

PSV VENTILATION STRATEGY

Assess at least once daily while on A/C for Criteria for Switching from A/C to PSV

INITIATION OF PSV

Ventilator Settings:

PS level: 10-20 cmH₂O or at previous level
 Inspiratory trigger: per clinician
 Expiratory trigger: 25% of peak flow_i
 PEEP: at previous level
 FiO₂: at lowest level required to keep SpO₂ 90-96%

Alarm Settings:

Paw max: per clinician
 RR max: 38 b/min
 Vte max: 12 mL/kg of PBW
 Vte min: 0 mL
 VE max: 20 L/min
 VE min: 5 L/min
 Apnea setting: 20 s

Assess at least every 8 hours while on PSV to determine if adjustments are needed to maintain Target Range

ALGORITHM TO ADJUST PSV BASED ON CLINICAL PARAMETERS

No Respiratory Distress:
 Patient appears comfortable
 RR 12-35 and Vte 5-10 mL/kg PBW

Target range achieved.
 No adjustments required unless one of the following occurs:

RR <12 or >35 or Vte <5 or >10 mL/kg PBW:
 Obtain arterial blood gas.
 No adjustments required unless:

Respiratory alkalemia

Respiratory acidemia or **Respiratory Distress** (see definition)

Treat any apparent cause of hyperventilation (eg. Pain, anxiety, metabolic acidosis)

Decrease PS in steps of 2-3 cmH₂O until Vte <8 mL/kg PBW and/or pH ≤7.47

Respiratory Distress with ≥2 signs:
 See definition

Treat any apparent cause of respiratory distress (eg. secretions, bronchospasm, pulmonary edema)

Increase FiO₂ and/or PEEP as needed to keep SpO₂ >90%

Increase PS in steps of 2-3 cmH₂O until respiratory distress resolves and pH ≥7.32 (confirm with repeat blood gas*)

Switch to A/C mode if ≥ 1 of:
 PS >20 cmH₂O
 PS + PEEP > 30 cmH₂O
 FiO₂ >60% required for SpO₂ ≥90%
Clinical instability (see definition)†
 Unable to trigger vent (NMB/sedation)

Reassess within 24 hours for Criteria for Switching from A/C to PSV

*Repeat blood gas q 30 min as needed to confirm pH 7.32-7.47

†Best clinical judgement should always prevail in setting of deterioration, with frequent reassessment until stable

Assess at least once daily while on PSV for Criteria to Initiate Weaning; Attempt to wean FiO₂ to 0.40 and PEEP to ≤8 cmH₂O

ALGORITHM FOR WEANING

Criteria to Initiate Weaning:
 SpO₂ ≥90%
 FiO₂ ≤0.40
 PEEP ≤8 cmH₂O
 pH ≥ 7.32
 vasopressors no higher than norepinephrine 0.1 ug/kg/min

Pre-SBT readiness assessment:
 CPAP 0 cmH₂O and FiO₂ 0.40 for 2 min; assess f/Vt

f/Vt ≤100

f/Vt >100

SBT: t-piece, FiO₂ 0.40 for 30 min

Return to PSV
 Reassess within 24 hr

Pass SBT:
 assess for extubation

Fail SBT

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PAV+ VENTILATION STRATEGY

Assess at least once daily while on A/C for Criteria for Switching from A/C to PAV

INITIATION OF PAV

Ventilator Settings:

