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

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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. Incidence and prevalence of persons living with HF is growing in the United States. 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. Heart failure admissions to the hospital impact health care costs, hospital organizations, and the individual patient. 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. Additional health care utilization costs occur with heart failure readmissions within 30-days from discharge. 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. The current health care environment places an emphasis on HF education with the inpatient population to decrease the 30-day readmission rates. 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. Patients’ post-hospital discharge potentially experience a decrease in functionality, physical endurance, medication changes, and a disruption of social support. Many of these patients live on a fixed-income with Medicare as their primary insurance. Every hospitalization incurs additional financial costs to the patient and family including insurance copayments and missed work time by caregivers/family. Hospital admissions are preventable with improved self-care of heart failure skills.

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. The factors that influence natural decision-making include the patient’s level of knowledge, experience, skill, and compatibility with their personal values. Self-care interventions related to heart failure management impact hospital admission rates. 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)
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 dietitians, 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,13 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 Model8 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-Cog17 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

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**Table 1**

<table>
<thead>
<tr>
<th>Intervention criteria</th>
<th>Boren8,13</th>
<th>Dewalt12,13</th>
<th>Ditewig8,13</th>
<th>McAlister8,13</th>
<th>Windham13,15</th>
<th>HFSA14,15</th>
<th>Riegel15</th>
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<tr>
<td>Symptom management</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Treatment management</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Physical consequences</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Psychosocial consequences</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Lifestyle changes</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Cognitive behavioral response</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Emotional response</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Multidisciplinary interventions</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Home visits</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Structured guidelines</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Provider follow-up</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Goal setting</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Preventative behaviors</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
the remaining participants dispersed throughout the other age ranges. The participants’ living arrangements were evenly distributed (see Table 2).

**Design**

A single group, pre and post intervention design with participants serving as their own control was used to measure the outcome of the implementation of the intervention. The intervention was a newly developed self-care of heart failure program titled, *Heart Failure Self-care to Success (HF S2S)*, with a sample of heart failure patients aged 65 years and older over six months. These patients were homebound and receiving primary care services by nurse practitioners in a Midwest urban area house call practice.

**Intervention**

The Self-Care of Heart Failure Model and evidence served as the guide for the development and information of self-care for HF S2S intervention. The patient component of the program included a combination of knowledge education (causes, sodium intake, fluid balance, diet and activity), management (e.g. monitoring of medications, weights, and edema), weight scales, weight scales,11,12 accessing and communication with health care individuals.13 The HF S2S calendar is a 12-month calendar designed to incorporate all of the above components (see Fig. 2). The monthly/daily tracking calendar page is to be used to encourage participants to record weight, monitor symptoms, and remind participants to take daily medications. The opposite side of the self-record system includes education on heart failure knowledge, HF maintenance (symptom monitoring), and HF management (symptom recognition/treatment/evaluation) information.13 Contact information was completed by the nurse practitioners containing emergency contact, cardiologist, and house call practice names and phone numbers. On the final page of the project calendar a medication list was used by the nurse practitioners to reconcile medications between providers. The education component was developed as a self-paced program by participants with one-on-one counseling by nurse practitioners using the materials. A health care component which included directions for implementation complemented the program (see Table 3). These materials were all incorporated into a toolkit for facilitating the implementation of the HF S2S program.

**Implementation**

The implementation of HF S2S included an orientation meeting with the three nurse practitioners (NPs) in the house call practice. This orientation meeting included a review of participant selection, consent, HF S2S program guide, and the implementation guide (see Table 4). The implementation guide was a checklist used by the NPs to guide and document the step-by-step implementation process of the HF S2S intervention. The initial house call visit included participant consent, distribution of weight scales, administration of the first SCHFI (v.6), directions for participant’s self-recording in calendar, and one-on-one counseling of the first four HF S2S calendar educational pages by the NPs. The time for this initial visit ranged from 1 to 1 1/2 h. One-on-one counseling using the HF S2S program content (8 more calendar pages) and evaluation of participant’s self-recording (weights, edema, recognition/treatment of symptoms) occurred during the next two, regularly scheduled 5-week interval house call visits by NPs. The time for these subsequent visits was approximately 40 min. Ongoing one-on-one interactions between participants and NPs at subsequent house call visits continued for a six month period using the HF S2S program materials.

