

PMV Trouble Shooting

Problem	Possible Causes	Solutions
1. Patient unable to exhale through upper airway when tracheostomy tube is occluded.	<ol style="list-style-type: none"> 1. Cuff is not fully deflated 2. Patient positioning 3. Upper airway is occluded with secretions 4. Tracheostomy tube too large to permit adequate exhalation 5. Patient has upper airway occlusion 	<ol style="list-style-type: none"> 1. Check to ensure trach cuff is completely deflated 2. Reposition patient 3. Suction to clear secretions from oral airway and above the cuff 4. Consider options including downsizing tracheostomy tube, changing to cuffless or changing to TTS tracheostomy tube 5. ENT referral 6. Use alternative method of communication
2. Patient tolerates PMV, but unable to phonate.	<ol style="list-style-type: none"> 1. Discoordination between respiration and phonation 2. Vocal folds are not functioning 3. Inadequate ventilator support 	<ol style="list-style-type: none"> 1. Instruction in exhaling through upper airway 2. Instruction in timing phonation with exhalation 3. VF adduction exercises 4. ENT referral 5. Consider incremental increases in VT to equal (but not exceed) pre-cuff deflation Peak Inspiratory Pressure
3. Patient tolerates PMV for short period of time, then desaturates or demonstrates shortness of breath.	<ol style="list-style-type: none"> 1. Patient not ventilating efficiently 2. Patient anxiety 3. Secretion build up 4. Patient fatigue 	<ol style="list-style-type: none"> 1. Reassess patient. Adjust ventilator settings as appropriate (for ex. increase tidal volume, adjust pressure support, FIO2) 2. Patient education Relaxation techniques. Distraction techniques. 3. Re-suction patient 4. End trial. Slowly increase trial time.

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4. Patient anxiety with PMV		<ol style="list-style-type: none"> 1. Patient education 2. Provide reassurance 3. Distraction techniques 4. Relaxation techniques 5. Time PMV trial with anti-anxiety medications 6. Consider Psych consult
5. Ventilator begins to autocycle	<ol style="list-style-type: none"> 1. PEEP too high. 2. I Trigger Sensitivity too sensitive. 	<ol style="list-style-type: none"> 1. Reduce PEEP (if PEEP was reduced, consider eliminating PEEP) 2. Increase I Trigger Sensitivity setting
6. High Inspiratory pressure alarm frequently alerting	<ol style="list-style-type: none"> 1. Obstruction to airflow 2. Patient is coughing 	<ol style="list-style-type: none"> 1. If on first trial, go back to problem 1 and work through the steps. 2. Suction patient. Replace PMV. 3. Remove PMV. Alert appropriate staff.
7. Low Pressure Alarm Alerting	<ol style="list-style-type: none"> 1. Partial or Complete Disconnect 2. Patient Fatigue 	<ol style="list-style-type: none"> 1. Check ventilator tubing for leaks for disconnection. 2. Discontinue trial and allow patient to rest.
8. Excessive Coughing	<ol style="list-style-type: none"> 1. Secretions 2. Inadequate airway patency 3. Appropriate ventilator adjustments not made. PEEP not adjusted. I-Time not adjusted in Pressure Support 	<ol style="list-style-type: none"> 1. Suction to clear secretions – including upper airway secretions. 2. Remove PMV and reassess airway patency with possible ENT/Physician referral 3. Adjust PEEP or I-time

Adapted from Fornataro-Clerici, L. and Roop, T. A. (1997). *Clinical Management of Adults Requiring Tracheostomy Tubes and Ventilators*. Gaylord, MI: Northern Speech Services