Effectiveness of self-management interventions on mortality, hospital readmissions, chronic heart failure hospitalization rate and quality of life in patients with chronic heart failure: a systematic review
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CRD summary
The review concluded that published trial evidence showed methodological shortcomings that impaired validation of the effectiveness of self-management interventions on mortality, all-cause hospital readmissions, chronic heart failure hospitalisations and quality of life in patients with chronic heart failure. The review was generally well conducted. The authors’ conclusions are suitably cautious and appropriate.

Authors' objectives
To determine the effectiveness of self-management interventions compared with usual care on mortality, all-cause hospital readmissions, chronic heart failure hospitalisations, and quality of life in patients with chronic heart failure.

Searching
MEDLINE, EMBASE, CINAHL and The Cochrane Library were searched from 1996 to 23rd April 2009 for articles published in any language. Search terms were reported. Reference lists of systematic reviews were hand searched.

Study selection
Randomised controlled trials (RCTs) of self-management interventions (in any format, such as written, audio and verbal) compared with standard care and implemented by any health professional or lay leader in adult patients (aged over 17 years) with chronic heart failure were eligible for inclusion. The relevant outcomes were mortality, all-cause hospital readmissions, chronic heart failure hospitalisations and quality of life. Self-management interventions could be integrated in any formal heart failure programme.

The included trials studied self-management interventions that comprised hospital education and follow-up monitoring, MOTIVA system, intensive follow-up, telephone and videophone, structured education, patient support education and behavioural management; these were compared with usual care in adult patients. In all trials, the main component of self-management was education and the intervention was delivered by health care professionals active in primary and secondary care. Mean patient age ranged from 43 to 79 years. Most patients were male.

Two reviewers independently performed study selection.

Assessment of study quality
Two reviewers independently assessed trial quality using the Delphi list for RCTs. Disagreements between reviewers were resolved by discussion or consultation with a third reviewer.

Data extraction
Two reviewers independently extracted data on mortality, all-cause hospital readmissions, chronic heart failure hospitalisations and quality of life. Disagreements between reviewers were resolved by consultation with a third reviewer.

Methods of synthesis
A narrative synthesis grouped studies by outcome.

Results of the review
Nineteen RCTs were included in the review (n=4,162 participants). Trials quality was variable. Seven trials had dissimilar baseline characteristics. Twelve trials adequately concealed allocation. Fifteen trials either did not perform assessor blinding or did not describe the method. Follow-up ranged from 183 to 730 days.
One trial showed a significant benefit for self-management on mortality and eight trials showed no difference. For chronic heart failure hospitalisations, two trials showed a significant benefit for self-management and two trials showed no difference. Two trials showed a significant benefit of self-management on all-cause hospitalisations and six trials showed no difference. Results for quality of life (various scales) were variable: eight trials found a significant effect in favour of self-management and six trials found no difference between groups.

**Authors’ conclusions**
The available published trial evidence showed methodological shortcomings that impaired validation of the effectiveness of self-management interventions on mortality, all-cause hospital readmissions, chronic heart failure hospitalisations and quality of life in patients with chronic heart failure.

**CRD commentary**
Inclusion criteria for the review were clearly defined. Several relevant data sources were searched. There were no language restrictions. Publication bias was not assessed and could not be ruled out. Attempts were made to reduce reviewer error and bias throughout the review process. Quality assessment was based on a standard checklist, which indicated the variable quality of evidence. Studies were narratively synthesised, which was appropriate given the apparent heterogeneity in included trials.

This review was generally well conducted and the authors’ conclusions are suitably cautious.

**Implications of the review for practice and research**

**Practice:** The authors did not state any implications for practice.

**Research:** The authors stated that further research was required on the independent primary effects of self-management interventions and different combinations of interventions on clinical and patient reported outcomes. Research was needed in selected patient populations with severe comorbidities, cognitive impairment and psychological disorders. Trials should be multicentre and good quality, with adequate duration of follow-up and properly defined terms.

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Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.