Evaluating the Management of
Heart Failure in the Inpatient Setting

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Heart failure is one of the costliest diseases in the United States to manage and treat.* In 1992, an estimated 718,000 lives were affected by this disease amounting to greater than $6.4 billion dollars in hospital charges. With the graying of America and the fact that the elderly are better surviving other forms of heart disease, it is not surprising that the incidence of heart failure is rising. Thus, management of heart failure imposes a heavier financial burden to the health care system at large.

This burden is obviously impacted by the pharmacological approach physicians take in managing heart disease. Mainstays of treatment have traditionally included reduction of volume with diuretics and strengthening of the heart's pumping function with digoxin. However, in recent years, major studies have shown that the emphasis of pharmacological management should be shifted away from the early use of digoxin to that of using ACE inhibitors. In these studies, ACE inhibitors were demonstrated to improve symptoms, decrease hospitalizations, and most importantly, decrease the mortality of heart failure patients. The Federal Government's Agency for Health Care Policy and Research (AHCPR) makes this recommendation in newly published guidelines regarding the diagnosis, treatment, and prevention of left ventricular systolic dysfunction (i.e. heart failure).

Employing these guidelines as a template, there is a current effort to examine the pharmacological management of heart failure patients hospitalized at Thomas Jefferson University Hospital. This study is part of a larger endeavor anchored at Jefferson's Department of Health Policy which entails the evaluation of heart failure management at Thomas Jefferson in both the inpatient and outpatient areas.

Evaluating the inpatient care of heart failure patients will involve a multi-step process. The first and perhaps most challenging task will be in developing the method by which to evaluate the therapy of patients hospitalized for heart failure. The AHCPR guidelines, while specific for care in the ambulatory setting, does not provide a "critical pathway" in treating patients admitted into the hospital for heart failure. Once review criteria have been formulated for treating hospitalized heart failure patients, a retrospective review of charts will be conducted. The charts reviewed will be chosen from a patient pool categorized under the heart failure DRG (diagnosis related group). The chart review will focus on pharmacological management of inpatients.

Traditionally, physicians have been trained to treat heart failure symptomatically. Typically, a heart failure patient will present in the hospital with symptoms of shortness of breath and signs of volume overload. To relieve volume overload, the patient will be treated with a diuretic and later may be given digoxin in order to strengthen the pumping ability of the heart. Once the symptoms are alleviated and barring further complications, the patient is ready for discharge. Because ACE inhibitors do not seem to acutely relieve typical symptoms, its use may be overlooked, especially in the inpatient setting. The use of ACE inhibitors fits right along with the principle of decreasing the strain to a weaker heart by the agent's ability to decrease what is known as preload and afterload. In evaluating inpatient

heart failure treatment, we hypothesize that ACE inhibitors are underused. Aside from lack of awareness, the study hopes to pinpoint other potential reasons for the lack of ACE inhibitor use. One reason may simply be reluctance to start a new heart failure medication regimen in the hospital delaying any changes for outpatient care.

In addition to reviewing the inconsistent use of ACE inhibitors in the care of hospitalized heart failure patients, the study aims to evaluate the use of the standard heart failure medications as well as inappropriate use of medications that may exacerbate the condition. Once the data have been collected and compiled, the patterns of pharmacological management of patients at Jefferson will be compared with the AHCPR guidelines.

*Heart failure is a clinical syndrome or condition characterized by the degeneration of the heart's pumping function. The weakened heart is thus unable to supply enough blood to meet the demands of the body. Common signs and symptoms of heart failure include shortness of breath, edema, fatigue, and exercise intolerance.

References

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