

# CONGESTIVE HEART FAILURE / PULMONARY EDEMA

## UPDATED 4/2025

### 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, ETCO<sub>2</sub>, 12 lead ECG, and pulse oximetry monitoring.
- ☐ **Treatment Plan**
  - Maintain airway; assist with breathing as necessary, provide oxygen as needed to target SpO<sub>2</sub> 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
    - Birth to 1 month = 60mmHg
    - 1 month to 1 year = 70mmHg
    - 1 year to 10 years = 70mmHg + (age x 2)
    - Over 10 years = 90mmHg.

#### ADULT

#### PEDIATRIC

**Pediatric weight-based dosing should not exceed Adult dosing.**

#### EMT

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- ☐ Assist patient with prescribed nitroglycerin SL every 5 minutes, as long as dyspnea or chest pain persist and SBP >90 mmHg (Max 3 doses)

#### AEMT

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- Supraglottic device, vascular access and fluid
    - IV access prior to nitrates is preferred if possible
    - Limit fluid bolus to 250–500 mL NS or LR
  - **Nitroglycerin 0.4 mg SL** every 5 minutes (max of 3 doses) if dyspnea or chest pain persist and SBP >90 mmHg or MAP of 65.
  - **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 H<sub>2</sub>O
    - **BIPAP** – Provide 10 L/min oxygen and IPAP at 10 cm H<sub>2</sub>O with EPAP at 5 cm H<sub>2</sub>O
- ☐ Supraglottic device, vascular access and fluid
  - ☐ **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

📞 Contact OLMC to discuss further settings and treatment above the initial setup.

#### PARAMEDIC

- ☐ **Push Dose Epinephrine 2-10mcg** as needed to maintain a SBP >100 mmHg or MAP of 65
- ☐ **Epinephrine 2-10 mcg/min** IV/IO infusion for shock. Titrate up to 10 mcg/min to maintain a SBP >100 mmHg or MAP of 65
- ☐ **Norepinephrine 1 mcg/min** IV/IO infusion for shock. Titrate up to 30 mcg/min to maintain SBP >100 mmHg or MAP of 65.

#### PARAMEDIC

- ☐ **Push Dose Epinephrine 0.5-1mcg/kg/min** IV/IO as needed to maintain an appropriate SBP for age
- ☐ **Epinephrine 0.1-0.5mcg/kg/min** IV/IO infusion. Titrate to maintain an appropriate SBP for age.
- ☐ **Norepinephrine 0.05-1mcg/kg/min** IV/IO infusion. Titrate to maintain appropriate SBP for age.

