

**Determining the Effectiveness of a Nurse-Led Heart Failure Education Program
in Reducing 30-Day Hospital Heart Failure Readmissions**

A Scholarly Project

Submitted to the

Faculty of Liberty University

In partial fulfillment of

The requirements for the degree

Of Doctor of Nursing Practice

By

Amy Suzanne Cosby

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Abstract

The purpose of this project was to determine if a nurse-led heart failure (HF) education program would reduce overall 30-day hospital readmissions related to. Affecting millions of adults in the United States, HF is a growing health epidemic as well as an economic burden to healthcare systems. The population for this project included patients admitted with a diagnosis of acute or chronic HF based on the International Statistical Classification of Diseases and Related Health Problems (ICD-10) codes. An electronic health record intervention indicated that when a healthcare provider diagnosed a patient with any HF ICD-10 code, the nurse-led HF education intervention would appear in Meditech on the nurse's worklist. The 8-week preintervention underwent comparison to the 8-week postintervention to determine if there was a decrease in 30-day readmission rates, with Microsoft Excel used to analyze the data. Project implementation occurred at 2 hospital sites where bedside nurses conducted standardized nurse-led HF patient education before inpatient discharge. Fewer patients discharged with an HF diagnosis were readmitted within 30 days postintervention (9.72%; March–April 2024) than preintervention (14.42%; January–February 2024). The results showed that nurse-led HF education is effective at decreasing 30-day HF readmissions. Future studies at the same site will occur to examine sustainability and how the intervention affects 30-day HF readmission rates.

Keywords: heart failure, nurse-led heart failure education, 30-day heart failure readmissions, heart failure discharge patient education

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List of Abbreviations

American Heart Association (AHA)

Centers for Medicare & Medicaid Services (CMS)

Heart Failure (HF)

Institutional Review Board (IRB)

International Statistical Classification of Diseases and Related Health Problems (ICD)

St. Joseph's/Candler Health System (SJCHS)

Section One: Introduction

Heart failure (HF) is a growing health concern and economic burden (Heidenreich et al., 2022). About 6.2 million adults in the United States had HF from 2013 to 2016, an increase of 8.77% from 2009 to 2012 (Virani et al., 2021). Assuming similar increases, more than eight million people will suffer from this heart condition by 2030 (Tsao et al., 2022). The rate of mortality associated with HF is substantial, with one in eight death certificates listing HF in 2019. HF remains associated with high mortality and morbidity, poor quality of life, and poor functional capacity, placing a substantial burden on the healthcare system (Shahim et al., 2023).

The purpose of this project was to determine if a nurse-led HF education program would reduce overall 30-day hospital readmissions related to HF. Despite advances in HF management, readmission and mortality rates remain high (Tian et al., 2023). Patient education is essential to the nursing process, and a nurse-led HF education program should help HF patients improve their disease knowledge and self-care, understand their HF treatment plans, and learn to identify signs and symptoms of early exacerbation to avoid unnecessary admissions, ultimately improving overall quality of life and outcomes.

Affecting millions of adults, HF is a growing concern due to the associated economic burden and increased 30-day readmission rates (Heidenreich et al., 2022; Huesken et al., 2021; Shahim et al., 2023). The following section presents why HF 30-day readmissions are a concern. Also discussed are the problem and purpose of this project and the clinical question posed to determine if implementing a nurse-led HF education program at St. Joseph's/Candler Health System (SJCHS) will decrease 30-day readmission rates related to HF by comparing pre- and postintervention data.

Background

Chronic HF is one of the most prevalent cardiovascular diseases in the United States, with a high rate of recurrent hospital admissions (Huesken et al., 2021). In the United States, HF is the leading cause of hospitalization among adults 65 and older (Shahim et al., 2023). The Hospital Readmissions Reduction Program includes 30-day risk-standardized readmission measures specific to HF, effective in 2013 (Centers for Medicare & Medicaid Services, 2023). The measures exclude planned readmissions. At 19.9%, the readmission rate for SJCHS HF patients aligns with the national rate of 20.2% in a Magnet facility (Medicare, n.d.). The hospital return for HF patients is 12.6 days per 100 discharges. The goal of implementing this project's nurse-led HF education program was to decrease unnecessary readmission rates for HF while improving HF patient care and outcomes.

Problem Statement

HF is a condition that affects millions of adults in the United States, and the cost associated with this condition is extremely high. Nurses could improve care, outcomes, and patient quality of life while decreasing overall costs to meet government, insurance company, and healthcare organization goals. Implementing a nurse-led HF education program at SJCHS could be a means to help HF patients improve their knowledge about HF, self-care practices, and ability to recognize and manage signs and symptoms of decline related to HF, decreasing 30-day unplanned readmission rates.

Purpose of the Project

The purpose of this project was to determine if a nurse-led HF education program would reduce overall 30-day hospital readmissions related to HF. In 2022 guidelines, the American

College of Cardiology, American Heart Association (AHA), and Heart Failure Society of America recommended one-on-one nurse-led education by specialist nurses, which could promote adherence to treatments and a healthy lifestyle for individuals with physical limitations due to HF (Heidenreich et al., 2022; Tian et al., 2023). Before this project, SJCHS did not offer consistent, structured nurse-led HF education to patients and their families prior to discharge. Implementing a nurse-led HF education program could benefit the patients, the healthcare organization, and the insurance companies by improving patient care and knowledge and decreasing costs and readmission.

The study's significance was that an intervention like nurse-led HF patient education may reduce patient readmission rates, outcomes, and overall health. This project has real-world applications to clinical practice and patient care. HF education and research show that nurse-led education for treating the HF patient population is beneficial in decreasing HF readmission and improving patient outcomes.

Clinical Question

HF is a disease affecting millions of patients in the United States, and despite advances in care, the incidences continue to rise (Shahim et al., 2023). Healthcare organizations must adapt and devise creative and innovative approaches to HF care delivery. This project's clinical question was, "Does the intervention of implementing a nurse-led HF class before inpatient discharge decrease 30-day hospital readmission rates?" The goal of this project was to implement a nurse-led HF education program at SJCHS that would result in decreased 30-day readmission rates.

Section Two: Literature Review

HF is a major public health concern affecting billions of people in the United States and worldwide. The costs associated with HF care are high, and patients may have difficulty understanding complex treatment plans (Davisson & Swanson, 2020a, 2020b; Huesken et al., 2021; Shahim et al., 2023; Tian et al., 2023). The reviewed literature (see Appendix A) showed that nurse-led education programs for HF patients can improve the knowledge of those diagnosed with HF while decreasing HF-related readmissions. The following section presents the impact of nurse-led HF education programs, HF readmission rates, the search strategy used for this project, a synthesis of the reviewed research, and the project's theoretical framework.

