initiate HHF at flow rate of 2L/kg/min (max 15L/min and ≥ 30% FiO2)
- Obtain RS, suction, repeat RS + VS per unit routine
- Place PIV (consider normal saline bolus/IVF)
- Order NPO status

**HHF Pathway Inclusion Criteria**
- Age 40 weeks post-conceptual age to < 2 years
- Any of the following:
  1. Respiratory distress
  2. Hypoxemia (need for > 1L NCO2 if 30-90 days, >1.5L for 91 days – 6 months, > 2L for 6 months – 2 years)
  3. RS score ≥ 5

**HHF Pathway Exclusion Criteria (If using HHF, manage off pathway)**
- Cardiac disease
- Anatomic airway defects
- Neuromuscular disease
- Immunodeficiency

**Clinically worsening**
- Provider disposition assessment at 2 hours

- Manage off pathway
  - Notify PICU and arrange transfer of patient

- Clinically improving
  - 2 licensed providers together at bedside (within 30 mins) may be required should differing opinions on disposition occur

**Sign of clinical improvement**
- Lower respiratory rate (not inappropriately low for age)
- Lower heart rate
- Improving RS

**Weaning HHF**
FiO2 should be weaned by RN/RT to maintain saturations ≥ 90%
Flow rate should be weaned quickly for improving patients, including at night.

RT should call provider to wean patient’s flow rate by at least 1L every 2 hours as long as patient is:
- Clinically improving (respiratory distress, respiratory rate)
- Requiring less than 30% FiO2

When flow is stable at 2L for 2 hours, discontinue HHF. Place low flow NC O2 if needed to keep saturations ≥ 90% awake, ≥ 88% asleep.

Weaning by conducting a trial directly off HHF to room air (from any rate) is also possible, as patient’s condition allows.

**Criteria for transfer from the ICU to Floor**
- Meets pathway criteria, stable on flow rate at or below the floor maximum for > 12 hours AND respiratory score < 8 prior to transfer

**Criteria for transfer to the ICU**
- Clinical worsening on HHF trial
- Reoccurring apnea > 20 seconds requiring intervention
- Reoccurring desaturations with increased FiO2 needs or > 60% FiO2
- Altered mental status (irritability, lethargy), poor perfusion (cool extremities, capillary refill > 3 seconds)

**Disclaimer:** Pathways and/or protocols are intended as a guide for practitioners and do not indicate an exclusive course of treatment nor serve as a standard of medical care. These pathways and/or protocols should be adapted by medical providers, when indicated, based on their professional judgment and taking into account individual patient and family circumstances.

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