Decatur LTAC Ventilator Weaning
Algorithm Care Plan

**Admission Day 1**

- **Patient on weaning protocol**
- **Home Vent Training**

**Ventilator Settings**

- **Previous settings reported?**
  - **Yes**
    - Set up per previous settings
  - **No**
    - **Mode:** AC
      - **RR:** 8-10 b/m
      - **Tidal Vol:** 5-10 ml/kg
      - **FiO₂:** 40%
      - **Peep:** 5

**Set Up Vent Alarms**

- **• High pressure 30 above peak pressure**
- **• Low pressure – Set at 10 cm H₂O**
- **• Low Minute Volume minimum 5 L/m**
- **• Low Volume set minimum of 250 or 200 below exhaled volume**
- **• High RR 30 above patients resting rate**

**Nursing/Respiratory/Rehab**

- Initial and daily assessment, Follow Guidelines

**Obtain ABG with electrolytes**

- 30-60 minutes after patient resting quietly on vent. Nursing will give relaxation medication when needed.

**Is the Ph between 7.32 and 7.42?**

- **Yes**
  - Continue current settings
  - Rest until the A.M.
- **No**
  - Adjust vent setting to stabilize pH and maintain SpO₂ between 92-95%

**Proceed to the next day**
Ventilator Weaning Algorithm Care Plan

**Plan A / Day 2**

**Weaning Vent**
- Not tolerating PSV
  - **Assessment**
    - Pt RR ↑ 35 BPM
    - VT ↓ 5 ml/kg
    - FVT > 100
    - PSV ↑ 25 cm H₂O
    - Pt uncomfortable, appears distressed
  - If patient still not tolerating PSV after 2 failed PSV trials, rest overnight on A/C and go to Plan C / Day 3

- Tolerating PSV
  - **Assessment**
    - RR ↓ 35 BPM
    - VT ↑ 5 ml/kg
    - FVT < 100
    - PSV ↓ 25 cm H₂O
    - Maintain current MV
    - Pt stable and comfortable
  - Go to Plan B same day

- If patient on PSV
  - Home care on continued vent per M.D. order
  - Home care on T-collar during day & vent @ night per M.D. order
  - Coordinate with PT/OT/ST to assess if pt has the ability and is stable to P.O. intake on vent. ST for eating on vent and possible cuff deflating for PMV trial on vent.

**Non-Weaning Vent**
- Discharge planners coordinate homecare company for inpatient training on home vent. Discharge per MD when all disciplines agree training is complete and patient is safe to go home.
**Plan B / Same Day or Day 3**

- **Slow Wean / Plan D**
  - 4-7 days

  1. Assess daily for weaning, if stable start slow wean
  2. Rotate PSV and AC. 2-4° on AC and 2°-4° on PSV as tolerated from 08:00-20:00
  3. Maintain F/VT < 100
  4. Look for weaning intolerance
    - Rapid/shallow breathing index (F/VT > 1.1)
    - HR that does not ↑ 20 above baseline
    - BP ↑ or ↓ by 20 cmHg systolic & 10 diastolic
    - RR > 35
    - V_T < 5 ml/kg of IBW
    - SpO₂ < 92% on FiO₂ > 50
  5. If Pt appears fatigued on PSV:
    - Return to AC for 30 min then back to PSV
    - 2nd fatigue, return to AC for 30 min, back to PSV and ↑ by 2 cm H₂O.
    - 3rd fatigue, repeat previous step
    - 4th fatigue, obtain ABG and return to AC for 8 cm until next A.M.
  6. Assess for anxiety/discuss with MD for weaning medication/Nurse and RT coordinate medication

  1. Patient reach PSV 10 cm H₂O
  2. Has adequate spontaneous Respiratory pattern
  3. Obtain ABG with lytes after 4 on PSV 10

- **Fast Wean**
  - 2-3 days

  1. Reduce PSV level by 2-4 cmH₂O as tolerated
  2. Maintain desired Vt
  3. Maintain F/VT < 100
  4. Ability to get out of bed
  5. Assess for PO and cuff deflation/PMV trials
  6. Family conference offered

**Phase I**

1. Reduce PSV level by 2-4 cmH₂O as tolerated
2. Maintain desired Vt
3. Maintain F/VT < 100
4. Ability to get out of bed
5. Assess for PO and cuff deflation/PMV trials
6. Family conference offered

**Plan B, Phase II – Fast Wean to T-Collar**

1. Start T/C trials. 4 hr on 4 hr off during day. Rest on PSV 10 at night. (PT/OT/ST will work with pt. on the 4 hr rest.) Can ↑ FiO₂ to keep Sat 92-95%
2. Next day ↑ T/C trial to 12 hrs. Rest at night PSV 10.

**Plan B, Phase III**

1. Third day, ↑ T/C trial to 24 hours
2. Obtain Q4 exhaled volumes & ABG after the 24 hrs

1. Daily weaning assessments
2. Maintain PSV level F/VT < 100
3. T-collar trials as tolerated. ↑ time off vent daily
4. If Pt appears fatigued on T-collar trials:
   - Return to PSV for 30 min then back to T-collar
   - 2nd fatigue, return to PSV for 4 hrs, back to T-collar.
   - 3rd fatigue, return to PSV until next A.M.
5. If febrile – Do not stop weaning w/ a temp alone. Assess all weaning criteria
6. Unable to maintain adequate ventilation after maximal PSV ↑.
   - Change to AC
   - Reason for failed weaning must be documented.
7. Placed on vent for short period due to fluid overload.
   - Wean rapidly once condition reversed.
8. High anxiety preventing weaning – notify MD levels of symptoms & obtain orders for anxiety.
9. Refer to anxiety protocol.
10. Return to plan B when 4 hr trial is successful.

**Is ABG acceptable?**

- **Yes**
  - Discontinue ventilation and go to decannulation section
- **No**
  - Assess for cause. Return to Phase I on Plan B.
Weaned from vent
Day 6-10

Admitted with Trach collar
Day 4-7

Trach Collar ↓ .40 FiO₂

24 hours off vent. Assess for PMV trials 12 on, 12 off

Day 2 of admission assess for PMV trials 12 on, 12 off

Tolerates

Yes

Next day, attempt 24 hr PMV

Successful

Yes

1. Plug trach tube for 48 hours
2. Obtain order to decannulate
3. Coordinate with ST to determine ability to swallow and tolerate PO prior to decannulation
4. Maintain SpO₂ 92-95% by nasal cannula
5. Continue pulse ox checks Q4
6. Go to oxygen and bronchodilator protocol.

No

Change trach tube to #6 cuffless tracheotomy tube

Successful

Yes

1. Continue to assess daily for PMV trials
2. Once successful on 24 hour PMV trial, go to plugging section
3. If not successful after several attempts, notify physician.

No

1. Plug trach tube for 48 hours
2. Obtain order to decannulate
3. Coordinate with ST to determine ability to swallow and tolerate PO prior to decannulation
4. Maintain SpO₂ 92-95% by nasal cannula
5. Continue pulse ox checks Q4
6. Go to oxygen and bronchodilator protocol.

Ventilator Weaning Algorithm Care Plan

Approved _____________________
Chief of Staff
Date: ____________