Search Strategy

Searches in PubMed, SAGE, CINAHL, and the Cochrane Library occurred using the keywords *heart failure, nurse, education, patient readmissions*, and other relevant terms (e.g., *knowledge* and *self-care*), with returns screened based on eligibility criteria. The reviewed literature pertained to HF, the theoretical framework (Lewin's change theory), and the conceptual framework (Iowa model for evidence-based practice [Iowa model]). Applying Lewin's change theory to this project entailed using education to change HF behaviors related to self-care, medication adherence, and treatment plan understanding and adherence.

Clinical Appraisal

There were twenty articles reviewed, evaluated, and analyzed based on their purpose, sample size, methods, results, level of evidence, and limitations. Appendix A provides an overview of evidence appraisal across systematic reviews, quantitative studies, and qualitative research.

Improving Knowledge

After a structured 1-hour education session, HF patients' questionnaire and disease knowledge scores improved (Huesken et al., 2021). These findings show that HF education is beneficial, and education improves measurable outcomes. In a quasi-experimental study, Kolasa et al. (2022) examined how a nurse-led education program could lead to improved disease knowledge and self-care for patients with acute decompensated HF. The results showed a significant increase in patients' total HF knowledge scores and improved self-care questionnaire scores. Kolasa et al. found that patients were likelier to follow up with their primary care provider (84%) and cardiologist (79%) in accordance with their treatment plans. With improved knowledge of HF, patients could understand the importance of treatment plan adherence and how each intervention could improve their overall care.

Mattina et al. (2021) aimed to determine the effectiveness of an educational intervention in improving nurses' knowledge of HF discharge teaching and documentation. The study found a statistically significant increase in patients receiving HF education from preintervention (77%) to postintervention (96.45%). Nurses demonstrated increased knowledge from the pretest (69.7%) to the posttest (100%). Patients and caregivers need to understand HF, and it is just as crucial for nurses to understand the importance and benefits of nurse-led HF education intervention to complete HF future education.

Decreasing Readmissions Related to Heart Failure

Tian et al. (2023) found that nurse-led education programs significantly impacted HF-related readmission rates, all-cause readmission rates, and mortality rates in patients with HF, and nursing interventions decreased HF-related readmissions by 25%. Alcoberro et al. (2023)

evaluated the impact of a new nurse-led coordinated transitional HF program for more extended periods (90 and 180 days). The researchers implemented a nurse-led 7-step transitional intervention program that included patient education for HF, finding a significantly reduced primary endpoint in the HF program group at both points. Qiu et al. (2021) found significantly lower rehospitalization in HF patients assigned to the nurse-led intervention group. Son et al. (2020) focused on nurse-led self-care education and how it affected readmissions, mortality, and quality of life. The results indicated that nurse-led education produced a 25.2% reduction in all-cause readmissions and a 40% reduction in HF readmissions specifically.

A pivotal theme throughout the literature was that nurse-led educational interventions improve HF patient outcomes, including improved HF knowledge and decreased HF readmissions. Providing nurse-led education for HF benefits patients by decreasing readmissions and increasing nurse and patient knowledge. Understanding the benefits and importance of this nursing intervention is integral to improving HF patient outcomes. Hospital administrators should employ best practices and adhere to the HF guidelines in implementing similar programs (Heidenreich et al., 2022).

Synthesis

Researchers have identified multiple benefits to HF patients of nurse-led HF education programs, including improved outcomes, improved quality of life, and reduced HF readmission rates (Alcoberro et al., 2023; Bernard et al., 2023; Mattina et al., 2021; Qiu et al., 2021; Son et al., 2020). Studies found that nurse-led education sessions for HF patients improved HF knowledge and decreased rehospitalizations (Alcoberro et al., 2023; Bernard et al., 2023; Huesken et al., 2021; Kolasa et al., 2022; Mattina et al., 2021; Qiu et al., 2021; Son et al., 2020). According to Bernard et al. (2023), nurse-led education interventions led to increased patient

quality of life, with face-to-face sessions having better outcomes. Scholars suggested that health system administrators incorporate education and support for nurse-led education sessions for HF patients to improve patient outcomes and prevent rehospitalizations. In this project, SJCHS organization leaders offered nurse support and resources, achieving similar outcomes.

A review of studies showing the multiple benefits of nurse-led HF education programs accompanied a review of SJCHS preintervention data. An 8-week nurse-led HF education program was developed and implemented to determine if it would decrease 30-day HF readmission at SJCHS. Reducing HF readmission rates also required better nurse, patient, and family member knowledge. HF knowledge has a direct correlation with improved outcomes, such as better quality of life and fewer hospitalizations (Alcoberro et al., 2023; Bernard et al., 2023; Huesken et al., 2021; Kolasa et al., 2022; Mattina et al., 2021; Qiu et al., 2021; Son et al., 2020).

Conceptual Framework

The Iowa model provides support for evidence-based practice to ensure and promote quality care while guiding researchers to evaluate and incorporate research findings into patient care and practice (Buckwalter et al., 2017). Providers who follow the Iowa model implement evidence-based practice to promote excellence in health care. This HF education project was a means to engage patients, provide excellent care based on AHA and American College of Cardiology guidelines, and change the process by providing additional education to HF patients before discharge, resulting in improved outcomes, quality metrics, and patients' overall quality of life. Using the Iowa model enabled the identification of a clinical patient issue, which was higher-than-expected HF readmission rates in the SJCHS healthcare system. SJCHS administrators seek to reduce readmissions due to the correlation between quality measures or

metrics and reimbursements. Publicly available Medicare records show hospital systems' data and ratings, which could reflect poorly on organizations not meeting prescribed targets. This project was a means to achieve the SJCHS goal of providing excellent care while implementing the latest evidence-based care into daily clinic practice.

Theoretical Framework

Lewin's change theory was the theoretical framework for this project. Change theory was applicable to implementing a process to change behaviors associated with HF self-care and management, which was crucial to achieving and sustaining improvements in patient care and decreasing readmissions for HF. The desired outcome of promoting organizational or individual change processes will require awareness of the current process, the need for the desired change, and how implementing the change will lead to improvements. Identifying, implementing, and sustaining change within the SJCHS organization to benefit HF patients followed Lewin's (1947) method of unfreezing, moving, and freezing.

In the unfreezing phase of Lewin's change theory, the organization, the nurse conducting the nurse-led HF education sessions, and the patients must recognize the need for change. Decreasing readmissions related to HF was a recognized and supported organization goal; however, the nurse educators and patients proved to be more of a challenge. Project leaders encouraged the nurses to replace old behaviors with new behaviors and tools to provide better nurse-led HF education. The majority of patients rehospitalized with an acute exacerbation of HF understood the need for change.

The second phase of Lewin's model is change. In this project, implementing change entailed developing a new patient education tool to simplify the education process and

completing the eight HF education concepts in each session. Another change involved building a nursing intervention in Meditech to alert the nurse to perform nurse-led HF education for patients diagnosed with HF. This intervention helped employees learn a new concept and simplified the process of HF patient education, which improved nurses' attitudes toward the task.

