Purpose:
A. To serve as the treatment standard for patients assessed to have shortness of breath and/or respiratory distress.
B. This protocol does not require the diagnosis of a specific disease or etiology precipitating the respiratory distress. Treatment is assessment based.

Authority:
A. California Health and Safety Code, Division 2.5
B. California Code of Regulations, Title 22, Division 9

Definitions:
A. Mild Distress - Patient is able to speak full sentences; patient may have an elevated pulse and blood pressure; patient may be diaphoretic and weak; mental status is unaffected; no cyanosis is present.
B. Moderate Distress - Patient is able to speak a few words; patient may have an elevated pulse and blood pressure; patient may be diaphoretic and weak; mental status is unaffected; mild cyanosis of lips and digits may be present.
C. Severe Distress - Patient is unable to speak; patient may have decreased/elevated pulse and/or decreased/elevated blood pressure; mental status is altered; more central and profound cyanosis is present.

Caveats:
A. Patients may have several disease processes together producing shortness of breath. Wheezing may occur in diseases other than asthma, and peripheral edema may occur in settings other than congestive heart failure (CHF). Assessment should usually yield a single treatment plan. In general, commit yourself to a single assessment - you may modify this assessment based on response to therapy and as additional information becomes available.
B. Patients may have diseases producing shortness of breath that cannot be relieved with any prehospital treatments. In addition, some patients will present to the prehospital personnel so far in respiratory failure that maintenance / establishment of an airway together with expeditious transport are the only treatments possible.
C. Pulmonary Edema in the setting of CHF will usually have collaborating signs such as:
   1. A history of CHF and medications such as diuretics and/or angiotensin converting enzyme (ACE) inhibitors.
   2. Peripheral edema.
4. Frothy pulmonary secretions.
D. Continuous Positive Airway Pressure (CPAP) is highly effective at improving respiratory distress and should be attempted if available in all patients with moderate and severe respiratory distress. In general, one provider should monitor and manipulate CPAP leaving the primary provider to focus on the overall condition of the patient.

Respiratory Distress
- Assess ABC’s - limit physical exertion, reduce anxiety.
- Supplemental O2 as necessary to maintain SpO2 > 94%. Use the lowest concentration and flow rate of O2 as possible.
- Cardiac Monitor and SpO2, and ETCO2 (continuous waveform) with advanced airways.

Asthma/COPD
- **Mild Distress**
  - Mild Wheezing
  - SOB
  - Cough
  - **Albuterol**
    - 2.5 mg-5 mg via HHN, mask, or inline nebulizer.
    - May repeat if persistent dyspnea.
- **Moderate – Severe Distress**
  - Cyanosis
  - Accessory Muscle Use
  - Inability to speak > 3 wds/sent
  - Severe Wheezing/SOB
  - **Albuterol**
    - 5 mg via HHN, mask, or inline nebulizer.
    - Continuous Albuterol for persistent dyspnea.
- **CPAP**
- **IV Access with SL**
- **Epinephrine**
  - For patients with severe asthma/bronchospasm **only**.
  - Can be given at same time as **Albuterol**.
  - Epi 1:1000 0.3 mg IM

CHF/Pulmonary Edema
- **Mild Distress**
  - Mild Wheezing
  - SOB
  - Cough
- **Moderate – Severe Distress**
  - Cyanosis
  - Accessory Muscle Use
  - Inability to speak > 3 wds/sent
  - Severe Wheezing/SOB
  - **Nitroglycerin:**
    - 0.4 mg SL q 5 minutes
    - Hold NTG if SBP < 90
- **Nitroglycerin:**
  - **SBP > 200 – 1.2 mg SL**
  - **SBP > 150-200 – 0.8 mg SL**
  - **SBP > 90-150 – 0.4 mg SL**
  - May repeat NTG q 5 minutes as above based on BP.
  - **Hold NTG if SBP < 90**
  - Do not delay NTG due to difficult IV/IO.
  - **1 inch of NTP** with CPAP use.
  - Remove NTG paste if SBP < 90
- **CPAP**
- **IV Access with Saline Lock**

**Base Hospital Order:**
- if SBP consistently < 90
- **Dopamine 10mcg/kg/min**

**Do Not Administer NTG if patient is taking PDE-5 inhibitors within last 48hrs for Erectile Dysfunction or Pulmonary HTN:**
- i.e Sildenafil (VIAGRA®, REVATIO), Tadalafil (CIALIS®), Vardenafil (LEVITRA®) or equivalent.