

**CONGESTIVE HEART FAILURE**

Congestive heart failure syndrome (CHF) is characterized by impaired function of the heart resulting in a constellation of symptoms and signs, which may include fatigue, weakness and shortness of breath. The American Heart Association (AHA) reports that CHF affects nearly 5 million people in the United States. CHF accounted for 970,000 hospital discharges in 2002. Medicare paid \$3.6 billion for the care of patients with CHF in 1999, or \$5,456 per discharge. The estimated direct and indirect cost of CHF in 2005 is \$27.9 billion. Despite published guidelines for CHF management, there is significant variation in treatment for hospitalized patients. This variability significantly impacts individual patients, families and hospital systems, and accounts for billions of dollars of the Medicare budget. Hospitalists can lead their institutions in early diagnosis, initiation of evidence based medical therapy, and incorporation of a multidisciplinary approach to heart failure. Hospitalists can also develop strategies to operationalize cost-effective interventions that reduce morbidity, mortality and readmission rates.

**KNOWLEDGE**

*Hospitalists should be able to:*

- Explain underlying causes of CHF and precipitating factors leading to exacerbation.
- Differentiate features of systolic and diastolic dysfunction, and explain the common etiologies of each.
- Describe the indicated tests required to evaluate CHF, including assessment of left ventricular function.
- Describe risk factors for the development of CHF in the hospital setting.
- Risk stratify patients admitted with CHF and determine the appropriate level of care.
- Describe goals of inpatient therapy for acute decompensated heart failure including pre-load and after-load reduction, hemodynamic stabilization, and optimization of volume status.
- Describe the role of invasive and noninvasive ventilatory support.
- Explain evidence based therapeutic options for management of acute and chronic CHF and describe contraindications to these therapies.
- Explain indications, contraindications and mechanisms of action of pharmacologic agents used to treat CHF.
- Identify medications and interventions contraindicated in CHF.
- Explain markers of severity of the disease and factors that influence prognosis.
- Explain goals for hospital discharge, including specific measures of clinical stability for safe care transition.

**SKILLS**

*Hospitalists should be able to:*

- Elicit a thorough and relevant history and review the medical record to identify symptoms, co-morbidities, medications, and/or social influences contributing to CHF or its exacerbation.
- Review inpatient records to determine iatrogenic influences of CHF.
- Recognize the clinical presentation of heart failure, including features of exacerbation and reliability of signs and symptoms.
- Identify physical findings consistent with CHF.
- Identify signs of low perfusion states and cardiogenic shock.
- Order indicated diagnostic testing to identify precipitating factors of CHF and assess cardiac function.
- Formulate an evidence based treatment plan, tailored to the individual patient, which may include pharmacologic agents and dosing, nutritional recommendations, and patient compliance.
- Recognize symptoms and signs of acute decompensation and initiate immediate indicated therapies.
- Assess patients with suspected heart failure in a timely manner, identify the level of care required, and manage or co-manage the patient with the primary requesting service.

**ATTITUDES**

*Hospitalists should be able to:*

- Communicate with patients and families to explain the history and prognosis of CHF.
- Communicate with patients and families to explain the importance of home self-monitoring and adherence to medication regimens, nutritional recommendations, and physical rehabilitation.

- Communicate with patients and families to explain goals of care plan, discharge instructions and management after release from hospital.
- Communicate with patients and families to explain tests and procedures, and the use and potential side effects of pharmacologic agents.
- Recognize indications for early cardiology consultation.
- Recognize indications and qualifications for cardiac transplant evaluation.
- Advocate the importance of behavioral modification to delay the progression of disease and improve quality of life.
- Employ a multidisciplinary approach to the care of patients with CHF that begins at admission and continues through all care transitions.
- Recognize the importance of palliative care in the treatment of patients with chronic CHF.
- Responsibly address and respect end of life care wishes for patients with end-stage CHF.
- Communicate to outpatient providers the relevant events of the hospitalization and post-discharge needs, including pending tests, and determine who is responsible for checking the results.
- Document treatment plan and provide clear discharge instructions for receiving primary care physician.
- Utilize evidence based recommendations to guide diagnosis, monitoring and treatment of CHF.

### SYSTEM ORGANIZATION AND IMPROVEMENT

*To improve efficiency and quality within their organizations, Hospitalists should:*

- Advocate to hospital administrators to establish and support outpatient CHF teams, which have been shown to reduce readmission rates and possibly morbidity and mortality through outreach to CHF patients.
- Lead, coordinate or participate in multidisciplinary teams, which may include nursing and social services, nutrition, pharmacy, and physical therapy, early in the hospital course to facilitate patient education and discharge planning; improve patient function and outcomes; and advocate patient outreach post-discharge.
- Implement systems to ensure hospital wide adherence to national standards and document those measures as specified by recognized organizations (JCAHO, AHA, ACC, AHRQ or others).
- Lead, coordinate or participate in multidisciplinary initiatives to promote patient safety and optimize resource utilization.
- Lead efforts to educate staff on the importance of smoking cessation counseling and other prevention measures.
- Integrate outcomes research, institution-specific laboratory policies, and hospital formulary to create indicated and cost-effective diagnostic and management strategies for patients with CHF.