

# Heart Failure Education Bundle to Improve Self-care and Reduce Hospital Readmission

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# Acknowledgements

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Editor: Helen Hough-Collins, PhD.

# Background

- HF identified by CDC (2016) major health concern in United States
- 5.7 million Americans diagnosed with HF
- 550,000 cases annually
- Prevalence rate predicted to exceed 8.1 million (Bradely et al.,2013)
- Predicted to reach 69.5 billion by 2030
- 30 day hospital readmission greatest financial expenditure (Heidenreich et al., 2013)
- CMMS (2016) established HRRP with monetary penalties for not reducing 30 day readmissions of HF

## Literature Review

### Education to Improve self-care:

4 large RTC that compared the effectiveness of a 1 hour nurse lead HF educational program on the five essential area in HF management. Utilizing the SCHFI or EHFScBS to evaluate self-care behavior pre and post intervention.

### Results:

Naylor et al., 2009:

Zamanzadeh et al., 2013

Dickson et al., 2014

Kato et al., 2016

Each study noted an increase in self-care behavior and management and avoidance of hospital readmission at 30, 60 and 90 days. Naylor et al., 2009 also noted a decrease in the cost treat.

# Literature Review

## Family members involved in HF classes: Pilot Studies

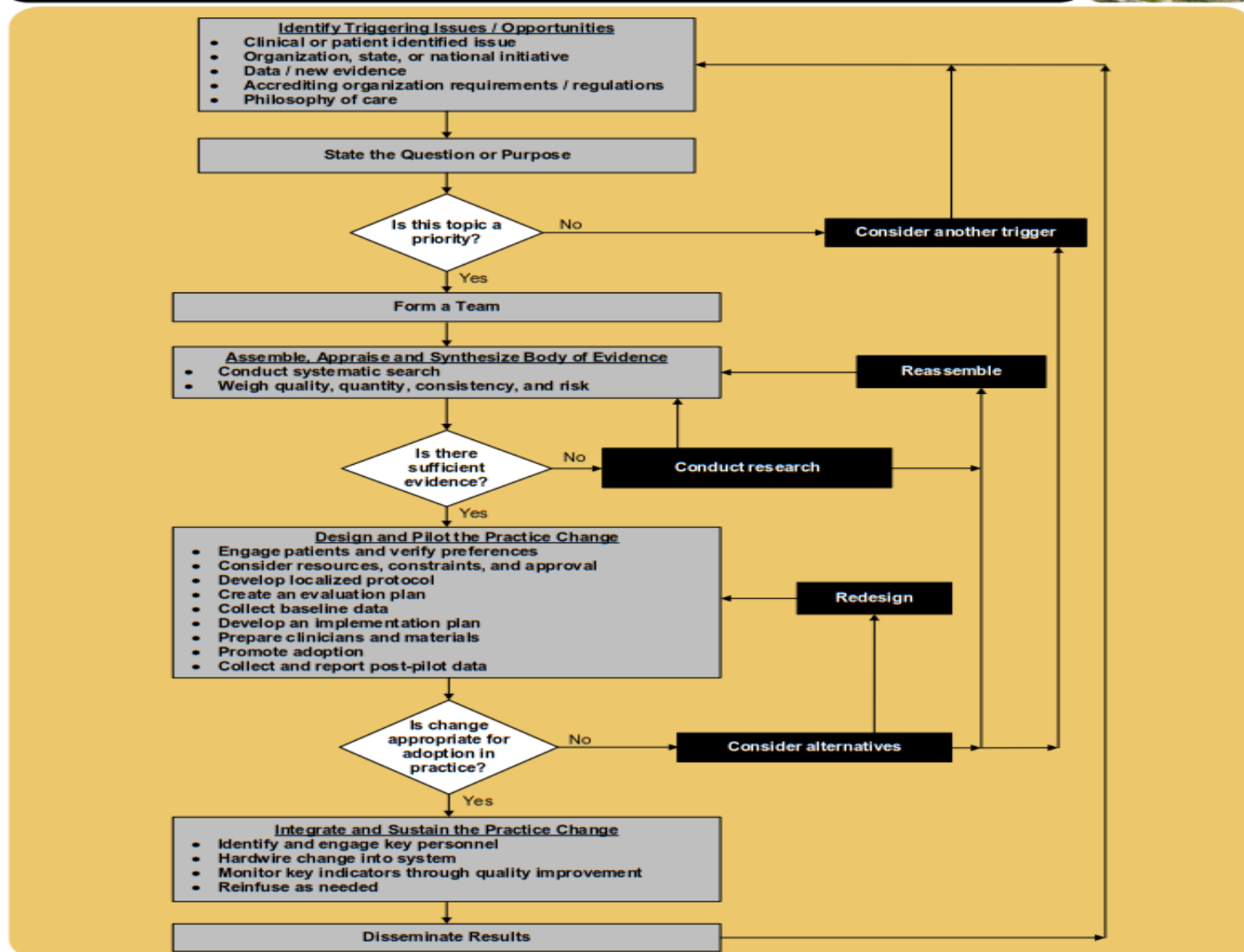
Argen et al., (2012); Blauer et al (2015); Buck et al.,(2015) and Riegel et al., (2009).

