

CONGESTIVE HEART FAILURE / PULMONARY EDEMA

ALL PROVIDERS

- ☐ Focused history and physical exam
 - Determine whether the patient (male or female) has taken erectile dysfunction medications such as Viagra, Levitra or Cialis within the last 24 hours.
 - Assess blood glucose level.
- ☐ Continuous cardiac monitoring, ETCO₂, 12 lead ECG, and pulse oximetry monitoring, when available
- ☐ **Treatment Plan**
 - Maintain airway; assist with breathing as necessary, provide oxygen as needed to target SpO₂ 90-94%.
- ☐ **Key Considerations**
 - Do not use nitroglycerin if the patient has taken erectile dysfunction medications in the last 24 hours.
 - In pregnant patients of >20 weeks gestation: Place wedge-shaped cushion or multiple pillows under patient's right hip and manually displace the uterus.
 - Pediatric lowest acceptable systolic blood pressures are birth to 1 month = 60mmHg, 1 month to 1 year = 70mmHg, 1 year to 10 years is = 70mmHg + (age x 2) and over 10 years = 90mmHg.

ADULT

PEDIATRIC (<15 years of Age)

NOTE: Pediatric weight based dosing should not exceed Adult dosing.

EMT

EMT

- ☐ Assist patient with prescribed nitroglycerin SL every 5 minutes, up to 3 doses, as long as dyspnea or chest pain persist and SBP >90 mmHg
 - Do not administer nitroglycerin if the patient (male or female) has taken erectile dysfunction medications within the last 24 hours
- ☐ **CPAP/BiPAP** – Consider when the patient is awake, cooperative and SBP >90 mmHg
 - Explain the procedure to the patient
 - **CPAP** - Provide 10 L/min oxygen and PAP at 10 cm H₂O
 - **BIPAP** – Provide 10 L/min oxygen and IPAP at 10 cm H₂O with EPAP at 5 cm H₂O
- Ⓢ **Contact OLMC to discuss further settings and treatment above the initial setup.**

- ☐ **CPAP/BiPAP** – ONLY use when the patient is on the machine at home. Maintain home settings and bring machine with the patient. If unable to adequately ventilate, return to BVM

AEMT

AEMT

- ☐ Vascular access and fluid.
 - IV access prior to nitrates is preferred if possible
 - Limit fluid bolus to 250–500 mL NS
- ☐ **Nitroglycerin 0.4 mg SL** every 5 minutes (max of 3 doses) if dyspnea or chest pain persist and SBP >90 mmHg.

- ☐ Vascular access and fluid.

PARAMEDIC

- ❑ **Push Dose Epinephrine 10mcg** as needed to maintain a SBP >100 mmHg after fluid bolus.
- ❑ **Epinephrine 2–10 mcg/min IV/IO** infusion for hypoperfusion. Titrate to maintain a SBP >100 mmHg.
- ❑ **Norepinephrine** initial dose: **0.05 – 1 mcg/kg/min IV/IO** for hypoperfusion. Titrate to maintain a SBP > 100 mmHg. For patients in refractory shock: 8-30 mcg/minute.

PARAMEDIC

- ⌚ **Pediatric Push Dose Epinephrine 1mcg/kg** (dose in appendix) as needed to maintain a SBP >70 + (age in years x 2) mmHg after fluid bolus.
- ⌚ **Epinephrine 0.1–1mcg/kg/min IV/IO** infusion for shock. Titrate to maintain a SBP >70 + (age in years x 2) mmHg.