Patients who have congestive heart failure and pulmonary edema are suffering from a true emergency. They may worsen rapidly and unpredictably. Patients may present only with shortness of breath, confusion, or loss of consciousness. They may or may not complain about accompanying chest pain. EMS personnel should maintain a high index of suspicion of underlying ischemic heart disease as the cause of the patient's presentation.

**GENERAL**

- personal protective equipment should be utilized as required
- body substance isolation techniques should be utilized as required
- primary survey
- if the patient has been assessed and is suspected of having congestive heart failure
  - monitor vital signs closely for evidence of hypotension and hypoperfusion
  - if the patient becomes hypotensive and exhibits signs and symptoms of congestive heart failure with pulmonary edema
    - place the patient in a high Fowler's position
    OR
    - place the patient in as supine a position as the patient will tolerate
    - in a semi-sitting position adequate for ventilation
- administer high concentration oxygen by non-rebreath mask
  - assist ventilations if required
- load and go should be initiated as soon as possible
  - on scene times should be kept to a minimum
  - treat other life-threatening conditions en route
- transport the patient to the nearest appropriate health care facility
  - notify the receiving health care facility of the patient's status as soon as possible
  - monitor and treat the patient en route
  - additional surveys and treatments should be conducted en route
- document all actions including the decision to initiate load and go
- report all findings to the receiving facility staff, and document on the patient care report
- conduct a secondary survey
- repeat and record vital signs at regular intervals (5-15 mins.) or when there is a change in the patient's status.
• obtain and record pertinent medical history regarding congestive heart failure
  • onset of symptoms
  • activity at onset
  • severity of dyspnea
    • at rest
    • with minimal movement
    • with daily activities
    • with exercise
  • associated symptoms
  • medications, when last taken, and if any recent changes
  • history of underlying renal or cardiac problems
    • dialysis or renal failure
    • angina or prior myocardial infarction
  • if chest pain is a feature, conduct a focused history for chest pain (see Chest Pain Guideline)

• if the patient has associated chest pain of a nontraumatic origin then evaluate as per the Chest Pain Guideline

• if a cardiac monitor is available and EMS personnel are trained and certified in its use
  • the patient should be monitored and an ECG strip (eight seconds in duration minimum) should be obtained for reference of the receiving physician
  • this should be done during transport to avoid delays in transport to the nearest appropriate health care facility

• prepare to deal with respiratory and cardiac arrest

• do not allow the patient to exert him/herself - e.g. walking, standing unassisted to transfer to the stretcher

• move, handle, and transport the patient gently

• report initial assessments and any changes in the patient's status to the staff at the receiving health care facility

NOTE
• high flow oxygen should be given to patients with congestive heart failure
  • patients with congestive heart failure should be monitored closely for signs of respiratory compromise and the need for ventilatory assistance

• congestive heart failure with pulmonary edema may be slow to develop due to long term chronic conditions or it may develop rapidly due to a deterioration of a chronic condition or an acute event such as myocardial ischemia, myocardial infarction, or pulmonary embolism

• EMS personnel trained and certified to treat congestive heart failure may do so as outlined in the Pulmonary Edema Protocol
• if 12-lead ECG capabilities are available and EMS personnel are trained and certified in its use
  • 12-lead ECG should be obtained based on existing policies and protocols, and transmitted to the receiving health care facility
  → under **NO** circumstances is a pre-hospital 12-lead ECG program to be implemented without **prior** approval from Emergency Services, Manitoba Health