Advisory 15-14: Non-Invasive Positive Pressure Ventilation

To: **All ALS Providers and Agencies**
Date: **December 21, 2015**

Earlier this year, the protocol and policy committee recommended changes to existing Policy 9.12 – *Use of Continuous Positive Airway Pressure Devices* to reflect the use and availability of Bi-Level Positive Airway Pressure (BiPAP) devices that are becoming more common within our system. This policy was subsequently approved by the REMAC but was not promulgated to agencies.

Effective immediately, Policy 9.12 dated April 21, 2008 is rescinded and replaced with the attached. This policy allows for the use of both continuous (CPAP), and bilevel (BiPAP) positive airway pressure devices in the prehospital setting under the oversight of the agency medical director. In no way does this policy require agencies to utilize BiPAP, it simple provides policy guidance should this modality be added to the agency's scope of service.

With any questions, please do not hesitate to contact our office.

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9.12 USE OF NON-INVASIVE POSITIVE PRESSURE VENTILATION DEVICES

PURPOSE

This policy outlines the use of Non-Invasive Positive Pressure Ventilation Devices in the Prehospital Environment.

POLICY

Non-Invasive Positive Pressure Ventilation Devices (Continuous Positive Airway Pressure [CPAP]/Bi-Level Positive Pressure [Bi-level] Devices) may be used when available by EMT-P Providers trained in its use according to the following procedure and as approved by the Agency Medical Director.

Indications

Acute respiratory distress, due to pulmonary edema or COPD/Asthma in which the patient demonstrates spontaneous respirations and a patent, self-maintained airway.

Contraindications

1. Respiratory or cardiac arrest.
2. Inability to maintain airway patency/respiratory effort.
3. Head injury with increased ICP.
4. Significant chest trauma.
5. Signs and symptoms of pneumothorax.
6. Vomiting.
7. Upper GI bleeding.
8. Significant maxilla-facial trauma interfering with mask seal.

Procedure

1. Assure patent airway.
2. Administer 100% Oxygen.
3. Perform patient assessment, including obtaining vital signs, pulse oximeter (SpO_2) reading, and cardiac rhythm.
4. Apply NPPV device per manufacturer's instructions.
5. Continuously reassess the patient. Adjust NPPV levels as needed for clinical condition:
   a. CPAP pressure must not exceed 10 cmH_2O without medical control authorization
   b. Bi-level pressures must not exceed 15 cmH_2O (IPAP) and 10cmH_2O (EPAP) without medical control authorization
6. Monitor continuous pulse oximetry. Titrate oxygen to maintain patient's SPO_2 > 92%
7. Monitor continuous $ETCO_2$ (if practicable).
8. Follow the appropriate MLREMS Standards of Care for continued treatment of underlying condition (Pulmonary Edema/CHF, Respiratory Distress/Bronchospasm).
9. Contact the destination facility on line Medical Control to allow for prompt availability of hospital NPPV equipment and respiratory personnel.

NOTE

If the patient does not improve or deteriorates despite NPPV and/or medical therapy, terminate NPPV administration and perform BVM ventilation with PEEP maintenance (if available) and endotracheal intubation if necessary.