Lewin's final phase, refreezing, entails reinforcing and stabilizing changes while integrating them into standard procedures. In this project, refreezing occurred by implementing the Meditech automatic nursing intervention alert and gaining staff support. After the intervention, staff nurses could perform nurse-led education more easily and with more HF patients.

Amina et al. (2022) applied Lewin's change theory in nursing by implementing teaching sessions for nurses and patients to improve patients' discharge plans. The researchers incorporated the teach-back method into the discharge planning process, resulting in statistically significant knowledge improvement. In their study, the unfreezing stage involved developing an environment conducive to implementing the teach-back sessions; the moving stage entailed putting appropriate processes and training in place to result in the desired change; and refreezing required putting mechanisms in place to ensure incorporating the teach-back method in patient discharge plans. This nurse-led HF project aligned with Amina et al.'s (2022) application of Lewin's change theory. Nurses required education about the new process to understand why change was necessary, and patients needed simple, effective nurse-led HF education.

Summary

The purpose of this project was to determine the effectiveness of a nurse-led HF education program and whether nurse-led interventions reduce 30-day hospital readmissions

related to HF. Expected outcomes after the 8-week intervention were as follows: (a) Patients with HF would become more knowledgeable and engaged in their healthcare as it related to HF, (b) patients would be able to recognize signs and symptoms of decline associated with HF, and (c) patients would be able to understand and implement complex HF treatment plans and implement self-care behaviors to improve HF outcomes while decreasing HF readmission rates. The expected outcomes of the nurse-led education intervention implementation are reduced HF readmission rates and improved patient care.

Section Three: Methodology

This section presents the methodological procedures and issues relevant to the project. Included in this section are the project design, measurable outcomes, setting, and population. There is a presentation of the ethical issues and the data collection procedures, tools, and intervention. Discussions of the project timeline, feasibility, and data analysis are also presented.

Design

This evidence-based project followed the Iowa model. The project involved implementing a nurse-led structured HF education program for HF inpatient discharge in a step-down floor/progressive care and coronary care units. The nurse-led intervention occurred in the two units for 8 weeks before planned facility-wide rollout. Measuring project success entailed comparing SJCHS 30-day readmission rates data pre- and postintervention.

Measurable Outcomes

After the 8-week nurse-led HF education program, the target outcome was that HF readmission rates would decrease below the national average quality data points measured preintervention and remain lower than the SJCHS goal of less than 18.87%.

Setting

HF scholarly project implementation occurred in a Magnet facility comprising two acute care hospitals, St. Joseph's (330 beds) and Candler (384 beds), in Savannah, Georgia. SJCHS administrators, leaders, and providers are committed to quality and known for breakthrough technology, highly specialized treatments, and advanced medical procedures in cardiovascular services. There are 40 beds in the hospitals' progressive care units. The 16-bed Coronary Care

Unit at St. Joseph's is the site of most HF patient discharges and the initial implication of the nurse-led education program. Shortly after the project began, SJCHS leaders saw the benefit of the nurse-led HF intervention and rolled it out to the entire organization.

Population

The population for this project was patients admitted with acute or chronic HF diagnosis based on International Statistical Classification of Diseases and Related Health Problems (ICD-10) codes. An SJCHS daily report showed all patients with an active HF diagnosis listed. Before discharge, an HF education team of staff nurses provided education to these patients and their support persons, if available. When a healthcare provider diagnosed a patient with any HF ICD-10 code, a prompt for nurse-led HF intervention appeared on a nurse's to-do list in the patient's Meditech electronic health record.

Ethical Considerations

The collected and analyzed information was data from the SJCHS quality committee and public Medicare data published online. Maintaining the confidentiality of proprietary data entailed storing digital material in a secure, password-protected iCloud platform and shredding hard copies. Before conducting research, the investigator completed two CITI program courses: Biomedical Research and Social and Behavioral Research. Prior to beginning the project, the investigator presented the material to the Quality and Magnet Committees at SJCHS and received approval from the organization's Institutional Review Board (IRB) to move forward with a performance improvement project and later retrospective study. Liberty University's IRB also granted approval.

Data Collection

Members of the SJCHS quality team collect HF readmission rate data from the Centers for Medicare & Medicaid Services, Premier Healthcare Database, and private insurance companies. The Premier Healthcare Database includes comprehensive and current information provided by 4,350 U.S. hospitals and health systems and more than 300,000 other providers and organizations. Comparing all data pre- and postintervention enabled determining of whether the nurse-led HF education program decreased HF readmission rates. The preintervention time frame was January through February 2024, and the postintervention time frame was March through April 2024.

Tools

The nurses who implemented the HF education program used AHA and StayWell education materials and tools developed for SJCHS. StayWell's three-page primary patient education handout contained the eight points of HF education: activity, diet, tobacco, medicine, weight monitoring, follow-up care, symptom recognition, and when to call the healthcare provider. The AHA self-check plan for HF management presented the three HF zones: green = keep up the good work, orange/yellow = use caution, and red = a medical alert and warning. These tools provided comprehensive patient education to aid in promoting healthy behaviors for HF patients. The two patient education tools appear in Appendices F and G.

Intervention

Education intervention team nurses attended an educational session to establish the program's goals and objectives and review the education tools, materials, and packets for HF patient education. Educator–staff nurse sessions focused on performing effective and consistent

education sessions with HF patients before hospital discharge. A recommendation is to provide early education to promote the ongoing learning and engagement of individuals diagnosed with HF. Patients and family members can ask questions to better adapt to their new HF knowledge and necessary lifestyle changes.

Timeline

The timeline for the nurse-led HF education program implementation was as follows:

- October 2023: Met with SJCHS Magnet Director, who approved a request to meet with the SJCHS Nursing Research Committee for approval to present the project to the IRB. Completed work order to modify patient education tool at SJCHS.
- November 2023: Modified the process for staff nurses to complete HF education. Received the new IRB application for SJCHS (11/28).
- December 2023: Completed the IRB applications for SJCHS and Liberty University. Conducted nurse education session to ensure consistent messaging and appropriate materials in patient education sessions. Reviewed project goals and objectives with patient-facing nurses.
- February 2024: Conducted staff nurse in-services on the new nurse-led HF education project. Introduced the new Meditech workflow and education tools.
- March–April 2024: During these 8 weeks, patients with HF admitted to St. Joseph's or Candler completed the nurse-led HF program prior to discharge.

- June 2024: Compared and analyzed preintervention (January–February 2024) and postintervention (March–April 2024) HF readmission rate data to determine if the nurse-led HF education intervention led to reduced readmission rates associated with HF.

