Implementing a Heart Failure Patient Educational Program to Improve Self-Care

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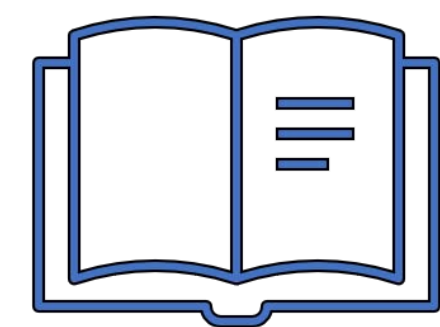
Introduction & Background

- Self-care is critical for successful heart failure (HF) management, but patients often **struggle to recognize, interpret, and respond to symptoms**
- Suboptimal HF management leads to: ↑ **cost & preventable readmissions** and ↓ **clinical outcomes & quality of life**
- The literature supports **nurse-led inpatient education, self-recording tools, teach-back, & role playing**
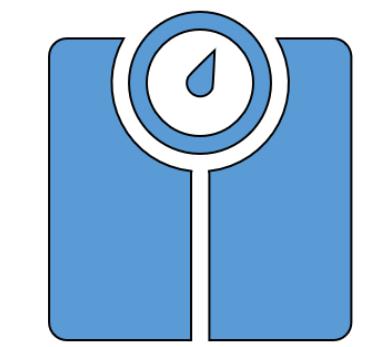
Daily Weights   Symptom Monitoring   Education   Confidence & Experiences   Follow-up

Fig. 1 – Key Elements of Self-Management of Heart Failure

Purpose & Aims

Purpose: to increase patient engagement in self-care practices with the following aims:

1.) Evaluate patient-reported self-care before and after the educational intervention using the Self-Care of Health Failure Index (SCHFI) survey

2.) Examine patient engagement in daily weighing and symptom monitoring using a tracking log, as well as medical visit follow-up post-hospital discharge

Methods

Design: pretest, posttest pilot study

Setting: inpatient cardiac unit and outpatient HF clinic

Inclusion Criteria: 18 yo +, f/u at outpatient HF clinic, English-speaking, able to stand for daily weights

Exclusion Criteria: significant cognitive impairment, hearing or visual impairment, residence in nursing care facility, history of or consideration for a heart transplant or LVAD

Intervention:
- Nurse-led HF education session (daily weights, HF symptoms, symptom interpretation, follow-up)
- Toolkit for weight & symptom tracking

Data collection:
- Pre/post SCHFI scores at enrollment, hospital discharge, & outpatient
- Log audits
- Outpatient appointment attendance rate

Table 1

Sample characteristics

Characteristic	(N = 10), n (%)
Age (years), median (IQR)	62 (17)
Sex (male)	7 (70)
Race	
Caucasian	4 (40)
African American	5 (50)
Other	1 (10)
Live with another person	9 (90)
Education	
High school or lower	3 (30)
Some college or higher	7 (70)
Comorbidities	
HTN	9 (90)
DM	8 (80)
CKD	4 (40)
COPD	1 (10)
Depression	1 (10)
NYHA classification at admission	
II	2 (20)
III	6 (60)
IV	2 (20)
Ejection Fraction	
Reduced (< 40)	6 (60)
Preserved (≥ 40)	4 (40)
Days per week daily weight is obtained, median (IQR)	7 (3)
Write down weight (yes)	5 (50)

Values are presented as median (interquartile range) or n (%). HTN, hypertension; DM, diabetes mellitus; CKD, chronic kidney disease; COPD, chronic obstructive pulmonary disease; NYHA, New York Heart Association.

Results

Aim One:
- Statistically significant increase in self-care scores from enrollment to discharge (maintenance 45 (10.6), $p < 0.005$; symptom perception 6.5 (11.4), $p < 0.030$; management 12.1 (18.9), $p < 0.037$). There was no significant change in confidence.

