



Review

Heart failure family-based education: a systematic review

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ABSTRACT

Objective: To systematically review evidence for the efficacy of family-based education for heart failure (HF) patients and carers.**Method:** A systematic review was conducted. Databases CINAHL, MEDLINE Complete, Cochrane, PubMed, Web of Science, EMBASE, PsycINFO, and Scopus were searched between 1 January 2005 and 1 May 2015. Randomised controlled trials included HF patient and carer dyads or carers alone. The primary outcome was HF knowledge. Secondary outcomes included self-care behaviour, dietary and treatment adherence, quality of life, depression, perceived control, hospital readmissions, and carer burden.**Result:** Six trials reported in nine papers were included. Wide variation in the quality of the studies was found. Two studies only examined HF knowledge; a significant improvement among patients and carers was reported. Other significant findings were enhanced patient self-care, boosted dietary and treatment adherence, enriched patient quality of life, improved perceived control among patients but not carers, and reduced carer burden.**Conclusion:** Modest evidence was found for family-based education among HF patients and carers. Methodological shortcomings of trials signify the need for empirically sound future research.**Practice implication:** Family-based HF education needs to include strategies that are tailored to the HF patient and carer, and sustainable in nature.

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1. Introduction

Heart failure (HF) is a major chronic health problem [1] associated with high rates of mortality [2], symptom burden [3], rehospitalisation [4] and diminished quality of life [5]. Annually, HF consumes a substantial portion of the health care budget [6]. The prevalence of HF is approximately 2–3% of the population and, notably, hospitalised HF patients remain a significant burden on the healthcare sector, representing 1–2% of all hospitalisations [7].

The management of HF is complex with the majority of ongoing care provided outside of the hospital system. Most commonly, HF patients and their families require substantial education regarding engagement in self-care. As a consequence, theory-driven self-care education is aimed at promoting, on a daily basis, self-monitoring of symptoms and engagement in appropriate strategies to address symptom changes [8–10].

In the context of HF, self-care is defined as a process involving the choice of behaviours patients adopt to sustain their health and respond appropriately when changes in symptoms occur [11]. The key behaviours in HF self-care are maintenance strategies and management decisions. Maintenance behaviours include daily weighing, monitoring for increased shortness of breath and adherence to medication regimens and have been revealed as instrumental in sustaining physiological stability, thereby preventing hospital readmissions [12,13]. Self-care management requires patients to recognise and evaluate deleterious changes in HF symptomatology, initiate remedial actions such as taking an additional diuretic, reducing fluid intake or resting, and report any negative changes to a healthcare professional [14]. These strategies have been shown to reduce the risk of clinical decompensation, thereby reducing emergency department admissions [15].

However, despite evidence attesting to self-care aiding clinical stability and improving quality of life [12,13,16,17], many HF patients struggle to assimilate such knowledge into everyday activities [18]. Self-care is complex and challenging due to the numerous and often simultaneous daily activities and tasks faced by the patient. Complexity is a challenge also experienced by the carer, who takes on several roles including health care administrator, treatment navigator, advocator for quality of life, and expert in the lived and ongoing experience of HF in the context of community and family [8,19]. Carers typically provide practical direct care, such as assisting with daily weighing, exercises, dietary sodium reductions and contacting health care professionals for advice. In addition, carers also provide indirect care, such as providing motivation and emotional support [20]. High rates of depression [21], mortality [22,23], hospital readmissions [24,25] and a diminished quality of life [26,27] have been identified in HF patients who lack support. Subsequently, informal carers have become recognised as a vital source of support for HF patients and in reducing a major burden on health services. The potential contribution from carers toward achieving positive HF health outcomes is now recognised in international clinical guidelines [28–30], with best practice guidelines recommending that family

members be included in care planning discussions and educational strategies [28–31].

In order to promote optimum wellbeing in HF patients and reduce the burden on the healthcare system family-based education is deemed essential, though little evidence is available to attest to its effectiveness or to guide its structure, content and delivery. The aim of this study, therefore, was to systematically review the evidence pertaining to family based-education for HF patients and carers.

2. Method

The development of this systematic review was guided by the criteria of the Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA) statement [32,33]. A protocol for the systematic review was developed through consensus among the co-authors and can be supplied upon request.

2.1. Search method

The search strategy aimed to identify published literature sources in the English language from 1 January 2005 to 1 May 2015 inclusive. Electronic databases searched included CINAHL, Cochrane Library, EMBASE, MEDLINE Complete, PsycINFO, PubMed, Scopus, and Web of Science. The following search terms were used: “heart failure” OR “congestive heart failure” OR “chronic heart failure” AND “family support” OR “family support intervention” OR “family education” OR “dyadic intervention” OR “family-focused intervention” OR “family member” OR “family caregiver” OR “caregiver” OR “informal caregiver” OR “family carer” OR “partner” AND “randomised controlled trial”. The reference lists of returned articles were searched to snowball for additional studies. The full search algorithm used to identify potential studies in the electronic database is included in [Appendix A](#).

2.2. Types of studies

Studies included in this review were randomised controlled trials (RCTs), such as HF patient and carer education compared with a control condition such as usual HF care, which provide the highest level of evidence in the literature [34]. The setting of the education program was either inpatient or outpatient. Exclusion criteria were studies in which education targeted the HF patient alone.

2.3. Types of participants

Participants included HF patients and their carer. Patients were those with a confirmed diagnosis of HF regardless of severity and aged 18 years or older. Carers were those living in the same household as the patient, or someone of the patient's own designation as ‘carer’ aged 18 years or older.

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