

Cluster of 'critical' follow-up evaluations may improve outlook for hospitalized HF patients

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Heart failure is by far the most prevalent chronic cardiac condition. Around 30 million people in Europe have heart failure and its incidence is still increasing: more cases are being identified, more people are living to an old age, and more are surviving a heart attack but with damage to the heart muscle.

As a result, [heart failure](#) represents one of the most common reasons for [hospital admission](#) today. However, one of its many challenges is that, following admission, there remains a high likelihood that many patients will be readmitted or die within one year.

Indeed, a new report published in the *European Journal of Heart Failure*, a journal of the European Society of Cardiology, notes mortality rates as high as 10 per cent and rehospitalisation rates of 30 per cent after discharge among heart failure (HF) patients admitted to hospital. This reflects previous studies of hospitalised Medicare patients in the USA where those with HF had the highest rates of 30-day readmission of any diagnosis.

Now, the authors of the report (from Europe and the USA) have indicated that a range of "critical" follow-up evaluations might efficiently identify these high-risk HF patients so that their treatments and outlook can each be improved. Potential treatments, they suggest, might include "more aggressive" medical or device therapy, increased

frequency of follow-up, and enrolment in HF disease management programmes.

This international group of researchers examined 1528 hospitalised HF patients enrolled in the multicentre EVEREST trial. "We analysed our data to help identify which components of a patient's health status, clinical examination or laboratory tests obtained early after [hospital discharge](#) were most associated with poor outcomes," said investigator Professor John Spertus from the University of Missouri in Kansas City, USA. "We evaluated which components of the one-week follow-up visit offered the greatest incremental value in predicting cardiovascular rehospitalisation and mortality.

"By clarifying which domains of follow-up evaluation are most important, more efficient strategies for managing discharged HF patients could then be designed. For example, if health status assessments provided the most important information, merely calling patients after discharge might enable accurate risk stratification and guide future treatment decisions. If laboratory tests, such as cardiac biomarkers, conferred the most discrimination, a laboratory visit with review of results by phone might suffice. If [physical examination](#) is needed to discriminate prognosis, than a clinic visit would be required."

Results of the study showed that the components best able to predict one-year rehospitalisation and mortality were:

- the HF patient's health status, as determined by a questionnaire
- physical examination (especially evidence of oedema in the foot)
- laboratory evaluation of biomarkers, the most predictive of which are natriuretic peptides (BNP), anaemia and kidney

function (which can all complicate HF)

"While the physical examination, laboratory data, and health questionnaire each provided important individual prognostic information," said Professor Spertus, "the combination of all three provided the greatest accuracy in risk stratification. So it's our belief that a comprehensive assessment one week after hospital discharge, which includes patient history, review of medications, targeted physical examination, laboratory, and health status assessments, may represent the best strategy for identifying HF patients at highest risk for adverse outcomes." Professor Spertus added that the most important elements appeared to be BNP levels, response to a brief health status questionnaire and foot oedema.

Such follow-ups, he explained, provide the opportunity to help physicians best evaluate their HF patients in the hope of reducing mortality and hospitalisation rates in acute HF cases.

More information: Dunlay SM, Gheorghiade M, Reid KJ, et al. Critical elements of clinical follow-up after hospital discharge for heart failure: insights from the EVEREST trial. *Eur J Heart Fail* 2010; [doi: 10.1093/eurjhf/hfq019](https://doi.org/10.1093/eurjhf/hfq019)

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