Feasibility Analysis

Resources necessary for this project included nurses with extensive knowledge of HF and the ability to educate HF patients and their families. The initial nurse education session occurred in a meeting room, with the other rounding education sessions held in unit breakrooms. Other resources needed were time to meet with quality and Magnet shared governance committees to gain support for the project. The quality manager provided the quality metrics for HF readmissions with baseline data and then compared preintervention to postintervention data to determine the effectiveness of the project.

Data Analysis

It was hypothesized that HF readmission rates would decrease after the 8-week nurse-led HF education intervention at SJCHS. The SJCHS quality team members provided Premier Healthcare Database data for statistical analysis of all HF outcome cases and HF outcome cases with readmissions. Because nurse-led HF education automatically appeared on nurses' to-do lists prior to patient discharge, all HF patients should have received nurse-led HF education; therefore, the analysis included all HF outcome cases.

Section Four: Results

The goal of this project was to establish a nurse-led HF education program that would lead to a decrease in SJCHS 30-day readmission rates. The expected outcome was that implementing a nurse-led HF education program at SJCHS could be a means to help HF patients improve their knowledge about HF, self-care practices, and ability to recognize and manage signs and symptoms of decline related to HF, decreasing 30-day unplanned readmission rates. The clinical question was, “Does the intervention of implementing a nurse-led HF class before inpatient discharge decrease 30-day hospital readmission rates?”

Table 1 presents the SJCHS HF risk-adjusted 30-day readmission data, descriptive statistics relevant to the clinical question. HF readmissions were 14.42% preintervention (January–February 2024) and 9.72% postintervention (March–April 2024). Nursing staff education began in February to increase awareness of the importance of HF education. Comparing preintervention to postintervention data showed a drop in 30-day readmission rates of 4.7%. The CEO and readmission team members found the decrease to be a successful start to demonstrate the benefits of nurse-led HF education and the decrease in 30-day readmissions.

Table 1

St. Joseph’s/Candler – Heart Failure Risk-Adjusted 30-Day Readmission

January–February 2024							
Facility	Diagnosis (all) – 7-digit (ICD-10)	Outcome cases	Outcome cases with readmissions	Observed	Expected	Variation	O/E
Total		728	105	14.42%	16.48%	-2.05%	0.88

March–April 2024								
Facility DISPLAY REPORT	Diagnosis (all) – 7-digit (ICD-10)	Diagnosis (all) – 7-digit (ICD-10) DESC	Outcome cases	Outcome cases with readmissions	Observed	Expected	Variation	O/E
Total			895	87	9.72%	16.49%	-6.77%	0.59

A z test of proportions occurred to determine if the March–April 2024 (preadmission) readmission rate was statistically significantly different from the January–February 2024 (postintervention) rate. The result of the two proportions z test was significant, $z = 2.87, p = .004$, 95.00% CI = [.01, .08], indicating that the readmission rate postintervention was significantly lower than preadmission. The results supported the expected outcome that implementing a nurse-led HF education program would decrease 30-day unintended readmission rates for SJCHS.

Table 2 presents the results of the z test.

Table 2

Z Test Results

Sample	Cases readmitted	Total cases	Proportion readmitted	SD	SE
January–February	105	728	.1442	0.35	0.01
March–April	87	895	.0972	0.30	0.01

Note. $z = 2.87, p = .004$, 95.00% CI: [.01, .08]

The data and analysis results showed a decrease of 4.7% in 30-day readmission rates after program implementation. A z test of proportions showed that this decrease was statistically significant. Section Five will contain a detailed discussion of the findings and their implications.

Section Five: Discussion

HF is quite common in the United States. One in five Americans will develop HF in their lifetime (American Association of Heart Failure Nurses, n.d.). The purpose of this project was to determine the effectiveness of a nurse-led HF education program and that such an intervention would reduce 30-day hospital readmissions related to HF. There is research and evidence that nurse-led HF education programs do benefit HF patients by improving their knowledge about HF, decreasing readmission related to HF, and producing positive outcomes as stated in the literature review. The key findings of the project indicated that the HF readmission rate was significantly lower (9.72%) postintervention than preintervention (14.42%). These results support the hypothesis that implementing a nurse-led HF education program does decrease 30-day readmissions.

The researcher applied the Iowa Model Theory (Buckwalter et al., 2017) by bridging the gap between research and practice by identifying a clinical problem and the need for process improvement. Then conducting a literature review and then needed implementing change into clinical practice. The outcomes of the project were evaluated, and the findings disseminated to Liberty University and SJCHS therefore creating a culture of evidence-based practice within the healthcare organization. Lewin's change theory was also applied by identifying the need for change in the process in which nurses provided HF education to patients. The organization and nurses' educators needed to recognize a need for change in the unfreezing phase, to replace old behaviors with new behaviors. Then in the refreezing phase SJCHS was able to integrate those changes into the normal way of doing things by simplifying and automating the process in which nurses provided HF education.

The study limitations included a limited period of time in which the study was conducted due to scholarly time constraints. The study was not randomized, it included all patients with HF in the SJCHS. The data that was collected did not include the patients or nurse educators age, sex, or race. In the future research could randomize the sample that receives nurse-led HF education with the improved process versus the standardized method. Future studies could also evaluate the patient and nurses' knowledge pre- and post-education to determine the effectiveness of knowledge improvement related to HF. The findings from the study align with other previous studies (Tian et al., 2023; Alcoberro et al., 2023; Qui et al., 2021; Son et al., 2020) by demonstrating that intervention of nurse-led HF education does indeed decrease, or lower readmission rates related to HF.

Implications for Practice

The research and evidence support that nurse-led HF education can influence and even decrease 30-day readmission rates for HF. The goal of the project was to use research about nurse-led HF education and implement a program at SJCHS to demonstrate a decrease in 30-day HF readmission rates. After deciding to implement the nurse-led HF education program the tools that were already available in Meditech that were based off of AHA guidelines were chosen as the two tools to use during teaching sessions with patients. After the success of the nurse-led HF education program the SJCHS organization has now included other disease process (stroke and pneumonia) in similar programs to aid with a decrease in readmissions and to ensure patient education is conducted successfully prior to discharge due to the automatic feature that was built in Meditech.

Sustainability

After implementing the two interventions, one intervention was a Meditech automatic feature that when HF is diagnosed then nurse-led HF education is then added to the nurse's worklist in the EHR and then secondly by utilizing the HF daily report to ensure all HF patients have received the nurse-led education intervention prior to discharge. These two interventions listed above are the key to sustaining the nurse-led HF project. When you automate a process, it is more likely to succeed as this project has done. The support has been excellent by the organization and now that data has demonstrated improvement other quality metrics within the organization are looking at utilizing the same interventions to decrease readmits for such diseases as pneumonia and stroke.

Dissemination Plan

The initial findings will be shared with stakeholders, relevant institutions, and other audiences within SJCHS to demonstrate the benefit of nurse-led HF education in decreasing readmissions. The purpose of the project was to decrease HF 30-day readmissions and develop a nurse-led HF education program to raise awareness, inform and empower those HF patients, engage the nurses, and patients about the pillars of HF education. The research will continue after this project with a retrospective research project which will allow for a longer time period examination of 30-day readmits, which was a limitation of this project.

