Geriatric Nursing 35 (2014) 188–193

Contents lists available at ScienceDirect

Geriatric Nursing

journal homepage: www.gnjournal.com

Feature Article

Implementation of a self-care of heart failure program among home-based clients

Rebecca Bryant, DNP, FNP-BC [a,*], Phyllis Gaspar, PhD, RN [b]

[a] School of Nursing, College of Health Sciences and Professions, Ohio University, Grover Center W133D, Athens, OH 45701-2979, USA
[b] College of Nursing, University of Toledo, Toledo, OH 43614, USA

ARTICLE INFO

Article history:
Received 5 September 2013
Received in revised form
14 January 2014
Accepted 18 January 2014
Available online 20 February 2014

Keywords:
Self-care
Heart failure
Homebound
Older adults
Hospital admissions
Self-care behaviors
Nurse practitioners

ABSTRACT

Heart failure is the most common admission in hospitals among Medicare recipients aged 65 years or older. Self-care management of heart failure has been reported to decrease heart failure hospital admission rates. The purpose of this evidence-based practice project was to examine how a self-care of heart failure program (Heart Failure Self-care to Success) impacts hospital admissions and patient perceptions of self-care management. Heart Failure Self-care to Success (HF S2S) was successfully implemented with 18 participants by nurse practitioners in a house call practice. Six months following implementation of the self-care of heart failure program no heart failure admissions occurred among participants and a significant increase in their self-care of heart failure behaviors ($p < .01$) was reported by participants. Nurse practitioners using HF S2S can decrease health care costs and improve self-care behaviors in the older, homebound heart failure patient. Further testing of HF S2S is recommended in different practice settings, sample populations, and geographic locations.

In the United States about 5.8 million people have heart failure (HF), with reported 300,000 deaths each year.[1] Incidence and prevalence of persons living with HF is growing in the United States.[2] Heart failure is the most common admission in hospitals among Medicare recipients aged 65 years or older, accounting for 5% of all Medicare hospital admissions.[3] Heart failure admissions to the hospital impact health care costs, hospital organizations, and the individual patient.[4]

Billian's HealthDATA portal, which Medicare uses to determine reimbursement rates for hospitals, reports the national average reimbursement for HF admissions between $7696 and $9939.[5] Additional health care utilization costs occur with heart failure readmissions within 30-days from discharge.[6] Centers for Medicare and Medicaid Services through the passage of the Patient Protection and Affordable Care Act in March 2010, authorized a payment adjustment to hospitals for excessive HF readmission rates beginning in the fiscal year 2013.[6] The current health care environment places an emphasis on HF education with the inpatient population to decrease the 30-day readmission rates.[4] There is a need to access the complex, frailer HF patients prior to an initial admission or readmission to the acute care hospital setting.

Hospitalizations negatively affect the health and financial status of those patients aged 65 years and older.[4] Patients' post-hospital discharge potentially experience a decrease in functionality, physical endurance, medication changes, and a disruption of social support.[4,7] Many of these patients live on a fixed-income with Medicare as their primary insurance.[4] Every hospitalization incurs additional financial costs to the patient and family including insurance copayments and missed work time by caregivers/family.[4] Hospital admissions are preventable with improved self-care of heart failure skills.[8]

Self-care is defined as a naturalistic decision-making process that reflects patients' choice of behaviors to maintain physiological stability and response to adverse symptoms.[9] The factors that influence natural decision-making include the patient's level of knowledge, experience, skill, and compatibility with their personal values.[9] Self-care interventions related to heart failure management impact hospital admission rates.[8,10–13] All of these studies include an aspect of symptom management, treatment management, and physical consequences. Cognitive behavioral response, multi-disciplinary interventions, home visits, and structured guidelines were implemented in over seventy percent of these studies as a part of their self-care of heart failure (SCHF)

* Corresponding author. Tel.: +1 937 725 5006; fax: +1 937 289 3003.
E-mail address: bryantr@ohio.edu (R. Bryant).

0197-4572/$ – see front matter © 2014 Mosby, Inc. All rights reserved.
http://dx.doi.org/10.1016/j.gerinurse.2014.01.003

Table 1
Comparison of defined criteria of self-care interventions across studies.

