

Firelands Regional Medical Center School of Nursing  
AMSN 2023  
Unit 6: Heart Failure online assignment (1.5H)

**CASE STUDY:**

Frannie Failure, a patient on 4P, calls the nurse and states, "I feel really puffy. My rings feel so tight on my fingers and I am having trouble catching my breath." The patient is lying flat in the bed and is alert and oriented x 3. NS @ 125mL/HR running.

Assessment:

- Vital Signs: T 97.9 oral, HR 120, RR 24, SpO<sub>2</sub> 86% RA, BP 152/94, pain 0/10.
- Respiratory: Lung sounds- crackles throughout bilaterally, non-productive cough.
- Cardiac: Heart sounds- S3, pedal pulses not palpable, 3+ pitting edema bilateral feet and ankles.
- Skin intact, pale and cool.
- Gastrointestinal: Bowel sounds x4 WNL, BM yesterday morning.
- Intake/Output: Patient has had 900ml in and 200ml out.

**1. What additional information would you want to know?**

- a. The additional information I would like to know is the past health history including any recent MI's, HTN, cardiomyopathy, any heart problems, DM, high lipids, renal disease, thyroid/lung disease, rapid or irregular heart beat. I would also like to know the use of and adherence with any medications especially heart medications, diuretics, estrogens, steroids, NSAID's, OTC drugs and herbal supplements. I would also like to know of any history of depression or anxiety. I would ask Frannie about her usual sodium intake, nausea, vomiting, stomach bloating, weight gain, leg swelling, decreased daytime UOP, constipation, cough, sleep apnea, palpitations, peripheral edema, crackles, wheezes, blood tinged sputum, tachycardia, jugular vein distention, abdominal distention or confusion. I would also like to know all of her lab values especially sodium and potassium, BUN, creatinine, liver functions, BNP. I would like a chest x-ray as well to see if there is any cardiomegaly, pulmonary congestion or edema. An echocardiogram as well.

**2. What assessment/ interventions would be appropriate for this patient?**

- a. I would first start by giving Frannie oxygen considering her O<sub>2</sub> is 86% on RA. I would anticipate drug therapy to be started. I would provide symptom relief, optimize volume status, support oxygenation/ventilation, CO, and end organ perfusion, identify and address the cause, avoid complications, provide education to her addressing factors that precipitated HF exacerbation and discharge planning. Other interventions/assessments that would be appropriate are High Fowler's Position, Noninvasive positive pressure ventilation, circulatory assist device; intraaortic balloon pump, possible endotracheal intubation and mechanical ventilation, VS/UOP at least every hour until stable,

continuous ECG and pulse oximetry monitoring and possible cardioversion depending on ECG.

**3. What would you anticipate the healthcare provider to order?**

- a. I would anticipate the HCP to order an echocardiogram, 12 lead ECG, ambulatory heart monitors, chest x-ray, 6-minute walk test, MUGA, cardiopulmonary exercise stress test, cardiac MRI and cardiac cath/angiogram. As well as BNP lab.

**4. What medications would be appropriate for this patient (include all pertinent from the Pharmacology List) ? Doses? Nursing Interventions? You will pick three of these medications to complete the ATI Medication Templates.**

- a. An ACE are the first line drug for chronic HF. They decrease mortality, morbidity, hospitalizations, and symptoms. Captopril is an ACE. Angioedema is a rare adverse effect, and needs reported ASAP. As a nurse it is important to monitor renal function and potassium level. For patients who are unable to tolerate ACE's, then they will get ARB's (losartan, valsartan). Side effects are somewhat similar to ACE's. It is important to monitor potassium and renal function. With ACE's & ARB's, monitor patient for first dose hypotension. Skipping doses or discontinuing can result in rebound HTN. Entresto, is a combination of a neprilysin inhibitor and an ARB. This drug is an alternative to ACE inhibitors and ARBs in patients meeting criteria with symptomatic HF and reduces death, hospitalization. Patients are monitored for hypotension, renal insufficiency and angioedema. Spironolactone which is a potassium sparing diuretic. They may prolong survival in patients with HF. Critical to carefully monitor potassium levels and renal function. Use in caution with patients taking digoxin. Teach patients to avoid foods high in potassium like bananas and oranges. Beta blockers such as Carvedilol. Obtain standing BP 1 hr after dosing to assess tolerance. Overdose can cause profound bradycardia, hypotension, bronchospasms and cardiogenic shock. Abrupt withdrawal may result in sweating, palpitations and headaches. Digoxin, low doses of it decreases HF hospitalizations and symptoms in patients who are still symptomatic despite standard HF therapies. Better outcomes occur with digoxin levels of <0.9. Dose should be based on body mass, renal function and concomitant medications. Usual maintenance dose in HF is 0.125 mg daily. Monitor renal function and potassium level. And a diuretic can help reduce symptoms of fluid overload and congestion in HF. They reduce edema, pulmonary venous pressure and preload.

**5. What patient education would you include?**

- a. My patient education would include OTC medications are known to pose significant risk to people with HF. Examples are NSAIDs, higher than prescribed ASA doses, ephedrine, pseudoephedrine and diet pills. NSAIDs can contribute to sodium retention which can lead to an exacerbation of HF. Low sodium diet is important to include as well. I would

tell Frannie to not add salt or seasonings that contain sodium to her foods. 1 tsp of salt equals 2.3 g of sodium. Avoid canned soups, processed meats, cheese, frozen meals and limit milk to 2 cups daily. Increase walking and other activities gradually. Consider a cardiac rehab. Make sure you know the signs and symptoms of worsening HF such as increasing dyspnea, cough, orthopnea, PND, weight gain, edema, fluid retention, fatigue and tiredness with physical activity. Things to call the doctor about would be weight gain of 3 pounds in a week, difficult breathing especially with activity or when lying flat, waking up breathless at night, frequent dry hacking cough especially when lying down, fatigue, weakness, swelling of ankles/feet or abdomen, swelling of face or difficulty breathing (if taking an ACE), nausea with abdominal swelling, pain and tenderness, dizzy or faint. Make sure to follow up with doctor on a regular basis. Consider joining a local support group. Obtain annual flu vaccine. Obtain pneumonia vaccine and develop a plan to reduce risk factors such as control BP, don't smoke, control sugars/A1C and weight reduction. Plan a regular daily rest and activity program, avoid emotional upsets, consider working shorter hours. Take each drug as prescribed, develop a system such as a chart or pillbox, count pulse rate each day before taking (certain meds), know signs and symptoms of orthostatic hypotension and how to prevent them, if taking anticoagulants, know the signs and symptoms of internal bleeding (bleeding gums, increased bruising, blood in stool or urine), know your INR and target range if taking warfarin and how often to have blood checked.