

**Michigan**  
**Adult Cardiac Protocols**  
**PULMONARY EDEMA/CHF**

Date: November 15, 2012

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### ***Pulmonary Edema / CHF***

This protocol is to be followed for patients in acute respiratory distress situations, not chronic.

#### **Pre-Medical Control**

##### **MFR/EMT/SPECIALIST/PARAMEDIC**

1. Follow **General Pre-Hospital Care Protocol**.
2. Initiate supplemental oxygen by non-rebreather mask.
3. Position patient upright with legs dependent, if possible.

##### **EMT/SPECIALIST**

4. Consider CPAP (if available) per **CPAP/BiPAP Procedure**.

##### **SPECIALIST**

5. Inquire of all patients (male and female) if they have taken Viagra (sildenafil citrate) or similar erectile dysfunction medications or medications used to treat pulmonary hypertension in the last 48 hours. If yes, **DO NOT ADMINISTER NITROGLYCERIN AND CONTACT MEDICAL CONTROL**.
6. If BP above 100 mmHg, administer Nitroglycerin 0.4 mg SL. Repeat every 3-5 minutes if BP above 100 mmHg. Nitroglycerin may be administered prior to IV placement if the BP is above 120 mmHg.
7. If wheezing or bronchial constriction administer nebulized Albuterol 2.5 mg/3ml.

##### **PARAMEDIC**

8. Consider CPAP / Bi-PAP (if available) or if indicated, an advanced airway.
9. Obtain 12-lead ECG if available. Follow local MCA transport protocol if ECG is positive for ST segment elevation myocardial infarction (STEMI) and alert hospital as soon as possible.
10. Inquire of all patients (male and female) if they have taken Viagra (sildenafil citrate) or similar erectile dysfunction medications or medications used to treat pulmonary hypertension in the last 48 hours. If yes, **DO NOT ADMINISTER NITROGLYCERIN AND CONTACT MEDICAL CONTROL**.
11. If BP above 100 mmHg, administer Nitroglycerin 0.4 mg SL. Repeat every 3-5 minutes if BP above 100 mmHg. Nitroglycerin may be administered prior to IV placement if the BP is above 120 mmHg.
12. If wheezing or bronchial constriction administer nebulized Albuterol 2.5 mg/3ml.

#### **Post-Medical Control**

13. If BP is less than 100 mmHg and signs/symptoms of shock, administer Dopamine 5 – 20 mcg/kg/min. Generally start at 5 mcg/kg/min, and increase every 10 minutes by an additional 5 mcg/kg/min until BP is greater than 100 mmHg. **DO NOT exceed 20 mcg/kg/min unless ordered by medical control.**

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This protocol is to be followed for patients in acute respiratory distress situations, not chronic.

Follow **General Pre-hospital Care Protocol**  
Initiate supplemental oxygen by non-re-breather mask  
Position patient upright with legs dependent, if possible

Consider CPAP/Bi-PAP (if available) or if indicated, an advanced airway.

Obtain 12-lead ECG if available. Follow local MCA transport protocol if ECG is positive for ST segment elevation myocardial infarction (STEMI) and alert hospital as soon as possible.

Inquire of all patients (male & female) if they have taken Viagra (sildenafil citrate) or a similar erectile dysfunction medications or medications used to treat pulmonary hypertension in the last 48 hrs., if yes **DO NOT ADMINISTER NITROGLYCERIN AND CONTACT MEDICAL CONTROL.**

**Blood Pressure greater than 100 mmHg**

YES

Administer Nitroglycerin 0.4 mg SL  
Repeat every 3-5 minutes if BP above 100 mmHg.  
Nitroglycerin may be administered prior to IV placement if the BP is above 120 mmHg.

If wheezing or bronchial constriction, administer nebulized Albuterol 2.5 mg/3ml

**Contact Medical Control**

NO

**Contact Medical Control**

If BP less than 100 mmHg and signs/symptoms of shock administer Dopamine at 5-20 mcg/kg/min

Generally start at 5 mcg/kg/min, and increase every 10 minutes by an additional 5 mcg/kg/min until BP greater than 100 mmHg. **DO NOT** exceed 20 mcg/kg/min unless ordered by medical control.