The outcomes of this project reinforce the importance of nurse-led HF education because it did demonstrate a decrease in HF readmissions. The nurse-led HF education benefits patients because they are able to understand HF better because they now understand when to call their healthcare provider early which prevents future readmissions. This type of nurse-led HF

education intervention could also equate to better quality of life for those with HF. While this project did not use surveys to measure if level of knowledge, self-care, or quality of life and if it was improved by the nurse-led education sessions, it has been shown that those were improved in other research studies and could be beneficial for SJCHS to use such surveys with patients to measure those indicators in the future (Huesken et al., 2021; Kolasa et al., 2022; Tonapa et al., 2022). The new process for HF education at SJCHS has been changed for the better, and nurses overall seemed pleased with the new process. This could be another area that could be explored is nurse satisfaction with the new process.

Lessons learned during the project were that implementing change takes time, and to ensure that the project is successful, one must be patient when making changes to an EHR, changing behaviors, or attempting to improve an already established workflow. In large healthcare organizations there are several committees that must sign off on new projects, which will demand time and test one's collaboration skills. Finally, nurses, who are at the forefront of patient interaction and play a pivotal role within multidisciplinary heart teams, are uniquely positioned to deliver targeted education on heart failure. Nurse-led education serves as a crucial component in addressing knowledge gaps, fostering a deep understanding of the disease, and equipping patients with essential tools and strategies for effective self-management. This approach not only enhances patient outcomes but also significantly reduces the incidence of heart failure readmissions.

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Appendix

Appendix A

Article Critique and Leveling Matrix Template

Article title, author, etc. (current APA format)	Study purpose	Sample (characteristics of the sample: demographics, etc.)	Methods	Study results	Level of evidence (use Melnyk framework)	Study limitations	Would use as evidence to support a change? (yes or no) provide rationale
Alcoberro, L., Moliner, P., Vime, J., Jiménez-Marrero, S., Garay, A., Yun, S., Pons-Riverola, A., Ramos-Polo, R., Ras-Jiménez, M., Tajés, M., Hidalgo, E., Calero, E., Ruiz, M., José-Bazán, N., Ferre, C., Delso, C., Alcober, L., Enjuanes, C., & Comin-Colet, J. (2023). Breaking the 30-day barrier: Long-term effectiveness of a nurse-led 7-step transitional intervention program in heart failure. <i>PloS One</i> , <i>18</i> (2), e0279815- https://doi.org/10.1371/journal.pone.0279815	To evaluate whether the impact of a new nurse-led coordinate transitional HF program extends to longer periods of time, including 90- and 180-days postdischarge.	440 HF patients (period # 1 123 and period # 2 317)	They compared outcomes between patients discharged with HF in period # 1 and compared it to period # 2 pre and postintervention	The primary endpoint was significantly reduced in the HF program group, at 90 and at 180 days both 90 & 180 days showing a p <0.001.	Level 4 cohort study retrospectively analyzed correlation design	First single health care area natural experiment, second all the confounding biases of the model, and third due to the retrospective nature of the study, neither the treatment at the time of inclusion nor the therapeutic changes that occurred during follow up could be evaluated.	Yes, the experiment showed a decrease hospitalization
Amina, A., Kassem, A., & Sleem, W. (2022). Applying Lewin’s change management theory to improve patient’s discharge plan. <i>Mansoura Nursing Journal</i> , <i>9</i> (2), 335-348.	Aim: to apply Lewin’s change management theory to improve patient’s discharge plan.	50) staff nurses and (50) patient at Oncology	A Quasi-experimental research design was utilized a convenient sample of (50) staff nurses and (50) patient at Oncology	Nurses’ knowledge regarding the teach-back method after implementing teaching sessions was significantly	Level III- Quasi-experimental, research design	There was no relation between nurses’ knowledge regarding teach-back method and their	Yes because there were statistically significant differences before and after implementing teaching

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			Center-Mansoura University. Four tools were used The Discharge Education Nursing Questionnaire, Observation Tool, Structured Patient Interview and Discharge Plan Follow-Up Questionnaire. Results: Nurses' knowledge regarding the teach-back method after implementing teaching sessions was significantly improved.	improved. The majority of staff nurses (90%) have a satisfactory performance level during patient discharge education after implementing teaching sessions of the teach-back method, while (100%) of them have an unsatisfactory performance level before.		performance during patient discharge education before and after implementing training session.	sessions for staff nurses using Lewin's change management theory.
Huesken, A., Hoffmann, R., & Ayed, S. (2021). Persistent effect of nurse-led education on self-care behavior and disease knowledge in heart failure patients. <i>International Journal of Nursing Sciences</i> , 8(2), 161-167. https://doi.org/10.1016/j.ijnss.2021.03.002	The study aimed to evaluate the short-term and long-term impacts of a structured education provided by a qualified heart failure nurse on patients' self-care behavior	N= 150 HF patients	One hundred fifty patients (66 ± 12 years) hospitalized for heart failure participated in a structured one-hour educational session by a heart failure nurse. Patients completed a questionnaire comprising 15	After the educational session, the total EHfScB-9 score improved from 24.31 ± 6.98 to 14.94 ± 6.22, and the disease knowledge score	Level 3 Controlled Clinical Trail	First there was a limited number of patients, and second it was not a RCT.	Yes, because the educational program led by a qualified nurse improves patients' self-care behavior and disease knowledge with a persistent effect at 6-month follow-up.

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	and disease knowledge.		<p>questions (nine questions from the European Heart Failure Self-Care Behavior Scale [EHFScB-9] and six on the patients' disease knowledge) one day before and one day and six months after the educational session. Responses for each question ranged from 1 (complete agreement) to 5 (complete disagreement)</p>	<p>improved from 18.03 ± 5.44 to 10.74 ± 4.30 (both $P < 0.001$). Scores for individual questions ranged from 1.26 ± 0.81 (adherence to the medication protocol) to 3.66 ± 1.58 (everyday weighing habits) before the education. The greatest improvement after education was observed on response to weight gain (-2.00 ± 1.57), daily weight control (-1.77 ± 1.64), and knowledge on the cause of patients' heart failure (-1.53 ± 1.43). At 6-month follow-up, EHFScB-9 score was</p>			

