Dignity Health.
Saint Francis Memorial Hospital

PATIENT CARE POLICY

SUBJECT:	MECHANICAL VENTILATION WEANING POLICY	NO:	D - 505
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PURPOSE

To provide a, clear, concise, multidisciplinary and evidence-based protocol for respiratory care practitioners and critical care nurses to successfully wean patients off the ventilator in a safe and timely manner.

POLICY

1. All patients on mechanical ventilation will be assessed daily for their ability to meet the Weaning Criteria. Weaned Assessment will be documented on the "Ventilator Wean Flow Sheet" by the Respiratory Care Practitioner (RCP) and the Registered Nurse (RN) assigned to the patient.
2. Initiation of weaning will begin after receiving a physician's order or if the patient meets the Weaning Criteria. (*See Ventilator Wean AssessmentFlowsheet*).
3. Weaning will be done by a RCP following the guidelines specified within this policy.
4. The weaning is a collaborative process whereby the RCP will consult with the RN to assess status and determine appropriate actions within the weaning protocol. The weaning outcome is documented by the RCP on the Ventilator Wean Flow Sheet
5. The physician must specify via a written order in the patient's chart, if desired parameters in mechanics of weaning or extubation differ from those identified in the Weaning Policy.

PROCEDURE

I. Assessment of Patient Prior to Initiation of Weaning

1. Assess for resolution or significant improvement in the underlying process causing respiratory failure

Assess for any signs of emerging processes which may lead to recurrent clinical deterioration, i.e., hemodynamic and cardiovascular instability or rapidly deteriorating renal status.

2. Assess the ability to initiate spontaneous breathing and general muscular strength, including:
    a. the resolution of all paralyzing medications.
    b. levels of sedating medication that do not depress respiration
3. Assess stability of hemoglobin levels (in most patients hemoglobin > 8 g/dl)

4. Assess for the adequacy of oxygenation: $PaO_2 \geq 70$ mm Hg or a $SpO_2 \geq 92\%$ when the $FiO_2 \leq 50\%$ (or PaO_2 60 mmHg on 40%) with PEEP ≤ 5 cm H_2O.
5. No other apparent contraindications to weaning.
6. If weaning protocol criteria is met per policy, the weaning protocol will be initiated and the physician notified by the RN or RCP within 30 minutes to one hour. If the physician declines the Medical Director of critical care will be notified.

II. Weaning

A. Intermittent Trials of Spontaneous Breathing (SBT)/Free Breathing Trial:

1. Once a day -preferably morning -the patient undergoes SBT. Humidified oxygen is supplied the same as on mechanical ventilation.
2. The trial should be terminated when the patient shows signs of poor tolerance (as outlined in Section II. B. 5 below). Full ventilatory support should be instituted between trials (i.e. assist control). The duration of each trial should be noted on the ventilator flow sheet.

B. Pressure Support Weaning:

1. The initial level of pressure support should be adjusted to the point at which the patient's respiratory rate is between 20 to 30 breaths/min.
2. Triggering sensitivity should be set on maximal sensitivity.
3. Patients with COPD who have difficulty triggering the ventilator due to suspected intrinsic PEEP, a PEEP of 3-10 may be used. The RCP should monitor plateau pressures before and after adding PEEP to assure no further air trapping.
4. Daily, preferably morning, pressure support weaning should occur. Pressure support settings should be assessed and decreased by 2-4 cm H_2O from the preceding level.
5. If signs of poor tolerance occur and including a Rapid Shallow Breathing Index (RSBI) of <65;
   - RR > 35 breaths/min for > 5 min
   - HR >120 bpm or a sustained increase or decrease of > 20%
   - Signs of distress (e.g. anxiety diaphoresis, decreased LOC)
   - SpO_2 <90%

   The patient should be returned to the pressure support level which was last tolerated well. Signs of poor tolerance must be documented on the ventilator flow sheet.
6 If the patient weans 30 minutes to 120 minutes call physician for possible extubation order.

(Note: No weaning trials should begin between 9PM to 6 AM in order to reinforce normal sleep/wake cycles and maximize patient rest.)

Sponsoring Department or Committee	**Approval Date**
Critical Care Collaborative	April 2010
Other Approvals	***Approval Date***
Pulmonary Medical Director (ICU Collaborative)	April 2010
Critical Care Medical Director (ICU Collaborative)	April 2010
Nursing Leadership (ICU Collaborative)	April 2010
Medical Executive Committee	
Board of Directors	
QA & I (ICU Collaborative)	
Past Approval Dates	
10/25/04, 11/06	