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Review article

The effect of nurse-led education on hospitalisation, readmission, quality of life and cost in adults with heart failure. A systematic review

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ABSTRACT

Objective: The purpose of this systematic review was to highlight the effect of nurse-led 1:1 patient education sessions on Quality of Life (QoL), readmission rates and healthcare costs for adults with heart failure (HF) living independently in the community.
Method: A systematic review of randomised control trials was undertaken. Using the search terms nurse, education, heart failure, hospitalisation, readmission, rehospitalisation, economic burden, cost, expenditure and quality of life in PubMed, CINAHL and Google Scholar databases were searched. Papers pertaining to nurse-led 1:1 HF disease management of education of adults in the community with a history of HF were reviewed.
Result: The results of this review identified nurse-led education sessions for adults with HF contribute to reduction in hospital readmissions, reduction in hospitalisation and a cost benefit. Additionally, higher functioning and improved QoL were also identified.
Conclusion: These results suggest that nurse-led patient education for adults with HF improves QoL and reduces hospital admissions and readmissions.
Practice implications: Nurse-led education can be delivered utilising diverse methods and impact to reduce readmission as well as hospitalisation.

Contents

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1. Introduction

Heart failure (HF) is a syndrome with a generally poor prognosis, regardless of the use of device therapy and pharmacological interventions [1–3]. It remains the chief reason for hospitalisation in adults over the age of 65 years [4]. Readmissions, debilitating symptoms and poor QoL are characteristic of patients with HF [5,6]. Globally, there are approximately 26 million HF patients with the incidence expected to rise 25% by 2030 [1,7]. In the mild to moderate classification of HF, one-year survival is estimated at 80–90%. However, in severe HF, the one-year survival estimation is 50—60% [8]. The annual cost of HF is approximated at $108 billion worldwide [9]. This is expected to rise owing to an ageing population and increasing prevalence of factors such as obesity [5]. The main expenditure relating to HF is on hospitalisation, followed by pharmacotherapies and community support [10–12].

Multiple factors contribute to a decline in patients with HF, resulting in hospitalisation and decreased quality of life (QoL). These pertain to the patient, healthcare providers, and health and economical systems [13]. Lack of social support, absence of a partner and living alone constitute a risk for rehospitalisation [6,14,15]. Improving self-management skills through disease management programs have shown favourable outcomes in adults with HF, particularly on symptoms, wellbeing, functioning, morbidity and prognosis [16].

Risk models relating to psychosocial factors have been developed to identify and target individuals in risk of adverse events such as rehospitalisation [14,17]. Due to the limitations in medical treatment and the significant economic burden of HF, primary and secondary prevention strategies including education have been sought [9]. Several disease management programmes have been trialled to reduce cost, hospitalisation and improve QoL of adults with HF [3]. However, these often include a multidisciplinary approach and result in large expenditures [18]. Thus, nurse-led interventions in disease management may prove more cost-effective in HF management. Additionally, self-care has become an important component in HF management with the primary objective of teaching patients self-care, increase compliance and self-efficacy, improve QoL and reduced healthcare costs [8,19].

The main objectives for HF management are slowing or stopping the progression of HF, managing symptoms and preventing hospitalisation [20]. The practice guidelines in USA, Europe and Australia highlight patient education as a key component in establishing an effective management regimen for adults with HF [20–22].

Many hospital admissions relating to HF are preventable [23]. Additionally, poor HF related knowledge has been linked to issues such as medication non-compliance [24,25]. These aspects emphasise the importance of patient education. Ideally, the rationale is to increase patients' knowledge, which in turn, leads to improved self-care behaviour and decrease adverse outcomes [23] such as hospitalisation and cost.

1.1. Aims

The study aim was to identify evidence on the effect of nurse-led community education on readmission, hospitalisation, QoL and cost in adult patients with HF.

Patient education is an integral part of a nurse's role. It has been shown to reduce hospitalisation and readmission. Face-to-face education sessions delivered by nurses to adults with HF have shown to improve disease management knowledge [26]. When comparing the amount of time healthcare providers spend with patients, nurses tend to interact and spend considerably more time with patients. As such, the rapport and relationship nurses build with patients has been shown to influence patient outcomes including adherence to treatment, satisfaction, and understanding of information [27]. Previous literature has identified patient dissatisfaction with physicians not providing understandable explanations of disease management when information was presented to adults with HF [28].

The most appropriate types of studies to address the effectiveness of an intervention are randomised controlled trials (RCTs) [29].To establish this, we reviewed RCTs that included nurse-led education as an intervention in which the end points were readmission, hospitalisation, QoL and/or cost.

2. Methods

This review is an analysis of RCTs focused on nurse-led 1:1 patient education of adults living in the community.

2.1. Inclusion and exclusion criteria

Studies were included based on the following criteria:

RCTs; Adults 18 years and older; a diagnosis of HF regardless of duration or severity or co-morbid conditions; nurse-led education that took place in the community.

Studies were excluded based on the following criteria:

Paediatric population; multidisciplinary team approach to education; in-hospital education; education aimed at both patient and families/caregivers; patients living in care facilities.

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