

11-10-2025

## Improving Healthcare Providers' Knowledge on Heart Failure Self-Care Management

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# Walden University

College of Nursing

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Walden University  
2025

Executive Summary: Staff Education Project  
Improving Healthcare Providers' Knowledge on Heart Failure Self-Care Management  
by  
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MS, Walden University, 2024

BS, Walden University, 2021

Executive Summary Submitted in Partial Fulfillment  
of the Requirements for the Degree of  
Doctor of Nursing Practice

Walden University

November 2025

## Summary

This Doctor of Nursing Practice (DNP) staff education project's aim was to provide heart failure (HF) self-care management (SCM) education to address staff knowledge gaps to improve high 30-day readmission rates at the DNP project site and ultimately improve SCM for patients. The practice-focused question for this project was In healthcare providers (HCPs) caring for HF patients in a primary care clinic, does implementing a staff education program on HF SCM improve HCPs' knowledge and ability to educate patients on HF self-care? The purpose of this DNP project was to educate HCPs on HF SCM. Leadership identified and confirmed the high readmission rates and lack of standardized staff education, which prompted the initiation of this project. Incorporating evidence-based practice staff education into practice enhances high-quality care and positive outcomes and has a significant impact on healthcare systems. Staff education for HF self-care was embraced as a valuable initiative to address the readmission issue and enhance SCM at this project site.

The result shows an increase in HCPs' knowledge of HF SCM. The conclusion revealed a correlation between staff education interventions and improvements in staff knowledge. Recommendations include annual staff training and making it a priority. The implications include the importance of staff education on HF SCM, which leads to positive social change, reduces readmission rates, enhances health literacy, and supports national efforts to improve outcomes for this chronic disease.

## **Background**

This DNP staff education project aims to enhance the knowledge of HCPs in a primary care setting regarding HF SCM to reduce the high 30-day readmission follow-up rate. HF and the increasing 30-day readmission rate have become prevalent in healthcare systems. HF affects 6.2 million people in the United States who are 65 years or older, and it is expected to cost the healthcare system over 70 billion dollars and be linked to higher morbidity and mortality by 2030 (Truby & Rogers, 2020). This training is geared towards providing appropriate patient education on self-management of HF.

The practice gap in this primary care center is the increasing 30-day readmission follow-up visit rates and the absence of an evidence-based HF SCM patient education tool. The management of this site frowned upon the growing rate of follow-up visits for readmission of patients with HF (personal communications with clinic leaders, staff interviews, February 27, 2025). The chart review of 100 patients with HF confirms that 25 were readmitted to hospitals or seen at urgent care centers within 30 days, showing a 25% increase in readmission follow-up visits for patients with HF (chart review, 2025, February 27). The increased number of 30-day readmission follow-up visits indicates suboptimal maintenance and management, reflecting inadequate treatment quality, insufficient patient education, and challenges in transitioning from hospital to home (Dhaliwal & Dang, 2024). This gap needs urgent attention to enhance effective care, reduce costs, and improve patient outcomes.

The practice-focused question for the DNP project was, “In HCPs caring for HF patients in a primary care clinic, does implementing a staff education program on HF SCM improve HCPs’ knowledge of SCM and ability to educate patients on HF self-

care?” This practice-focused question calls for staff education to address the gap by equipping staff with the necessary knowledge to educate patients on lifestyle modifications that enhance SCM of the disease, thereby reducing the readmission rate. Gudeta et al. (2024) asserted that integrating evidence-based practice staff education into practice improves high-quality care and favorable outcomes, substantially influencing healthcare systems. The project goal is to ensure all the HCPs in the project site obtain the training, demonstrate understanding of HF SCM through the knowledge test, and achieve a positive outcome exceeding a 15% decrease in the 30-day readmission follow-up visit rates of patients with HF.

The evidence supporting this project was collected through an extensive literature search of articles from the Walden University library and Google Search. Thirteen high-level, peer-reviewed, full-text, and most current articles out of 30 reviewed from CINAHL, ProQuest, NCBI, and EBSCO databases were selected. These 13 articles that met the criteria were appraised using the Johns Hopkins practice tools to identify high-quality evidence and the level of evidence supporting the change. Six articles are Level I, one is Level II, three are Level III, and three are Level V.

