CONGESTIVE HEART FAILURE

I. AUTHORITY: Health and Safety Code, Division 2.5, California Code of Regulations, Title 22, Division 9

II. PURPOSE**:** To serve as a patient treatment standard for EMT-Is and Paramedics within their scope of practice.

III. DEFINITIONS:

A. Mild Respiratory Distress describes a patient who is typically able to speak full sentences; who's blood pressure and pulse may be elevated; might be weak and diaphoretic; have a normal mental status; no cyanosis.

B. Moderate Respiratory Distress describes a patient who is generally able to speak just a few words; who's blood pressure and pulse are likely elevated; who might be weak and diaphoretic; have a normal mental status; circumoral and digital cyanosis may be present.

C. Severe Respiratory Distress describes a patient who is unable to speak; whose blood pressure and pulse will be elevated or depressed; whose mental status typically altered; central cyanosis likely.

Note: Patients with congestive heart failure typically have a cardiac history, are generally older patients, and they are commonly on medications including beta blockers, diuretics, ACE inhibitors, digoxin, or calcium channel blockers. In addition, the CHF patient typically presents with physical findings including hypertension, peripheral edema, jugular venous distension, and a more sudden onset of wheezes, rales, or rhonchi, or some combination of all three. It is VERY UNLIKELY for a patient to have symptomatic CHF without a blood pressure >150 systolic. In these patients, oxygen and direct vasodilators such as morphine and nitrates will be more efficacious than indirect venodilators such as furosemide.

IV. PROTOCOL:

MILD DISTRESS	
STANDING ORDERS	
ASSESS	CAB
OXYGEN	Oxygen delivered as appropriate.
POSITION	Sitting (as tolerated.)
MONITOR	12 Lead EKG – If interpretation results reveal ***ACUTE MI/SUSPECTED***, expedite transport to SRC as directed if transport time is less than 60 minutes. It is preferable to obtain 12 lead prior to Nitro administration or transport. Repeat post-treatment if patient symptomatic and condition permits
PULSE OXIMETRY	
NITROGLYCERINE	0.4mg SL if systolic BP 120 – 150 mmHg 0.8mg SL if systolic BP 150 – 200 mmHg 1.2mg SL if systolic BP > 200 mmHg Recheck BP after each nitroglycerine (NTG) dose. Repeat doses are based on systolic BP as outlined above. Repeat SL NTG every 5 minutes until clinical improvement or systolic BP 100 mmHg or less. Do not administer if systolic BP is less than 100 mmHg.
ALBUTEROL	2.5mg (3ml unit dose) via hand held nebulizer, if the patient is wheezing
IV ACCESS	Saline Lock is preferable

MODERATE DISTRESS	
STANDING ORDERS	
ASSESS	CAB
OXYGEN	Oxygen delivered as appropriate.
POSITION	Sitting (as tolerated.)
MONITOR **PULSE OXIMETRY**	12 Lead EKG – If interpretation results reveal ***ACUTE MI/SUSPECTED***, expedite transport to SRC as directed if transport time is less than 60 minutes. It is preferable to obtain 12 lead prior to Nitro administration or transport. Repeat post-treatment if patient symptomatic and condition permits.
NITROGLYCERINE	0.4mg SL if systolic BP 120 – 150 mmHg 0.8mg SL if systolic BP 150 – 200 mmHg 1.2mg SL if systolic BP > 200 mmHg Recheck BP after each nitroglycerine (NTG) dose. Repeat doses are based on systolic BP as outlined above. Repeat SL NTG every 5 minutes until clinical improvement or systolic BP 100 mmHg or less. Do not administer if systolic BP is less than 100 mmHg.
CONSIDER CPAP	**If available, s**tart at 5 cm H2O, titrate up as patient tolerates and as patient condition warrants, to a max of 10 cm H2O
ALBUTEROL	2.5mg (3ml unit dose) via hand held nebulizer/in line nebulization if the patient is wheezing
NITROGLYCERINE	**If CPAP is employed**, apply 1 inch of NTG paste to anterior chest wall **If CPAP is NOT employed**, recheck BP after each nitroglycerine (NTG) dose. Repeat SL doses are based on systolic BP as outlined above. Repeat NTG every 5 minutes until clinical improvement or systolic BP 100 mmHg or less. Do not administer if systolic BP is less than 100 mmHg.
IV ACCESS	Saline Lock is preferable
FUROSEMIDE	Consider 40mg IV if transport time exceeds 30 minutes AND systolic BP is > 120 mmHg

SEVERE DISTRESS	
STANDING ORDERS	
ASSESS	CAB
OXYGEN	Oxygen delivered as appropriate.
POSITION	Sitting (as tolerated.)
MONITOR **PULSE OXIMETRY**	12 Lead EKG – If interpretation results reveal ***ACUTE MI/SUSPECTED***, expedite transport to SRC as directed if transport time is less than 60 minutes. It is preferable to obtain 12 lead prior to Nitro administration or transport. Repeat post-treatment if patient symptomatic and condition permits.
APPLY CPAP	**If available, s**tart at 5 cm H2O, titrate up as patient tolerates and as patient condition warrants, to a max of 10 cm H2O
NITROGLYCERINE	0.4mg SL if systolic BP 120 – 150 mmHg 0.8mg SL if systolic BP 150 – 200 mmHg 1.2mg SL if systolic BP > 200 mmHg Recheck BP after each nitroglycerine (NTG) dose. Repeat doses are based on systolic BP as outlined above. Repeat SL NTG every 5 minutes until clinical improvement or systolic BP 100 mmHg or less. Do not administer if systolic BP is less than 100 mmHg.
ALBUTEROL	2.5mg (3ml unit dose) via hand held nebulizer/in line nebulization if the patient is wheezing
IV ACCESS	Saline Lock is preferable
MORPHINE	2.0 mg slow IVP if systolic BP > 100 mmHg. May repeat ONCE.
FUROSEMIDE	40mg IV ONLY if transport time exceeds 30 minutes AND systolic BP is > 120 mmHg
BASE ORDER	
DOPAMINE	Start at 10 mcg/kg/minute for systolic BP < 90 mmHg. Titrate to systolic BP 90-100 mmHg