



Simon Stewart

Heart failure management

A team based approach

Background

Chronic heart failure (CHF) is an important condition that requires complex treatment and management.

Objective

This article outlines the key benefits of a team based approach to CHF management and the role of the different health professionals involved, including a central role for the patient's general practitioner.

Discussion

Specific management programs are designed to improve CHF related outcomes such as reducing hospitalisation rates and prolonging survival. There are many components to these programs and a team based approach is arguably the most important. Programs that apply multidisciplinary care (either via dedicated CHF clinics or community based teams) are consistently superior to those supplied by an individual.

Keywords: Chronic heart failure; disease management, team-based



Chronic heart failure (CHF) is a deadly and disabling syndrome that has reached epidemic proportions in Australia (and in other aging populations).¹ Population based, hospital data from many countries,² including Australia,³ has shown encouraging declines in the rate of CHF related admissions. However, the overall burden of CHF, in respect to the number of individuals affected, all related hospitalisations and persistently high mortality, remains unacceptably high. Unfortunately, CHF is now becoming a major health problem in the developing world.⁴ The continued burden and adverse impact of CHF defies the introduction of new pharmacological agents and devices that underpin contemporary expert guidelines.⁵

Within this context, efforts to better organise the healthcare of affected individuals triggered the development of CHF management programs (CHF-MPs), mainly involving dedicated multidisciplinary teams. These programs predominantly target recently hospitalised patients in an effort to optimise their ongoing/long term management.⁵ A series of randomised trials in the 1990s^{6,7} suggested CHF-MPs reduce readmission rates, improve quality of life, reduce costs and prolong survival compared to usual care. These findings were confirmed in a series of meta-analyses.⁸ There has been debate about the real world efficacy of CHF-MPs⁹ and the COACH Study suggested that usual management with a cardiologist is equivalent to that provided via a moderate-to-intensive CHF-MP in limiting recurrent hospitalisation but inferior in prolonging survival.¹⁰ However, the overall strength of evidence in favour of CHF-MPs is compelling. Indeed, there is strong contemporary evidence to suggest that in the absence of face-to-face CHF-MPs (via community based or specialist outpatient CHF clinics) remote monitoring and management will also reduce morbidity and mortality.¹¹

Key components of CHF-MPs

The American Heart Association Disease Management Taxonomy Writing Group's scientific statement on categorising disease management,¹² clearly identifies some key components for successful CHF management that are inherent to many successfully applied



CHF-MPs. Contemporary scientific statements on the gold standard application of CHF-MPs in Australia¹³ and Europe (to be published soon by the European Society of Cardiology) identify a number of these key components including:

- pre-discharge planning
- formal pathways to improve communication within the healthcare team
- optimisation of gold standard pharmacological therapy (including up-titration of doses to evidence based levels)
- application of nonpharmacological strategies (including formal exercise programs, monitoring weight and adjusting dietary intake)
- patient (and care giver) education
- promotion of self care
- increased surveillance for impending crises.

Any review of the literature and how CHF-MPs achieve improved health outcomes in predominantly old and fragile individuals, reveals the importance of teamwork, not only in applying a multidisciplinary approach but in working with affected patients and their families.

A team based approach

Historically, CHF-MPs were predominantly nurse led with a broad remit for a specially trained nurse to coordinate healthcare activities and ensure effective coordination within the healthcare team to provide integrated care. Specific responsibilities (depending on the level of qualifications and training of the CHF nurse) included:

- noninvasive clinical evaluation
- patient education/promotion of self care activities
- initiation and titration of pharmacological therapy (particularly flexible diuretic regimen and up-titration of beta-blockers).

However, it is important to recognise that focus on CHF nurses may overshadow the critical role of the wider multidisciplinary team; indeed the potential impact of any CHF-MP is quickly lost once a multidisciplinary team approach is abandoned.¹⁴ Key personnel that typically form an integral role in the effective management of patients with CHF include:

- GP: to provide consistent day-to-day medical management and support (including for the syndrome of CHF and the many comorbid conditions that accompany it)
- cardiologist: to provide/facilitate advanced diagnostic techniques and treatment. This includes a mandatory assessment of cardiac function and structure to confirm the presence of CHF
- case manager: to coordinate healthcare via an agreed plan of management (ie. following a multidisciplinary team meeting organised by the patient's GP)
- pharmacist: to optimise pharmacological therapy and patient adherence. Many patients have difficulty with the complexity of therapy, both in respect to remembering to take their medications and in appreciating potential adverse effects from therapies with finely balanced benefit-to-risk ratios (eg. warfarin and spironolactone)
- dietician: to individualise dietary assessment and advice with a

particular focus on strategies to avoid cardiac cachexia through adequate nutrition, and to avoid excessive salt intake and optimise fluid intake (particularly combating unnecessary fluid restrictions)

- social worker: to coordinate services, particularly if the patient is suffering from depression (a common occurrence in CHF) and/or has limited social support
- exercise therapist: to develop and supervise an individualised exercise program either in a formal setting or in the home
- psychologist/psychiatrist: a supportive mental health structure may be required, particularly in regards to assessment of potential cognitive impairment (from mild to dementia) and/or associated depression, both of which are extremely prevalent in older patients with CHF.

The most successful models of care have formalised this team based approach, either by directing care via a specialist CHF clinic (located with a tertiary referral centre) and/or a dedicated team located in the primary care setting.

Incorporating a patient based approach

Any team based approach to improve CHF related outcomes has to recognise the importance of educating affected patients and their families to self care. It is now well recognised that many patients with CHF are affected by mild to severe cognitive impairment and/or depression¹⁵ which has potential to adversely impact their ability to self care. It is therefore recommended that older patients with CHF be routinely screened for impaired cognition, depression and anxiety as well as ability to self care. Assessment of self care ability has been facilitated by the development of specific tools that are easy to apply and interpret.¹⁶

Every effort should be made to understand the patient's personal experiences, including their symptom profile, their personal therapeutic goals, and how they believe the healthcare team can best support them. This is the 'heart' of the seminal trials that developed the evidence based in favour of CHF management and can valuably shape the team approach.

Key challenges

Effective team management is challenging and there is considerable work being undertaken to explore and refine how teams work. Although multidisciplinary teams are now considered essential to coordinated healthcare, the BENCH study,¹⁷ a survey of 55 CHF-MPs and 1147 patients (who attended 48 of these CHF-MPs) is a sobering reflection on the imperfect translation from research to practice. Many of the patients being treated at these clinics did not meet the National Heart Foundation of Australia definition of CHF.¹³ This study identifies the insecure financial support for many CHF-MPs and the paucity of planning to sustain the continuity and efficacy of the team management approach. The immense burden imposed by acute coronary syndromes and CHF is underappreciated by the public and healthcare system alike.¹⁸ Equitable access to CHF-MPs in rural and regional communities is of particular concern in Australia when there is a lack of sustainable funding models overall.¹⁹ A recently



updated Cochrane review of remote monitoring in CHF¹¹ provides strong evidence that this approach may be of particular benefit in the Australian context.

Conclusion

In order to optimise CHF related health outcomes for the increasing number of affected patients a team based management approach that includes the patient and their carer is imperative. In Australia, we are fortunate to have a rudimentary network of CHF-MPs (predominantly located in tertiary referral centres) supplemented by primary care initiatives that support the development of chronic disease management plans and coordinated approaches to management. Recently released guidelines¹³ reinforce the key principles underlying gold standard management of CHF: a team based approach remains central to optimising CHF related outcomes both at an individual and societal level.

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