Article title, author, etc. (current APA format)	Study purpose	Sample (characteristics of the sample: demographics, etc.)	Methods	Study results	Level of evidence (use Melnyk framework)	Study limitations	Would use as evidence to support a change? (yes or no) provide rationale
				17.33 ± 7.23 and knowledge score was 12.34 ± 5.30 (both $P < 0.001$ compared with baseline). No factor was predictive of an insufficient teaching effect			
Tonapa, S., Inayati, A., Sithichoksakulchai, S., Daryanti Saragih, I., Efendi, F., & Chou, F. (2022). Outcomes of nurse-led telecoaching intervention for patients with heart failure: A systematic review and meta-analysis of randomised controlled trials. <i>Journal of Clinical Nursing</i> , 31(9-10), 1125-1135. https://doi.org/10.1111/jocn.16025	This review aimed to determine the effects of nurse-led telecoaching among patients with heart failure	A total of 12 randomized controlled trials were reviewed.	This study was a systematic review and meta-analysis of randomized controlled trials. This study was reported in accordance with the PRISMA guideline	A total of 12 randomized controlled trials met eligibility criteria and represented 1938 heart failure patients. The results showed that the nurse-led telecoaching significantly enhanced patients' self-care behavior (SMD = .84, 95% CI [0.45–1.24], $p < .001$) and improved quality of life (SMD = .23, 95% CI [0.06–	Level 1 Comprehensive Meta-Analysis of RCT's	There was variation in delivering the intervention, older adults demonstrated cognitive issues, there was no consensus among the reviewed studies for time measurement which can lead to flaws, and finally only a few studies were guided by theoretical framework.	Yes, because of this study, it is important to reiterate that nurse-led telecoaching was an effective approach to maintaining continuity of care for patients with HF, enhancing self-care behavior, and ultimately improving QoL. Such intervention was supported by the policy statement of AHA that recommends using telehealth for

Article title, author, etc. (current APA format)	Study purpose	Sample (characteristics of the sample: demographics, etc.)	Methods	Study results	Level of evidence (use Melnyk framework)	Study limitations	Would use as evidence to support a change? (yes or no) provide rationale
				0.39], $p = .007$).			enhancing patients access is an important strategy to address HF’s disease burden (Schwamm et al., 2017)
<p>Kolasa, J., Frączek-Jucha, M., Grabowski, M., Jankowska, E. A., Lelonek, M., Pawlak, A., Uchmanowicz, I., & Nessler, J. (2022). A quasi-experimental study examining a nurse-led educational program to improve disease knowledge and self-care for patients with acute decompensated heart failure with reduced ejection fraction. <i>Advances in Clinical and Experimental Medicine: Official Organ Wroclaw Medical University</i>, 31(3), 267-275. https://doi.org/10.17219/acem/143989</p>	<p>The purpose of this study was to implement a standardized nurse-led HF education program focused on improving disease knowledge and self-care behaviors in hospitalized patients with acute decompensated heart failure with reduced ejection fraction (HFrEF) and evaluate its effectiveness.</p>	<p>N=259 with (ADHF)</p>	<p>An evidence-based, standardized educational program was implemented for HF patients in Poland. They compared the initial level of HF knowledge – as rated using a self-developed questionnaire re and self-care behaviors, evaluated according to the 9- item European Heart Failure Self-care Behavior Scale (9- EHFS CBS) – to the results obtained at the 3- month follow-up period with</p>	<p>The results showed a significant increase in total score of HF knowledge test depending on the time of measurement ($\chi^2 = 356.526, p < 0.001$) and in all individual questions on HF.</p>	<p>Level 3 Quasi-experimental study</p>	<p>This program had quasi-experimental, non-randomized design, without an appropriate control group, with short observation on period and relatively small sample of patients. Secondly, the cohort recruited was relatively young, had a higher education level, lived with family, and the majority lived in the city</p>	<p>Yes, the HF knowledge and self-care behaviors among patients with HFrEF can be improved by introducing a structured, nurse-led educational programs to clinical practice.</p>

Article title, author, etc. (current APA format)	Study purpose	Sample (characteristics of the sample: demographics, etc.)	Methods	Study results	Level of evidence (use Melnyk framework)	Study limitations	Would use as evidence to support a change? (yes or no) provide rationale
<p>Qiu, X., Lan, C., Li, J., Xiao, X., & Li, J. (2021). The effect of nurse-led interventions on readmission and mortality for congestive heart failure: A meta-analysis. <i>Medicine (Baltimore)</i>, 100(7), e24599- e24599. https://doi.org/10.1097/MD.00000000000024599</p>	<p>They aimed to systematic ally show the impact of nurse-led interventions (NLI) on readmission and mortality in patients with CHF (reduced ejection fraction)</p>	<p>N= 3282 1571 NLI and 1711 to usual care</p>	<p>Publications reporting the impact of NLI on readmission and mortality in patients with CHF were carefully searched from electronic databases. Rehospitalization and mortality were the endpoints. For this analysis, the latest version of the RevMan software was used. Risk ratios (RR) with 95% confidence intervals (CI) were used to represent data following analysis.</p>	<p>Results were mortality (RR: 0.69, 95% CI: 0.56– 0.86; P = .0009) was significantly lower among CHF patients who were assigned to the nurse-led intervention.</p>	<p>Level 1 meta-analysis</p>	<p>The types of nursing interventions were not similar in all of the original studies. Even though all the original studies involved NLI, minor differences in their approach might contribute to the limitation of this analysis. Another limitation might be due to the fact that the follow-up time periods were not similar in all of the studies. Moreover, since in this analysis we could not assess the causes of mortality of the patients with CHF, this might be considered as</p>	<p>Yes, this systematic review and meta-analysis of randomized controlled trials showed that NLI had significant impacts in reducing the risk of rehospitalization and mortality in these patients with CHF (with reduced ejection fraction). Hence, we believe that nurse -led clinics and other interventional programs would be beneficial to patients with heart failure and this practice should be implemented to the health care system.</p>

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						another limitation of this analysis.	
<p>Son, Y., Choi, J., & Lee, H. (2020). Effectiveness of nurse-led heart failure self-care education on health outcomes of heart failure patients: A systematic review and meta-analysis. <i>International Journal of Environmental Research and Public Health</i>, 17(18), 6559. https://doi.org/10.3390/ijerph17186559</p>	<p>They conducted a systematic review and meta-analysis of randomized controlled trials (RCTs) with the following aims: (1) to describe characteristics of the intervention, and (2) to examine the effects of nurse-led interventions on patients' health outcomes.</p>	<p>612 studies, eight articles were eligible for this study.</p>	<p>The review included only RCTs to reduce certain sources of bias when testing the effectiveness of nurse-led heart failure self-care education. To confirm all relevant articles published between January 2000 and October 2019, we conducted a systematic search of six databases.</p>	<p>Of 612 studies, eight articles were eligible for this study. Nurse-led heart failure self-care education significantly reduced the risk of all-cause readmission (risk ratio (RR) = 0.75, 95% confidence interval (CI) = 0.66–0.85), heart failure specific readmission (RR = 0.60, 95% CI = 0.42–0.85), and all-cause mortality or readmission (RR = 0.71, 95% CI = 0.61–0.82)</p>	<p>Level 1-Systematic Review and Meta-Analysis</p>	<p>First, the small sample size and limited number of studies included in this meta-analysis limited generalizability. Second, patient satisfaction was not synthesized because it was not reported in the included studies. Patient satisfaction forms part of patient-reported outcomes and could be a significant indicator of successful intervention on delivery. Third, none of the studies reviewed</p>	<p>Yes, the findings highlight the positive effects of nurse-led heart failure self-care education on clinical outcomes such as readmission and mortality. However, it is not clear whether nurse-led interventions are effective in patient reported quality indicators, including quality of life and disease knowledge.</p>