The evidence in the literature supporting the practice change was provided by Zuraida et al. (2022), who indicated that staff education interventions for HF self-care are a valuable tool to address the prevalent readmission issue and enhance SCM. A systematic literature review on HF SCM education shows improved compliance, self-care knowledge, management, and perception of HF (Wahyuni et al., 2023). A randomized controlled study by Wang and Li (2020) demonstrated that self-care education helps improve patients' quality of life, compliance, self-confidence, and symptom control,

thereby reducing hospital stays in patients with HF. Additional studies indicate that implementing HF SCM education and a collaborative effort that includes follow-up visits and the access of educational media for HCPs supported the success of self-management education for HF patients, promotes optimal HF self-care, improves perception and treatment adherence, positively affects maintenance and management outcomes, and reduces readmission rates, as well as provides adequate education and training to providers to empower patients' active participation in their care (Anzio et al., 2022; Clements et al., 2023; Hill et al., 2024; Jiang & Wang, 2021; Mitcheltree, 2020; Nair et al., 2020; Tinoco et al., 2021; Zuraida et al., 2021). Woodcock et al. (2024) supported the notion that standardized HF self-care training improves care, compliance, and reduces rehospitalization. Hill et al. (2024) and Mitcheltree (2020) emphasized the importance of equipping and supporting nurses and allied professionals in primary care settings with cardiovascular knowledge to deliver efficient services tailored to their patients' needs.

### **Staff Education**

The staff participants in this project included seven HCPs in a primary care clinic. Participants included one physician, five certified registered nurse practitioners, and one registered nurse in a primary care clinic. All seven HCPs were able to complete the training. The medical clerk assisted in collecting data for analysis and interpretation. The procedures used to develop this project were based on the findings from the reviewed literature. As a DNP student, I developed a PowerPoint presentation for the staff education program, incorporating high-level, evidence-based strategies for HF SCM. The preceptor, the clinic's medical director, served as the subject matter expert and reviewed the PowerPoint presentation and the pre- and post-knowledge assessments developed for

the project to ensure alignment with addressing the gap and policy. The 11-question pre- and post-knowledge assessment (see Appendix) was developed based on the content of the HF SCM staff education, as reviewed in articles, to meet the learning objectives for the education (Jaarsma et al., 2021; Rabelo et al., 2011; White et al., 2014).

The implementation of this project consisted of a 1-hour in-person training session conducted over three days, on September 10-12, 2025, to accommodate flexible schedules for all participants. The pre- and post-knowledge assessments were identical, and all seven participants voluntarily completed both the pre- and post-assessment tools. The participants generated a self-identity code using two numbers and two letters to ensure anonymity and link their data from the pre-intervention to the post-intervention assessment. The completed assessments were submitted in a sealed envelope to ensure anonymity, as no personal identifier of the participants was collected. The pre-knowledge assessment determined the participants' baseline knowledge of HF SCM. In contrast, the post-knowledge assessment evaluated the improvement of the participants' knowledge and the training outcome.

### **Collection and Analysis of Evidence**

The process for collecting the pre- and post-knowledge assessment involved collecting baseline data from the pre- and post-assessment scores for comparison and to determine the differences in the participants' knowledge. The participants' codes were used to link participant answers for the pre- and post-assessment scores for comparison. Data were collected from the pre-knowledge results and linked with each participant's post-knowledge assessment results for comparison. The analysis of the evidence includes using a statistical method to calculate the pre- and post-assessment scores for each of the

seven participants (see Table 1). This statistical analysis revealed significant differences between the participants' pre- and post-assessment results on HF SCM.

### **Evaluation Process**

The analyzed data were evaluated using a statistical quantitative process. The differences between the pre- and post-knowledge assessment results were compared in terms of mean, median, and standard deviation (see Table 2). The differences helped determine the outcome of the staff education. A comparative analysis of the pre- and post-knowledge assessment scores was conducted to compare the participants' baseline and the difference between the pre- and post-knowledge assessment data. A descriptive analysis of the data was collated using an Excel spreadsheet to determine the growth in SCM knowledge among the HCPs who care for HF patients in this clinic and the outcome of the staff education intervention.

### **Results**

The results of this project were based on the data from the pre- and post-knowledge assessments of the seven participants. The results of the post-knowledge assessments show a significant increase in HCPs' knowledge of HF SCM, demonstrating their ability to educate patients. The charts demonstrate the findings and explanations of the results from the pre- and post-knowledge assessments (see Figure 1).

**Table 1***The Pre- and Post-Knowledge Assessment Scores*

	Pre-knowledge %	Post-knowledge %
Participant 1	64	100
Participant 2	47	100
Participant 3	71	100
Participant 4	68	99
Participant 5	78	100
Participant 6	70	100
Participant 7	60	99

Table 1 depicts the scores for the pre- and post-knowledge assessments

**Table 2***The Pre- and Post-Knowledge Statistic Calculations*

	Pre-knowledge %	Post-knowledge %
Mean	65	99.7
Median	68	99
Standard deviation	9.9	0.5
Count	$N = 7$	$N = 7$

Table 2 presents the calculation of the mean, median, standard deviation, and number of participants for the pre- and post-knowledge scores.