The HF S2S program content prompted discussions between participants and NP providers. Participant’s self-recording of symptoms (weight, edema, and medication compliance), evaluation/treatment of symptoms, HF S2S calendar educational content, and adherence to treatment regimens were discussed with the participants by the NPs during all house call visits. Participant’s self-care activities and knowledge were reinforced or modified (e.g. self-recording components on calendar, specific education, and NP notification of HF symptoms) as necessary through NP provider support and guidance.

**Measures**

**Heart failure hospital admissions**

Admissions to the hospital related to heart failure were obtained from a review of the participants health records kept by the agency.

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Table 2

Sample population characteristics (N = 18).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>5</td>
<td>27.8</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>13</td>
<td>72.2</td>
</tr>
<tr>
<td>Age range</td>
<td>65–70</td>
<td>5</td>
<td>27.8</td>
</tr>
<tr>
<td></td>
<td>71–75</td>
<td>2</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td>76–80</td>
<td>3</td>
<td>16.7</td>
</tr>
<tr>
<td></td>
<td>81–85</td>
<td>4</td>
<td>22.2</td>
</tr>
<tr>
<td></td>
<td>86+</td>
<td>4</td>
<td>22.2</td>
</tr>
<tr>
<td>Education</td>
<td>&lt;8th grade</td>
<td>2</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td>&lt;12th grade</td>
<td>7</td>
<td>38.9</td>
</tr>
<tr>
<td></td>
<td>High school graduate</td>
<td>8</td>
<td>44.4</td>
</tr>
<tr>
<td></td>
<td>&gt;High school education</td>
<td>1</td>
<td>5.6</td>
</tr>
<tr>
<td>Living arrangement</td>
<td>Lives alone</td>
<td>6</td>
<td>33.3</td>
</tr>
<tr>
<td></td>
<td>Lives with spouse</td>
<td>4</td>
<td>22.2</td>
</tr>
<tr>
<td></td>
<td>Friend/family other than spouse</td>
<td>8</td>
<td>44.4</td>
</tr>
</tbody>
</table>

**Fig. 1.** Sample population enrollment.
The number of participants’ admissions due to HF for a six month measurement period was compared to the number of participants’ HF admissions prior to the HF S2S program by a retrospective review.

Self-Care of Heart Failure Index

The HF S2S program content was developed to encourage self-care behaviors in the maintenance and management of heart failure. Participant’s completed the Self-Care of Heart Failure Index (SCHFI v.6) at baseline and then were asked to “think about how you have been feeling in the last 3 months as you complete the items” on the SCHFI (v.6) three months post initial visit. The authors of this index recommended a time interval no longer than three months due to participant’s issues with recall of their symptoms and evaluation of treatment. The SCHFI uses a quantitative, ordinal, self-report, rating scale to measure heart failure maintenance, management, and confidence.

Reliability and validity updates were reported for the SCHFI (v.6). Coefficient alpha for reliability reported for each scale was: self-care maintenance scale .553 (95% CI = .439–.651); self-care management scale .597 (95% CI = .434–.725); self-care confidence scale .827 (95% CI = .781–.86). Concurrent validity was tested by comparing scores from the SCHFI (V.6) to scores on the European Heart Failure Self-care Behavior Scale (EHFScBS). Self-care maintenance construct was supported to be moderately and negatively related to the EHFScBS (r = −.65, p < .001). Since the EHFScBS measures only self-care maintenance the constructs of self-care management (r = −.18, p = .43) and self-care confidence (r = −.05, p = .76) were poorly correlated. The SCHFI (v.6) has good internal reliability and has undergone extensive validity testing.

Data analysis

The differences in pre and post HF hospital admission data were analyzed using descriptive statistics. The SCHFI (v.6) pre and post questionnaire data were evaluated for differences in change scores. A paired t-test on the change scores was used to determine statistical significance. The change scores between the pre-test and post-test score for each participant on section A (HF maintenance), section B (HF management), and section C (HF confidence) were computed.

