HEART FAILURE (HF)
Observation Unit Condition-Specific Guidelines

Inclusion/Transfer Criteria

- Past medical history of HF
- Acceptable VS – SBP greater than 90 (asymptomatic patient) , RR less than 32, HR less than 130
- O2 Sat greater than 90% on RA after ED management, correctable to greater than 92% on O2 by NC
- Confirmed CHF by history (dyspnea, orthopnea) , physical exam(S3, rales, JVD) and chest x-ray and BNP (if done)
- High likelihood of achieving baseline status within **18-24 hours**
- Negative initial troponin or troponin at patient's known baseline
- No acute comorbidities (examples- pneumonia, atrial fibrillation, altered mental status, etc.)

Exclusion Criteria

- New onset HF (de novo HF)
- Unstable VS after ED management (HR greater than 130, SBP less than 90 or greater than 180, RR greater than 32, O2 Sat less than 92% on O2 by NC)
- Acute cardiac ischemia (EKG changes, positive troponin/above patient's known baseline, ongoing ischemic chest pain, unstable angina) or new arrythmias
- Impending respiratory failure or requirement of NIPPV (bipap)
- Acute co-morbidities - sepsis, pneumonia, new murmur, confusion
- Severe anemia (Hgb less than 8 g/dl)
- Renal failure (BUN>40 or Cr>3) or Creatinine increase greater than 1 mg/dl from baseline or Na<135
- Evidence of poor perfusion (confusion, cool extremity, weakness, N/V)

Potential Interventions

- Weight on arrival, strict Intake/Output, vital signs Q4H, serial weights
- ECG if needed
- O2, IV loop diuretics (at least total home dose provided intravenously)
- Monitor for response to therapy by assessing symptom relief **2 hours after diuretic dose and prn** (such as shortness of breath, orthopnea, able to speak in longer sentences, able to tolerate HOB lower) and by following objective response (such as urine output, improving lung sounds and O2 sats, peripheral edema in both lower extremities and sacral area, etc.)
- Blood Pressure Management - nitroglycerine/Nitro-paste
- Continue home beta blocker, ACE inhibitors/ARB/ARNI and other HF medications if hemodynamically stable
- VTE prophylaxis
- Repeat electrolytes Q4H-Q6H (if abnormal) with replacement (if indicated). Target K greater than 4, target MG greater than 2
- Pulse oximetry and cardiac monitoring
- Echocardiography – Document known EF. Evaluate left ventricular (LV) function if indicated by patient presentation/assessment findings or suspect decline in LV function. May opt for outpatient evaluation/assessment if patient is stable and do not suspect change in known EF%.
- Cardiology consultation (if indicated) OR Heart Failure clinic
- HF education – target ADHF possible precipitant
- Smoking cessation counseling

Quality Measures

- Left Ventricular Systolic Function (LVSF) Assessment - Document most recent EF or repeat ECHO

Adapted from Appendix 2 of Ross MA, et al., "Protocol-Driven Emergency Department Observation Units Offer Savings, Shorter Stays, and Reduced Admissions," Health Affairs, 32, no. 12 (2013). See http://www.obsprotocols.org/tiki-index.php.

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- Continue home dose of beta blocker or begin beta blocker at discharge when patient is no longer decompensated HF
- Continue home dose of ACE Inhibitor/ARB/ARNI or consider adding an ACEI if the EF is less than 40% by evaluation
- Educate patient on heart failure self-care topics:
  - Daily Weight
  - Symptom recognition and what to do if symptoms worsen
  - Diet
    - 2-gram sodium diet restriction
    - Heart healthy options – low cholesterol, low fat
  - Activity – encourage movement!
  - Importance of the follow up appointment

- Educate patient on smoking cessation (if indicated)
- Early follow-up to be done **within 72 hours** of discharge (specify date, time, location). Make appointment PRIOR to patient discharge.
- Follow up telephone call within 24 – 72 hours

<u>Disposition</u>

Home

- Resolution or return to baseline status
- Acceptable VS – O2 Sat ≥ 95% (or baseline), RR ≤ 20, HR < 100, SBP > 100)
- Negative serial ECGs and cardiac markers, acceptable echo (if done)
- Adequate diuresis – decrease in weight, > 1L urine output
- Evidence-based medications for patient with EF% less than 40%: ACEi/ARB/ARNI, beta blocker, and nitrate and or hydralazine and spironolactone should be considered
- Education – HF, diet, smoking cessation

Hospital

- Poor response to therapy - Failure to improve subjectively
- Worsening respiratory status or failure to return to baseline
- Unstable VS
- Evidence of acute cardiac ischemia or new arrhythmia
- Inability to care for self at home
- Qualifies for upgrade to inpatient status
- Physician judgment

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