Psychological support was shown to have a significant impact on HF management and self-care behavior was enhanced, greater adherence to medication management and diet restriction and daily weight monitoring was noted.

# Framework: Iowa Model

1. Identify trigger
2. PICOT
3. Team
4. Assemble and Appraise and Synthesize Body of Evidence
5. Design Pilot
6. Integrate and Sustain practice change
7. Disseminate Results.

## The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care



◆ = a decision point

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# Inquiry Question: PICOT

What is the effectiveness of a HF education bundle, in an out-patient clinic classroom setting, with adults who have a diagnosis of HF and their caregivers, in improving self-care behaviors and management of HF and reducing hospital readmission, as compared with patients who receive education as usual?

# Methods

**Design:** pre and post-test

**Sampling:** Convenience sample

**Inclusion Criteria:** HF patients w/ systolic/diastolic HF, with < 30 day readmission, w/ EF equal to or less than 40%. NYHA II to IV symptoms, 18 Y/O

**Population:** 177 bed hospital/clinic central U.S rural area.

**Collection:** over 4 months

## **Demographics**

- Average age was 63.2 years old, Males/Females (60% males)
- High school education, Household income < \$25,000
- Insurance Medicare/Medicaid



## **Intervention:**

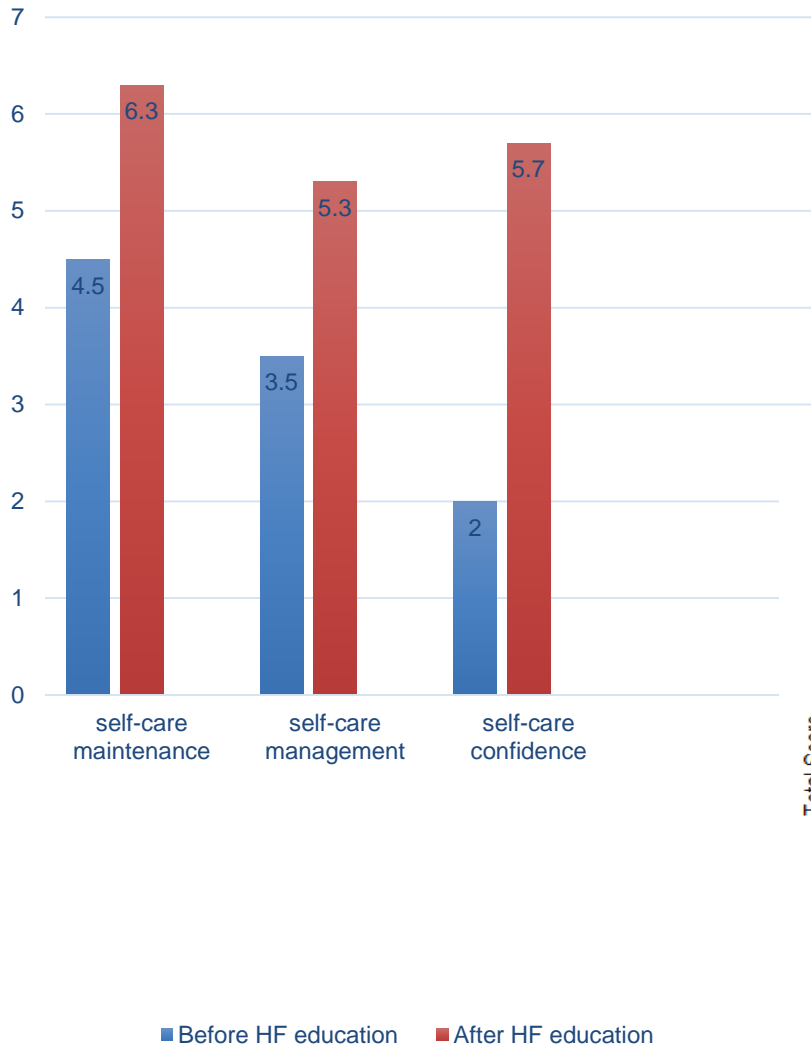
Four, 1 hours HF educational bundle classes:

1. Physiological effects of HF
2. Medications for HF
3. Daily weight monitoring
4. Dietary restriction (fluid and sodium)
5. Worsening symptoms of HF
6. Smoking cessation/medications to avoid/ETOH
7. Exercise

Follow up at 30, 60 and 90 days.

SCHF1 v6.2, weight log sheet

## Heart Failure Pre and Post Intervention Overall scores of the 3 main sections of the SCHFI V6.2

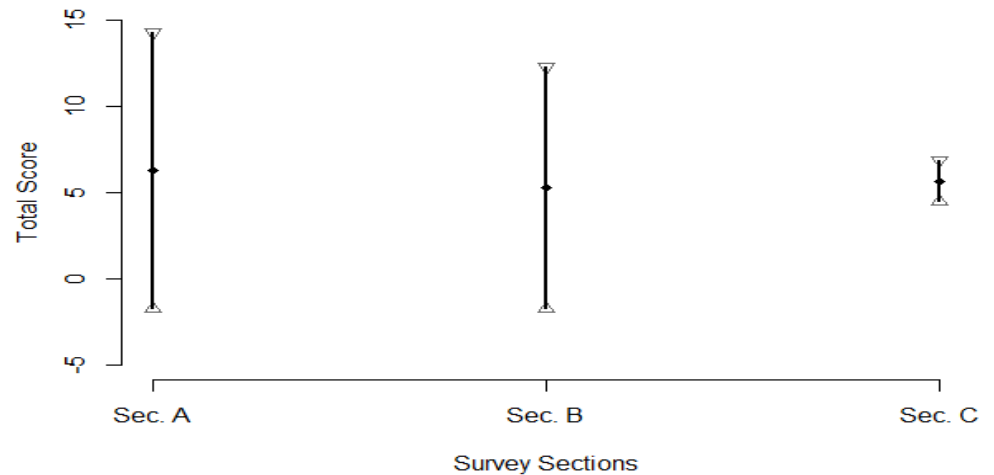


Improvement in self-care maintenance (6.3)

self-care management (5.3)

Self-care Confidence (5.7)

## Heart Failure Pre and Post Intervention Overall scores of the 3 main sections of the SCHFI V6.2



## Discussion

HF education bundle improved self-care maintenance, management and confidence and adherence to daily weight monitoring and avoidance of unnecessary hospital readmission at 30, 60 and 90 days.

Americans with HF need reduction of cost to HF management

The Texas Medical Foundation and the Central Texas Council of Government on Aging support HF educational program

Joining alliance with the Hispanic American Chamber of Commerce

Mentorship of retired nurses

## **Limitations**

1. Small sample
2. Spanish-language excluded
3. Transportation

## **Overcoming Barriers**

1. Increase support from providers/join with community programs to reach more HF patients
2. Bilingual instructor
3. Social services for IHOP bus passes
4. In home HF educational bundle program, in person, skype, internet or offer classes at the time of the patients routine appointment.

# Implications

## Future Projects:

1. Quality improvement project on benefits of a HF home management program
2. Telemedicine and HF educational program for patients in rural areas

## Future Research:

1. A descriptive study is recommended for long-term observation of the effectiveness of a HF educational bundle program

# Conclusion

Notable improvement in self-care behavior and no unnecessary hospital readmission at 30, 60 and 90 days.