



Portage County EMS Patient Care Guidelines



Congestive Heart Failure

Note:

- Remember that acute coronary syndrome may present with shortness of breath (alone) and new onset acute congestive heart failure!
- Acute weight gain may be the only symptom of acute CHF.

Priorities	Assessment Findings
Chief Complaint	"Difficulty breathing", "Shortness of breath", "wheezing"
LOPQRST	Assess onset, duration, progression, subjective severity, possible triggering events, and response to treatments before EMS arrival.
AS/PN	Cardiac chest pain, frothy sputum, blood tinged sputum
AMPL	Check past history of CHF or heart disease; medications for CHF (e.g., furosemide, digoxin, ACE inhibitors, long acting nitrates, etc.), and compliance with these medications.
Initial Exam	Check ABCs and correct immediately life-threatening problems.
Detailed Focused Exam	General Appearance: Tripod positioning; Severity of distress [1]? Skin: Cool, moist and pale? Warm, dry and flushed? Cyanotic? Neck: JVD? Respiratory Effort: Using accessory muscles, signs of fatigue; two-word sentences? Lung Sounds: The presence of rales (wet lungs) is a strong indication of CHF. Wheezing is also common in CHF. Heart Sounds: Rate, regularity. Peripheral Edema: Pitting edema of the ankles is common in CHF, but its absence does not rule out CHF. Neuro: ALOC? Lethargy? Somnolence?
Data	SpO ₂ , 12-lead EKG, capnography
Goals of Therapy	Differentiate CHF from other causes of dyspnea, reduce the work of breathing, improve pump function, and improve oxygenation and ventilation.
Monitoring	Carefully monitor blood pressure, respiratory effort, and level of consciousness, cardiac monitor, capnography and SpO ₂ .

EMERGENCY MEDICAL RESPONDER

- Routine Medical Care
- Allow/assist the patient to assume a position of comfort (usually upright).
- Administer oxygen 2 – 4 LPM per nasal cannula if SpO₂ < 94%. Increase flow and consider non-rebreather mask to keep SpO₂ > 94%
- Assisted ventilation: Consider assisting breathing with gentle synchronous ventilations with bag-valve mask (BVM); Support ventilation with BVM if apnea or hypopnea occurs.
- Airway adjuncts: If there is loss of consciousness and loss of gag reflex, insert an oropharyngeal or nasopharyngeal airway. *Remember breathing my get worse when lying on their backs.*
- If the patient complains of chest pain (angina),
 - Administer **aspirin** 324 mg PO (four 81 mg chewable tablets) unless the patient is allergic to it. Advise patient to chew & swallow tablets.

Give a status report to the ambulance crew by radio ASAP.

EMERGENCY MEDICAL TECHNICIAN

- If the patient complains of chest pain (angina),
 - If the patient is prescribed **nitroglycerin** consider assisting them in taking it, provided systolic blood pressure > 100 mmHg
 - Note: No NTG if pt has used Viagra or Levitra in the last 24 hours, or Cialis in the last 48 hours.
- If the patient is wheezing, assist with use of metered dose inhalers or give **albuterol** unit dose (2.5 mg in 3 ml) administer per hand held nebulizer or mask; May repeat X 2 additional doses.
- Consider CPAP for a patient that:
 - Is awake and able to follow commands
 - Is over 12 years old and is able to fit the CPAP mask
 - Has the ability to maintain an open airway
 - Exhibits two or more of the following:
 - Respiratory rate greater than 25 breaths per minute
 - SPO2 of less than 94% at any time
 - Use of accessory muscles during respirations
- Airway adjuncts: If there is loss of consciousness and loss of gag reflex, insert a non-visualized airway.

Give a status report to the ambulance crew by radio ASAP.

ADVANCED EMERGENCY MEDICAL TECHNICIAN

- Obtain a 12-lead EKG and transmit to receiving facility. If transmission is not possible, may read monitor's interpretation to hospital.
- IV normal saline @ KVO
- Give 1 **nitroglycerin** 0.4 mg sublingual spray or tablet every 3 – 5 minutes. No maximum dose.

Contact Medical Control for the following:

- IV fluid orders, if the patient in congestive heart failure is also hypotensive (SPB ≤ 100 mmHg).

INTERMEDIATE

- If SPB ≤ 100 mmHg, do not give nitroglycerin.
- If angina is present, consider **fantanyl** per the *Cardiac Chest Pain Guidelines*

Contact Medical Control for the following:

- Additional doses of these medications appear to be needed.

PARAMEDIC

- Give 1 **nitroglycerin** 0.4 mg sublingual spray or tablet every 3 – 5 minutes until SPB < 100 mmHg. No maximum dose.
- If patient is on CPAP or prolonged transport, initiate a **nitroglycerin** IV infusion w/ pump.

- Start IV pump at 10 mcg/min. Increase by 5 – 10 mcg/min every 5 minutes until a max dose of 50 mcg/min or systolic BP drops below 100 mmHg.
**Note: Remember to use “Low Sorbing I.V. Set” (nitro tubing).*
- Consider RSI/RSA[2] if any of the following indications is met:
 - A trial of CPAP fails to improve the work of breathing or oxygenation, or if the patient shows signs of deterioration on it
 - There is ALOC and the gag reflex is intact
 - Respiratory failure is imminent (e.g., severe fatigue)

Contact Medical Control for the following:

- Additional orders are needed
- Provide patient report ASAP

FOOTNOTES:

[1] Severity of Respiratory Distress:

- Mild = RR < 20 + minimal additional breathing effort + speaking in complete sentences + minimal subjective distress, No ALOC
- Moderate = RR 20 to 25 + moderate additional breathing effort + difficult to complete a sentence + moderate subjective distress + No ALOC
- Severe = RR > 25 + marked additional breathing effort + 2 or 3 word sentences + marked subjective distress + possible ALOC

[2] RSI/RSA requires 2 paramedics at the patient’s side

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