Intervention criteria	Boren[11,a]	Dewalt[13,b]	Ditewig[12,a]	McAlister[8,a]	Windham[10,c]	HFSA[14,c]	Riegel[15,c]
Symptom management	X	X	X	X	X	X	X
Treatment management	X	X	X	X	X	X	X
Physical consequences	X	X	X	X	X	X	X
Psychosocial consequences	X		X		X		X
Lifestyle changes	X		X			X	X
Cognitive behavioral response	X	X	X			X	X
Emotional response	X		X				X
Multidisciplinary interventions	X		X	X	X	X	
Home visits	X		X	X	X	X	
Structured guidelines	X		X	X	X	X	
Provider follow-up	X		X			X	
Goal setting			X				
Preventative behaviors						X	X

[a] Systematic review.
[b] Randomized control trial.
[c] Expert review.

interventions. A synthesis of SCHF interventions was key in the development of Heart Failure Self-care to Success (HF S2S), the program implemented in this project (see Table 1).[8,10–15]

The implementation of self-care programs for patients with heart failure had some similarities and differences.[8,11–13] The majority had a multidisciplinary educational approach and were primarily nurse-led (outpatient centers, home health agencies, and heart failure clinics) with additional support by dieticians, pharmacists, and health educators.[8,11–13] One-on-one counseling by a physician (cardiologist or primary care) was included as part of the programs implemented by Windham and Ditewig.[10,12] House call practices that are nurse practitioner owned/operated have a unique opportunity to demonstrate their educational and one-on-one counseling skills as providers of chronic disease management in improving patient outcomes.

Self-management of heart failure studies include a varied combination of educational instruction (HF causes, pathophysiology, physician follow-up appointments, symptom recognition),[8,11–13] daily weight monitoring,[8,11–13] fluid management (Na^+ intake, fluids balance, management),[8,11] support systems,[8,11] telephone follow-ups,[8,10,13] home visits,[10] diet and activity.[8,10–13] Heart Failure Society of America and the American Heart Association expert opinion incorporates many of these interventions into their guidelines.[14,15] Most studies using self-management principles report a decrease in heart failure hospital admissions with only a few studying these interventions impact on a change in patient's self-care behaviors.[11,13,15] While many of the studies listed specific self-care interventions, most did not discuss the philosophy of care used during implementation of these interventions.[8,10–13] Research supports a multidisciplinary delivery of these interventions with the majority including registered nurses.[8] There are no published self-care of heart failure programs demonstrating a decrease in hospital utilization and change in self-care behaviors with heart failure patients available for implementation by nurse practitioners.

The Self-Care of Heart Failure Model[9] provided a framework to guide the development of the Heart Failure Self-care to Success (HF S2S) program. This model was selected for its conceptual clarity of self-care of heart failure. As the previous research that evaluated self-management programs for patients with heart failure lacked a conceptual definition of self-care.[8,10–13] A single theoretical framework was not consistently used in the development of these self-management programs, resulting in difficulty in the comparison of their outcome measurement differences.[7,9] The purpose of this project was to examine how an evidence-based self-care of heart failure program (Heart Failure Self-care to Success) impacts hospital admissions and patient perceptions of self-care management of heart failure.

Self-care is important in the management of chronic diseases.[16] The Self-Care of Heart Failure Model is a situation-specific framework conceptualizing the decision making process of patients with heart failure.[9] This model conceptualizes maintenance of heart failure to include symptom monitoring and treatment adherence.[9] Management of heart failure in this model is conceptualized as the decision-making process where the patient recognizes symptoms, takes action, and evaluates their outcomes.[9] In this model, confidence is conceptualized as a moderator between maintenance and management of heart failure on their outcomes.[9]

Methods

Participants

The population included patients 65 years and older with a diagnosis of HF receiving home visits by nurse practitioners in a Midwest house call program. This house call practice is owned and operated by nurse practitioners and at the time of the project had approximately 400 patients. The Midwest house call practice identified 34 heart failure patients in their practice on January 1, 2012. Participants were excluded if they had a cognitive impairment (scored less than a 3/3 word recall with an abnormal clock drawing test using the Mini-Cog[17] instrument), a significant functional limitation (inability to weigh self on scale), or were enrolled in hospice. The goal of this sampling was to include participants with the motivation and ability to perform self-care activities. Patients are limited in their ability to participate in self-care activities if there are cognitive or functional limitations.[15,18,19] Hospice patients focus on their end-of-life issues and not on disease management.[15] The study was approved by the university's Institutional Review Board.

There were 28 of the 34 identified patients available in January during their regularly scheduled house call visit to approach for consent and participation. The decrease in the overall population was related to death (1), moved from house call practice area (2), transferred to long term care (1), and admission to hospice (2). Of these 28 patients, two refused participation and eight did not meet the inclusion criteria (2 cognitively impaired and 6 functionally impaired). There were 18 total participants included in the clinical project (see Fig. 1). The sample population was predominately female (72.2%) and an educational level of 9th grade to high school graduate (83.3%). Participant's ages were collected using age ranges with the highest number of participants in the 65–70 age range and