# Reducing the cost of heart failure while improving quality of life

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Chronic heart failure (CHF) affects 900,000 people in the UK and consumes almost 2% of the National Health Service (NHS) budget. These figures are set to rise as the prognosis of coronary artery disease improves and the population ages. Heart failure currently accounts for approximately 5% of all emergency medical admissions to hospital, and over the next 25 years the proportion will rise by 50% – largely due to an older population.[1]

In the USA, in 2008 the total inflation-adjusted cost of heart failure admissions was US$10.7 billion, compared with US$6.9 billion in 1997.[2] So heart failure admissions are expensive and there is considerable interest in how we might reduce admissions, thereby reducing costs and leading to an improved quality of life (QoL) for patients with heart failure.[3]

One solution might be the Observation Unit (OU) proposed by Collins *et al*.[4] as an alternative to hospital admission for patients needing a brief period (under 24 hours) of intravenous diuretic therapy. Observation, by definition, is the use of appropriate monitoring, diagnostic testing, therapy, and assessment of patient symptoms, signs, laboratory tests, and response to therapy in order to decide whether a patient will require further treatment as an inpatient or can be discharged from the hospital. OUs are present in almost one third of US hospitals. They are short-stay units for emergency departments (EDs) and have been introduced as an economically viable and clinically safe solution to the growing problem of overcrowding in hospitals. They are typically situated within (or adjacent to) the ED. Patients who do not improve within 24 hours are admitted, but most (around 70%) are discharged. Patients on OUs are still under the auspices of the ED and are not considered inpatients. Their admissions are cheaper because OUs have a lower nurse-to-patient ratio than inpatient units and they are associated with a reduced length of stay. Not only that, but, because the patients are not counted as admissions, hospitals are not subject to 30-day re-admission penalties, another potential cost saving. In the US healthcare model, one of the problems associated with this approach is that while hospital costs are reduced, the bill for the patient can be increased. They are treated as outpatients when staying in an OU and insurers will often only 'part cover' outpatient expenses, whereas inpatient treatment is usually fully covered.

In the UK, short-stay units have become common following an NHS plan launched in 2000.[5] They are more commonly associated with medical admissions units than accident and emergency departments. By the time patients have reached such units they have been classified as inpatients and the hospital trust may then be subject to 30-day re-admission penalties. There is little point in operating an OU (or short-stay ward) as an accountancy trick to reduce hospital costs or avoid re-admission penalties: changes to the structure of healthcare should be to the benefit of patients.

## Observation Units – a UK model

Individual hospitals are unlikely ever to have a large enough number of heart failure admissions to allow a dedicated heart failure OU to be viable. Managing patients with heart failure in a generic short-stay unit without expert input, however, will make the problem of lack of integration of care worse, as yet another group become involved in patient management. A solution might be to have outreach from the heart failure service into OUs from a team of heart failure specialist nurses who work in the community as well as in hospital, so that patients who need a day or two of intravenous therapy can be managed by the group of nurses who know them. Intense initial follow-up post-discharge, with relaxation of appointments once remission and stability are achieved, is likely to reduce re-admissions. Whether such a model is actually better for the patient than simply being admitted to cardiology for appropriate management must be tested in formal trials before it is widely taken up.

The benefits of specialist heart failure clinics on survival and hospitalisation are well known.[6,7] Despite this, the National Heart Failure Audit for 2011–12 showed that only half of patients were

referred to a heart failure liaison service on discharge. Women with heart failure, or those patients over the age of 75, had a less than 50% chance of being followed up appropriately post-discharge.[8] While Desai *et al*.[9] may be correct in saying that "Even with widespread implementation of a package of post-discharge strategies that successfully address the triggers of re-admission, episodes of heart failure decompensation will continue to occur", we are a long way from widespread implementation of the package.

The modern management of CHF has led to improved life expectancy and QoL.[10] Recurrent admission to hospital has a significant effect on QoL, but measuring QoL is difficult. Although there are a number of disease-specific questionnaires available, many of them address symptoms that are thought to be important by the physician but may not be important to the patient.[10,11] The Kansas City Cardiomyopathy Questionnaire has the merit of specifically addressing the impact that symptoms have on the patient, which is particularly important as healthcare professionals often underestimate the social functioning of patients with heart failure.[10] Swinburn *et al*. in the present issue (see pages 72–6) compared the rating of symptoms made by a patient's relatives with the rating made by a specialist nurse. Relatives tended to grade symptoms as being less severe at day one following an admission for acute heart failure than the specialist nurses. It is important to emphasise, however, that patients' appreciation of their symptoms is not the same as that of healthcare professionals, and after all, it is the *patient* who experiences the symptoms.[12,13] A proxy assessment via the relatives may be a way of assessing QoL in very sick patients who are unable to speak, but this only applies to a very small number of heart failure admissions, most of whom can answer for themselves

## Conflict of interest

None declared.

## Editors' note

See the article by Swinburn *et al*. on page 72–6 of this issue.

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