Editorial

Specialized Heart Failure Centers—A Success or an Indicator of the Failure of Our Health Care Delivery System

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Increasing evidence suggests that specialized heart failure centers reduce hospitalizations for heart failure. The study by Ramahi *et al.* from the Yale Heart Failure and Transplantation Program in this issue of the journal adds further support to the use of these centers.¹ The investigators noted a significant increase in the utilization and dose of angiotensin-converting enzyme (ACE) inhibitors, diuretic combinations including metolazone and spironolactone, beta-adrenergic blocking agents, amiodarone, hydralazine, and nitrates. Although this was not a randomized study, the rate of hospitalization and mortality for these patients appears relatively low in comparison with historical controls and is attributed to the increase in effective drug therapy. The authors point out, however, the impracticability of caring for all patients with heart failure at specialized centers but suggest that these centers "... play a leading role in the continued education of primary providers in the optimal management of heart failure." They also point out the need for continued quality monitoring and for adequate reimbursement for these centers.

While we agree with the authors' conclusion, it is disappointing to see the level of care provided for many patients with heart failure. The results of large scale randomized trials of ACE inhibitors, beta-adrenergic receptor blocking agents, and spironolactone have clearly shown the benefits of these agents. Guidelines from the American College of Cardiology/American Heart Association, the Heart Failure Society of America, and other organizations both in the United States and Europe are in general agreement as to the optimal therapy of patients with heart failure due to systolic left ventricular dysfunction. Nevertheless, there has been a reluctance on the part of many primary care physicians, internists, and, unfortunately,

many cardiologists to use these agents, especially beta-adrenergic receptor blocking agents, if the patient appears stable on a diuretic, an ACE inhibitor, and digoxin. When used, both ACE inhibitors and beta-adrenergic receptor blocking agents are often administered in token doses with no attempt to reach the target doses shown to be effective in the major morbidity/mortality trials. It is reasonable to use doses of an ACE inhibitor and/or a beta-adrenergic receptor blocking agent that are less than the target dose if the patient is intolerant to the target dose; it is not, however, acceptable to fail to at least attempt to achieve the target dose. There is no assurance that suboptimal doses of an ACE inhibitor and/or beta-adrenergic receptor

"Effect of Heart Failure Program on Cardiovascular Drug Utilization and Dosage in Patients with Chronic Heart Failure" by Ramahi et al. appears on page 909.

blocking agent are effective in reducing morbidity and/or mortality. Similarly, in patients with severe heart failure there has been a reluctance to add spironolactone, likely because of the fear of hyperkalemia and the need for monitoring of serum potassium, despite the clear benefits in regard to morbidity and mortality and the fact that with the recommended dose strategy, 25 mg daily, hyperkalemia was not a significant side effect in the Randomized Aldactone Survival Study.

There are several reasons why, despite the evidence from large-scale randomized trials and a consensus among guidelines as to the optimal therapy for heart failure, the level of care for heart failure in the community remains suboptimal, as evidenced by the suboptimal therapy seen in the patients referred to the Yale center. In part, the failure of some physicians to adopt the recommendations from current guidelines may be due to inadequate physician education. Despite the guidelines, the efficacy of a seemingly ever increasing number of drugs for heart failure may be difficult to track for primary care physicians trying to stay abreast of advances in many fields. In some cases, the risks of ACE inhibitors, beta-adrenergic receptor blocking agents, intensive diuretic regimens, and spironolactone may have been overemphasized in relation to their benefits. However, one of the most important reasons for the failure of many physicians to follow current guidelines may not be due to a lack of awareness of the proper therapeutic approach

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but rather to current reimbursement patterns. These patterns, especially per capita plans, act as a deterrent to frequent follow-up by either telephone or office visits and limit the monitoring of serum electrolytes and the adjustment of doses of ACE inhibitors, beta-adrenergic blocking agents, diuretics, and drug combinations in relation to patient symptoms. The burden for improving the financial incentives for frequent follow-up and monitoring of patients with heart failure will, to a large extent, fall on the Medicare program, since the increasing majority of such patients are under their auspices. Failure of Medicare and other providers to address the problem of financial incentives for frequent follow-up and monitoring of patients with heart failure, to explore new approaches such as home telemanagement, and to provide realistic quality standards will likely perpetuate the current suboptimal level of care for patients with heart failure in the community, resulting not only in increased national health care costs and increased morbidity and mortality, but likely in a backlash from our patients who are increasingly well informed as to the results of large scale treatment trials and the recommendations of current guidelines. Until we alter our health care system to encourage the application of complex, tedious, but effective medical therapy for heart failure, it is likely that the level of heart failure care for many patients will remain suboptimal. Specialized heart failure centers will play increasingly important roles in delivering model care and assisting others with the burden of heart failure therapy.

However, before advocating the proliferation of specialized heart failure centers, we believe that the success of these centers in improving clinical outcomes must be rigorously scrutinized. Unfortunately, the report by Ramahi, *et al.*, like many other previous reports, is an observational study without a reference control group for comparison.¹⁻³ Although the hospitalization rates seem low, without a control it is difficult to judge the true benefits of the center. Some disease management programs have only increased patient access to and utilization of medical facilities without lowering hospitalization.⁴

Specialized heart failure centers also need to examine the effectiveness of different interventions. It is surprising that the only prospective, randomized, controlled study of a heart failure center lowered hospitalization rates without any alteration in drug therapy.⁵ The efficacy of dietary counseling and intensive reinforcement of treatment regimens must be evaluated. The duration of care delivery from a specialized heart failure center must also be assessed in studies lasting longer than 6 to 12 months and in withdrawal trials.

The promise of specialized heart failure centers remains great and reports such as the one by Ramahi *et al.* continue to augment our optimism about these centers and raise serious concern about current health care delivery. However, careful scrutiny of the specialized centers in settings where the health care delivery system encourages delivery of complex chronic care will be required before we can assess the centers' true value.

References

1. Ramahi TM, Longo MD, Rohlf K, Sheynberg N: Effect of heart failure program on cardiovascular drug utilization and dosage in patients with chronic heart failure. *Clin Cardiol* 2000;23:000-000
2. Kornowski R, Zeeli D, Averbuch M, Finkelstein A, Schwartz D, Moshkovitz M, Weinreb B, Hershkovitz R, Eyal D, Miller M, Levo Y, Pines A: Intensive home-care surveillance prevents hospitalization and improves morbidity rates among elderly patients with severe congestive heart failure. *Am Heart J* 1995;129:726-766
3. Hanumanthu S, Butler J, Chomsky D, Davis S, Wilson JR: Effect of a heart failure program on hospitalization frequency and exercise tolerance. *Circulation* 1997;96:2842-2848
4. Fitzgerald JF, Smith DM, Martin DK, Freedman JA, Katz BP: A case manager intervention to reduce readmissions. *Arch Intern Med* 1994;154:1721-1729
5. Rich MW, Beckman V, Wittenberg C, Leven CL, Freedland KE, Carney RM: A multidisciplinary intervention to prevent the readmission of elderly patients with congestive heart failure. *N Engl J Med* 1995;333:1190-1195