Results

The average number of heart failure hospital admissions during a 6 month period before HF S2S was 1.39 (SD 1.539) with a range from no hospitalizations to 5 hospitalizations prior to the HF S2S program intervention. None of the participants experienced a hospital admission related to heart failure during the 6 months following participation in the HF S2S program. As reported in Table 5, a significant increase in all three categories of the self-care behavior index scores (SCHFI v.6) was found for the following components: maintenance 5.7 (16), p < .001; management 4.9 (4), p < .01; confidence 6.9 (17), p < .001.

Discussion

Consistent with research that demonstrates the effectiveness of self-care interventions with heart failure patients, the implementation of HF S2S program suggests improvement in patient outcomes. Similar to Boren and Ditewig, the heart failure hospital admission rates were decreased post
Table 3
Heart Failure Self-care to Success (HF S2S) Program Guide.

Program goal: To empower heart failure patients to achieve optimal heart health and independence through self-care, maintenance, and confidence.

Provider objective: To assist providers in the education of clients in self-care of heart failure.

Materials needed: Heart Failure Self Care to Success calendar/journal and weight scale.

Instruction methods: Patient self-paced and one-on-one nurse practitioner counseling.

Process:

Step one: Complete and update information
- Provider information on first page with phone numbers
- Medication list and describe purpose for all medications on back page
- Begin “Month” and fill in dates

Step two: Calendar recordings (maintenance)
- Daily weights
- Level of swelling
- Medication administration
- Other — tests, provider appointments, home health visits

Step three: Calendar recordings (maintenance)
- Encourage client to share calendar with all caregivers and other providers
- Review HF S2S calendar at each visit

Step three: heart failure education
- Provider quick review of heart failure education on calendar pages
  - Basic knowledge
  - Daily weights/record (maintenance)
  - Worsening signs/symptoms (management)
  - Action plan (management)
  - Sodium intake (maintenance)
  - Fluid intake (maintenance)
  - Medication administration (maintenance)
  - Activity (maintenance)
  - Prevention/lifestyle (maintenance)
  - Pulling it all together CONFIDENCE
  - Patient — self-paced learning
  - Encourage to call with questions about program
- Develop and adjust heart failure management action plan with provider

implementation of self-management strategies. These strategies used a combination of knowledge education and management (e.g., monitoring of medications, weights, and edema).

Table 4
Implementation guide for the HF S2S program.

<table>
<thead>
<tr>
<th>Visit</th>
<th>X for completed</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comments</td>
<td></td>
<td>Project participation consent obtained</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>Mini-cog administered — score</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>Functional ability to weigh/scribe numbers Y N</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>Age range: 65–70 71–75 76–80 81–85 86–90 &gt;90</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gender: M F</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Education level: &lt;5th grade &lt;6th grade &lt;7th grade H S H S</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Living arrangement: Alone With spouse Family/friend</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>Weight scale and program calendar distributed</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>Self-Care of Heart Failure Index administered by NPs</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>One-on-one discussion of four calendar pages</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>One-on-one discussion of four calendar pages</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Self-care of Heart Failure Index administered by NPs</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>Ongoing one-on-one discussion of program content</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Ongoing one-on-one discussion of program content</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Turn in all data collection tools in folder</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pre — Self-Care of Heart Failure Index</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post — Self-Care of Heart Failure Index</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Implementation guide</td>
</tr>
</tbody>
</table>

Table 5
Heart failure management, maintenance, and confidence paired t-test.

<table>
<thead>
<tr>
<th>Test value = 0</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean difference</th>
<th>95% confidence interval of the difference</th>
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</thead>
<tbody>
<tr>
<td>Maintenance</td>
<td>5.737</td>
<td>16</td>
<td>.000</td>
<td>18.62559</td>
<td>25.5086</td>
</tr>
<tr>
<td>Management</td>
<td>4.950</td>
<td>4</td>
<td>.008</td>
<td>35.00000</td>
<td>54.6324</td>
</tr>
<tr>
<td>Confidence</td>
<td>6.964</td>
<td>17</td>
<td>.000</td>
<td>33.05111</td>
<td>43.0639</td>
</tr>
</tbody>
</table>

scales, accessing and communication with health care individuals. The HF S2S toolkit details a systematic approach, one-on-one counseling by nurse practitioners, and program content based on evidence-based knowledge. These were similar strategies recommended by Sochalski as effective self-care strategies in heart failure.