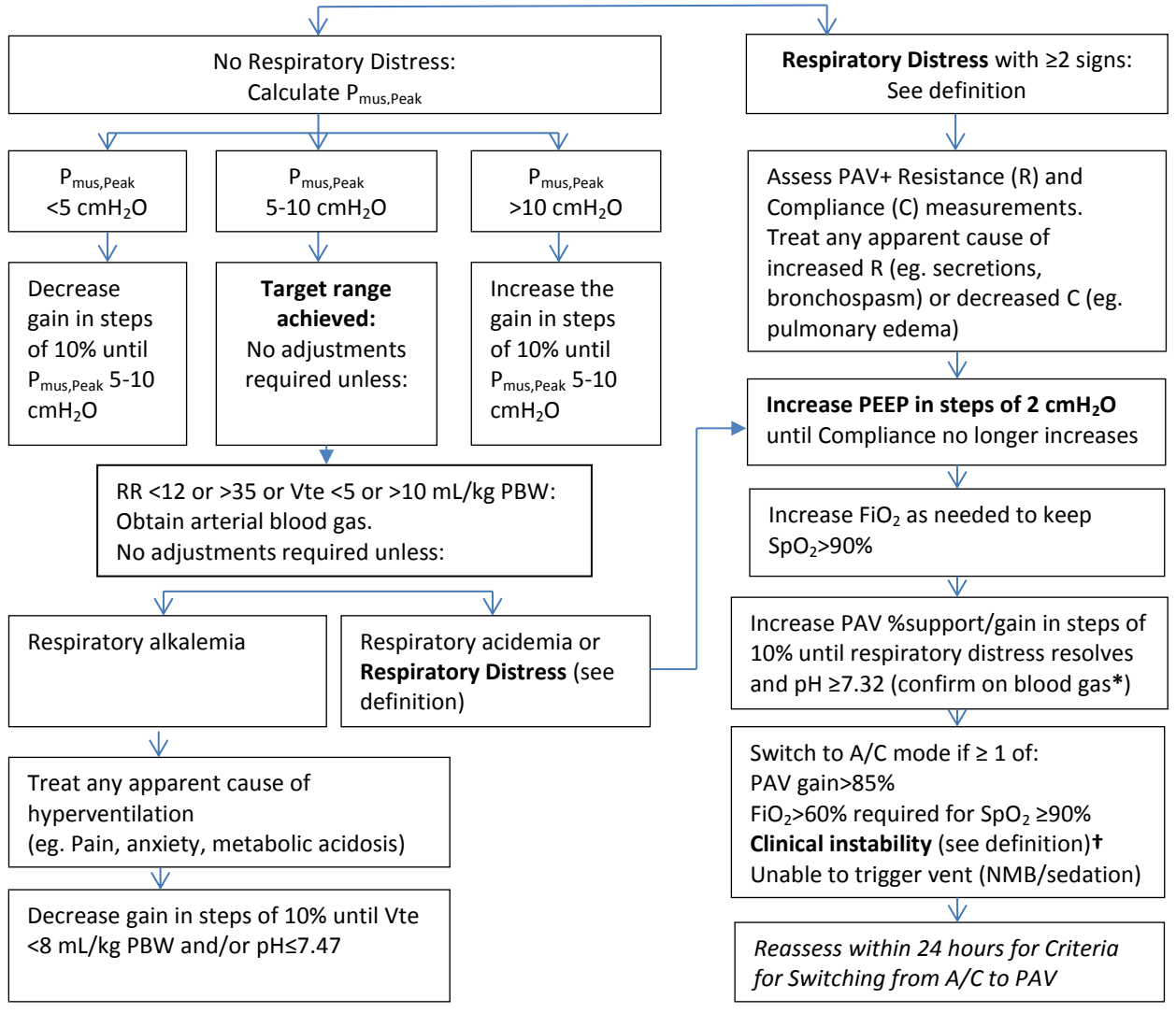
IBW (Ideal Body Weight): Correct PBW (Predicted Body Weight)
 Tube Type: ET or Trach
 PAV %support/gain: 70%
 Inspiratory trigger: per clinician
 Expiratory trigger (Esens): 3 L/min
 PEEP: at previous level
 FiO₂: at lowest level required to keep SpO₂ 90-96%

Alarm Settings:

Paw max: 40 cmH₂O
 RR max: 38 b/min
 Vte max: 12 mL/kg of PBW
 Vte min: 0 mL
 VE max: 20 L/min
 VE min: 5 L/min
 Apnea setting: 20 s

Assess at least every 8 hours while on PAV to determine if adjustments are needed to maintain Target Range

ALGORITHM TO ADJUST PAV BASED ON PHYSIOLOGIC AND CLINICAL PARAMETERS



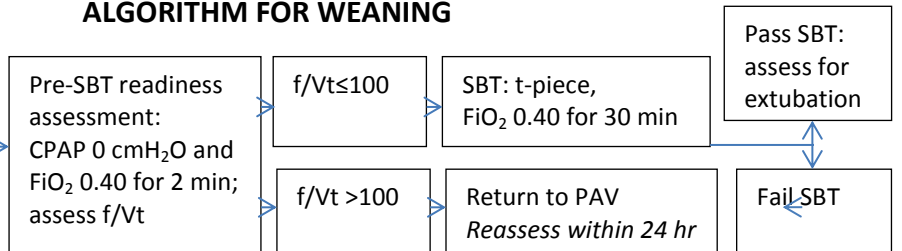
**Repeat blood gas q 30 min as needed to confirm pH 7.32-7.47*

†Best clinical judgement should always prevail in setting of deterioration, with frequent reassessment until stable

Assess at least once daily while on PAV for Criteria to Initiate Weaning; Attempt to wean FiO₂ to 0.40 and PEEP to ≤ 8 cmH₂O