**Figure 1**

*A Comparison of the Pre- and Post-Knowledge Assessment Scores*

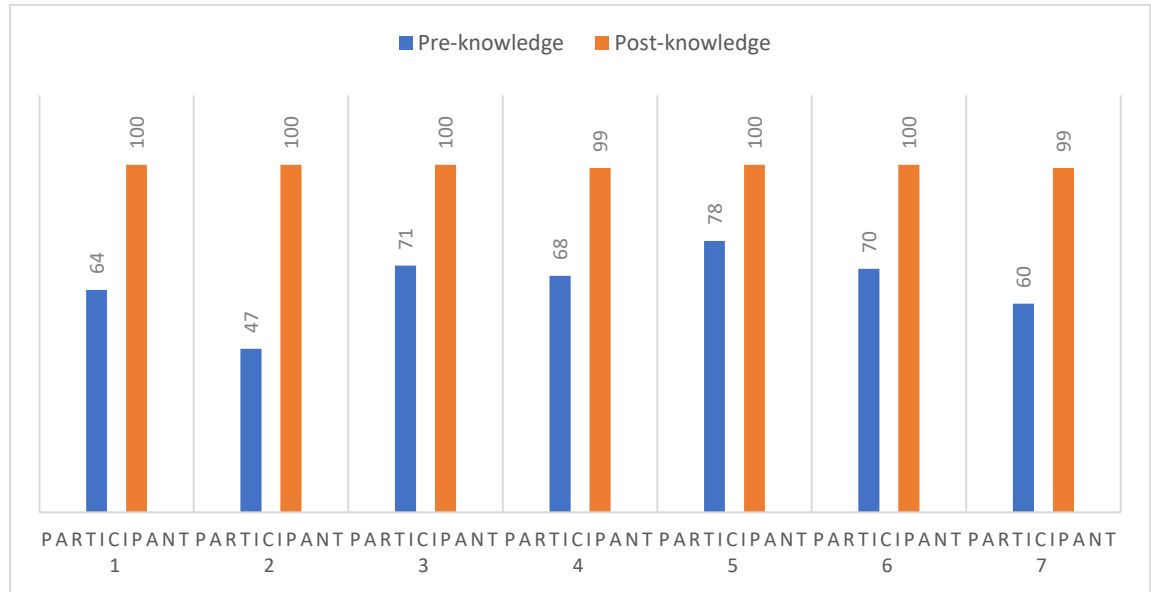


Figure 1 above shows the comparison of both the pre- and post-knowledge assessments of each participant.

### **Descriptive Analysis**

The tables and the graph above depict the analysis and results of the staff education intervention conducted for the seven HCPs in the primary care clinic. The results revealed the pre- and post-knowledge scores of the seven participants ( $N = 7$ ). The pre-knowledge assessment mean score was 65%, the median was 68%, and the standard deviation was 9.9%. In contrast, the post-knowledge assessment mean score was 99.7%, the median score was 99%, and the standard deviation was 0.5%. This significant difference indicates an increase in HCPs' knowledge of HF SCM following staff education. The findings reveal a statistically significant correlation between the staff education intervention and the staff's knowledge. The staff education increased the staff's

knowledge, providing significant evidence of improvement resulting from the project's implementation.

The impact of this project on the organization is evident in the increased ability of the staff to educate patients on HF SCM in this primary care clinic. This will significantly reduce the high rate of 30-day readmission follow-up visits. The limitation of this project includes a small sample size of  $n = 7$  (i.e., the number of participants). Another limitation is that the project was implemented only in one primary care center.

The project holds importance beyond the local project site, as HF and 30-day readmissions have had a significant impact on patients and the healthcare system (Clements et al., 2023). Other organizations can benefit from this project by educating their HCPs to increase their knowledge and enhance patient education on how to manage the disease appropriately and reduce readmission. This project has reinforced the importance of continual staff education on HF SCM and the significance of patient education on managing the disease at home, thereby improving positive outcomes.

### **Conclusions**

In conclusion, the impact of this DNP project on the project site shows an improved staff knowledge of HF SCM. The HCPs in this organization are well-equipped to educate the HF patients to be more proactive and involved in the management of their care to enhance positive outcomes. Addressing the organizational gap will maintain its reputation, enhance patient satisfaction, and increase revenue.

The future recommendations for this organization include maintaining staff knowledge through regular staff training, which should be incorporated into the annual competency and orientation process. It is crucial to continue conducting regular staff

training in this clinic to ensure continuity and enhance the providers' knowledge. It is also crucial to prioritize staff training in this primary care clinic, enabling staff to provide effective patient education.

