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# ELDER CARE

A Resource for Interprofessional Providers

## Heart Failure Management - In the Home and Community

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Heart failure (HF) is a common clinical syndrome in older adults, accounting for over 1 million annual hospitalizations, most of which are considered preventable. It also has the highest 30-day hospital readmission rate of any medical condition. Given the growing aging population, increasing lifespan, and longer survival with cardiac disorders, systematic and cost-effective approaches to outpatient HF management must be implemented to reduce readmissions. This edition of Elder Care will review some of those approaches.

### Daily Monitoring and Targeted Intervention

Education should be provided about daily monitoring for the signs/symptoms of worsening HF. Patients/caregivers should be taught about early signs and symptoms of HF exacerbation that often occur in the days and weeks prior to re-hospitalization (Table 1). Interventions can then be made to stabilize the patient to reduce the risk of re-hospitalization.

**Table 1. Signs/Symptoms of Heart Failure that occur in the Days and Week Prior to Decompensation and Hospitalization**

|                                       |
|---------------------------------------|
| Weight gain >2 lbs/week               |
| New or increasing ankle edema         |
| New or worsening exercise intolerance |
| New or worsening nocturnal dyspnea    |
| Lightheadedness                       |

Patients should weigh themselves daily and monitor for increasing symptoms. Patients and health care providers should establish a contact protocol to communicate symptoms or weight changes, either by phone or with biomonitoring equipment. Diuretic dosing protocols, based on weight gain and symptoms, can also be established.

For example, if worsening of signs/symptoms are mild, patients can increase their diuretic dose and/or frequency on their own, based on those protocols, while maintaining their sodium-restricted diet. If weight gain or symptoms are more severe, the patient's health care provider would be notified and may consider a home or office visit.

### Medication Management

Standard medical treatment of heart failure includes beta blockers, angiotensin converting enzyme (ACE)-inhibitors or angiotensin receptor blockers (ARBs), and diuretics. Clinicians should prescribe generic forms of these medications to reduce treatment cost, and try to simplify treatment regimens by prescribing medications for use on a once daily basis whenever possible. Medications should be started at low doses and increased to treatment targets, as tolerated. In addition, some medications carry risk for patients with HF, and should be avoided or used with caution (see Table 2, on reverse side).

For medications to be effective, however, clinicians must assure that patients and/or their caregivers have an adequate understanding of how medications are to be taken. Education should be provided about the side effects of HF medications (e.g., urinary frequency with diuretics at night), the importance of medications for HF management, and the need to adhere to medication regimens. Multi-day medication box set-ups are often helpful in fostering adherence, though not for diuretics requiring frequent dose changes. For patients with limited literacy or vision problems who have difficulty reading labels, "talking" medication bottles are available.

As already mentioned, medication titration targets based on weight gain and symptoms should be established for diuretics. Furosemide is the most commonly used diuretic for treating HF, and is an exception to the aforementioned recommendation to seek once-daily dosing regimens. Due to its short half-life, furosemide is better taken 2-3 times

### TIPS for Managing Heart Failure in the Home and Community

- Recommend that patients with heart failure monitor their weight daily, and report any weekly weight gain of more than two pounds. Such abrupt weight gain is often a warning sign that heart failure decompensation will occur.
- Recommend that patients with heart failure report symptoms of increasing edema, nocturnal edema, decreased exercise intolerance, or lightheadedness. As with weight gain, these symptoms may indicate decompensation.
- Assure that patients and/or caregivers understand when and how heart failure medications should be taken. Provide strategies for adherence when needed.
- Recommend sodium restriction of no more than 2.3-2.5 gm/day for patients with stable heart failure.

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per day in split doses, rather than taking the entire daily dose at one time. For example, if a patient responds to 20 mg of furosemide, the frequency may be titrated upward to 20 mg two or three times a day during exacerbations, rather than increasing the dose to 60 mg on a once daily basis.

## Dietary and Lifestyle Counseling

Clinicians and care teams should provide counseling on sodium and fluid-restricted diets. The American Heart Association recently recommended (2013) sodium restriction to < 1.5 grams/day. However, the benefit of sodium restriction in geriatric HF is controversial, the current recommendation for sodium restriction in community-dwelling patients is 2.3-2.5 grams/day. Some evidence suggests that a more aggressive restriction may be detrimental, particularly for patients with decompensated heart failure. To achieve this goal, patients with HF and those who prepare food for them need to understand the need to avoid table salt, to

recognize hidden sources of sodium, to learn how to read nutrition labels, and should know about salt substitutes.

## Tobacco and Alcohol

Provide counseling on smoking cessation and alcohol intake. Recommend limiting alcohol consumption to no more than 2 drinks daily for men and 1 drink for women. Inquire about smoking at each encounter. Urge referral to smoking cessation program for those who smoke.

## A Multidisciplinary Approach

A multidisciplinary approach using an interprofessional team (nurses, dieticians, social workers, pharmacists, physician, and others) can reduce re-hospitalization and costs of care, and improve quality of life through preemptive management strategies. These include the self-management approaches discussed earlier, and should also address barriers to self-care that may be present (Table 3).

| Barrier                                 | Recommended Approach                                                                                                                                                                           |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limited financial resources             | Social service agency's assistance                                                                                                                                                             |
| Limited health literacy                 | Use teach-back to assure understanding by patients and caregivers about what needs to be done                                                                                                  |
| Management by multiple clinicians       | Avoid contradictory instructions to patient through use of electronic medical record available to all participating clinicians, with care plan delivered to patients by primary care clinician |
| Mood disorders (depression and anxiety) | Appropriate pharmacologic and non-pharmacologic interventions                                                                                                                                  |
| Multiple comorbidities                  | Optimize and simplify medical management                                                                                                                                                       |
| Cognitive Impairment                    | Assure safe and supportive environment, simplify regimen                                                                                                                                       |

| Medication                                | Concern for Patients with HF                                                                                      |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| NSAIDs                                    | Fluid retention with HF exacerbation; impaired renal function; impaired responses to ACE inhibitors and diuretics |
| Calcium channel blockers                  | Negative inotropic effects                                                                                        |
| Thiazolidinediones                        | Fluid retention with HF exacerbations                                                                             |
| Metformin                                 | Lethal lactic acidosis                                                                                            |
| Phosphodiesterase type-5 inhibitors       | Use contraindicated concomitantly with nitrates due to risk of hypotension                                        |
| Cardiotoxic chemotherapy agents           | Impaired systolic function                                                                                        |
| 2 <sup>nd</sup> generation antihistamines | QTc interval prolongation suggested for clemastine, loratadine                                                    |
| Theophylline                              | Arrhythmia                                                                                                        |

## References and Resources

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