ALGORITHM FOR WEANING

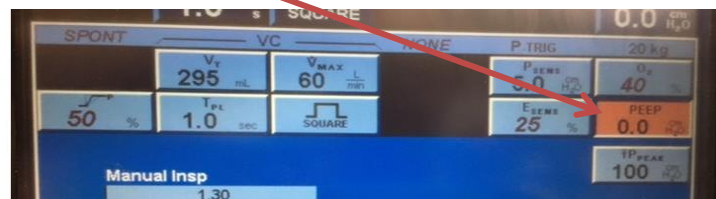
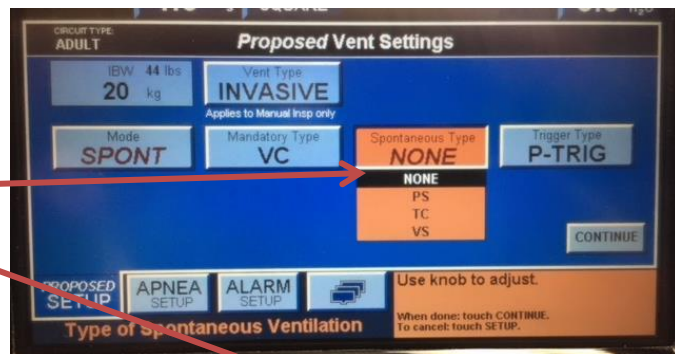
Criteria to Initiate Weaning:
 SpO₂ ≥ 90%
 FiO₂ ≤ 0.40
 PEEP ≤ 8 cmH₂O
 pH ≥ 7.32
 vasopressors no higher than norepinephrine 0.1 ug/kg/min



Weaning /SBT Methods for PROMIZING

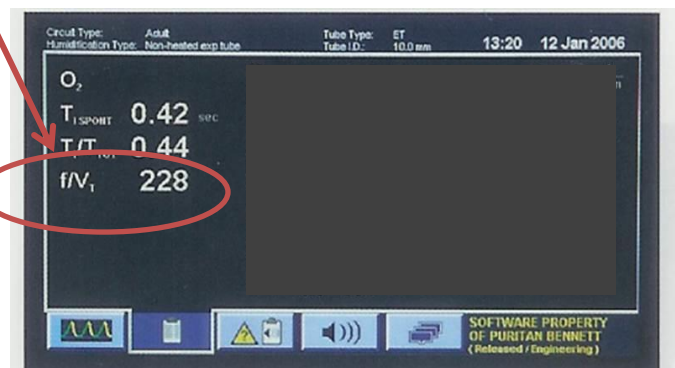
Pre-SBT readiness assessment (CPAP Trial)

1. With patient's ETT connected to the ventilator circuit, change the ventilator mode to CPAP at 0 cmH₂O and FiO₂ 0.40 (on PB 840 ventilator, choose **MODE: SPONT** and then choose **Spontaneous Type NONE**, then set PEEP to 0 and FiO₂ to 40%)
2. Monitor patient for 2 min
3. On the ventilator, assess the f/Vt ratio after 1-2 minutes at 0 cmH₂O CPAP:
4. **FAIL:** If the f/Vt >100, or SpO₂ <90% or Clinical Instability, patient has failed the CPAP trial. Resume ventilation on settings used immediately prior to the CPAP test.
5. **PASS:** If the f/Vt is ≤100, and SpO₂ ≥90%, proceed to SBT



SBT

1. Disconnect endotracheal tube from ventilator circuit and place patients on T-piece* with FiO₂ 0.40. (For patients with tracheostomy, place patients on tracheostomy mask trial with FiO₂ 0.40)
2. Monitor patient for 30-120 minutes:
3. **FAIL/ SBT Termination:** Terminate the SBT and return patient to ventilator settings according to assigned algorithm if at any time one of the following occur:
 - a. Respiratory Distress
 - b. Clinical Instability
 - c. Increased somnolence with elevated pCO₂ and/or pH < 7.32
 - d. Desaturation with SpO₂ < 90% on FiO₂ 0.40
4. **PASS:** Patients will be considered to have passed the SBT if, after a minimum of 30 minutes and maximum of 120 minutes, none of the failure/SBT termination criteria have occurred.
5. **Extubation/Disconnection:** Proceed to evaluate patients with endotracheal tube for extubation criteria. Patients with tracheostomy who pass their initial SBT may remain off ventilator until they develop failure criteria. Tracheostomized patients who fail their initial SBT within 120 minutes may undergo gradual increments in tracheostomy mask trials according to local practice.



T-Piece



Tracheostomy Mask Trial



*for the purposes of this study, the Sponsor considers SBT performed with patients connected to ventilator on flow-by with CPAP of 0 cmH₂O and FiO₂ 0.40 to be equivalent to SBT performed on T-piece with FiO₂ 0.40.