RESPIRATORY THERAPIST DRIVEN VENTILATOR LIBERATION/WEANING PROTOCOL

PURPOSE: To ensure the safe and uniform application of the ventilator weaning process in adult patients to expedite ventilator liberation. Patients meeting weaning criteria must have specific pulmonary/critical care physician orders indicating weaning using the Respiratory Therapist Driven Ventilator Liberation/Weaning Protocol.

If an order is written for Respiratory Therapist Driven Ventilator Liberation/Weaning Protocol, the weaning process will begin with the completion of a Spontaneous Awakening Trial (SAT) between 6 a.m. and 7 a.m. If the result of the SAT is deemed successful by the patient's respiratory therapist/respiratory care practitioner (RT), the day shift RT will proceed with completing the Spontaneous Breathing Trial (SBT). The RT will review pain medications and sedation before the start of the SBT, which will be performed between 7:30 a.m. and 10 a.m. within 48 hours of admission.

GENERAL PROVISIONS: Ventilator weaning will be performed on the designated Milne units.

CONSIDERATION: Consult with a pulmonary/critical care physician for patients with neuromuscular disease before instituting Respiratory Therapist Driven Ventilator Liberation/Weaning Protocol.

RESPONSIBLE STAFF: Respiratory therapy, nursing, pulmonary/critical care physician, monitor technician

Procedure:

To be a candidate for SBT, the Patient must pass the following criteria:

1. **Clinical Assessment before Spontaneous Breathing Trial (SBT):**
   a. Successful Spontaneous Awakening Trial (SAT) (RT to consult with RN)
   b. No hemodynamic instability (RT to consult with RN)
   c. Assess mental status to be within range of alert, calm, mild drowsiness to mild restlessness
   d. PaO2/FiO2 greater than 200 (Obtain values from most current ABG- done within last 48 hours)
   e. PEEP < 7.5
   f. FIO2 < .50
   g. The Patient is making efforts to breathe
   h. Secretions scant or small amounts, non-purulent, suctioning not required more frequently than Q 4 hr
   i. Temp < 100.5
   j. Document trach size and type

Before initiation of SBT, notify the cardiac monitor technician.

2. **Interventions:**
   a. If the Patient had completed 2 hours or more of trach mask (TM) trial at acute care, RT can proceed with supervised 30-minute trach mask trial. If tolerated, RT may continue the duration of TM trials per pre-admission documentation.
   b. If the Patient has not completed TM trial at acute care and FiO2 is less than or equal to 0.50, place the Patient on PSV of +5 cmH2O and CPAP of +5 cmH20 and perform Rapid Shallow Breathing Index (RSBI). If the rate/tidal volume (f/Vt) <105, the RT can proceed with TM trial.
   c. If the Patient remains stable on current settings of PSV of +5 cmH2Oand CPAP of +5 cmH20 with FiO2 less than or equal to 0.50 for 30 minutes to 2 hours (based on overall status and assessment of patient) perform reassessment for spontaneous breathing success and proceed to TM trials.

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Procedure (continued):

d. Resume previous ventilator support settings and terminate spontaneous breathing trial if any of the following occur:
- **Respiratory Rate > 35**
- **Respiratory Rate < 8**
- **Oxygen saturation < 88%**
- **Respiratory distress**
- **Mental status change**
- **Acute cardiac arrhythmia/hemodynamic changes**
- **Temp ≥ 100.5**

NOTE - Inform RN and pulmonary/critical care physician of the termination of the SBT.

e. Obtain ABG per ABG Protocol For Weaning Patients.

3. Reassessment:

Spontaneous breathing trial deemed successful based upon the following criteria:
- Stable gas exchange
- Hemodynamically stable
- Temp < 100.5
- RR < 35
- SpO2 > 88% on not more than 50% FiO2
- Positive cuff leak
- Absence of diaphoresis and absence of use of accessory muscles
- Ability to maintain airway with the ability to clear secretions
- Assess for the presence of a cuff leak
- Begin 2-hour TM trial BID with intervening 2-hour rest
- Record O2 SAT, ETCO2 at the end of each trial
- Proceed with subsequent daily progressive increases of time on TM as follows

NOTE - A pulmonary/critical care physician will be notified to proceed with ventilator liberation if all criteria in the reassessment are met for spontaneous breathing trial or notified of the Patient's failed criteria in the reassessment and that a trial will be attempted the next day.

Trach Mask (TM) Progress:
- 4 hours BID (with 2 – 4 hours rest interval in between)
- 8 consecutive hours
- Up to 16 consecutive hours with rest on ventilator support at night x2 nights

When the patient can tolerate 16 hours x2 consecutive days with rest on ventilator support at night, proceed to 24 hours off ventilator support (on trach mask) and obtain ABG after the 24-hour period. After obtaining the ABG, consult with a pulmonary/critical care physician regarding ventilator status, next steps and consider decannulation protocol.

Documentation:

Patient Assessments, Rapid Shallow Breathing Index, SAT and SBT outcomes will be documented on the ventilator flow sheet. If the Patient does not pass SBT trials, the reason will be documented in progress notes.

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Signed original on file

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