COUNTY OF VENTURA HEALTH CARE AGENCY		EMERGENCY MEDICAL SERVICES POLICIES AND PROCEDURES
Policy Title: Continuous Positive Airway Pressure & Bilevel Positive Airway Pressure (CPAP/BiPAP)		Policy Number: 723
APPROVED: Administration:	Steven L. Carroll, Paramedic	Date: December 1, 2024
APPROVED: Medical Director	Daniel Shepherd, MD	Date: December 1, 2024
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I. PURPOSE: To define the indications, procedure and documentation for the use of Continuous Positive Airway Pressure and Bilevel Positive Airway Pressure (CPAP/BiPAP) by EMS Personnel

II. AUTHORITY: Health and Safety Code, Sections 1797.220 and 1798. California Code of Regulations, Title 22, Division 9, Section 100066.02.
POLICY: EMS Personnel may utilize CPAP/BiPAP on patients in accordance with Ventura County Policy 705.

III. PROCEDURE:

A. Training: Prior to using CPAP/BiPAP, EMS Personnel must successfully complete a training program approved by the VC EMS Medical Director, which includes operation of the device to be used.

B. Indications:

1. CPAP/BiPAP is indicated for all causes of severe respiratory distress or respiratory failure when absolute contraindications are not present

C. Contraindications:

1. Respiratory or cardiac arrest
2. Agonal respirations
3. Unconsciousness
4. Pneumothorax
5. Inability to maintain / protect airway patency

D. Relative Contraindications:

1. Vomiting
    a. CPAP may limit a patient's ability to protect their airway from aspiration in the event of vomiting. Consider Ondansetron administration and prepare suction for patients at risk of vomiting.
2. Altered level of consciousness
    a. Patients with altered level of consciousness may be less able to protect their own airway and may be at risk of a decreasing respiratory rate. Prepare to utilize suction, monitor capnography and responsiveness closely.
3. Systolic Blood Pressure < 90
    a. All forms of positive pressure ventilation, including CPAP and BiPAP, may exacerbate hypotension. Prepare to utilize Push-dose epinephrine per Policy 735 for patients who are hypotensive or at risk of hypotension.

D. PATIENT TREATMENT:

1. Place patient in an upright seated position to aid respiratory effort.
2. Apply nasal EtCO2 measurement device.
3. Monitor ECG, Vital signs, SpO2, and continuous waveform capnography.
4. Set up CPAP/BiPAP system
5. Explain procedure to patient.
6. Apply mask while reassuring patient.
7. Frequently reevaluate patient. Improvement is indicated by less labored breathing, increased SpO2, and relative normalization of the EtCO2 (normal range 35-45mmHg)
8. Should the patient’s condition worsen, assess lung sounds, capnography, and clinical circumstances. Closely consider, the following
    a. Pneumothorax – When present, a pneumothorax will worsen, and may evolve into a tension pneumothorax, as a result of positive pressure ventilation. When strong suspicion of pneumothorax is present discontinue CPAP/BiPAP and consider needle thoracostomy per policy 715
    b. Inadequate Respiratory Rate – CPAP/BiPAP is likely to be utilized for patients at risk for respiratory failure and/or respiratory arrest. Efficacy of breathing must be evaluated closely via direct observation and continuous waveform capnography. When inadequate respiratory rate, agonal respirations, or respiratory arrest are present, or impending, discontinue CPAP/BiPAP and support ventilations with BVM.

E. DOCUMENTATION

1. VCePCR, including attached medical device data, will be completed per VCEMS policy 1000.
2. Vital signs,SpO2, and EtCO2 must be documented every 5 minutes
3. Narrative documentation should include a description of the patient's response to CPAP/BiPAP treatment.