

**DEPARTMENT OF HEALTH & SOCIAL SERVICES**

Public Health Division

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**POLICY MEMORANDUM 6605****Implementation Date: November 30, 2009****Revised Date: January 20, 2020****Review Date: January 20, 2022****REVIEWED/APPROVED BY:**

Handwritten signature of Bryn Mumma.

**MD, MAS****BRYN MUMMA, MD, MAS, EMS AGENCY MEDICAL DIRECTOR**

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**TED SELBY, EMS AGENCY ADMINISTRATOR****SUBJECT: CONTINUOUS POSITIVE AIRWAY PRESSURE (CPAP)****AUTHORITY:**

California Health and Safety Code Sections 1797.220 and 1797.221  
California Code of Regulations Sections 100063 and 100146

**PURPOSE:**

To improve ventilation and oxygenation and avoid intubation for patients suffering from Congestive Heart Failure (CHF), Chronic Obstructive Pulmonary Disease (COPD), asthma, pneumonia, generalized Shortness of Breath (SOB), or near drowning and are at risk for acute pulmonary edema or bronchospasm.

**I. INDICATIONS**

- A. For patients  $\geq 12$  years old in severe respiratory distress from the following conditions:
  1. Acute pulmonary edema and CHF;
  2. Near drowning;
  3. Asthma;
  4. Bronchospasm;
  5. COPD;
  6. Pneumonia;
  7. Non-traumatic SOB;

**II. CONTRAINDICATIONS**

- A. CPAP is contraindicated with any of the following:
  - 1. Patient ≤11 years old;
  - 2. Respiratory or cardiac arrest;
  - 3. Agonal respirations;
  - 4. Severely depressed level of consciousness with a Glasgow Coma Scale of ≤8;
  - 5. Systolic blood pressure <90mmHg;
  - 6. Pneumothorax;
  - 7. Inability to maintain airway patency;
  - 8. Major trauma, especially with head and/or chest trauma;
  - 9. Facial abnormalities;
  - 10. Vomiting;

**III. COMPLICATIONS FROM CPAP**

- A. Complications from CPAP are any of the following:
  - 1. Hypotension;
  - 2. Pneumothorax;
  - 3. Corneal drying;
  - 4. Patient agitation or inability to tolerate CPAP;

**IV. CPAP PROCEDURE**

- A. Evaluate the following prior to applying CPAP:
  - 1. Heart rate;
  - 2. Respiratory Rate;
  - 3. Blood Pressure;
  - 4. Pulse Oximetry;
  - 5. Mental status;
  - 6. Lung sounds;
  - 7. Work of breathing;
- B. Explain the procedure to the patient.
- C. Set up the CPAP per manufacturer's recommendations and set to 10cmH<sub>2</sub>O pressure.
- D. Apply CPAP and encourage patient to breathe normally. Check mask seal to ensure that no air is leaking.
- E. Reassess patient every five minutes using the criteria in Section IV(A).

- F. Notify the receiving hospital as soon as possible that CPAP has been utilized.
- G. Do not remove CPAP until the receiving hospital is prepared to switch the patient to the hospital CPAP or unless ordered by the Base Hospital Physician.

**V. GOALS OF CPAP**

- A. To improve the patient's respiratory status by reducing the work of breathing or improving suspected hypercapnia/hypoxemia to avoid more invasive airway management.
    - 1. If the patient fails to improve, consider bag-valve mask ventilation and endotracheal intubation for adult patients and Basic Life Support (BLS) airways for pediatric patients.
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