

# Heart Failure Successfully Managed by GPs

BY MITCHEL L. ZOLER

FROM THE ANNUAL MEETING OF THE AMERICAN COLLEGE OF CARDIOLOGY

NEW ORLEANS – General practice physicians who managed stable heart failure patients achieved long-term outcomes that matched the outcomes of patients managed in specialized, outpatient heart failure clinics supervised by cardiologists, in a randomized, Danish study with more than 1,100 patients.

## VITALS

**Major Finding:** After a median of 2.8 years, low-risk patients had 27 deaths and 81 composite events in the GP group vs. 22 deaths and 92 composite events in the heart failure clinic group. High-risk patients had 37 deaths and 78 composite events in the GP group and 38 deaths and 85 composite events in the clinic.

**Data Source:** Randomized study of 1,119 heart failure patients treated at 18 Danish centers.

**Disclosures:** Dr. Schou said that he has received research support from Roche Diagnostics Denmark, Roche Diagnostics International, and Merck Sharp & Dohme.

newly diagnosed patients who are not yet well controlled on an appropriate maintenance regimen, Dr. Schou said in an interview. “Our study is the first to investigate continuing intensive management once a heart failure patient is stable on an optimized regimen. The long-term benefits of heart failure clinics were never tested before.”

The stabilization regimen used by the investigators involved uptitrating the drugs patients received so that their medical treatment used drugs such as ACE inhibitors, beta-blockers, and aldosterone antagonists at dosages comparable to what has been shown effective in clinical trials. Patients also received comprehensive education about their heart failure and optimal management methods. The stabilization process took from 1 month to 1 year, he said, and slightly more than a quarter of the heart failure patients seen at least once at one of the 18 participating Danish heart failure clinics achieved stability and also met the study’s other eligibility criteria.

“The key message is that you need to educate and uptitrate patients, and then they can be followed by a general practitioner [GP],” he said.

The second finding of the study, that multiple, serial measures of blood NT-proBNP did not lead to improved outcomes, should prompt a change in U.S. practice, commented Dr. Prakash C. Deedwania, professor of medicine at the University of California, San Francisco, in Fresno.

In current U.S. practice, “BNP is measured about 10 times on patients in the hospital [for heart failure]. I could never understand it. These results show that it

wastes time and money to measure BNP” repeatedly, he said in an interview (see View on the News, below).

The NT-proBNP stratified follow-up in outpatient heart failure clinics (North-Star) trial enrolled patients with New



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DR. SCHOU

York Heart Association class I-III systolic heart failure and a left ventricular ejection fraction of 45% or less who also fulfilled the study’s prespecified criteria for disease stability. The criteria included completion of a heart failure education course, and daily treatment with an evidence-based dosage of an ACE inhibitor or angiotensin II receptor blocker, beta-blocker, and, when appropriate, an aldosterone antagonist. Participants were also taking a stable diuretic dose and had a stable weight, stable heart failure symptoms, and no crackles on lung auscultation. The study randomized 460 patients to ongoing care by a general practitioner and 659 patients to regular care in a heart failure clinic supervised by a cardiologist.

The heart failure clinic patients underwent further assessment at baseline to identify those with a blood level of NT-proBNP that exceeded 1,000 pg/mL. The 407 patients in this group underwent a

second randomization, with 208 patients followed without any subsequent, routine measurement of their NT-proBNP level, and 199 patients who underwent a repeat blood check of NT-proBNP at every follow-up visit to the clinic. The clinic staff received a guide detailing clinical factors to investigate in patients who had a rise in their NT-proBNP level of greater than 30% from one clinic visit to the next. The study followed all patients for a median of 2.5 years.

The average age of the patients randomized to GP or heart failure clinic management was 69 years. A quarter of the patients were women, and all patients had an average ejection fraction of about 31%. Among the subgroup of patients with an elevated blood level of NT-proBNP at baseline, the average age was 73 years, a quarter were women, and their average ejection fraction was 30%.

The study’s primary end point was the combined rate of all-cause death or cardiovascular hospitalization. After a median of 2.8 years, low-risk patients had 27 deaths and 81 composite events in the GP group vs. 22 deaths and 92 composite events in the clinic group. High-risk patients had 37 deaths and 78 composite events in the GP group and 38 deaths and 85 composite events in the clinic. In addition, patients managed in heart failure clinics without routine NT-proBNP monitoring had a combined end-point rate similar to those who underwent routine monitoring, Dr. Schou reported. The results showed no statistically significant difference among the study subgroups for any secondary end points assessed. ■

Another facet of the same study showed that repeated, serial measurement of blood levels of N-terminal-proB-type natriuretic peptide (NT-proBNP) in heart failure patients did not improve long-term outcomes compared with no routine measurement of the biomarker, Dr. Morten Schou said at the meeting.

“Clinically stable patients with systolic heart failure on optimal medical therapy did not benefit from long-term follow-up in a heart failure clinic,” said Dr. Schou, a cardiologist at Hillerod University Hospital in Copenhagen.

Heart failure clinics with intensive patient management can aid in stabilizing patients, but they are most suited for

## Findings Point to Lower Costs

The results from this study show that properly treated heart failure patients on an evidence-based regimen can be effectively managed by a primary care physician. That’s a very powerful and important message. In the United States, heart failure management has become a big business. But every heart failure patient cannot be managed by a cardiologist because the number of patients is increasing too quickly. In the Danish study, general practitioners got the heart failure patients after they were stabilized, and the GPs were trained in how to adjust the patients’ diuretic dosages.

These results do not discount a role for heart failure disease management. Disease management works. It is important to have a specific regimen for monitoring and treating heart failure patients. But the results show that it doesn’t matter who does the monitoring and treating as long as they received training in how to do it.

The results also showed that we

waste time and money if we measure B-type natriuretic peptide repeatedly in heart failure patients. BNP is good for making an initial diagnosis of heart failure, to distinguish heart failure from other disorders with similar symptoms. But once an initial measure is made and the diagnosis confirmed, more BNP measurements don’t add anything further. Many U.S. heart failure patients undergo serial measurements despite the lack of good evidence that this helps. Current guidelines from the Heart Failure Society of America call for only measuring BNP initially in heart failure patients, especially when the initial diagnosis is uncertain based on clinical presentation (*J. Card. Fail.* 2010;16:e1-e194).



PRAKASH C. DEEDWANIA, M.D., is professor of medicine at the University of California, San Francisco, in Fresno. His comments were made in an interview. He reported having no disclosures.

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