Aim Two:
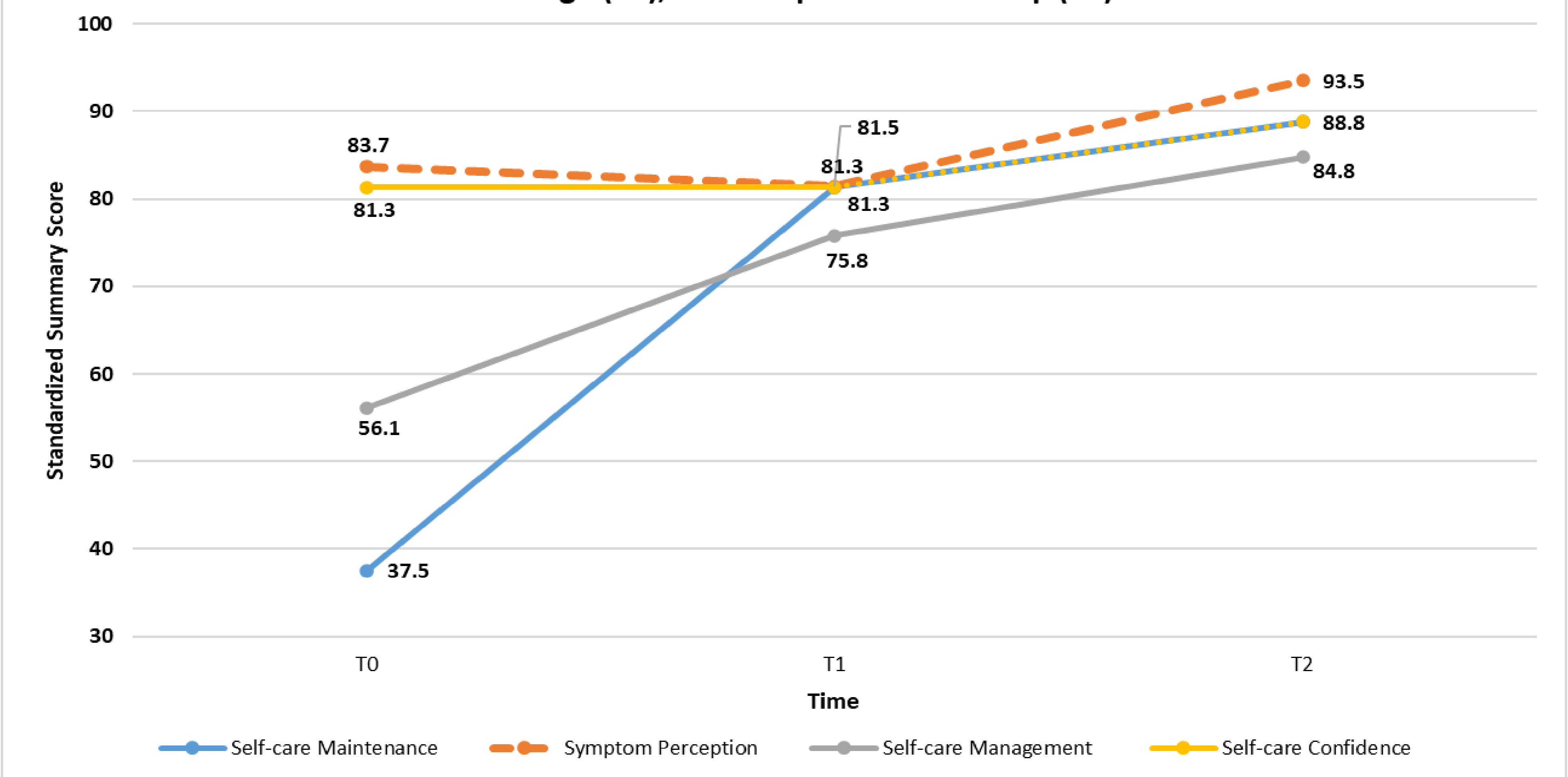- Majority of toolkits were 100% complete

Fig. 2. Changes in median summary scores by time. T0 = measured at enrollment before education; T1 = at hospital discharge; T2 = the first outpatient follow-up appointment. Higher scores indicate better perceived self-care. A score of greater than or equal to 70% is an established metric for adequate self-care.

Table 2

Log Audit Assessing for Weight, Symptom, and Heart Failure Zone Completeness and Follow-up at First Outpatient Clinic Appointment

Measure	(N = 10)
Number of Days Recording in Log, median (IQR)	4 (8)
Weight tracking completeness, %	96.9
Symptom tracking completeness, %	96.9
HF Zone tracking completeness, %	100
Attendance Rate	8 (80)
Tracking Log Copy of Some Form	6 (60)

IQR = interquartile range. Tracking log of some form includes the study tracking log or an electronic or paper copy of another tracking-type of log.

Conclusions

Interactive toolkits are a feasible approach to promote self-care
- Significant increase in patient-perceived self-care maintenance, management, & symptom monitoring scores
- High staff & patient participation
- Supports skill-building and emphasizes early response to symptoms which could have important implications for improving HF outcomes
- Results support continued expansion of project aims

See Reference list