Article title, author, etc. (current APA format)	Study purpose	Sample (characteristics of the sample: demographics, etc.)	Methods	Study results	Level of evidence (use Melnyk framework)	Study limitations	Would use as evidence to support a change? (yes or no) provide rationale
						provided description ns of the intervention in sufficient detail. Further RCTs that would suggest full description n of study protocol, and contents or scope of self-care behaviors are, therefore, needed.	
Tian, C., Zhang, J., Rong, J., Ma, W., & Yang, H. (2023). Impact of nurse-led education on the prognosis of heart failure patients: A systematic review and meta-analysis. <i>International Nursing Review</i> , https://doi.org/10.1111/inr.12852	To perform a meta-analysis of randomized controlled trials to investigate the effect of nurse-led education on death, readmission, and quality of life in patients with heart failure.	15 RCT's were included	PubMed, Embase, and the Cochrane Library were searched up to May 2022 to retrieve relevant studies. The primary outcomes were readmission rate (all-cause or HF-related) and all-cause mortality. The secondary outcome was quality of life, evaluated by the Minnesota Living with	Although there was no significant association between the nursing intervention and all-cause readmissions [RR (95% CI) = 0.91 (0.79, 1.06), P = 0.231], the nursing intervention decreased HF-related readmission by 25% [RR (95% CI) = 0.75 (0.58,	Level 1 systematic review and meta-analysis	This meta-analysis had limitations. First, HF patients were often at a high risk of readmission or death due to age and ejection fraction. Although we extracted all the available data, no meta-regression analysis could be performed to balance age and ejection	Yes, Nurse-led education is a useful adjunct strategy in the clinic and has been shown to be effective. The results from this review provide solid evidence that nurse-led education with home visits should be established for HF patients in clinical practice. However, more studies are

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			Heart Failure Questionnaire (MLHFQ), EuroQol-5D (EQ-5D), and visual analog scale for quality of life.	0.99), P = 0.039]. The nursing intervention reduced all-cause readmission or mortality as a composite endpoint by 13% [RR (95% CI) = 0.87 (0.76, 0.99), P = 0.029]. In the subgroup analysis they found that home nursing visits reduced HF-related readmissions [RR (95% CI) = 0.56 (0.37, 0.84), P = 0.005]. In addition, the nursing intervention improved the quality of life in MLHFQ and EQ-5D [standardized mean differences (SMD) (95% CI) = 3.38 (1.10, 5.66),		fraction as some of the studies did not report the information, and the sample size was small. Second, the results for quality of life were based on a limited number of studies and patients, but the results were robust and consistent with previous studies. The contents of the education programs were not consistent among studies. Despite all studies applying for the nurse-led education program, some educational interventions required mandatory	warranted to verify this finding.

Article title, author, etc. (current APA format)	Study purpose	Sample (characteristics of the sample: demographics, etc.)	Methods	Study results	Level of evidence (use Melnyk framework)	Study limitations	Would use as evidence to support a change? (yes or no) provide rationale
				7.12 (2.54, 11.71), respectively].		exercise or regular consultation during follow-up, introducing bias among the studies. Third, only data from reports published in English were included, which might have excluded potentially essential data.	
<p>Mattina, Dabney, B. W., & Linton, M. (2021). The Impact of Nurse Education on Heart Failure Readmissions and Patient Education. <i>The Journal of Doctoral Nursing Practice</i>, 14(1), 56–63. https://doi.org/10.1891/JDNP-D-19-00076</p>	<p>This quality improvement initiative aimed to determine the effectiveness of an educational intervention in improving nurses' knowledge of HF discharge teaching and documentation of this education in patients' charts.</p>	<p>N=29 nurses</p>	<p>This project was conducted at a Magnet-recognized acute care hospital with 39 critical care step-down beds. Twenty-nine nurses employed on the step-down unit participated in the educational intervention. Pre/post nurse knowledge and chart review data were analyzed.</p>	<p>There was a statistically significant increase in the percentage of patients receiving HF education from the unit nurses from preintervention 77.0% (n = 81) to postintervention 96.4% (n = 138) (p < .001). There was also a statistically significant increase in the</p>	<p>Level IV case control</p>	<p>Our findings are not generalizable beyond the study sample of qualifying patient charts and participating nurses. This QI initiative took place on a single critical care step down unit at one hospital. Additionally, realizing a sustained change in</p>	<p>Yes, Providing HF educational opportunities enhanced nurse knowledge and increased their documentation of HF education in patient charts. Implications for Nursing: Nurse educators may use the study results to improve nurse education and practices aimed at reducing HF readmissions</p>

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				mean number of days patients were educated from 1.64 to 2.58 days (p < .001). Nurse knowledge also increased from pretest (69.7%) to posttest scores (100%) (p < .001).		nursing practice may require more than a 2-month implementation period	
Davisson, E., & Swanson, E. (2020a). Nurses' heart failure discharge planning part I: The impact of interdisciplinary relationships and patient behaviors. <i>Applied nursing research: ANR</i> , 56, 151337. https://doi.org/10.1016/j.apnr.2020.151337	The purpose of this interpretive descriptive study was to understand bedside nurses' motivation and decision-making during discharge planning for adult patients with HF on a 48-bed telemetry step-down unit.	N= 156 nurses	Fifteen bedside nurses were interviewed. Coding was done using NVivo and thematic analysis was completed	This paper is the first in a two-part series which presents separate results of the interpretive descriptive study delineating the factors that impact bedside nurses' motivation and decision-making during HF discharge planning. This paper presents the major finding of nurses' high levels of motivation to	Level 6 interpretive descriptive design	None listed see part II	Yes, Overall, findings of this study emphasized a need for interdisciplinary relationship-building between bedside nurses, patients, and physicians to be factored into the organizational culture.