No studies report nurse practitioners as primary care providers using self-care strategies with heart failure patients in the home. In many heart failure management studies, nurses were the primary educators of self-care management interventions to improve hospital utilization and behaviors. The implementation of HF S2S by nurse practitioners in a house call practice is feasible with their advanced clinical reasoning skills, educational experience, and unique provider relationship in patients’ homes.

In addition to the reported decrease of heart failure hospital admissions, the differences in self-care behaviors showed a statistically significant increase following the HF S2S program intervention. Windham and colleagues report similar improvements in self-management of heart failure related to the components of heart failure knowledge, education by health care providers, symptom recognition, and ability to access providers. The use of a self-care definition along with a conceptual framework to develop and guide implementation of HF S2S program was unique to this pilot project. Minimal studies defined self-care of heart failure or the use of a conceptual framework within their studies limiting comparison of results.

A decrease in overall health care savings can be demonstrated with the implementation of the HF S2S project. Using Billian’s HealthDATA estimation of health care costs attributed to a heart failure hospital admission, the health care cost savings was estimated to be approximately $200,000 for the 18 participants over the six months following the SCHF program. There was minimal cost for the HF S2S program intervention. The cost of materials for this intervention was $50/participant. This expenditure can easily be recovered by billing for the one-on-one counseling using evaluation and management codes with minimal chart documentation by the nurse practitioner. Sochalski reports one-on-one counseling by providers is an important aspect in caring for heart failure patients.

This pilot project had several limitations. The results indicate that the program was effective in reducing HF hospitalization rates and increasing the self-care behaviors for a small group of clients in one setting. The homogenous demographics of the pilot group recruited from patient’s homes in an urban area limit the ability to interpret these findings for population with different backgrounds and geographic locations. Continued evaluation of the implementation of the HF S2S using the toolkit in other settings is essential. Additionally, the design of the project effectiveness did not measure the relationships between individual components of the HF S2S (self-care behaviors, HF hospital admission rates, and participant characteristics). These relationships could be addressed in future research studies.
Conclusion

The feasibility of nurse practitioners implementing HF S2S in a house call practice was demonstrated by the results of this pilot project, health care savings, and ability for nurse practitioners to receive reimbursement for these services. This pilot project was an important step in measuring the impact of HF S2S program on hospital admissions and self-care behaviors by nurse practitioners. Clearly continued implementation of the program is needed to further validate and expand these findings. Research that uses a quasi-experimental design using random sampling methods, different practice settings, and geographic locations would examine differences between groups for internal validity. A larger sample size using correlation statistics between SCHF behaviors, HF hospital admissions, and participant characteristics would indicate possible relationships. These relationships can be used to improve the HF S2S program and identify populations best served by this HF S2S program.

The findings from the implementation of HF S2S with household, older heart failure patients reveal that heart failure hospital admissions can be decreased and further demonstrate an improvement in their self-care of heart behaviors. These findings have two clear clinical implications one is that patients receiving HF education, HF symptom recording tools, and one-on-one counseling with support by nurse practitioners demonstrate a positive improvement in SCHF behaviors. Secondly, a decrease in heart failure hospital admissions is a cost savings for the overall health care system. The challenge for health care systems and providers is to access these older adult heart failure patients prior to acute hospital admissions. In summary, the focus with heart failure patients should be proactive with nurse practitioners providing the leadership regarding innovative programs. Nurse practitioners and health care systems can formulate the best plan for the patient; however the patient needs to actively participate in the maintenance and management of their heart failure disease as a strategy to impact their outcomes.

Acknowledgments

A special thanks to Gail Moddeman, PhD, RN at Wright State University and Todd Sobol, MD at Wright State University. This work was partially funded by the Gerontological Advance Practice Nurse Association’s Foundation Clinical Project Grant.

References