The potential implications of this project for nursing practice include the importance of staff education on HF SCM. The staff education intervention for HF self-care has effectively addressed the significant issue of readmissions and improved SCM (Wahyuni et al., 2023; Zuraida et al., 2022). This intervention will be beneficial to other clinical sites, promoting staff knowledge, patient education on SCM, and achieving positive outcomes. Improving staff knowledge will lead to quality care for patients with HF, promote SCM, enhance health promotion and complication prevention, and reduce readmission (Jaarsma et al., 2021). The impact of this project will lead to positive social change by enhancing the quality of life for patients with HF, thereby empowering patients to actively engage in their health, provide self-care, and perform daily activities. This will enhance their participation in community activities, improve public health outcomes, and decrease disparities and financial burdens on both the individuals and the healthcare system. The impact of this project promotes health equity and advances care for this vulnerable population.

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### Appendix: Pre- and Post- Knowledge Heart Failure Self-Care Assessment

Instruction: Read the following questions carefully and choose the best answer.

1. Which of the following is the most important dietary recommendation for a patient with heart failure to help manage fluid retention?
  - a) Increase potassium intake through bananas and oranges.
  - b) Limit daily sodium intake to 2-3 grams daily as prescribed.
  - c) Consume a high-protein diet to strengthen the heart muscle.
  - d) Avoid all fats and oils.
  
2. A patient with heart failure should be instructed to monitor their weight daily and report any weight gain to their healthcare provider.
  - a) 0.5 kg (1.1 lbs) in one week.
  - b) 1 kg (2.2 lbs) in two weeks.
  - c) 2 kg (4.4 lbs) in 5 days without symptoms.
  - d) 5 kg (11 lbs) in one month.
  
3. Which statement indicates a need for further medication adherence education in a heart failure patient?
  - a) "I know the names and purposes of each of my medicines."
  - b) "I should never skip a dose of my heart medication."
  - c) "I can take over-the-counter medications and herbal supplements without consulting my doctor."
  - d) "I refill my prescriptions before I run out of medicine."
  
4. Which of the following symptoms of worsening heart failure should a patient immediately report to their healthcare provider?

- a) Mild fatigue after light activity.
  - b) Slight swelling in the ankles at the end of the day.
  - c) Increasing shortness of breath or difficulty breathing at night.
  - d) Feeling anxious occasionally.
5. Which teaching is most appropriate regarding physical activity for a patient with heart failure?
- a) Avoid all physical activity to rest the heart.
  - b) Engage in moderate aerobic exercise for 30 minutes, 5 times weekly, as tolerated.
  - c) Exercise vigorously every day regardless of symptoms.
  - d) Exercise only when symptoms are completely gone.
6. A patient with heart failure reports a 3-pound weight gain in two days. Which of the following is the most appropriate initial nursing action?
- a) Advise the patient to increase fluid intake.
  - b) Instruct the patient to increase their diuretic dose.
  - c) Assess for other signs and symptoms of fluid overload, such as swelling or shortness of breath.
  - d) Tell the patient to restrict their sodium intake to 1000mg/day.
7. Which of the following dietary recommendations is most important for a patient with heart failure?
- a) Limit protein intake.
  - b) Restrict fat intake to less than 20% of daily calories.
  - c) Adhere to a low-sodium diet.

- d) Increase potassium-rich foods to prevent side effects from diuretics.
8. When educating a patient with heart failure about daily weights, what is the most important instruction to emphasize?
- a) Weigh yourself weekly at the same time of day.
- b) Weigh yourself daily, preferably in the morning, before eating or drinking, and after voiding.
- c) Weigh yourself daily and record only significant changes (e.g., > 5 pounds).
- d) Weigh yourself after showering to ensure accuracy.
9. A nurse educates a heart failure patient on recognizing worsening symptoms. Which of the following symptoms would indicate a need for immediate reporting to the healthcare provider?
- a) Mild increase in fatigue after exercising.
- b) Occasional swelling in the ankles at the end of the day.
- c) Worsening shortness of breath, even at rest.
- d) Intermittent dry cough.
10. Which of the following statements by a patient indicates a need for further teaching regarding heart failure management?
- a) "I know it's important to take my medications exactly as prescribed."
- b) "I will call my doctor if I gain more than two pounds in two days."
- c) "If I feel better, I can stop taking my medications."
- d) "I'll try to walk daily to stay active."
11. Which of the following strategies can nurses utilize to improve patient compliance with heart failure self-management?

- a) Provide complex medical jargon during patient education sessions.
- b) Emphasize the patient's role in their care through shared decision-making.
- c) Rely solely on written educational materials without verbal explanation.
- d) Assume the patient understands the information without asking for clarification.