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				do effective discharge planning despite many barriers, such as poor physician-nurse communication and patient behaviors.			
Davisson, E., & Swanson, E. (2020b). Nurses' heart failure discharge planning part II: Implications for the hospital system. <i>Applied Nursing Research</i> , 56, 151336.	The purpose of this interpretive descriptive study was to understand bedside nurses' motivation and decision-making during discharge planning for patients with HF on a 48-bed telemetry unit. Background: Heart failure (HF) discharge planning interventions have largely excluded the contributions of bedside nurses	N=15 nurses	Fifteen nurses were interviewed. Coding was done using NVivo and thematic analysis was completed	This paper is the second in a two-part series which presents separate results of one interpretive descriptive study delineating the factors that impact bedside nurses' HF discharge planning. This paper presents how nurses' lack of time, competing priorities, and hospital policies affect nurses' HF discharge planning. In addition to the previous	Level 6 interpretive descriptive study	Small sample size and specific to that one unit.	Yes, Findings from this study suggest that patients with HF may benefit if bedside nurses are afforded the support to effectively assess patients' discharge needs and educate them. A shift in organizational practice is needed, such as employing HF nurse educators to lead bedside nurses in a more structured method of HF education delivery, Requiring

Article title, author, etc. (current APA format)	Study purpose	Sample (characteristics of the sample: demographics, etc.)	Methods	Study results	Level of evidence (use Melnyk framework)	Study limitations	Would use as evidence to support a change? (yes or no) provide rationale
				report (part I) of how nurses felt more motivated during HF discharge planning when they had time to establish a personal connection with patients, nurses reported being motivated when they had time to individualize HF education and did not feel rushed to complete discharge planning tasks.			discharge planning as a component of each shift's work, and promoting bedside nurse involvement in HF discharge planning decision-making within interdisciplinary teams
Bernard, Hetland, B., Schmaderer, M., Zolty, R., & Pozehl, B. (2023). Nurse-led heart failure educational interventions for patient and informal caregiver dyads: An integrative review. <i>Heart & Lung</i> , 59, 44–51. https://doi.org/10.1016/j.hrtlng.2023.01.014	This integrative literature review focused on evaluating design, delivery content, and outcomes of nurse-led dyadic educational interventions.	8 articles	PubMed, CINAHL, Cochrane, and Google Scholar databases (1999-2022) were searched for quantitative and qualitative studies that included these search terms: heart failure, dyads, nonmedical	The original search of six databases yielded 92 citations (Fig. 1). Of these, 31 duplicates were removed. In addition, 55 were excluded, as they did not meet the criteria. In total, eight	Level V Integrative Review	Only 8 articles were reviewed	Yes, Nurse-led education interventions revealed promising results with increasing perceived control and quality of life in both the caregiver and HF patient, as well as reduced rehospitalization

Article title, author, etc. (current APA format)	Study purpose	Sample (characteristics of the sample: demographics, etc.)	Methods	Study results	Level of evidence (use Melnyk framework)	Study limitations	Would use as evidence to support a change? (yes or no) provide rationale
			caregivers, caregivers, randomized controlled trials, nurse-led education, education	articles were selected for this integrative review. The articles included seven randomized controlled trials (RCTs) and one pilot feasibility study.			ns in the HF patient.

Appendix B

CITI Training Certificate



Completion Date 05-Oct-2023
Expiration Date 05-Oct-2026
Record ID 58851254

This is to certify that:

Amy Suzanne Cosby


Has completed the following CITI Program course:

Biomedical Research - Basic/Refresher
(Curriculum Group)
Biomedical & Health Science Researchers
(Course Learner Group)
1 - Basic Course
(Stage)

Under requirements set by:

Liberty University

Not valid for renewal of certification through CME.



Collaborative Institutional Training Initiative
101 NE 3rd Avenue, Suite 320
Fort Lauderdale, FL 33301 US
www.citiprogram.org

Verify at www.citiprogram.org/verify/?wbbb0d800-9709-4e80-873d-387c1ab42828-58851254

Appendix C

Letter of Support from Organization – SJCHS



November 13, 2023

Suzanne Cosby MSN, RN
Liberty University DNP Student

Suzanne,

Thank you for your presentation to our Nursing Research and Evidence-Based Practice Council on October 26th. Your quality improvement project, Nurse-led Heart Failure Education project, was approved by the committee to be submitted to the IRB.

We wish you every success with your DNP project and completion of your degree. We also look forward to having you come back to present the results of your project.

Best regards,

[Redacted signature box]

Alicia Motley, DNP, MBA, RN, NE-BC

Appendix D

IOWA Model Permission Communication

[External] Permission to Use The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care

Kimberly Jordan - University of Iowa Hospitals and Clinics <survey-bounce@survey.uiowa.edu>

Sat 8/26/2023 1:30 AM

To: Cosby, Amy Suzanne Hughes <ahcosby@liberty.edu>

You don't often get email from survey-bounce@survey.uiowa.edu. [Learn why this is important](#)

[EXTERNAL EMAIL: Do not click any links or open attachments unless you know the sender and trust the content.]

You have permission, as requested today, to review and/or reproduce *The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care*. Click the link below to open.

[Iowa Model - 2015.pdf](#)

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Reference: Iowa Model Collaborative. (2017). Iowa model of evidence-based practice: Revisions and validation. *Worldviews on Evidence-Based Nursing*, 14(3), 175-182. doi:10.1111/wvn.12223

In written material, please add the following statement:

Used/reprinted with permission from the University of Iowa Hospitals and Clinics, copyright 2015. For permission to use or reproduce, please contact the University of Iowa Hospitals and Clinics at 319-384-9098.

Please contact UIHCNursingResearchandEBP@uiowa.edu or 319-384-9098 with questions.

Appendix E

Liberty University IRB Approval Letter

LIBERTY UNIVERSITY

INSTITUTIONAL REVIEW BOARD

January 23, 2024

Amy Cosby
Shade Adigun

Re: IRB Application - IRB-FY23-24-1055 Determining the Effectiveness of a Nurse-led Heart Failure (HF) Education Program in Reducing 30-day Hospital HF Re-admissions

Dear Amy Cosby and Shade Adigun,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds that your study does not meet the definition of human subjects research. This means you may begin your project with the data safeguarding methods mentioned in your IRB application.

Decision: No Human Subjects Research

Explanation: Your project is not considered human subjects research because evidence-based practice projects are considered quality improvement activities, which are not "designed to develop or contribute to generalizable knowledge" according to 45 CFR 46.102(l).

Please note that this decision only applies to your current application. Any modifications to your protocol must be reported to the Liberty University IRB for verification of continued non-human subjects research status. You may report these changes by completing a modification submission through your Cayuse IRB account.

For a PDF of your IRB letter, click on your study number in the My Studies card on your Cayuse dashboard. Next, click the Submissions bar beside the Study Details bar on the Study Details page. Finally, click Initial under Submission Type and choose the Letters tab toward the bottom of the Submission Details page.

If you have any questions about this determination or need assistance in determining whether possible modifications to your protocol would change your application's status, please email us at irb@liberty.edu.

Sincerely,

G. Michele Baker, PhD, CIP
Administrative Chair
Research Ethics Office

Appendix F

SJCHS HF Patient Education Brochure/Handout

Removed to comply with copyright.

Appendix G

AHA Self-Check Plan for Heart Failure Management

<https://www.heart.org/-/media/Files/Health-Topics/Heart-Failure/HF-Symptom-Tracker.pdf>