



Montgomery County Fire and Rescue Service

Division of Operations

Emergency Medical and Integrated Healthcare Services

Office of Medical Oversight Clinical Practice Guideline

Title:	CPAP Settings – O2-MAX CPAP Device	Number:	2024 – 08
Date:	September 19, 2024		
Issued by:	Roger M. Stone MD, MS – MCFRS Medical Director		
Purpose:	To define acceptable settings when using the O2-Max		
Target Patient Population:	<p style="text-align: center;"><u>This CPG replaces and rescinds CPG 2024 – 01</u></p> Any patient receiving CPAP via the O2-Max CPAP device		
Guideline:	<p>Background: The O2-Max disposable CPAP has variable pressure and fraction of inspired oxygen (FiO2) settings available for titration to the physiologic needs of the patient. MCFRS will begin with initial settings that should be suitable for most patients.</p> <p>Goals of Therapy (Consistent with MMP Section 12.3):</p> <ol style="list-style-type: none"> To improve the patient’s respiratory status as measured by improvements in respiratory rate, work of breathing, and EtCO2. To improve oxygenation with a target SpO2 of greater than or equal to 94% in most patients and a target of 90-94% in patients with COPD. <p>Initial Setup and Settings:</p> <ol style="list-style-type: none"> Place nasal EtCO2 and connect for continuous monitoring. Place and secure CPAP mask. Set the CPAP pressure to 10 cmH2O and the TRIO device to 30% FiO2. <p>These settings may be titrated up to increase CPAP pressure and FiO2 to improve oxygenation and ventilation in patients who do not respond adequately to the initial settings. It is advisable to wait 3-5 minutes for any therapy level to take effect prior to increasing settings. However, patients who do not improve at all or deteriorate with the initial settings may require more immediate and aggressive escalation of therapy.</p> <p><i>The below titrations are intended as a guideline rather than a rigid doctrine. Clinicians should attempt to identify the underlying disease state and treat appropriately.</i></p> <p>CPAP Pressure: The 5-Set device includes pressure settings of 5, 7.5, 10, 12.5, and 15 cmH2O. Upward pressure titration is best accomplished by increasing from 10 to 15 cmH2O in a single 5 cmH2O increment. Disease states that may require higher pressures include SCAPE/hypertensive heart failure and restrictive/fibrotic airway disease. Patients who are clinically indicated for CPAP therapy should not start therapy at 5 or 7.5 cmH2O.</p>		



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FiO₂: The incorporated Trio device allows for FiO₂ settings of 30%, 60%, and 90%. An FiO₂ of 30% combined with 10-15 cmH₂O of pressure will be sufficient to treat the majority of patients. Some patients with severe hypoxia or certain conditions (pregnancy, sickle cell crisis, CO poisoning, pulmonary embolism) may need titration up to 60% FiO₂. Increasing the FiO₂ greatly increases oxygen consumption and reduces the life of our cylinders. If an FiO₂ of 60% is required while not connected to an onboard cylinder, spare portable cylinders should be immediately available. The FiO₂ should almost never be set to 90% because it will not deliver therapy at all with a D cylinder and will deplete even a full M cylinder in a matter of minutes.

Clinical Considerations: Patients who do not improve despite increases in therapy are critically ill and may require interventions beyond CPAP, including bag valve mask ventilation in preparation for an advanced airway including nasotracheal intubation.

Questions may be directed to the EMIHS Quality Management Battalion Chief.